Bloomsbury Wildlife Guides

Field Guide to the Moths of Great Britain and Ireland

Third edition

Paul Waring
Martin Townsend
Illustrated by **Richard Lewington**

BLOOMSBURY

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Bloomsbury Wildlife Guides

Field Guide to the Moths of Great Britain and Ireland

Third edition

Paul Waring
Martin Townsend
Mark Tunmore (assistance with immigrant moth accounts)
Illustrated by **Richard Lewington**

BLOOMSBURY

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Authors: Paul Waring, moth conservation consultant; **Martin Townsend**, consultant ecologist and moth recorder for Oxfordshire
Illustrator: Richard Lewington, one of Europe's leading natural-history illustrators

Dedications
To my late parents, Doris and Clifford Waring, who encouraged my interest in moths in my formative years and who both died while this guide was in preparation; to my daughter, Kirsty Mae, who was born at the same time as the book, and to my wife, Rachel Thomas, for her support throughout. P.W.

To my late parents, Denis and Barbara Townsend, whose own love and knowledge of the natural world led to my interest in insects and other wildlife; to my wife Liz for her support during the revision for the third edition. M.T.

Bloomsbury Natural History
An imprint of Bloomsbury Publishing Plc

50 Bedford Square
London
WC1B 3DP
UK

1385 Broadway
New York
NY 10018
USA

www.bloomsbury.com

BLOOMSBURY and the Diana logo are trademarks of Bloomsbury Publishing Plc

This electronic edition published in 2017 by Bloomsbury Publishing Plc

First edition published 2003
Reprinted (with corrections) 2004, 2006
Second edition published 2009
Reprinted 2011, 2013, 2015
Third edition published 2017

© Paul Waring and Martin Townsend, 2017
Illustrations © Richard Lewington, 2017
Maps © Chris Manley, 2017
Photographs © Paul Waring, 2017

Paul Waring and Martin Townsend have asserted their right under the Copyright, Designs and Patents Act, 1988, to be identified as Authors of this work.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage or retrieval system, without prior permission in writing from the publishers.

No responsibility for loss caused to any individual or organisation acting on or refraining from action as a result of the material in this publication can be accepted by Bloomsbury or the authors.

British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library.

ISBN: HB: 978-1-4729-3029-3
PB: 978-1-4729-3030-9
ePDF: 978-1-4729-3031-6
ePub: 978-1-4729-3032-3

To find out more about our authors and books visit www.bloomsbury.com. Here you will find extracts, author interviews, details of forthcoming events and the option to sign up for our newsletters.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Contents

Preface to the third edition 4
Introduction 6
How to use this field guide 6
Moths in more detail 12
Field techniques for finding moths 20
Conservation of moths 22
Societies and local recording groups 24
Species accounts 25–431
Hepialidae 25
Cossidae 27
Sesiidae 28
Limacodidae 35
Zygaenidae 36
Drepanidae 41
Lasiocampidae 46
Endromidae 52
Saturniidae 52
Sphingidae 53
Geometridae 63
Notodontidae 176
Erebidae 187
Plate section 220
Noctuidae 292
Nolidae 427
Adventive (accidentally imported) species and those of doubtful occurrence 432
Authority abbreviations used in the descriptions 435
Further reading 436
Scientific species names of plants 439
Index 444

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Preface to the third edition

A great deal has happened with moths and moth recording since the second edition of the *Field guide to the moths of Great Britain and Ireland* was published in 2009, and this new edition sets out to reflect as much of that as possible. Recording of all larger moths in Britain and Ireland is now more popular and more sociable, and has better geographical coverage, and the coordination and speed of dissemination of records are better than ever before, to a large extent due to advances in technology, including the mobile variety. The National Moth Recording Scheme, run by Butterfly Conservation and launched in 2007, brought together the network of county moth recorders, leading to the publication of the *Provisional atlas of the UK's larger moths* in 2010 (Hill *et al.* 2010) based on the 11.3 million records accumulated to the end of 2010. A further, more complete, atlas is in the pipeline. Recording schemes, including online maps, flight period charts and other information, were subsequently set up for Scotland (through Butterfly Conservation) and for all of Ireland (Moths Ireland), which, along with the increase in recording, have resulted in huge improvements in our knowledge of moths in these areas.

Websites related to moth recording have proliferated, often dedicated to moths of particular counties or countries. These now cover most parts of the British Isles, and include county lists, distribution maps, flight season charts and records of immigrant species. Information is also accessible via the National Biodiversity Network (NBN) Gateway website, which holds records and maps of all fauna and flora. New discoveries continue to be published in the entomological journals and magazines, in particular *Entomologist's Record and Journal of Variation* (including detailed annual summaries of immigrant records) and *Atropos*, and books about the moths of individual counties also continue to be published.

Synthesising, verifying and summarising all the new knowledge has made abundantly clear how much more we now know about the increasingly profound effects that the results of human activities – in particular habitat change and loss, climate change and the accidental transportation of insects through international trade and travel – are having on our moth fauna. There have been gains and losses. The geographical range of many species has increased out of all recognition compared to 30–40 years ago. Examples are Orange Footman and Pale Pinion, and the strikingly marked day-flying Jersey Tiger. Others that were formerly widespread, such as Pale Shining Brown and Stout Dart, have declined drastically and may be struggling to cope with the altered climate, especially in southern inland areas, and there are signs that some northern and montane species are retreating to higher altitudes and further north. The trend for northward expansion of additional generations each year continues, and flight seasons in many cases are starting earlier. Exceptionally mild weather in autumn and early winter is causing premature emergence, and has also resulted in unprecedented immigrations, improving the chances of potential colonists and probably contributing to the northward drift of established residents. Colonisation is already increasing, as part of a trend for species to spread westwards to and within mainland Europe. In the second edition we noted that 2006 was an exceptional year for immigration of the very large and spectacular Clifden Nonpareil (or Blue Underwing), with at least 22 recorded, and it has since recolonised parts of southern England.

The similarly dynamic situation in terms of overall abundance has been highlighted in two recent *The state of Britain's larger moths* reports (Fox *et al*. 2006, 2013), using data gathered from over 40 years in the Rothamsted Insect Survey light-trap network. This work has concentrated on the more numerous, widespread species, for two-thirds of which declines (some over 90 per cent) have been recorded, many thought to be related to increased habitat loss and fragmentation, or climate change. Yet this has occurred at the same time as large increases (in a few cases spectacular, such as in the case of Least Carpet and Treble Brown Spot) and northerly spread of many species, along with huge increases in some of those feeding on lichens and conifers (such as Buff Footman and Spruce Carpet). We have made selective mention of these and would suggest that interested readers obtain copies of the reports and watch out for the new atlas, which will doubtless examine these trends in greater detail.

Observations on moths are being made on a daily basis, and the moth fauna of the British Isles is constantly changing, so no book will ever be a complete account. Parsons (2003) reports that, for the 20th century, in Britain the rate at which resident moth species are being added to the list is increasing, and the balance sheet of gains (successful colonists) to losses (extinctions) for all moths and butterflies is 66 lost to 89 gained. We tend to be gaining highly mobile species, predominantly of exotic foodplants or disturbed and degraded habitats and warmer climates, and losing species often closely associated

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

with some of our best-quality semi-natural habitats, such as the Essex Emerald of mature saltmarsh and the Viper's Bugloss, dependent on the rare native Spanish Catchfly in extensive Breckland.

On top of all of this, a completely new *Checklist of the Lepidoptera of the British Isles* was published by the Royal Entomological Society in 2013 (Agassiz *et al.* 2013), which, along with corrections and additions published in 2016, we have adopted (see Introduction for further details). This list brings us much more into line with the European checklist. There have been many changes to the scientific names of species and, in many cases, the order of the species within a genus, and also that of the genera and sub-families, has changed. The arrangement of the families is broadly similar, but some familiar ones have been demoted to sub-family status. The changes are perhaps most pronounced in the Noctuidae, with some groups moved to the Erebidae, a family never previously featured in British checklists. In the new checklist, species recorded doubtfully or only as accidental introductions are now listed separately, providing a clear demarcation between these species (most of which have only ever been recorded once or twice) and those that genuinely occur naturally. For the purposes of this field guide, we were therefore able to dispense with the appendix of species accounts from our previous editions (with a handful of species retained or mentioned in the species accounts). To help the reader navigate through the new taxonomic sequence, the book has been indexed by the specific names as well as by the generic names.

The existence and accessibility of all this new and varied information meant that, in order to make the third edition as up to date and useful as possible, it was necessary to undertake a thorough review of the text, as well as providing 55 additional illustrations covering 19 species, of which ten have occurred in the British Isles for the first time since the second edition. Numerous recent observations, including our own, personally communicated or published elsewhere, on various aspects of the identification and biology of individual species have also been added, and we have engaged in a considerable amount of correspondence with recorders. However, time constraints meant that it was not possible to contact everyone, and information often has had to be summarised, but we continue to welcome any additional observations or comments.

The third big change in this third edition is the inclusion of maps showing post-2000 moth records. The maps have been produced by Chris Manley and are derived from those in his own *British moths* (second edition, 2015), which were based on the 2010 *Provisional atlas*. Amendments were made by Martin Townsend, as part of the process of updating the text. Further detail on the maps can be found in the Introduction. We hope readers welcome all the changes and improvements made, and find the book helpful and stimulating.

Paul Waring, Martin Townsend and Richard Lewington
September 2016

Acknowledgements

As for the first and second editions, information included in this third edition has come from a great many sources. Many people – too numerous to list fully – have offered new information and constructive comment, have published papers and articles that have increased our knowledge, or have produced websites with distribution maps and flight period charts. We are extremely grateful to them all.

A number of individuals deserve special mention for help with this and/or previous editions, including: Andrew and Anne Branson, Mark Parsons, Richard Fox and Les Hill (Butterfly Conservation); Sean Clancy (immigrant moth recorder); Deborah Procter (Joint Nature Conservation Committee); Martin Honey, John Chainey and Geoff Martin (Natural History Museum, London); Dave Allen, Angus Tyner and Andrew Crory (Ireland); Roy Leverton and Mark Cubitt (Scotland); and Chris Manley (provision of, and alterations to, distribution maps). Thanks must also go to David Agassiz, Martin Albertini, Martin Anthony, Rich Austin, Jon Baker, Melissa and Andrew Banthorpe, David Brown, Dave Budworth, Martin Cade, Julian Clarke, Graham Collins, Martin Corley, Graham Crittenden, Barry Dickerson, Ian Ferguson, Charles Fletcher, Andrew George, Brian Goodey, Martin Gray, Colin Hart, Martin Harvey, Paul Harvey, Bob Heckford, Gary Hedges, Barry Henwood, Tony James, Mark Lawlor, Roger Long, Brenda Marney, the late Michael Marney, Andrew Masterman, Neil Money, Steve Nash, Steve Palmer, Sarah Patton, Colin Plant, Colin Pratt, Chris Raper, Alison Robertson, Ian Scott, David Slade, Michael Taylor, Robin Taylor, George Tordoff, Gerry Tremewan, Leon Truscott, Mike Wall, David Wedd and Sheila Wright. We also thank Katy Roper (Bloomsbury) for her invaluable help, input and guidance at the writing stage, Susi Bailey for her excellent copy-editing, Michael Jones for proof-reading, and similarly David and Namrita Price-Goodfellow at D & N Publishing for the production and design of the third edition. With apologies to anyone inadvertently omitted.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Introduction

This field guide is written for everyone interested in moths, from the beginner to the long-term enthusiast, and from the amateur naturalist with a passing interest to professional lepidopterists, biological surveyors and conservation land managers. In order to make the guide more user-friendly, technical terms have been avoided wherever possible.

One of the major reasons for embarking on this field guide is the difficulty many people have, frequently expressed among the many new moth enthusiasts, in identifying a live moth, with wings folded at rest, from a photograph or painting of a set specimen with its wings spread out. The moths in this field guide are generally shown in their normal resting positions because the emphasis is on identifying live moths, unless the salient features are not visible when the moth is at rest.

Moths are often dismissed as drab, night-flying relatives of butterflies. A thumb through the illustrations in this guide shows quite the opposite. In terms of colour, many moths are as brightly patterned and as attractive as butterflies. In terms of wing shape, body form and size, moths are much more varied than butterflies, and there are so many more species in which to take an interest. One of the largest resident moths in Britain is the Privet Hawk-moth, which is as big as a mouse, as is the immigrant Death's-head Hawk-moth, which even squeaks like one! This field guide aims to help the reader navigate through this amazing variety of adult moths.

The text covers the latest details on their life cycle, foodplants, habitat, status and distribution. All the naturally occurring larger or so-called 'macro-moths' that have been reported 'in the field' in Britain, Ireland and the Channel Islands are covered, from the abundant species you are likely to see in any garden to the rarest of immigrants that have flown to Britain from other parts of the world.

How to use this field guide

To identify a moth

Some moths have strikingly distinctive wing patterns or other features that enable identification simply by looking through the illustrations to find an exact match. The plates are grouped taxonomically, i.e. into families of moths, which often share a similar wing shape, posture and body form. With practice, you will be able to recognise the families, and therefore know where to search. In other cases, you will find that several species provide a fairly good match and you will now need to scrutinise certain details. Turn to the text for the species and use the 'Field characters' sections to examine the diagnostic features, which in most cases should enable you to finalise your identification. Also take into account variation, habitat, location and time of year, but bear in mind that moths sometimes appear in the 'wrong' place and at the 'wrong' time, or species are discovered in parts of Britain where they have never been seen before, so do not dismiss your identification purely on that basis. Knowledge of geographical distributions is continually being updated, so you might find that you have made an important new discovery, for example, a new country or county record. The 'Similar species' section of the description draws attention to other species to check. Take a photograph of the moth if at all possible. This will provide a long-term record of the species, which can be checked by other people at any time in the future, although bear in mind that in some cases it will not be conclusive, and it may be necessary to show the actual moth (rather than a two-dimensional image) to an expert to obtain confirmation and acceptance of the record. Many people seek guidance with identifications from more experienced recorders, particularly when they are just starting to familiarise themselves with moths, by posting photographs on social media (notably on blogs). However, it is important to be aware that photographs of moths posted on the Internet are sometimes incorrectly identified, so be careful where you look. By far the best way to become proficient at recognising moths is to

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

try to make your own identification first, by potting the moth and studying it at length, rather than taking a long series of photographs and trying to identify it later (which, although it may be more convenient, often proves more difficult).

A small minority of species cannot be distinguished reliably by their immediate external appearance. In some cases, only small details on the underside of the abdomen or elsewhere enable certain identification, and diagrams of these features are shown in the guide or references to other publications are provided. For a very few species, it is necessary to look at diagnostic differences in the genitalia, situated at the tip of the abdomen. Moth genitalia are quite complex. The male has a pair of claspers with which he grasps the female, in addition to a penis-like structure (the aedeagus) and other associated structures for opening the female aperture (known as the ostium). The male genitalia are sculptured and have patterns of bristles, all of which fit together with the female genitalia of the same species, rather like a lock and key. In many cases, mating with another species is physically impossible. Consequently, the genitalia of a species vary very little, and so are extremely useful in identifying moths and in confirming tentative identifications made using other more variable characters. Where features of the genitalia can be viewed without dissecting the moth, illustrations are given. Where dissection is needed, the reader is referred to more specialist resources for methods and diagrams (including Townsend *et al.* 2010).

Illustrations

Each of the species illustrated is represented by at least one example of the adult, usually a male. Where the female differs substantially in appearance, this is also illustrated. Additional illustrations are provided where a species varies greatly or more than one subspecies occurs. Sometimes additional diagnostic features are shown, including the hindwing. Photographs of a number of larvae have also been included. These have been selected to show the great diversity of form between, and even within, family groupings. The selection includes widespread species, and others that are more localised or rare but are of particular interest.

Format of the species accounts

Nomenclature, taxonomic changes and the 'new' checklist English names, scientific names and taxonomic order are as given in the most recent checklist and corrigenda, addenda and amendments (Agassiz *et al.* 2013, 2016a,b). The English names have the advantage that they have remained largely stable for the last 200 years (compare the English and scientific names in this guide with those in 19th- and early 20th-century works).

Anyone with long-term experience of any branch of natural history will know that scientific names and taxonomic relationships are far from being set in stone. In entomology in particular, rather like the organisms they describe, the system is itself subject to an 'evolutionary' process, as understanding of status and phylogeny changes (and hopefully becomes more accurate). We all, to some extent, find the resultant changes frustrating, but it is unavoidable given the vast numbers of species involved (including the many as yet undescribed) and the still relatively superficial nature of our knowledge in some areas.

The previous revision of the British Isles checklist was Bradley (2000), as used in earlier editions of this field guide. Considerable advances in taxonomic techniques and analysis have occurred since then, including traditional studies of external features and genitalia, but also the wider use of DNA. In fact, the 2000 list did not take into account all of the thinking elsewhere in Europe, including elements of the European checklist (Karsholt & Razowski 1996, now superseded by the Fauna Europaea project; see 'Websites' on page 438). Therefore, it was inevitable that the next British checklist was going to result in something of an upheaval. The ordering of families, genera and species within (or between) genera is now considerably different, sometimes along with all or part of the scientific name. In previous editions of the guide, we adhered very closely to the recognised checklist and we continue to do so. Agassiz *et al.* (2013) has a main section comprising species occurring naturally (unlike Bradley, who placed everything in one list), and those recorded doubtfully or only as accidental introductions (adventives) are listed separately, in appendices.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

This time, we do not include an appendix with additional species accounts and simply cover all the species in the main section of Agassiz *et al.*, plus an additional three, namely African, Eastern Bollworm and Spiny Bollworm, which we feel may well have been genuine immigrants, at least in some instances. Adventive or doubtfully recorded species are generally not mentioned, except in a few cases where confusion with other, accepted, species is known to be likely.

A new numbering system has been adopted in the current checklist and we have provided that, along with the Bradley (2000) numbers (in parentheses), for cross-referencing on databases, collections and older works. The new code numbers are of the form X.XXX or XX.XXX. The digits before the decimal point are those of the family to which the species belongs, while the three after the decimal point indicate the species, so that each has a unique code. In the checklist appendices, doubtful or adventive species are numbered according to their taxonomic position, with an additional sixth digit, so that if they subsequently need to be moved to the main list, they can be slotted in easily. Newly recorded, naturally occurring species are treated in the same way, and this has already begun to happen, with four having already been added since 2013 (Agassiz *et al.* 2016b).

Field characters and similar species This begins with the forewing length, i.e. the distance from the forewing tip to the point where it joins the thorax (see Fig. 1), to indicate the size of the moth. If necessary, this measurement can be taken by holding a pair of dividers close to the moth without touching it, provided it is docile. Forewing length is given rather than wingspan because the latter can be measured only when the wings are spread. The diagnostic features of the moth are then given, together with a description of its variation. When describing features of the wings, the standard convention is to describe the wing in the singular. When the description states that there are two or more spots, cross-lines or other markings, this is the number on each wing. For species with two or more distinct subspecies or forms, these are also named and described. Also, species that can easily be confused are listed and diagnostic features are given to separate them. Often, to avoid repetition, these features will be found under one of the confusion species.

Flight season The number of generations per year is specified and, if this varies in different parts of the British Isles, this is stated. The approximate period when each generation is on the wing is given, i.e. when you can usually expect to find the adult moth. Moths generally emerge earlier in the south than in the north, until late summer, when the onset of autumn and emergence of its associated moths is earlier in the north. Also, flight seasons for many species vary from year to year, and since the early 1990s many have been earlier than the long-term average by as much as two weeks. This correlates with higher-than-average temperatures, and has led to much interest in the use of moths to monitor the effects of climate change. Every year, occasional individuals are reported well outside the usual dates, for reasons that are not always clear.

Other aspects of adult behaviour are also reported in this section. The moths are nocturnal, unless otherwise stated. We use the term 'comes to light' to cover all sources of light normally used for attracting moths. The extent to which they come to light and baits (see pages 20–21 for more information on these) is given, and this applies to both sexes unless otherwise stated. The term 'comes to sugar' is used as a short-hand term for sugaring mixture, wine-roping and other sweet baits.

Life cycle The overwintering stage is given first, because much practical habitat-management work is done during the winter period, with the intention of minimising the impact on wildlife. It is crucially important to site managers that they know how and where particular moth species spend the winter. Many are dormant below ground as larvae or pupae, but others spend the winter as eggs, larvae or pupae on or inside the twigs of both living and dead trees, shrubs and herbaceous plants, or as adults in caves, cold buildings, among dense vegetation or under loose bark, and are likely, for example, to be removed by scrub clearance or felling. Relatively little is known about pupation sites of some moths, but many species pupate in the earth, unless it is

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

too hard to burrow into, while others remain on the ground surface among plant debris, such as fallen leaves.

Larval foodplants Although this guide is intended for the identification of adult moths, their early stages are also fascinating, and some understanding of the larval requirements is necessary to select appropriate places to search for particular moths and to interpret the results obtained from light-trapping and other monitoring of the adults. The English plant names used in the guide follow Stace (2010). An effort has been made to specify the exact species wherever possible, and these begin with capital letters. The scientific foodplant names are listed on pages 439–443. In previous works, there has been a tendency to list some foodplants generically, but this can be misleading. For instance, many larvae found on Pedunculate Oak are likely to refuse Holm (Evergreen) Oak. Unless stated otherwise, the larva eats the leaves. The most frequently used foodplants are listed first. If a wide range is involved, closely related plants generally appear together. Some moth species have clear preferences for either mature or scrubby growth in the case of trees, or for plants growing in the open or the shade, and where it is known this is indicated. There is much work to be done on this subject and it is hoped that this guide will stimulate readers to fill such gaps in our knowledge. Larvae have often been reared in captivity on common and readily available plants such as Dandelion and chickweeds. These are not listed in the accounts, except for the minority where the foodplants in the wild are unknown.

Habitat The descriptions used are largely self-explanatory. They are intended to indicate the major habitat types occupied, and whether the species prefers calcareous (e.g. limestone, chalk), acidic (heathland, moorland, bogs), wet or dry (e.g. marshes, sand-dunes), open or sheltered, upland or lowland, and inland or coastal locations. Where certain habitats are preferred, these are presented first, but many species occur equally in a wide range of habitats. Where a species is likely to be found in most gardens within its geographic distribution, this habitat tends to be given near the front of the list, because this is the most accessible habitat for the majority of people. If gardens appear late in the list, you have a fair chance of recording the species in gardens, but the moth is much better represented in other habitats.

Status and distribution Most species are described as 'Resident' or 'Immigrant', or sometimes as both. 'Resident' means breeding and surviving the winter, such that the populations are not dependent on annual migration from elsewhere for their survival. The term 'Immigrant' is used where the species has flown to the British Isles under favourable conditions from origins outside, sometimes as far away as North Africa and eastern Europe. They are most frequently recorded on the coast and some have been seen flying across the English Channel or arriving from the North Sea. Others are likely immigrants but are not proven to be so, and are listed as 'Suspected immigrant'. The total numbers given are partly based on information published and posted on the Internet (see Further Reading, page 436) by the national recorder for immigrant moths, Sean Clancy, as well as other recent publications, Internet postings and personal communications.

Other moths have clearly been accidentally or deliberately imported (often with goods or produce), or released from captivity. A few have been captured in the field, but many have origins so far away from Europe that their arrival by natural means is extremely unlikely. In our previous editions we labelled these as 'Accidental introduction', 'Import' or 'Suspected import'. In this edition we have adopted the generally accepted collective term 'Adventive'.

Every species occurring naturally in Britain is assigned a national conservation status by the Joint Nature Conservation Committee (JNCC), and these are provided. They are now out of date for some species, because of changes in the distribution of the species and/or our knowledge of it, so that in some cases there is a considerable discrepancy between the grading and our current knowledge. However, updating on the scale required can be done only under a formal review, which Butterfly Conservation, as lead organisation, is currently undertaking for the government agencies. It is a complex process and may involve changes in the criteria used in assigning designations. The basis for the various categories will change to take into account new criteria

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

from the International Union for the Conservation of Nature (IUCN) for defining Red Data Book gradings, along with new delineations for national rarity. Unfortunately, the results are not yet available. So, for this third edition, the statuses are unchanged from the second edition.

The status categories used are as follows:

- Red Data Book species (RDB) – species included in the *British Red Data Books 2. Insects* (Shirt 1987) or meeting Red Data Book criteria subsequently. All resident species known from 15 or fewer 10km squares in Britain. More recently introduced criteria give greater emphasis to rates of decline, and declining species with recent records (the last 25 years) from more than 15 10km squares can be admitted to this category.
- pRDB species – proposed here as Red Data Book species in the next review because information indicated the species met then current criteria. Note that this is different from Provisional RDB (also commonly abbreviated to pRDB), which refers to lists published by JNCC prior to review.
- Nationally Scarce A (Na) – recorded from 16–30 10km squares in Britain since 1 January 1980.
- Nationally Scarce B (Nb) – recorded from 31–100 10km squares in Britain since 1 January 1980.
- Local – recorded from 101–300 10km squares in Britain since 1 January 1960.
- Common – recorded from over 300 10km squares in Britain since 1 January 1960.
- Uncommon on introduced foodplant (alien host) – recorded from less than 100 10km squares in Britain since 1980 but all known larval foodplants are non-native.
- Naturalised – species artificially introduced and now breeding successfully in the wild.
- Immigrant – flown or transported by wind from sources outside the British Isles. Note that resident populations may be supplemented by immigrants.
- Adventive – originating outside the British Isles and usually found with imported goods or in their vicinity, such as in docks and warehouses. Referred to as 'Import' or 'Accidental introduction' in the second edition.

Waring (1994) annotated every species of macro-moth on the British list according to this system. The list was reviewed by Waring (1999b) and then again for the first (2003) and second (2009) editions of this field guide when new proposals were drawn up, in consultation with JNCC, for a small number of species, in order to take account of additional data. These listings have been widely adopted by moth recorders, in county lists and biological recording packages. This third edition follows Waring (1999b), with the following few proposals (as per the second edition): False Mocha, Nb (was Local); Slender-striped Rufous, Na (was Na, then RDB); Pretty Pinion, Local (was Nb); Marsh Pug, Nb (was Local); Four-spotted Footman, Na as well as Immigrant; Cousin German, Na (was Na, then RDB); Stout Dart, pRDB (was Local, as in the first edition of this book); Pale Shining Brown, pRDB (was Nb); Bordered Gothic, pRDB (was Na, now probably extinct in Britain); White-spotted Pinion, pRDB (was Na); and Brighton Wainscot, pRDB (was Na, now probably extinct in Britain).

There are three main components to the accounts of distribution, i.e. the parts of the British Isles in which the species occurs, the density, uniformity or pattern of distribution within these areas, and the frequency with which the species is normally encountered in the field. For species present over large areas of Britain, terms such as northern and western, upland and lowland are used, sometimes in combination. Note that south-east England is used here to mean Surrey, Kent and Sussex mainly, and is not intended to include parts of Essex, which is generally treated as part of East Anglia. Very localised species are described in terms of the counties they occupy. Moth recording has been based on the Watsonian vice-county system since the 19th century (see https://en.wikipedia.org/wiki/Vice-county) and this continues to be the case, since unlike modern political boundaries they are not subject to change. Generally, this guide uses vice-counties or amalgamations of them (e.g. East and West Sussex into Sussex, Yorkshire to mean its five constituent vice-counties). A noteworthy exception is use of the term Cumbria, which is a readily understood amalgamation of the cumbersomely named vice-county of Westmorland with North Lancashire with the vice-county of Cumberland.

In many cases, the vice-county boundaries are clearly demarcated on the ground by rivers and other landscape features. In Scotland, many moth distributions follow the valleys of the major

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

rivers and associated lowlands, so it sometimes makes more sense to refer to Speyside and Deeside, for instance, than to list the vice-counties. In most cases in England, the text would read the same whether using names of amalgamated vice-counties or modern county names. Exceptions include the large part of vice-county Berkshire in modern Oxfordshire. Where it is helpful or prevents confusion, the modern county is added. Within Britain, we have usually distinguished the individual countries in the text, partly because there are often major differences in the patterns between them, due to geographical features (such as hills and mountains), habitat and climate. However, we have treated Ireland as a single geographical entity, partly because ecological differences between Northern Ireland and the Republic of Ireland are less clear, and partly for brevity. We have used Britain as short-hand for Great Britain. The abbreviation 'Man' is used for the Isle of Man and 'Scilly' for the Isles of Scilly. Since the range of many species has changed, the new distribution sections are designed to emphasise this, while at the same time retaining the essential historical information. The assessment of the pattern and density of distribution is largely based on that of the 10km squares from which the species has been recorded. The following terms are used, although the criteria are necessarily somewhat loose:

- Very well distributed – records from almost every 10km square.
- Well distributed – records from a majority of 10km squares.
- Quite well distributed – areas without records not overwhelming.
- Local – localised or patchy distribution of records.

The distribution of species with relatively few records is described in greater detail. An indication of the usual frequency with which the moth is encountered is also given. Most often this is based on impressions from use of mercury vapour light-traps, but sometimes species are found to be more numerous using other techniques; if so, this is stated.

The number of moths recorded on a site visit depends partly on the trapping or searching effort. As a very rough guide to what is intended by the following terms, they are based on, and explained in terms of, the experience of a lone trapper with one to three mercury vapour light-traps. The categories are:

- Abundant – often 100 or more individuals per light-trap in a single night at peak season (e.g. Large Yellow Underwing).
- Frequent – often more than ten individuals in a visit to an occupied site, or seen on most visits during its flight season.
- Fairly frequent – seen on most visits to occupied sites, but seldom as many as ten individuals at one time.
- Occasional – unlikely to be seen on most site visits during its flight season and seldom as more than one or two individuals, but likely to be encountered every year. Species insufficiently numerous to be 'Occasional' are described more specifically, and for species with few records, these may be listed individually.

Use of these terms for moths on Man, Ireland and in the Channel Islands is according to information supplied by the respective local recorders and not necessarily as above.

Distribution maps As mentioned in the Preface, records from 2000 onwards were used to draw up the distribution maps, which were originally based on the 10km square dot maps in *Provisional Atlas of the UK's Larger Moths* (Hill *et al.* 2010) and the Moths Ireland maps. It is an acknowledged fact that substantial geographical gaps exist in the provisional atlas maps. It was therefore necessary to update both text and maps, to interrogate these and other resources (as described in the Preface), and to consult with recorders, in order to verify data. Much pre-existing text relates to records made before 2000, but remains important and informative, and where significant changes have occurred, the text is designed to complement the new maps. In particular, where a species has been recorded from a particular area but only pre-2000, this is stated although the date may not be given.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

When interpreting the maps, it is important to remember that they have not been created by a sophisticated digital system, and are intended only to give an overall impression of the range of a species, which may be restricted to certain habitats or altitudes within that range, so that records may in reality be thinly scattered. Similarly, in the case of outlying groups of islands, distinction is not made on the maps between the islands in that group (presence or absence of a species is indicated for the Channel Islands as a whole, for example). The accompanying status and distribution text complements the maps by providing extra detail where readily available (often including something on the history of the moth), especially for the rarest species. For species that are both resident and immigrant, it is often very difficult to assign records to one or the other, so we have not attempted to do so. We are very aware that published or mapped records can later turn out to be spurious. In spite of strenuous efforts to establish the veracity of records (especially outlying ones), we cannot claim 100 per cent accuracy. Maps can also be biased by recording effort (i.e. simply the distribution of recorders), and this was also taken into account as much as possible. Also, overall recording effort is now much greater than in the past, although the vast majority of major geographical changes are undoubtedly real.

For one species, the New Forest Burnet, which survives in the British Isles at a single site only, no map is included. This is intentional and has been done so as not to increase the risk of undesirable (and illegal) interference with that one remaining population. Maps are not provided for suspected immigrant species that have been recorded only very few times. In these instances, details of their capture are set out in the text.

Moths in more detail

Moth anatomy

The illustration opposite (Fig. 1) shows the Angle Shades moth at rest and with wings spread, as in a set specimen. This shows how some diagnostic features such as resting posture (in this case with furled wings) are lost, while conversely, features of the hindwings are revealed. The difficulty many people have in mentally translating the resting moth into the set specimen is one of the main reasons for producing this guide. Illustrations of Lesser Yellow Underwing and Common Emerald are used to show the main anatomical terms used in the guide.

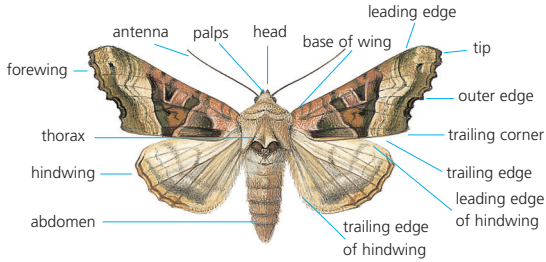
The life cycle of the moth

Larvae, larval foodplants and pupation Moths reproduce by laying eggs, which hatch into caterpillars, commonly known among moth enthusiasts as larvae (plural) or larva (singular). The larvae are 'feeding machines', which do all the eating and weight-gain necessary to produce an adult moth from a tiny egg. Most moth larvae feed on plant material, usually eating the leaves. Others eat the flowers, fruits or roots, or bore into the stems or rootstocks. Most are specialists in particular plants or groups of plants, and in many cases will starve rather than feed on anything else. A small number feed on lichens and fungi, and a few are partly carnivorous.

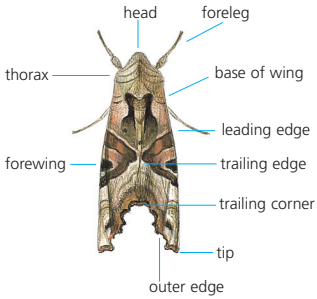
As the larva grows in size, it sheds its skin in order for expansion to occur, revealing a new skin that has formed underneath (a process called ecdysis). This typically happens four times before the larva moults to produce what outwardly looks like a resting stage, the chrysalis, or pupa. For moths, it is generally called the pupa (singular) or pupae (plural), and the act of forming the pupa is known as pupation. The larvae of many species of moths leave the larval foodplant and burrow into the ground before forming the pupa, or pupate among leaf litter. Others attach themselves to the foodplant in various ways, frequently spinning a cocoon of silk, often spun between leaves or in grooves or cracks in loose bark, or soft, rotten wood. Some are even spun inside the plant near exit holes made by the larva.

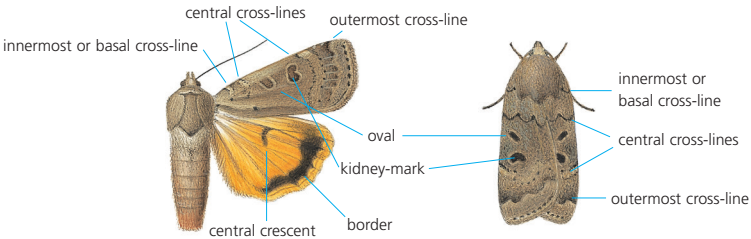
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Figure 1

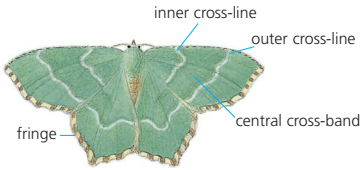


Angle Shades
Phlogophora meticulosa





Lesser Yellow Underwing
Noctua comes



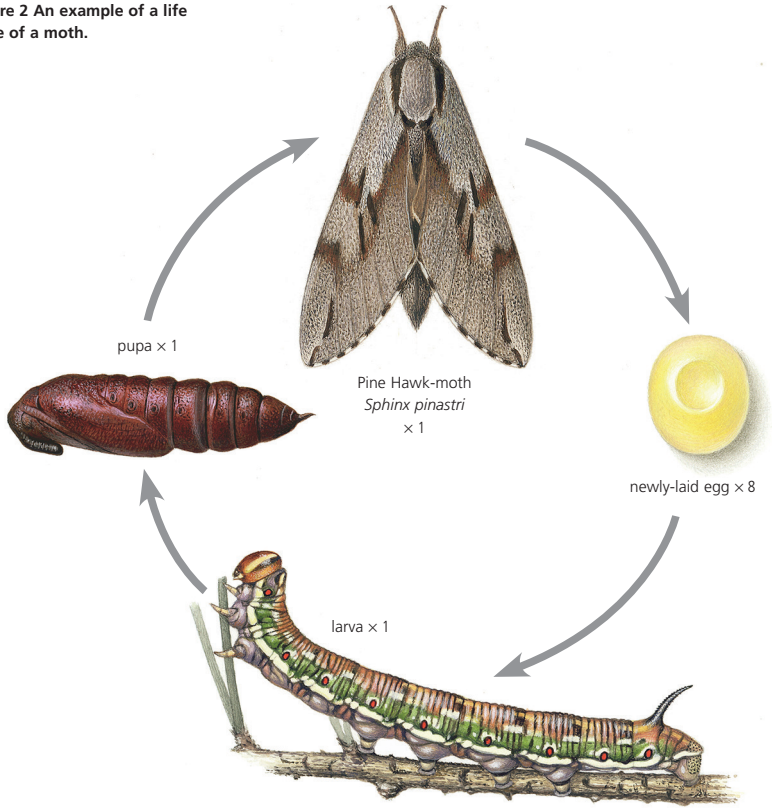
Common Emerald
Hemithea aestivaria

From pupa to adult moth to egg-laying and dispersal Inside the pupa, the body of the insect is rebuilt to form the adult moth, which breaks out of the pupa and expands its initially soft wings by pumping fluids into them and allowing them to dry. It is then ready to take flight. For male moths, the main activity is to find females and mate with them. They do this by following scents released by unmated females. Sometimes mating takes place before the female has dried her wings, and there are even species in which the male locates the cocoons of females and simply waits for them to emerge. Others emerge with the gonads immature and must feed and/or undergo a period of dormancy before mating can occur. The main activities of the female moth are to attract a mate, and to survive long enough to lay as many eggs as she can, which may be over 100, or even 1,000.

Often the females do not move far from the larval foodplants, particularly in the early phase of egg-laying. They may spend much time gluing eggs to particular parts of the foodplant, either singly or in large batches, although others lay them loose and the larvae have to locate

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Figure 2 An example of a life cycle of a moth.



the appropriate foodplants. Once some eggs are laid, the females weigh less and may show a greater tendency to wander and seek out new supplies of foodplant.

In many species, the males, or both sexes, feed like butterflies, with a tube-like tongue, known as the proboscis. They feed for energy at sugary substances, such as the nectar produced by flowers, honeydew excreted by aphids (which often accumulates on leaves) or the sap that oozes from wounds on tree trunks. Others have no requirement to feed and have reduced, non-functional mouthparts, existing instead on the energy provided by fats and carbohydrates accumulated when they were larvae.

For most moths, the adult stage is also the main means of dispersal and colonisation of a new habitat. Some individuals fly great distances, leaving breeding grounds in the south of Europe and flying north to reach the British Isles as immigrants. Certain species display a strong tendency to migrate and arrive in numbers annually from mainland Europe, while others move no more than a few hundred metres during their adult lifespan, which typically varies from a few days to two or three weeks, although those that overwinter as adults can in some cases live for up to about ten months.

For a few species, the larva is the most mobile stage. Tiny caterpillars of tussock moths and some loopers have been found drifting in the upper atmosphere. Eggs and pupae can move hundreds of miles attached to plant material floating on water, or on objects transported by man.

Determining the sex of a moth and examining the genitalia

This is particularly important if you wish to try to breed a species, which is the best start to learning the young stages and finding them more successfully in the wild. Generally, when a

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

wild female moth is found, she has already been mated and has received from the male a supply of sperm that will enable her to lay fertile eggs, usually over the next few days. In some species, the size or wing patterns are very different in males and females. Otherwise, the sexes are most easily recognised by examining the antennae and the abdomen.

Antennae In many species, the antennae of the male are much broader than those of the female. Often they are feathery on one or both sides, while those of the female are much less feathery or single-stranded and thin. The most notable exceptions are those of the burnet moths, which have pointed club ends in both sexes.

Abdomen shape Features of the abdomen are the best means of sexing some moths. Generally, females have a wider abdomen that does not curve upwards. In geometrids and some hawk-moths, the tip of the male abdomen often curves upwards in an extreme fashion. The abdomen of the female is often fat with eggs, usually tapering to a rather blunt tip, but if all the eggs have been laid it will be slimmer. The rather pointed ovipositor, from which the eggs are laid, is often noticeable, especially after egg-laying has started, when some scales are lost from the end of the abdomen. In male moths of the majority of species, the two claspers at the tip of the abdomen are an obvious distinguishing feature and sometimes serve to distinguish closely related species. They often make the tip of the male's abdomen appear rather squared, sometimes even slightly bulbous, as in the burnet moths.

Genitalia examination If confirmation of difficult species such as the Marbled Minor group (page 356) or the Grey and Dark daggers (page 308) is required, it is possible to see the diagnostic differences in the genitalia of the males, without dissection. First either place the moth in a deep-freeze for a minimum of one hour to kill it and wait a few minutes for it to defrost, or anaesthetise it in a killing jar (leaving it in only until it is still; it will soon rouse once back in fresh air). Lay it on its back and gently apply pressure to the central portion of the abdomen with forceps or a setting needle, working towards the genitalia, which will extrude and can then be examined with a hand-lens or low-power binocular microscope. With the larger species, some lepidopterists extrude genitalia on live, active moths. This requires experience and a delicate touch but can be done without apparent injury on, for example, Grey and Dark daggers. For males of pugs and the November moth group, the diagnostic genital plate can be examined without extrusion. Further details on dissection techniques can be found in Townsend *et al.* (2010), Sterling *et al.* (2012), at the website mothdissection.co.uk and elsewhere.

How to distinguish moths from butterflies and other insects

Butterflies and moths are very closely related. Together they comprise the order Lepidoptera within the class Insecta in the kingdom Animalia. Taxonomically, butterflies are placed in a discrete group of families toward the middle of the moths, implying that they evolved later as a branch of the Lepidoptera 'family tree' rather than early in the history of the group, so the division is somewhat artificial. There are about 165,000 described species of Lepidoptera in the world, and perhaps as many more awaiting discovery and description. Some 2,535 species of moth have been recorded as naturally occurring in the British Isles (as listed by Agassiz *et al.* 2013, 2016b), including 869 macros. These numbers are constantly changing as new species colonise Britain, others are discovered and some become extinct.

The British butterflies can be distinguished from nearly all British moths by their clubbed antennae. The moths have many types of antennae (see above) and only those of the burnets are clubbed. This group of moths is easily recognised by their slender wings, held close to the body at rest, in marked contrast to all the butterflies.

Caddisflies (order Trichoptera) are the only other group of insects that are frequently confused with moths, and they often occur in large numbers in light-traps, but they lack the powdery, detachable, overlapping wing scales after which the moths and butterflies are named (Lepidoptera literally means 'scale-winged', from the Greek). Caddisflies can also be recognised

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

by their long antennae (usually longer than the whole body), which point forward and are held together at rest. They never lay them back along the body or wings, like many moths do. Even moths with very long antennae, such as the members of the families Adelidae and Incurvariidae, do not generally align the antennae together. Caddisflies are usually brown and the wings look coarse and leathery, with few cross-veins.

The division of moths into macro-moths and micro-moths

Like the division of Lepidoptera into butterflies and moths, the division of moths into macro- and micro-moths is one of convenience rather than science. This field guide covers the macro-moths. Our companion guide *Field guide to the micro-moths of Great Britain and Ireland* (Sterling *et al.* 2012) covers the microlepidoptera, or 'micros', which are generally smaller in size, with a forewing length of 10mm or less, although there is actually some overlap in size with the 'macros' (see box below). Macro-moths, being generally larger, are more easily handled and identified, and therefore were more widely studied in the early days of entomology, with many people ignoring families of the very small moths. The micros are considered to be more primitive (indeed, the most primitive have not developed a proboscis for feeding, and instead use mandibles) and therefore are placed at or toward the front of the classification. However, a

Common micro-moths that may easily be confused with macro-moths

The reader will find a few common moths that, on the basis of size, could reasonably be expected to be in this book, but that are covered by the companion *Field guide to the micro-moths of Great Britain and Ireland* (Sterling *et al.* 2012). The following is intended to help beginners recognise what is not a macro-moth and to guide them to sources of information on the larger micro-moths, most of which belong to the family Pyralidae. Some large and frequent pyralids you will encounter include: **Mother of Pearl** *Pleuroptya ruralis* (Scop.), often disturbed from rest by day around Common Nettle, the larval foodplant; **Small Magpie** *Anania hortulata* (L.), also widespread and frequent on Common Nettle; **grass-veneers** or **grass-moths** (sub-family Crambinae), frequent among uncut grass, on which the larvae feed; the various purple and gold *Pyrausta* species, which are day-flying, often seen visiting flowers for nectar, and feed as larvae on the flowers of labiate plants such as mints, marjorams and thymes, sometimes in herb gardens.

When at rest, most pyralid moths fold the antennae backwards over the wings so that they lie alongside the body. Notable exceptions are the **Bee Moth** *Aphomia sociella* (L.) and the **Wax Moth** *Galleria mellonella* (L.), both of which are frequently captured in light-traps. For further information on pyralid moths, see Goater (1986).

More distinctive than pyralids are the **plume moths** (family Pterophoridae), so named because the wings when spread look like feathers or plumes. The **White Plume** *Pterophorus pentadactyla* (L.) is a widespread and frequent species dependent on bindweeds. Other plumes are generally brown and roll their wings up at rest, in a 'T' shape, e.g. the **Common Plume** *Emmelina monodactyla* (L.). An exception is the **Twenty-plume Moth** *Alucita hexadactyla* L. (family Alucitidae). It is often encountered hibernating in gardens near the larval foodplant, Honeysuckle. For further information on plume moths see Hart (2011).

Tortricoid moths (super-family Tortricoidea) are widespread, often colourful moths, so named because the larvae twist up leaves so that they are protected within them while feeding. They are medium-sized, often bell-shaped moths. The **Green Oak Roller** or **Green Oak Tortrix** *Tortrix viridana* L. is abundant in woodland, the larvae feeding on oak. This species is sometimes confused with the rarer Cream-bordered Green Pea (a macro-moth of the family Nolidae; page 430). Also illustrated in Fig. 3 is a typical bell-shaped tortricoid, the **Large Fruit-tree Tortrix** *Archips podana* (Scop.).

The **small ermines**, *Yponomeuta* species (family Yponomeutidae), are often confused with macro-moths, both as adult moths and as larvae. The adults are similar in shape to footman moths (macro-moths in the family Erebidae; page 187), but with pinprick-sized black dots, and have been confused with the very rare Speckled Footman. The larvae of some of the small ermines defoliate shrubs, which they cover in silk webbing, such as the **Orchard Ermine** *Y. padella* (L.) on hawthorns, Blackthorn and Cherry Plum, and the **Spindle Ermine** *Y. cagnagella* (Hb.) on Spindle. The naked black-spotted greyish larvae are easy to see in the thin webbing. Touch one on the head or disturb it and it will wriggle backwards. This 'reverse wriggling test' is a good means of distinguishing larvae of micro-moths from larvae that will produce the macro-moths covered in this book, because the latter will generally not do this, although some, like the larvae of the Buttoned Snout, wriggle vigorously from side to side.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

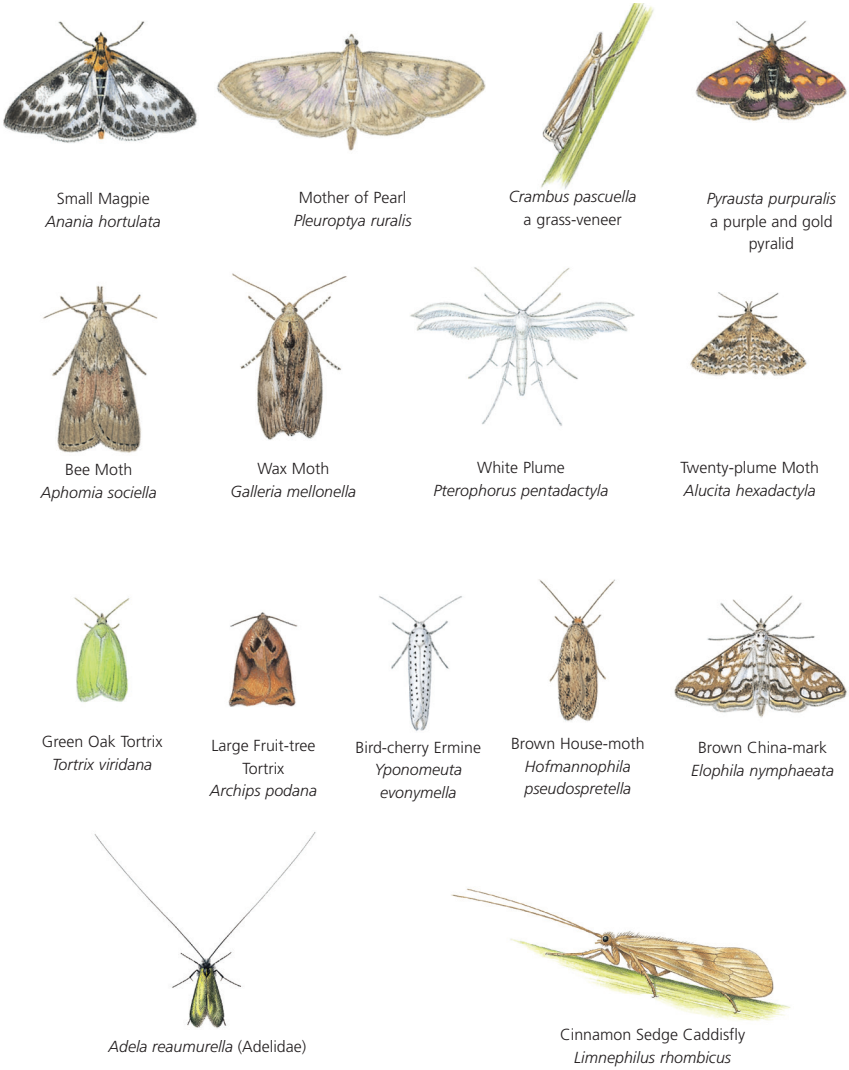


Figure 3 Some micro-moths that may easily be confused with macro-moths, and a caddisfly.

small number of primitive groups have developed quite large species, such as the swifts, goats and clearwings, and these have become 'honorary' macros. The treatment of the Pyralidae as micros is also puzzling, since they are a diverse group, and even in the British Isles many species are comparatively large.

Scientific names

Like all forms of life known to science, from bacteria to bracket fungi to birds, each described species of moth has been given a binomial ('double-barrelled') name in Latin (often mixed with Greek), a system introduced by Carl von Linné (Linnaeus) in 1758, by convention written in italics. Latin was the internationally understood language of science in the 18th and early 19th century, when most European moths were first formally named in print.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Scientific names are used throughout the world. So, while the very descriptive English name of the Figure of Eight moth means something only to a person who speaks English, its scientific name, *Diloba caeruleocephala* (Linnaeus, 1758), is universal. The first name given is the generic name, i.e. the genus or grouping into which the moth and its close relatives have been placed, and this always begins with a capital letter. The second word is the specific or species name and should always be written in lower case. The full scientific name of a species also includes that of the natural scientist (known as the authority) who named it, along with the year in which it was published. This system thereby recognises the discoverer of the new species and distinguishes the name from another similar one, for example if it is discovered that another authority later named the same species, in which case the earliest name takes precedence. Where the species has subsequently been classified in another genus (as in most cases), the original authority and year are retained but placed in parentheses (and in formal lists the authority for the genus is also given). Elsewhere, as in this guide, the authority may be abbreviated (using officially accepted abbreviations, see page 435) and the year omitted. Colour forms of many species have also been given scientific names, again followed by the authority who named them. There are many rules and permutations of changes to scientific names that can occur, and the International Commission on Zoological Nomenclature (ICZN) governs the allocation (and reallocation) of these.

It is unfortunate that the majority of people interested in natural history today do not have the benefit of having learned Latin and Greek in school. As a consequence, the scientific names are often perceived as no more than code words that are hard to remember and difficult to pronounce and spell. In fact, they are often as descriptive as the English names. In the case of the Figure of Eight moth, the species name *caeruleocephala* means 'blue-headed one', and comes from the Latin *caeruleus*, meaning 'sky blue', and the Greek *kephale*, meaning 'head'. This refers to the larva, unlike the English name, which refers to the adult moth. Bear in mind that in the days before electric light-traps, many moths were much more easily found as larvae and then reared to adult. The generic name *Diloba* means 'two lobes' in Greek and refers to the same figure of eight marking on the forewing of the moth that inspired the English name.

Subspecies and forms

Generally, the term subspecies (also synonymous with race) has been applied to populations of a species in which the individuals are consistently different in form and often in ecology, and occur in a different geographical area from other populations, such that they do not generally interbreed, although they are capable of doing so if they encounter one another. If they were unable to interbreed (i.e. produce fertile offspring) when meeting, they would qualify as separate species. In addition, any population may consist of several recognisable colour forms. Names have been given both to subspecies and some forms. Forms are sometimes referred to as aberrations, which automatically implies rarity, but the frequency of a particular form can vary greatly from one population to another, being rare in some and predominating in others, and can change in frequency over time! An 'aberrant' form has very atypical features that include structural differences, for example in size or wing shape.

In scrutinising and comparing set specimens from many locations while preparing this guide, we noted much subtle variation. It is clear that intergrading regional differences occur in many species. In practice, this means that species can look somewhat different when you move out of regions you know well into other areas, even though the moths are not recognised as different subspecies or forms. All this variation has been a source of fascination since the earliest days of the study of moths, and is part of the foundation for evolution by natural selection.

Recording moths

The number of people in the British Isles involved in observing and recording moths now runs to many thousands and is increasing year by year. The majority have some contact with the county moth recorders who compile county databases on moths, usually with the aim of producing and updating annotated county lists and atlases, now collated by the National Moth Recording Scheme. Some of the resultant data can be found on the websites of county moth groups and

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Moths Count (see page 438). The county recorders are essential in quality control, i.e. verifying records. Some have support from natural history societies, wildlife trusts and biological records centres, and have formal or informal groups of recorders, supplying data in electronic format, from field notebooks via spreadsheets or directly into databases such as MapMate, Recorder and iRecord. More recently, online data-entry systems have been set up.

The ready availability of the Global Positioning System (GPS) in hand-held units or incorporated into smart phones now enables quick and accurate location recording, and saves poring over maps later on. These and other mobile devices enable information to be shared instantaneously from the field, of great use particularly to beginners (and their existence makes venturing out at night with light-traps a safer pursuit). Use of dictaphones and video camcorders as the first means of capturing the data is less common, but sometimes employed as a temporary or additional record. Note that, as with digital photographs, there are concerns about long-term storage of digital information. In the shorter term, back-ups (such as external hard drives and cloud storage) are essential, but moth information remains of use indefinitely and future changes are not necessarily easy to predict. Some may wish to make good-quality prints of the more noteworthy records, but this is an expensive option. Moth recorders are still strongly advised to retain hand-written records as county recorders may query unusual records, and also for posterity, and additionally to publish noteworthy findings in the entomological journals listed later in this guide (page 438). Many moth recorders have made careful arrangements for their materials and specimens to be transferred to appropriate museums and libraries after their passing.

Recorders are venturing out with ever more light-traps, and disseminating their results the following morning with digital photographs, via smart phones and the Internet. Moth recording has also become much more of a social activity. Many still prefer to operate alone or with one or two others, but the numbers of moth groups and field meetings, or morning 'moth breakfasts' after inspecting the catches of light-traps, have increased. Moth Night, organised jointly by *Atropos* magazine and Butterfly Conservation, has provided encouragement to organise social mothing events throughout the British Isles. There has also been considerable investment in facilities on many nature reserves, and this has increased the options for operating traps from mains electricity and running public events.

National recording schemes

National distribution maps were originally produced by the Biological Records Centre (BRC), Monks Wood, Huntingdonshire, based on returns from all the county recorders and many other individuals. A national recording scheme covering all the macro-moths in the British Isles and the Channel Islands was operated from BRC, coordinated by the late John Heath, from the 1960s until his retirement in 1982, when the scheme was formally closed down. In the following years, national distribution maps were produced on an ad hoc basis, usually by updating existing maps of particular species, for publications such as *The moths and butterflies of Great Britain and Ireland* (see Further Reading, page 436). Between 1991 and 1996, Paul Waring set up and coordinated the National Scarce Moth Recording Scheme for the 300 rarest species of larger moths, for the Nature Conservancy Council and, later, the JNCC. This provided the information and distribution maps for a national review (Waring 1997) and for the UK Biodiversity Action Plan (1999), in which the most recent date class was 1980 onwards. As mentioned in the Preface, Butterfly Conservation launched the National Moth Recording Scheme in 2007 to cover all macro-moths in the UK, Isle of Man and the Channel Islands, founded on the voluntary efforts of county moth recorders. The organisation set about collating newly submitted data, existing data-sets and historical sources, and promoting interest in moths via citizen science projects (including Moth Night) and targeting under-recorded areas. As at January 2016, the National Moth Recording Scheme held 20.3 million records of macro-moths. Distribution maps and other resources for Scotland have been available online since 2011, the product of a scheme coordinated by Roy Leverton. Moth enthusiasts in Northern Ireland and the Republic of Ireland have collaborated in a scheme now known as Moths Ireland, co-ordinated by Angus Tyner and Dave Allen. It has been online since 2015 and includes distribution maps for the whole of Ireland. For websites, see page 438.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Field techniques for finding moths

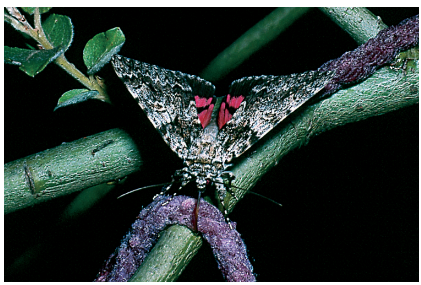
Searching for adult moths

Day-flying moths can be sought as for butterflies, by walking around likely places, inspecting flowers and tapping vegetation to dislodge resting individuals. Some flowers are particularly attractive to moths, such as sallow catkins, ragworts, Hemp-agrimony, buddleias, heathers, Ivy and the flower-heads of some grasses and sedges, the latter often as a result of infections of ergot fungus, which result in sticky, sweet secretions. Success is greater on warm, dry and calm days and a few species require sunshine. Others have dawn or pre-dusk flights. Many species roost on tree trunks, fence posts, rocks or man-made structures by day and, for some species, these objects are well worth searching, especially early in the morning, as warmth and direct sunlight will often cause the moths to move out of sight later. Places with all-night lighting are worth searching by day, such as hallways, porches, shop windows, street lights, and especially rural telephone boxes and toilet blocks on campsites. As dusk falls, more moths take to the wing, when hedgerows along footpaths and rides in woodland are good places. The more species of woody plants in the hedge and the more varied the herbs and grasses in the verge, the greater the variety of moths you can expect. Open woodlands of native trees are the most productive places, but herb-rich, permanent unimproved grassland is also very good. Fens, carr woodland, heathland and moorland all have characteristic species unlikely to be found elsewhere, and for some moths you will need to climb to the very tops of mountains. After dark, you can carry on searching with a torch. You will smell the scent of flowers you never noticed by day and will find moths feeding by searching these, as well as sap runs, overripe and fallen fruit, and even damp bare ground, animal corpses and dung. Under the cover of darkness you will see many larvae starting to feed more openly, safe from the birds, and you will not be able to resist collecting a few to rear on the same foodplant to find out what they are. Then you will have really become a moth hunter!

Baiting techniques

Having seen how moths are attracted to fermenting fruit or sap runs, you can provide some attractants of your own. For centuries, moth collectors have mixed or gently boiled up potions based on black treacle, with various additives, and painted the mixture in vertical strips measuring about 30cm by 2–3cm on tree trunks, fence posts or even rocks, to attract moths. This is known as 'sugaring'. The black treacle gives the mixture body and adhesion, but for an effective potion you need to add something to attract the moths from a distance – a dash of rum is traditional and very effective, amyl acetate is also frequently used, but you need only a drop or two as any more can be repellent. A little beer adds a fermenting smell and can intoxicate the moths and make them easier to catch. Sour chutney and overripe bananas are also effective attractants and add substance to the mix. The majority of moths arrive quickly once the 'sugar' has been applied at dusk.

Wine-roping is a technique in which approximately 1m lengths of thin rope are soaked in a saturated solution of white sugar in red wine, and then draped across low branches, bushes and other vegetation at dusk. Note that the rope needs to be of an absorbent natural fibre and must not have been treated with any chemicals that render it distasteful, such as the fungicides and herbicides used to prevent



Light Crimson Underwing at a wine rope.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

moulds and algae from growing on washing-line cord. Like sugaring, wine-roping can be a very successful means of attracting moths to feed.

Light-trapping

A BENHS meeting gathered around a light and sheet.

Light-trapping exploits the commonly observed tendency of many moths to approach and become disoriented around bright lights. The types of electric light that emit part of their output as ultraviolet light have been found to be the most effective, and two are particular favourites among moth trappers: mercury vapour discharge bulbs and actinic fluorescent tubes. Traps are designed around these, operating on the lobster-pot principle. The moths rest on egg-trays in the trap unharmed and can be released again after recording. There are a number of commercially produced designs, chief of which are the Robinson, Skinner and Heath traps, although a number of newer variants are now available, including some that utilise other types of light source. For a guide to moth-traps and their use, see Fry & Waring (2001). Light-trapping is the single most effective technique for general recording, site assessment and compiling a site inventory, and for targeted trapping of particular species, both in terms of economy of effort and the wide spectrum of species found.

Assembling and pheromone lures

These are techniques that will specifically attract the males of a particular species to the pheromone of the female (or a synthetic equivalent) and provide a wonderful display of how male moths locate females for mating in the wild. Assembling involves rearing a batch of females but keeping them unmated. This can be done by keeping all the pupae in separate containers and determining the sex of the adults when they emerge. For species that are difficult to sex as adults, there are methods of sexing the pupae in order to segregate them. In many species, female pupae are recognisably larger or fatter than those that will produce males. Generally, if the underside of the pupa is examined, there are four unmarked abdominal segments beyond the tip of the wing cases and a pair of small bumps on the fourth in the male, while the female has only three unmarked segments before grooves and other markings intervene (see also May 2014). You may need a hand-lens to see this clearly. When rearing for assembling, the larvae and pupae must not be kept too warm, or they will emerge early and fail to coincide with the wild males.

When the virgin females emerge, one or more of them is placed in a netting bag, cage or trap, preferably on the day of emergence or within a day or two thereafter. At some point during the day or night, depending on the species, she will be observed to adopt a hanging position, with the wings slightly parted to expose the hind end of the abdomen (this is known as 'calling'). A small scent gland, which is usually white or yellowish and may glisten, is extruded from the tip of the abdomen. From this a scent known as a pheromone evaporates into the air, to be carried off on the breeze. The males detect this scent using their antennae. The very feathery antennae of the males of some species provide a greater surface area with which to 'comb' the air for the faintest traces of pheromone. Even single molecules touching the antennae

A Red-belted Clearwing attracted to a pheromone lure.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

have been shown to cause a nervous discharge and recognition behaviour. The males fly upwind towards increasing concentrations of the scent, which brings them to the female. In some species, such as the Emperor Moth, Oak Eggar and the clearwings, the females attract the males during the day. The males can be seen flying upwind from distances of up to several hundred metres, often adopting a wide zigzagging behaviour to relocate the scent plume. Assembling is particularly useful for the many moths that 'call' during the night, as a trap can be made, based on the lobster-pot principle, and then left unattended, like a light-trap.

For some species, generally those of economic importance as pests, the pheromone (a complex molecule or precise combination of several molecules) has been made synthetically in the laboratory and impregnated onto a small rubber bung. These can be contained within a small netting bag and hung from a branch from a length of string, or placed on low vegetation. Alternatively, small plastic lobster-pot type traps can be purchased, originally designed for pest monitoring, in which the pheromone bung is suspended in a small cage over a funnel. For pests, these normally contain a liquid, such as brine, to kill and preserve the moths for later analysis, but can be used dry, with a few small pieces of egg-tray for perching. Other types of trap use a very sticky surface, from which it is not possible to remove the moths, so are only suitable for pests. Some pheromone lures can last for up to ten years or more if stored in a deep freeze. See May (2014) and elsewhere for further details.

Searching for eggs, larvae and pupae

Searching for the eggs, larvae or pupae of moths and rearing them to adult to confirm the identification will increase your chances of encountering the full range of species and can provide a great deal of enjoyment, satisfaction and knowledge. This guide includes enough information to enable you to find the larvae and pupae of many species, and in some cases the eggs. Larvae that feed on trees and shrubs can be knocked into an upturned umbrella or sheet, or a purpose-built beating tray, by jarring the branches with a stick. Those among grasses and herbs can be swept into a heavy-duty net. Both of these methods are most productive at night. See May (2014), Porter (1997) and Tutt (1994) for additional advice.

Conservation of moths

Many moth species are likely to thrive in the British Isles as long as their foodplants and habitat are well represented. For others, the required habitat has been severely reduced in extent or quality, often as a direct result of human activities, or the micro-climate has altered, often due to plant succession. Conservation of such species depends largely on preventing further habitat loss and reversing declines by restoration and creation of additional breeding grounds. A small minority of moth species are so restricted and at risk that removal of any individuals from the wild is considered likely to jeopardise the remaining populations. These receive full legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 and subsequent amendments, and are labelled as such in the text accounts: New Forest Burnet, Fiery Clearwing, Sussex Emerald, Barberry Carpet, Black-veined Moth, Fisher's Estuarine Moth (a species also protected under European legislation) and Reddish Buff. In summary, it is an offence to kill, injure, possess or sell any life stage of these moths, or to damage or destroy their habitat. Two species, Viper's Bugloss and Essex Emerald, have been removed from Schedule 5, as they are thought to be extinct. Also, two species, Slender Scotch Burnet and Talisker Burnet (= ssp. *jocelynae* of the Narrow-bordered Five-spot Burnet), were added as protected from sale only in the Fifth Quinquennial Review of the Act. For further information, see Parsons *et al.* (2001).

For other species, it is most unlikely that removal of a single specimen, particularly a male, will have any impact on a population, except in the unlikely event of large numbers of people doing so where a population is small and isolated. The population has to be able to withstand much

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

higher losses to predators, parasitoids and inclement weather, or it would not survive. There is a genuine need to collect a voucher specimen of certain species to substantiate the record. For many species, however, provided the moth has not lost too many scales, one or several good-quality photographs, taken from a variety of angles, will enable a specialist to confirm the record. The importance of substantiating and vetting records cannot be emphasised too highly. These days, the latest generations of mobile phones are able to take good-quality close-up digital photographs.

In terms of the overall picture, the JNCC conservation statuses (see under 'Status and distribution' above) form a well-established system, but a separate initiative, the UK Biodiversity Action Plan (UKBAP), has provided a huge impetus, and substantial funding for practical conservation measures for moths has been released since it was published by the UK Biodiversity Group (1999). The UKBAP was a response to the United Nations Conference on Environment and Development (popularly known as the Earth Summit or Rio Conference), held in Rio de Janeiro on 3–14 June 1992.

As part of the UKBAP process, a list of priority species in greatest need of special conservation measures was drawn up by the statutory agencies and non-government organisations, and biodiversity action plans for each were produced and implemented. This has resulted in surveys, habitat protection and management, and monitoring and reporting of the results. For UK moths, Butterfly Conservation is the lead agency for this work. When the list was last reviewed, in 2007, 56 macro-moths (and 25 species of micros) were included as priority species. Priorities for action have changed at various times, following surveys that have revealed that species are more widespread than previously available data had suggested, or when their status has improved as a result of conservation measures.

In July 2012, the UKBAP was succeeded by the UK Post-2010 Biodiversity Framework and the focus has moved from UK to country level, so for England, Scotland, Wales and Northern Ireland, there are lists of species considered of principal importance to the conservation of biodiversity. These are covered by Acts of Parliament, including the Natural Environment and Rural Communities Act 2006 (England and Wales), the Wildlife and Natural Environment (Scotland) Act 2011 and the Wildlife and Natural Environment (Northern Ireland) Act 2011. The legislation has many aspects, but essentially relates to compliance with biodiversity obligations by the relevant government bodies, including local authorities deciding on planning applications. The original reviews for the UKBAP identified much longer lists of species for conservation action (e.g. see Waring 1994: 24–30, with 94 species of macro-moths), and in many cases action for these species is taking place at a country, regional or local level.

A group of moth-trappers at sunset on the coast of Northern Ireland.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

In Ireland, the National Parks and Wildlife Service and the Northern Ireland Environment Agency have joined forces to produce Red Lists (based on IUCN criteria) of fauna and flora for all of Ireland. A moths Red List is currently in preparation and Moths Ireland has been one of the key players in the data analysis.

As mentioned in the Preface, *The state of Britain's larger moths* reports (Fox *et al.* 2006, 2013) have identified a number of trends in abundance over a 40-year period from 1968 using data from the Rothamsted Insect Survey light-trap network of approximately 80 traps. Over that period, roughly twice as many species have declined as have increased, and in the latest list, 27 have declined by 90 per cent or more and 61 species have declined by 75 per cent or more. This has major consequences not only for the moth species but also for predators, pollination and other aspects of the ecosystem. Further research into the causes of these declines, and development of plans to halt or reverse them, is urgently needed.

Societies and local recording groups

Amateur Entomologists' Society
Ideal for beginners, but retains many members for life. Publishes the *AES Bulletin*, *Entomologist's Record and Journal of Variation* and many helpful books and leaflets, and holds a large annual exhibition and trade fair. Contact: AES, PO Box 8774, London SW7 5ZG (www.amentsoc.org).

British Entomological and Natural History Society
The national society for the field entomologist. Covers all insect groups but comprises a large proportion of moth enthusiasts. Publishes *British Journal of Entomology and Natural History*, holds an annual exhibition, has lecture space, a library and reference collections, and holds indoor lectures and field meetings. Contact: BENHS Secretary, c/o Dinton Pastures Country Park, Davis Street, Hurst, Reading, Berkshire RG10 0TH (www.benhs.org.uk).

Butterfly Conservation
Despite its name, this is the UK's lead non-governmental organisation involved in the conservation of moths as well as butterflies. Has a paid staff, involved in a wide range of activities promoting the conservation of butterflies and moths, undertakes moth conservation contract services and advises government agencies. Lead partner on moths for the UK Biodiversity Action Plan and the Post-2010 Biodiversity Framework. Runs the National Moth Recording Scheme (Moths Count), and holds an annual moth recorders meeting. Publishes a members' magazine three times a year, *Butterfly*, holds an annual members' day and symposia, and has many active local branches with meetings and regular newsletters. Contact: Butterfly Conservation, Manor Yard, Shaggs, East Lulworth, Wareham, Dorset BH20 5QP (www.butterfly-conservation.org).

Royal Entomological Society
For professional entomologists and others with special interests in entomology. Publishes a range of scientific journals on entomology and a members' magazine three times a year, *Antenna*. Has extensive library facilities and holds international symposia. Contact: The Mansion House, Chiswell Green Lane, St Albans, Hertfordshire AL2 3NS (www.royensoc.co.uk).

Many **moth recording groups** now have their own websites. The Moths Count website (www.mothscount.org) lists the county-based moth groups and the contact details for the county moth recorders.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Hepialidae Swift moths

Ghost Moth

Common Swift

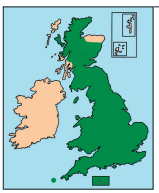
The Hepialidae are primitive moths, with five of the 500 or so species occurring in the British Isles. All five have elongated wings that are held almost vertically against the body when at rest. The main flight is from early dusk until full darkness. They come to light-traps, sometimes laying large numbers of eggs that collect in the base. Adults have no functional proboscis, so are incapable of feeding, and have very short antennae. The eggs are normally laid in a low flight over the foodplant. The larvae live underground, feeding internally or externally on plant roots, among which they pupate. The life cycle commonly takes two years to complete, with the larvae overwintering twice.

Orange Swift

plate 1

Triodia sylvina (L.)

Common 3.001 (15)



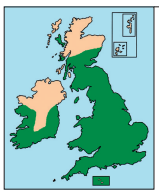
Field characters and similar species FW M 12–18mm F 15–26mm. Male has distinctive bright orange-brown forewing, with two quite narrow, fairly straight, continuous, dark-edged, whitish diagonal lines forming an open V. Duller female is somewhat similar to plainer forms of Map-winged Swift, which has a white marking at base and in centre of forewing, and chequered fringes. Both sexes vary greatly in size, but female is generally larger. See also Common Swift. **Flight season** One generation. Late Jun–early Sep. Flies from early dusk. Comes to light, sometimes in numbers, and is often attracted to house lights. **Life cycle** Overwinters twice as a larva. Larva Sep–May or Jun. Pupates underground. **Larval foodplant** The roots of many herbaceous plants, including Broad-leaved Dock, Dandelion, Bracken and probably grasses. **Habitat** Frequent in gardens, on roadside verges, downland, moorland, woodland rides and other rough grassy places. Rarely in upland areas. **Status and distribution** Resident. Common. Mainland Britain (more local in the north), Channel Islands, Scilly and Man.

Common Swift

plate 1

Korscheltellus lupulina (L.)

Common 3.002 (17)



Field characters FW M 11–16mm F 15–20mm. Probably the most frequently encountered of the swifts. Forewing markings of male vary greatly in amount and intensity, ranging from whitish to pale brown to grey; entirely plain examples occur. Female is slightly larger, with forewing generally much less strongly marked, often plain grey. **Similar species** In northern Britain especially, can resemble worn or plain Map-winged Swifts, but that species has broader forewing and fringes (if still present) chequered. Orange Swift is usually found later in the year; forewing is broader, bright orange in male and with narrower, usually smoother, divergent white bands. Female has smoother, often more continuous and more extensive grey or greyish-white markings than female Common Swift. See also Gold Swift. **Flight season** One generation. May–Jul. Flies mainly at dusk, and is sometimes attracted to house lights. Usually caught in light-traps in the first hour of darkness. Male flies swiftly, low over the ground. Mating pairs may be found after dark, with the male hanging head downwards and immobile. **Life cycle** Overwinters as a larva. Larva Jun or Jul–Apr. Pupates underground. **Larval foodplant** The roots of grasses and many other wild and cultivated herbaceous plants. Sometimes a pest of agriculture and horticulture. **Habitat** Open grassland, gardens and roadside verges, including in urban areas, moorland, heathland, fens and grassy woodland rides. **Status and distribution** Resident. Common.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

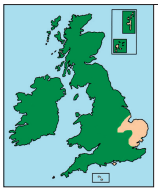
Most parts of mainland Britain, Channel Islands and Man. Sometimes abundant in the south, less so further north. In eastern Scotland, locally frequent and found north to Kincardineshire and East Perthshire. Much scarcer in the west, where it is mainly in the south-west but reliably recorded on Skye. Local in Ireland, predominantly in coastal counties north to Cos. Sligo and Louth.

Map-winged Swift

plate 1

Korscheltellus fusconebulosa (DeG.)

Local 3.003 (18)



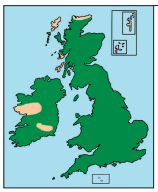
Field characters FW 14–26mm. Named after the distinctive, map-like variegated markings on forewing. In f. *gallicus* Led., which occurs throughout the range, forewing is more uniformly yellowish brown and the whitish markings are limited to two small marks, one in centre of wing (often elongated) and one at base. Both forms have chequered fringes, unlike the other swifts. On the sand-dunes of Orkney the moths are small and pale. In Shetland some have particularly bright patterns and have been named f. *shetlandicus* Viette. **Similar species** See Orange Swift and Common Swift. **Flight season** One generation. Late May–early Jul or early Aug (in the north). Flies at dusk, earlier in Shetland. Comes to light, sometimes in large numbers. **Life cycle** Overwinters twice as a larva. Larva Jul–May. Pupates underground. **Larval foodplants** Widely associated with Bracken roots, among which it can be numerous. Also on the roots of Red Fescue in the absence of Bracken, and may feed on roots of broadleaved herbs. **Habitat** Moorland, rough pasture, heathland and open woodland, less often on downland and sand-dunes. **Status and distribution** Resident. Local. Mainland Britain, Man, Western Isles of Scotland, Orkney, Shetland. Most frequent in the north, and absent from large areas of the south and east of England. Widespread in Ireland.

Gold Swift

plate 1

Phymatopus hecta (L.)

Local 3.004 (16)



Field characters FW M 12–15mm F 13–16mm. Golden markings on forewing of male are diagnostic. In particular, the inner and outer bands run roughly parallel to one another, unlike those of other swift moths. Male has very swollen tibia on the hind legs, used in the release of pheromones. Duller female has broad purplish-grey bands on forewing, which may appear brown when wings are spread out. **Similar species** More slender than Common Swift, banded examples of which have divergent, whitish markings, with those near base angled to almost meet outer markings near trailing edge. In addition (as in all other British swifts), tibia is not swollen on hind legs of male. **Flight season** One generation. Mid-Jun–mid-Jul. Males fly at dusk around the larval foodplants. They attract females with a pineapple-like scent, hanging from the vegetation by the forelegs as they do so. Dawn and late-afternoon flights are also reported. Both sexes come to light in small numbers. **Life cycle** Overwinters twice as a larva. Larva Jun–late May. Pupates underground. **Larval foodplants** Bracken is a major foodplant and larvae have been found in the roots of young Bracken shoots in Apr. Occurs on sites without Bracken and must also feed on roots of herbs or grasses. **Habitat** Mainly open woodland, also scrubby areas and Bracken-covered slopes on heathland and on rough grassland. Rarely in uplands. **Status and distribution** Resident. Local. Mainland Britain, Man, Scotland including the Hebrides, Ireland.

Ghost Moth

plate 1

Hepialus humuli (L.)

Common 3.005 (14)

Field characters FW M 21–29mm F 21–35mm. The largest of our swift moths, and unmistakable. Male usually has plain, chalky white forewing and hindwing (dark grey underneath). Female has yellowish forewing, marked with orange-brown. The Shetland population conforms to f. *thulensis* (Newm.) (formerly regarded as a distinct subspecies). Here, the moths are smaller. Male has creamy-white or yellowish forewing, variably marked with brown, while that of female is less yellow than in the typical form. This form is occasionally recorded elsewhere in northern Britain. **Flight season** One generation. Jun–early Aug. Both sexes fly at dusk and after dark, and come to light. Males have a characteristic display or 'lekking' flight at dusk, which can involve up to several dozen moths, each swaying to and fro over one spot as if attached to a pendulum, and releasing a goat-like scent from eversible brushes on the hind legs. Mating pairs are conspicuous on low vegetation by torchlight. **Life cycle** Overwinters as a larva, probably twice. Larva Jul–May. Pupates underground among roots. **Larval foodplants** The roots of grasses and many other wild and cultivated herbaceous plants, including Common Nettle, docks, burdocks and Wild Strawberry. **Habitat** Grassy or rank, weedy places, both on open ground and in woodland rides and clearings, often where the soil surface has been disturbed. **Status and distribution** Resident. Common. Throughout Great Britain and Ireland, but usually at low altitude in the north of Britain. Two females on Alderney in 2006, the first Channel Islands records since the 19th century.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Cossidae Leopard and goat moths

This family consists of about 700 species, of which three are found in the British Isles. The wings are elongated and held at a steep angle close to the body when at rest. The antennae are variable and the abdomen is extremely long in some species. The adults are nocturnal, and are incapable of feeding. The females attach the eggs to stems of the host plant. The larvae feed in the living wood and stem tissue of trees and other plants, often taking two or more years to complete their growth. Most pupate within the foodplant.

Leopard Moth

Goat Moth

Cossinae

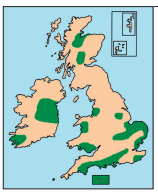
Goat Moth

plate 1

Cossus cossus (L.)

Nb

50.001 (162)



Field characters FW 32–42mm. A large, very thickset moth with a distinctive upright resting posture. Forewing silvery grey-brown with many fine, dark, irregular and often branched cross-lines, which resemble cracks in bark. **Flight season** One generation. Jun–Jul. Comes to light occasionally, but otherwise seldom seen. Female sometimes attracted to sugar bait painted on trees, but since it cannot feed it may in fact mistake the sweet smell for that of oozing sap caused by previous larval damage, i.e. as an egg-laying site. **Life cycle** Overwinters three or four times as a larva, the final time in a cocoon in which it pupates in the spring. Some larvae leave the tree in the autumn to spin a cocoon in rotten wood or soft earth. Eggs are laid in batches in a bark crevice, often near old larval burrows or other damage. **Larval foodplants** Under the bark and in the heartwood of a variety of broadleaved trees, including sallows, willows and poplars, Ash, birches, English Elm, oaks, Alder, Apple and other fruit trees. Trees in low-lying or damp situations that are prone to winter flooding are particularly favoured. **Habitat** Riverbanks, fens, marshes, parkland, hedgerows and woodland edges. **Status and distribution** Resident. Nationally Scarce B. In Britain, previously locally widespread, mainly in the southern half, but now found locally in widely scattered areas, mainly in East Anglia, southern and south-west England (especially along the south coast), the south and east Midlands (including Nottinghamshire) and south Wales. In Scotland, in the Great Glen, Inverness-shire, the Morayshire coast and Perthshire, and in the Channel Islands. In Ireland, in central, eastern and south-western parts.

Zeuzerinae

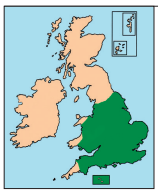
Leopard Moth

plate 1

Zeuzera pyrina (L.)

Common

50.002 (161)



Field characters FW 22–35mm. Six large black spots on big, furry thorax and heavy spotting on whitish wings, along with comb-like antennae of male, are diagnostic. In the rare f. *confluens* Cock., central spots of forewing are joined to form stripes. **Similar species** See Puss Moth. **Flight season** One generation. Late Jun–early Aug. Comes to light and is occasionally found at rest on tree trunks by day. **Life cycle** Overwinters two or three times as a larva, feeding in the stems and branches of trees and shrubs, sometimes in slender young stems and generally in those less than 10cm in diameter. Pupates under the bark. Larva Aug–May. The eggs are attached singly or in small batches to the bark. **Larval foodplants** Many woody plants, including willows, Blackthorn, plums, cherries, Hawthorn, Apple, Pear, privets, Ash, elms, oaks,

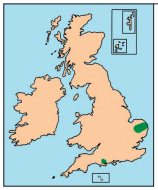
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Beech, Wayfaringtree, Honeysuckle, Lilac and Black Currant; occasionally causes economic damage to fruit trees. **Habitat** Most frequent in open woodland and scrub, but also found in gardens, orchards and parkland. **Status and distribution** Resident. Common. Found widely and frequently in the south of England, north to Yorkshire, Lancashire, in Wales (mainly in the south and east), and recorded (rarely) in the Channel Islands. A single accepted record for Ireland, one in Co. Mayo on 12 Jul 1978.

Reed Leopard plate 1

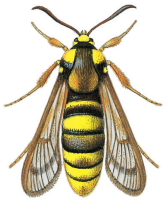
Phragmataecia castaneae (Hb.)

RDB 50.003 (160)



Field characters FW 15–23mm. The fine blackish spotting and rounded tip of the slightly transparent straw-white forewing, comb-like antennae of male and very long abdomen, especially of female, extending well beyond wing tips when at rest, are diagnostic. **Similar species** Several wainscot moths similar in colour occur in the same habitat, but none has the combination of features listed above. **Flight season** One generation. Jun–Jul, sometimes late May or early Aug. Male comes readily to light soon after dark; female rarely does so but can be found at rest on reed stems at night. She starts laying eggs immediately after mating, in batches between the leaf-sheath and stalk. **Life cycle** Overwinters twice as a part-grown larva, low down in a reed stem, usually 20cm or more below the water level. Larva Jul–May of the third year, feeding in stems, moving from one to another and pupating near a prepared exit window through which the pupa breaks to release the adult. Occupied stems tend not to flower. **Larval foodplants** The roots and lower stems of Common Reed. **Habitat** Fens, marshes and the margins of ponds, where there is year-round standing water (reed swamp) or seasonal flooding or waterlogging (reed-bed). **Status and distribution** Resident. Red Data Book species. Extremely local. Resident only at Chippenham Fen and Wicken Fen, Cambridgeshire, the Norfolk Broads and a single locality, known for over 70 years, near Wareham, Dorset.

Sesiidae Clearwing moths



Hornet Moth

Yellow-legged Clearwing

Clearwing moths are fairly closely related to the more familiar burnet moths. There are about 1,000 species worldwide, of which 14 are resident in the British Isles, and one is of uncertain status. They mimic wasps, which is thought to confer protection from vertebrate predators, but they can in most cases be distinguished from wasps by the dark bar or blotch across the forewings, from which numerous veins radiate. Also, the head and eyes are much smaller. They have very narrow forewings and quite narrow hindwings, both with large transparent areas, and black bodies banded with yellow or red. Species in the genera *Sesia*, *Bembecia* and *Pyropteron* hold their wings quite close to the body when settled. *Synanthedon* species settle with their wings extending at a greater angle from the body.

The adults are active by day, particularly in sunny weather, but they are very elusive, in some species probably due to their inconspicuous, wasp-like appearance, especially when in flight. Until recently, those of many species were rarely encountered in the wild. Some may be found when freshly emerged by searching the trunks of the larval foodplants from early to mid-morning, but soon disperse when warmed by the sun. Some visit flowers and are occasionally caught when sweep-nets or malaise-traps are used for general invertebrate sampling. The males fly around the larval foodplants,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

seeking out unmated females. Recently, the use of lures containing synthetic sex pheromones came into use as a recording technique, particularly for this group. This has greatly improved the speed and efficiency of detection, and some species are proving to be more widespread and frequent than previous records indicated.

Locating the actual breeding sites requires patience, persistence and specialised, yet simple, techniques. Eggs are usually laid singly, often on freshly cut tree-stumps and on callouses and other damaged bark, or on the leaves of herbaceous foodplants. The larvae feed in the live stems, trunks or roots, boring out tunnels that usually bear traces of silk, distinguishing them from those of other plant-boring insects. Some betray their presence by issuing brown sawdust-like droppings (frass) from holes in the plant, or by causing a swelling (gall).

The life cycle may take up to three years for some species. The pupa is formed in a fibrous cocoon just under the outer layer of the occupied trunk or root, behind a lidded exit hole prepared by the larva, which can be found by careful searching or scraping, and the section containing the insect carefully cut, chiselled or dug out for rearing to adult. In species feeding below ground, a silken tube may be formed leading to the surface of the earth. Breeding sites are best located by searching for empty pupal cases, which are left protruding from exit holes in stems and trunks at the start of the flight season and may remain in place for weeks.

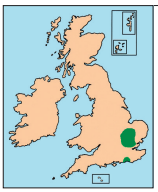
Tinthiinae

Raspberry Clearwing

plate 2

Pennisetia hylaeiformis (Lasp.)

Recent colonist/Adventive 52.001 (369a)



Field characters and similar species FW 11–13mm. Forewing extensively marked with reddish scales. Abdomen with tuft of black scales on fourth segment, and seven (in male) or six (in female) prominent yellow bands, four between tuft and tail in male and three in female. A further yellow band, behind and obscured by scale tuft, may be apparent if moth is worn. Tail fan black and yellow in varying proportions. Antennae distinctly feathered in male. Rests with wings held close to body. **Similar species** See Six-belted Clearwing (male with six yellow bands on abdomen) and Yellow-legged Clearwing (three or four yellow bands on abdomen), both without black tuft on abdomen and with only very fine, short hair-like projections on antennae in male. **Flight season** Jul–Aug. Male is attracted to pheromone lures. **Life cycle** Overwinters twice as a larva, in the rootstock of the foodplant. In the second summer it feeds in the roots, sometimes causing a rounded walnut-sized gall at the base of the plant. It then mines a short way up a fruiting stem and returns to the roots to overwinter. The following spring it mines a little further up the stem and makes an exit hole, leaving the outer skin as a 'window'. Pupates by early Jun, just below the exit hole, without a cocoon. **Larval foodplants** In Britain, so far recorded only on cultivated Raspberry. Abroad also found on Raspberry growing in the wild, and recorded on Bramble. **Habitat** Gardens and fruit farms. **Status and distribution** Probably accidentally introduced, most likely with Raspberry plants, now established locally. Found breeding locally in Hertfordshire, Cambridgeshire, Essex and Bedfordshire (in 2009 and 2010), and found very locally in Sussex in 2009 and 2010. First discovered in early Oct 2007, a larva in a garden at Meldreth, Cambridgeshire. Subsequently, vacated mines were found at local commercial raspberry growers, and males came to pheromone lures in several places in the Lee Valley, also Kimpton, Bishop's Stortford and on a farm near Cambridge. The origin of these populations remains uncertain. Long-term residency, recent immigration and accidental importation with plant stock are all possibilities. Widespread in mainland Europe.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

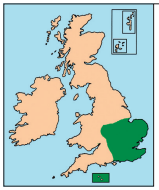
Sesiinae

Hornet Moth

plate 2

Sesia apiformis (Cl.)

Nb 52.002 (370)



Field characters and similar species FW 17–21mm. As large and bulky as a true Hornet *Vespa crabro*, and even has jerky, wasp-like movements when disturbed. However, it is yellower, and lacks the wasp-waist. Distinguished from Lunar Hornet Moth by bright yellow head and shoulder patches, and black collar. **Flight season** One generation. Mid-Jun–Jul, sometimes to early Aug. Can be found, including mating pairs, at rest on poplar trunks after emergence, usually from 7–11am, but seldom seen when active. Male is attracted to pheromone lures, usually in the morning. **Life cycle** Overwinters as a larva, at least twice, fully grown in a cocoon during the second or third winter. Larva Sep–May of the third or fourth year. Female glues the eggs to the base of the trunk. Larva feeds mainly just beneath the bark, near ground level or just below it. Look for adult exit holes near the base of the tree. During the flight season, these may have pupal cases protruding from them or lying on the ground nearby. **Larval foodplants** The live wood of Black-poplar, Aspen, Lombardy-poplar and other poplars. Occasionally found on willows. **Habitat** Includes parks, hedgerows, golf courses, quarries, fens, plantations and amenity plantings. Favours trees in open habitats, often those planted as wind-breaks, with little vegetation around the base so that the sun warms the trunks. Some trees may be tenanted year after year, and may eventually be killed. **Status and distribution** Resident. Nationally Scarce B. Locally fairly frequent in the Midlands and southern England, from Oxfordshire, Berkshire and Northamptonshire eastwards and through East Anglia. More local in Hampshire, Sussex and Kent. Older records from south-west England, Cheshire, Lancashire, Co. Durham and north and south Wales (Denbighshire, Flintshire and Glamorgan). A single record from Ireland, in Co. Dublin in 1946. Local in the Channel Islands.

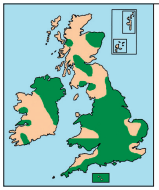
Pupa and cocoon of Hornet Moth.

Lunar Hornet Moth

plate 2

Sesia bembeciformis (Hb.)

Common 52.003 (371)



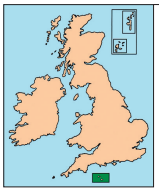
Field characters and similar species FW 15–19mm. Similar to Hornet Moth, but smaller, and with black head and shoulders, and bright yellow collar. **Flight season** One generation. Jul–early Aug. Very rarely seen, but can be found freshly emerged on willow trunks in the morning. No specific pheromone lure is available. **Life cycle** Overwinters, normally twice, as a larva. Larva Aug–spring. Feeds under the bark and close to the ground in the first year, making piles of fine brown frass. In the second, it burrows deeper in and tunnels upwards vertically up to 50cm from the ground. Look for small piles of fine brown frass at the base of the tree, old exit holes, and rough gashes in the trunks made by woodpeckers trying to reach the larvae. The larval workings are a frequent sight in felled willows. **Larval foodplants** The lower trunk and upper roots of sallows and willows, including Goat Willow, Grey Willow and Crack-willow, and also poplars. Mature trees in damp ground seem to be preferred. **Habitat** Most situations in which the foodplants occur, particularly fens and carr, open woodland, heaths, moors, hedgerows, old quarries and other scrubby areas. **Status and distribution** Resident. Common. The most widespread clearwing in Britain and Ireland, with records from most counties of England and Wales. Widespread but more local in Scotland, mainly recorded in the south, Central Belt and north-east. In Ireland, quite widespread in the north, but a few, scattered records from the south and east of the Irish Republic, south to Co. Cork. Local in the Channel Islands.

Dusky Clearwing

plate 2

Paranthrene tabaniformis (Rott.)

Presumed extinct; former resident 52.004 (372)



Field characters FW 13–14mm. Distinguished from all other clearwing moths in Britain and Ireland by dark clouding over most of forewing. **Flight season** One generation. Late May–mid-Jul (or Aug). Apparently very elusive, and rarely seen in Britain. In mainland Europe, males respond well to pheromone lures. **Life cycle** Not known in Britain, but probably similar to that abroad, where it overwinters twice as a larva. Eggs are laid on a twig of the foodplant or in a bark crevice near the base of the trunk. In the first instance, the small larva overwinters inside the twig gall of the longhorn beetle *Saperda populnea* (L.). It then tunnels along the twig and creates its own gall, more elongated and tapering than that of the beetle, in which it overwinters and

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

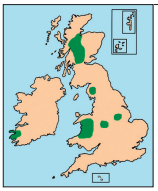
pupates in May. Alternatively, the larva feeds under the bark or in the roots and pupates just beneath the surface of the bark. **Larval foodplants** In England recorded on Aspen, but possibly also associated with other poplars. In France recorded from poplars, sallows and Sea-buckthorn. **Habitat** Generally associated with broadleaved woodland in England, but also found in coastal habitats abroad. **Status and distribution** Former resident in Britain, but given the obscure habits of the adults its rediscovery using pheromone lures is still a possibility. In the 19th or early 20th centuries, very small numbers were found in the London area, Middlesex (Colney Hatch, Ealing Gardens), Kent (Bexley, Ashford), Essex (Epping Forest), Sussex (Brighton), Surrey (Warlingham), Hampshire (near Portsmouth), Devon (Totnes) and Cornwall (Bodmin). The most recent records are of an adult found in Tubney Wood, Berkshire (modern Oxfordshire), in 1924 and one beaten from the foliage of Black-poplar at Birtley, Co. Durham, in 1931. First recorded in the Channel Islands on 28 Jun 2012, one at a pheromone lure at Grouville Common, Jersey, another on 6 Jul 2013.

Welsh Clearwing

plate 2

Synanthedon scoliaeformis (Borkh.)

RDB 52.005 (376)



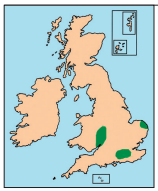
Field characters FW 12–15mm. Large, broad and roughly heart-shaped central black mark on forewing, pointing towards base of wing, is diagnostic. Antennae whitish towards tip in female, darker in male, and two narrow yellow bands on abdomen. Tail fan orange in female, brownish orange in male. **Similar species** Orange-tailed Clearwing also has two yellow bands on abdomen, but is much smaller with narrower, squarer central forewing mark, and black antennae. See also White-barred Clearwing. **Flight season** One generation. Jun–early Jul. Occasionally found at rest on birch trunks in the morning or seen laying eggs in the afternoon. Male is attracted to pheromone lures, usually before 1pm. **Life cycle** Overwinters twice as a larva. Larva Aug–May, feeding on the inner bark of old trees. Look for emergence holes 1–2m above ground and for the 15–18mm-long extruded yellowish-brown pupa. **Larval foodplants** Downy Birch. **Habitat** Open birch woodland, on wet, acidic pasture and moorland. It may be important that the base of the tree is not shaded or smothered with vegetation, thus providing a warmer micro-climate for the larvae within. **Status and distribution** Resident. Red Data Book species. First discovered in Britain in 1854, near Llangollen, Denbighshire. Still found very locally in Wales, in Merionethshire (foothills of Snowdonia) and Montgomeryshire (several sites). In England, in Staffordshire (Cannock Chase, where it was found in the 19th century, rediscovered in 2005, and in 2006 proved to be well established). A strong colony at Sherwood Forest, Nottinghamshire, was discovered in 2008, and another in Borrowdale, Cumbria, in 2014. In Scotland, in Perthshire (Rannoch and the Trossachs) and East Inverness-shire (Glen Affric and Glen Moriston), and old larval workings have been reported from Sutherland. In the Irish Republic, found in the area between Killarney and Kenmare, Co. Kerry. In the 19th and early 20th centuries, also found in Glamorgan and Cheshire (Delamere Forest), with unconfirmed records from Herefordshire. There could be other overlooked populations elsewhere.

White-barred Clearwing

plate 2

Synanthedon spheciformis ([D. and S.])

Nb 52.006 (375)



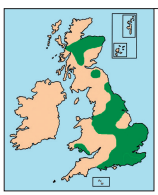
Field characters FW 12–14mm. A relatively large, quite dark species. Diagnostic features are the presence of only one yellowish-white band on abdomen, near the front, yellowish-white spot or short dash to rear of thorax, and whitish band near tips of antennae. **Similar species** Welsh Clearwing has two pale bands on abdomen and a partly or wholly orange tail fan, and central band on forewing is broader and more rounded. **Flight season** One generation. Mid-May–early Jul, with peak numbers in early Jun. Once recorded visiting flowers of Guelder-rose. Male is attracted to pheromone lures. **Life cycle** Overwinters as a larva, at least twice. Larva Aug–May, feeding near the base of the trunk or in the roots. Look for a small pile of frass on the ground beneath the 5mm round exit hole. **Larval foodplants** Alder and birches. **Habitat** Heathland, raised mosses, Alder groves, stream-sides, woodland edges, glades and way-leaves in damp woods. **Status and distribution** Resident. Nationally Scarce B. Recent records come from the heaths of north Hampshire, Surrey and Berkshire, and from Norfolk and the west Midlands. Formerly recorded more widely in south-east and southern England (from Hampshire eastwards), East Anglia, Wales, the north-west Midlands and north-west England.

Large Red-belted Clearwing

plate 2

Synanthedon culiciformis (L.)

Nb 52.007 (381)



Field characters FW 12–14mm. Combination of single broad red band on abdomen and a scatter of reddish scales at base of forewing is diagnostic. **Similar species** See Red-belted Clearwing and Red-tipped Clearwing. **Flight season** One generation. Mid-May–late Jun, earlier than most clearwings, but emergence can be delayed by prolonged cool, wet weather. On hot, sunny days,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

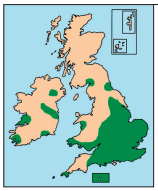
females can be seen (sometimes in numbers) laying eggs on freshly cut birch stumps and tree trunks. Recorded visiting flowers, including Wood Spurge, hawthorns and Rhododendron. Male is attracted to pheromone lures. **Life cycle** Overwinters as a larva in a cocoon. Larva Jul–May. Tunnels and pupates under the bark. Look for small holes and frass at the edges of cut stumps, between the bark and the heartwood. **Larval foodplants** Downy Birch and Silver Birch, occasionally Alder. **Habitat** Birches in light woodland, particularly areas of recent coppicing or felling, and birch and Alder scrub on heathland and other open sunny places, on both light soils and clays. **Status and distribution** Resident. Nationally Scarce B. Recorded locally from most counties in England. Recent records are more thinly distributed, in southern coastal counties from Dorset to Kent, Berkshire, East Anglia, the east Midlands and north to Durham. Also Shropshire, Cheshire, Lancashire and south Wales. In Scotland, Berwickshire, West Perthshire, Inverness-shire and the north-east. Recorded on Jersey, but not recently.

Red-tipped Clearwing

plate 2

Synanthedon formicaeformis (Esp.)

Nb 52.008 (380)



Field characters FW 9–11mm. Combination of dense patch of red scales at forewing tip and a single broad red band on abdomen is diagnostic. On emergence, has two bands of powdery yellow scales on abdomen, which are lost during early flights. **Similar species** See Red-belted Clearwing and Large Red-belted Clearwing. **Flight season** One generation. Late May–early Aug, with peak emergence in mid-Jun, later in cool summers. Has been found at rest on tree trunks in early morning and beaten from willow foliage in dull weather, and is sometimes seen visiting flowers. Male is attracted to pheromone lures in the afternoon. **Life cycle** Overwinters as a part-grown larva. Larva Aug–May, living in the trunks, branches and thin stems of the foodplants. Sometimes frass is found where the tree has been damaged in some way.

Empty pupal case of Red-tipped Clearwing.

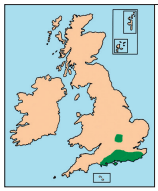
Larval foodplants Osiers and other willows, including Goat Willow, Grey Willow and Creeping Willow. **Habitat** Sallow carr and swamp, osier or withy beds, riverbanks, flooded gravel pits and pond edges, and other places where willows grow, usually in damp or marshy ground. **Status and distribution** Resident. Nationally Scarce B. Widespread but local and absent from some areas. In England, found north to Northumberland and Cumbria. Also in south and north-west Wales. In Scotland, recorded very locally from the south-west, but not since 1942. In Ireland, widely distributed but very local. In the Channel Islands, recently recorded from Alderney.

Sallow Clearwing

plate 2

Synanthedon flaviventris (Stdgr.)

Nb 52.009 (377)



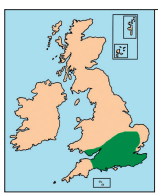
Field characters FW 8–9mm. A small clearwing with a dark thorax and three thin yellow bands on otherwise black abdomen, the central one slightly broader. Occasionally a very faint fourth abdominal band. **Similar species** Currant Clearwing is similar in size, but with yellow collar and two yellow lines on thorax. Yellow-legged Clearwing has largely yellow legs and four distinct yellow bands on abdomen. See also Thrift Clearwing. **Flight season** One generation. Mid-Jun–mid-Jul. Seldom seen except when attracted to pheromone lures, mainly in the afternoon. **Life cycle** Overwinters twice as a larva, in the stem of the foodplant. Larva Aug–Jun. The eggs are laid on slender stems and the larva burrows within, causing a pear-shaped gall 25mm in length to form in the second year, in a stem about 10–15mm in diameter. These can be found mainly in winters from odd to even years, usually on the top-most twigs of old bushes or the young straight stems of those cut back a year or two previously. The larva of the longhorn beetle *Saperda populnea* (L.) makes a similar gall in slender willow stems. **Larval foodplants** Sallows, particularly Goat Willow and Grey Willow. **Habitat** Damp, open woodland and damp heathland. **Status and distribution** Resident. Nationally Scarce B. Very local from Dorset to Kent and north to Oxfordshire and Buckinghamshire. Old records from Devon (1927) and the Isle of Wight.

Orange-tailed Clearwing

plate 2

Synanthedon andrenaeformis (Lasp.)

Nb 52.010 (378)



Field characters and similar species FW 9–11mm. Distinctive wide orange and black tail fan on slender abdomen of male is visible even in flight, but see Welsh Clearwing and Yellow-legged Clearwing. Female with less orange on tail fan.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

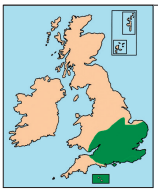
Abdomen in both sexes with two yellowish bands, and sometimes further very fine bands. **Flight season** One generation. Mid-May–mid-Jul. Male comes readily to pheromone lures. Otherwise, adults are very seldom recorded, but have been seen in flight around lime blossom. Some populations are reported to produce adults only in alternate years. **Life cycle** Overwinters twice as a larva in the stem of the foodplant. Larva Jul–May, in stems or branches 8–25mm or more in diameter, most frequently on bushes growing in sheltered, sunny locations. Look for exit holes up to 6m from the ground. The holes are about 3mm in diameter, covered with a disc of bark about 7mm across, making them quite hard to find. However, the discs are often slightly concave and sometimes fall off, in which case the hole may be plugged with frass. **Larval foodplants** Wayfaringtree and, less often, Guelder-rose. **Habitat** Chalk downland, limestone grassland and woodland edges. **Status and distribution** Resident. Nationally Scarce B. Found locally from Dorset and Somerset eastwards to Kent, northwards to south-east Wales, Worcestershire and Herefordshire, and east to Northamptonshire, Cambridgeshire and West Norfolk. Also reported from Ilfracombe, Devon (in 1935), and in Wales from Monmouthshire and Glamorgan.

Red-belted Clearwing

plate 2

Synanthedon myopaeformis (Borkh.)

Nb 52.011 (379)



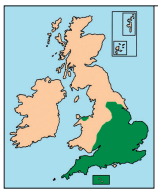
Field characters FW 9–11mm. Combination of a single broad red (very rarely white) band on abdomen with uniformly black forewing markings is diagnostic. **Similar species** See Large Red-belted Clearwing and Red-tipped Clearwing. **Flight season** One generation. Mid-Jun–early Aug. Male can often be seen flying around the top-most branches of Apple trees and comes readily to pheromone lures, sometimes in numbers, from mid-morning to late afternoon. **Life cycle** Overwinters as a larva. Eggs are laid in the afternoon, singly on the bark, especially where main trunk divides to form the largest branches in mature trees. Larva Aug–May, feeding underneath the bark. Wounded trees are especially favoured, and a tree may be infested for many years. Look for exit holes, empty, protruding pupal cases and frass in bark crevices. **Larval foodplants** Usually Apple, including native Crab Apple. Also recorded from Hawthorn, Pear, Almond and Rowan. **Habitat** Well-established orchards and gardens, hedgerows, open woodland and mature scrub. **Status and distribution** Resident. Nationally Scarce B, but probably under-recorded. Recorded locally in most counties in England south of the Wash, but few or no recent records from south-west England. A very few historical records from the north Midlands and northern England. Rare on Jersey but seen regularly on Alderney.

Yellow-legged Clearwing

plate 2

Synanthedon vespiformis (L.)

Nb 52.012 (374)



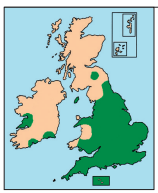
Field characters FW 10–12mm. Central cross-bar on forewing is reddish and easily visible parts of legs are largely yellow. In female, second, fourth and sixth abdominal segments with yellow band (also one on fifth, but usually more faint). In male, extra yellow band on seventh segment. Tail fan yellow above on female (conspicuous in flight), while that of male is black above, with some yellow underneath. Sometimes leading and trailing edges of forewing are bordered with red (f. *rufomarginata* Spul.). **Similar species** Reddish central bar on forewing and yellow legs distinguish this moth from Orange-tailed, Sallow, Currant and Welsh clearwings. See also Six-belted Clearwing, with five or six distinct yellow bands on abdomen, tail fan black and yellow above, and wings held closer to the body at rest. See also Raspberry Clearwing. **Flight season** One generation. Late May–mid-Aug. Recorded visiting Bramble flowers. Females have been seen laying eggs on sunny afternoons. Male comes readily to pheromone lures, usually between noon and 6pm. **Life cycle** Overwinters as a part-grown larva, probably only once. Eggs are laid on one- or two-year-old stumps, or in wounds and calluses on the trunk. Larva Aug–May, feeding on the inner bark. **Larval foodplants** Usually Pedunculate Oak but also Sweet Chestnut; and recorded on Sessile Oak, Evergreen Oak, Wych Elm, birches, cherries and, recently, on a broadleaved willow. **Habitat** Open woodland, parkland and hedgerows, especially where felling has taken place in the last three years. One report from a shaded avenue of Wych Elms, in London. **Status and distribution** Resident. Nationally Scarce B, but probably under-recorded. Found locally in most counties of England north to Yorkshire, very locally in Wales and recorded from Jersey.

Currant Clearwing

plate 2

Synanthedon tipuliformis (Cl.)

Nb 52.013 (373)



Field characters FW 8–10mm. A small clearwing with a yellow collar. Usually two fine yellow lines running along thorax. Three (female) or four (male) thin yellow cross-bands on abdomen, which is black-tipped. **Similar species** Sallow Clearwing has no yellow lines on thorax. See also Thrift Clearwing. **Flight season** One generation. Jun–Jul, usually peaking in late Jun. Flies around the larval foodplants in sunny weather, and is more inclined to settle on leaves than some other clearwings. Male comes quickly and in numbers (sometimes dozens) to

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

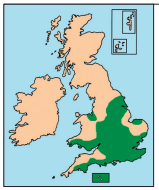
pheromone lures, most often in the afternoon, which is also the main egg-laying time. Recorded visiting the flowers of Ground-elder. **Life cycle** Overwinters, usually once, as a larva in the main stem or a side stem of the foodplant. Larva Aug–Apr or May. In the spring, brownish frass is sometimes found issuing from cut ends of affected shoots, or from cracks in the bark. **Larval foodplants** Cultivated and sometimes wild Black Currant and Red Currant, and less frequently on Gooseberry. **Habitat** Fruit fields, gardens and allotments, in both rural and urban locations. Neglected Black Currant bushes in sheltered, sunny positions seem to be favoured. Occasionally reported on wild currants in sunny places on the banks of streams in damp woods and the margins of fens. **Status and distribution** Resident. Nationally Scarce B, but widespread and under-recorded. Recorded from every county in England, and locally in Wales, Man and the Channel Islands. Very local in Scotland. Recorded north to Aberdeenshire, but recently only from Roxburghshire in the south. Few, very scattered records from the southern half of Ireland, but thought to be under-recorded.

Six-belted Clearwing

plate 2

Bembecia ichneumoniformis ([D. and S.])

Nb 52.014 (382)



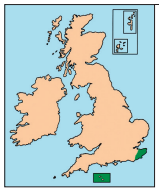
Field characters and similar species FW 9–12mm. The six (in male) or five (in female) yellowish bands on abdomen, in combination with a frosting of orange scales on tip and on central bar of forewing, and largely yellow legs, distinguish this from most other clearwings. Tail fan black with yellow on sides and thin central yellow streaks. Male with fine, short projections on antennae. Yellow-legged Clearwing has three or four strong yellow bands on abdomen. Female Raspberry Clearwing (with six strong yellow bands on abdomen) has black tuft on fourth abdominal segment. Thrift Clearwing is smaller, with fewer, less obvious bands and lacks orange scales on forewing. **Flight season** One generation. Late Jun–mid-Aug. Can be caught using sweep nets. Male sometimes seen perching on the flowers of Salad Burnet and other vantage points in the afternoon and comes readily to pheromone lures, sometimes in large numbers, from 8am to 7pm. Female is sometimes seen laying eggs on the leaves and other parts of the foodplant. **Life cycle** Overwinters as a larva. Larva Jul–May or early Jun. Can be found only by digging up the foodplant, when frass may be seen along the main root. Look on stressed, rather isolated plants in somewhat disturbed ground, particularly at the edges of paths and tracks, rather than in lush growth. **Larval foodplants** Common Bird's-foot-trefoil and Kidney Vetch, and recorded laying eggs on Horseshoe Vetch. **Habitat** Grassy swards, mainly in areas of chalk or limestone, on downland, coastal grassland and rough upland fields, embankments, quarries, brick-pits and cliffs. Does not thrive under heavy grazing. **Status and distribution** Resident. Nationally Scarce B. Most counties in England north to Shropshire and Yorkshire, south and north-west Wales, and the Channel Islands. Much overlooked until recently, but may be expanding its range northwards.

Fiery Clearwing

plate 2

Pyropteron chrysidiformis (Esp.)

RDB (protected species) 52.015 (384)



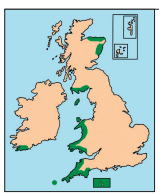
Field characters FW 9–12mm. The fiery orange-red scales over most of forewing are diagnostic. There are two (in female) or three (in male) narrow whitish bands on abdomen. Tail fan orange centrally, black at the sides. These features are very apparent when the moth is at rest. **Flight season** One generation. Mid-Jun–early Jul. Has been seen flying about the foodplants, egg-laying and visiting flowers such as Common Mallow. **Life cycle** Overwinters usually once or sometimes twice as a larva. Larva Aug–May. Tunnels into the tap roots of larger, often isolated plants. Those affected may appear unhealthy. **Larval foodplants** Curled Dock, Common Sorrel and probably other species of dock. **Habitat** Well-drained sites with a warm micro-climate. Shingle at the top of beaches or similarly bare man-made features, including railway ballast, rough herb-rich grassy sward, broken chalk under-cliff, cliff-tops and nearby roadside verges. **Status and distribution** Resident. Red Data Book species. Protected by law from collection or disturbance. Found very locally along the coast and a short distance inland in Kent, between Folkestone and Dover, including Folkestone Warren, where it was first discovered in 1836. Recently rediscovered on the north Kent coast, where it was first reported in 1944. Records from the 19th century from Hampshire (Hayling Island, Gosport and Southsea), Sussex (Eastbourne) and Essex (between Leigh and Southend-on-Sea). In the Channel Islands, a single male on Alderney at a pheromone lure on 2 Jul 2007.

Thrift Clearwing

plate 2

Pyropteron muscaeformis (Esp.)

Nb 52.016 (383)



Field characters FW 6–8mm. Our smallest clearwing, with three longitudinal yellowish stripes on thorax, three (sometimes four) narrow yellowish-white bands on abdomen and no orange scales on forewing. When freshly emerged, the wings have a light covering of yellowish-white scales, which are lost on the first

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

flight. **Similar species** See Six-belted Clearwing. On Currant Clearwing the dark outer band on forewing is streaked with orange. Sallow Clearwing has a dark thorax. Both are slightly larger, and unlikely to occur in the same habitat as Thrift Clearwing. **Flight season** One generation. Early Jun–late Jul. Flies rapidly, from late morning until late afternoon, sometimes visiting the flowers of Thrift and Wild Thyme. Male comes readily to pheromone lures. **Life cycle** Overwinters as a part-grown larva. Larva Aug–May, feeding in the roots and stems. Most frequent in plants growing in rock crevices, often in the splash zone. In occupied plants, the cushion of foliage often dies around the feeding larva and turns brown, or there are small piles of reddish-brown frass on the surface. Larvae of the tortricoid micro-moth *Lobesia littoralis* (Humph. and Westw.) also cause Thrift dieback and browning, and are much more frequent. Like clearwing larvae, they are whitish and unmarked, with a brownish head, but much smaller (<10mm) in Apr–May. **Larval foodplants** Thrift. **Habitat** Rocky coastlines and sunken lanes close to the sea. **Status and distribution** Resident. Nationally Scarce B. Quite well distributed along the coasts of south-west England (including Scilly), west Wales (including Anglesey) and Man, with older records from Cumbria. In Scotland, very local in the south-west (Kirkcudbrightshire and Wigtownshire) and the north-east (Banffshire, Moray and Kincardineshire, with older records from Aberdeenshire and Angus). In Ireland, recorded widely but very locally in the southern half, and recently only from Co. Clare. Locally frequent in the Channel Islands.

Limacodidae

Festoon

Triangle

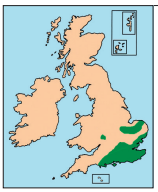
This family of about 1,000 species is mainly tropical, but has representatives all over the world. There are only two species found in the British Isles, both quite small moths but with the deep, rather rounded forewings and tent-like resting posture characteristic of the group. The proboscis is rudimentary and the adult moths do not feed. The family name derives from *Limax*, the Latin for slug, on account of the distinctive slug-like larvae.

Festoon

plate 2

Apoda limacodes (Hufn.)

Nb 53.001 (173)



Field characters FW M 10–12mm F 11–13mm. The cross-lines, strongly diverging from leading edge of broad orange-brown forewing, and resting posture, with forewings held at a steep angle and creased so that tips are flattened out (with abdomen upturned in male), are diagnostic. Female is paler than male. Sometimes the area between cross-lines is darker and occasionally male is as pale as female (f. *ochracea* Seitz). Rare melanic forms of male have forewing lightly or heavy marked with blackish brown (f. *suffusa* Seitz and f. *assella* Esp.). **Flight season** One generation. Jun–Jul. Flies mainly at night and comes to light. Occasionally seen flying in sunshine, high in the oak canopy. From a higher vantage point, this might prove to be frequent behaviour. **Life cycle** Overwinters as a larva in a cocoon formed on a leaf, which falls to the ground in autumn. Larva late Jul–early May. **Larval foodplants** Usually Pedunculate Oak, but also other oaks and Beech. **Habitat** Principally mature lowland broadleaved woodland, but also hedgerows with mature oaks, and wooded heathland. **Status and distribution** Resident. Nationally Scarce B. Found locally in the southern half of England, mainly in Dorset, Hampshire, Isle of Wight, Wiltshire, Berkshire, Surrey, Sussex, Kent, East Anglia and the south-east Midlands. Also very locally in Oxfordshire and at a single site in Worcestershire (Trench Wood). One record from Wales, at Usk, Monmouthshire, in 1967.

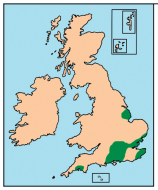
Larva of Festoon.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Triangle plate 2

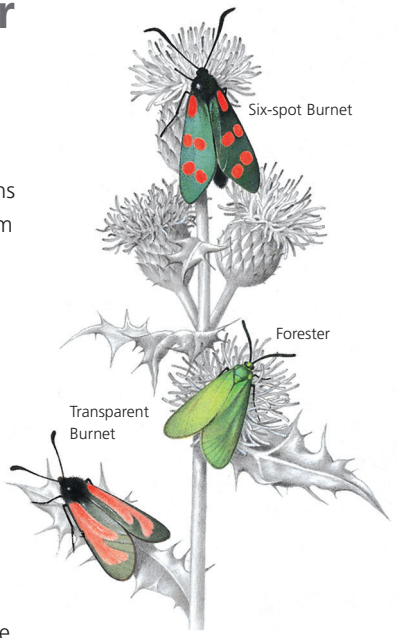
Heterogenea asella ([D. and S.])

RDB 53.002 (174)



Field characters FW M 5–7mm F 9–11mm. Could be confused with some microlepidoptera (e.g. Tortricidae). Recognised by the combination of very plain, rather triangular brown forewing with a very curved leading edge, and the tent-like resting posture. Occasionally male is very dark (f. *nigra* Tutt) and female is pale yellow (f. *flavescens* Tutt). **Flight season** One generation. Mid-Jun–late Jul. Flies mainly at night, coming to light in small numbers, usually on warm nights. There are a few reports of flights in the tree canopy on sunny afternoons; it is possible that this occurs more frequently but usually goes undetected. **Life cycle** Overwinters as a fully grown larva, in a gall-like cocoon on a leaf or twig. Larva Aug–May or Jun, feeding until Oct. **Larval foodplants** Oaks and Beech. Recorded once on a poplar. **Habitat** Oak and Beech woodland. **Status and distribution** Resident. Red Data Book species. Very localised and scarce in the most southern parts of England. Most records are from the large and ancient oak woodlands of Hampshire, Wiltshire, Sussex and south-east Kent. Two males at Great Torrington Wood in 1999 were the first in Devon for nearly 100 years, with more subsequently. Also found very locally in south Devon, Essex, Berkshire, in Lincolnshire in Bardney Forest and near Woodhall Spa, in Buckinghamshire and near Looe, Cornwall, in 1960 and 1969. Two larvae were found on poplar at Seaford, Sussex, in about 1930.

Zygaenidae Forester and burnet moths



This family comprises about 800 species worldwide. There are ten species recorded in Great Britain and Ireland. Typically, these moths live in colonies, sometimes rather isolated from one another for many generations, and as a consequence a number of differences have evolved between populations, some of which are recognised as races or subspecies.

The adults are almost exclusively seen by day and their flight is generally rather direct. All have round-tipped, rather narrow forewings that are held at a steep angle quite close to the body when at rest, and stout antennae that are always forward-pointed and in some cases clubbed, rather like those of butterflies. Both adults and larvae are toxic to non-insect predators, releasing poisons such as hydrogen cyanide when attacked. Forester moths are not, in fact, particularly associated with woodland and the name is most probably derived from Lincoln green, the colour supposedly worn by medieval foresters in Sherwood Forest.

Adults regularly visit flowers in open habitats, particularly rough grassland. The larvae feed mainly on herbaceous plants, often members of the pea family. The tapering whitish papery cocoons are usually formed low down in the vegetation, but those of some burnet moths are spun high along grass stems, and are rather conspicuous.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

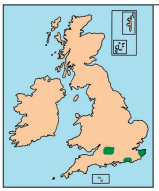
Procridinae

Scarce Forester

plate 3

Jordanita globulariae (Hb.)

Na 54.001 (165)



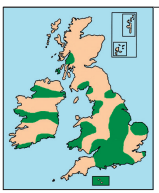
Field characters and similar species FW M 12–15mm F 10–12mm. Forewing of both sexes is generally broader and more rounded at tip than in same sex of Forester, and both sexes are larger than those of Cistus Forester. Male antennae are tapering and pointed at tip, and lack distinct feather-blade extensions only on the last three segments. Those of male Forester and Cistus Forester are thickened at tip, with nine to eleven and eight to ten segments, respectively, lacking feather-like extensions. Antennae of female Scarce Forester are of almost uniform thickness from tip to base, whereas in the other two species they gradually thicken towards tip. These differences are best seen under a hand-lens or binocular microscope. **Flight season** One generation. Jun–early Jul. Male flies in sunshine but sits on flowers and vegetation in dull weather. Female spends more time perching or resting. Both sexes visit flowers, notably Salad Burnet and knapweeds. **Life cycle** Overwinters as a larva, low down among vegetation. Larva Jul–May, feeding until Sep and then again in spring. Pupates in May in a brownish-grey cocoon concealed on or just below the ground. **Larval foodplants** Common Knapweed and Greater Knapweed, mining the leaves. **Habitat** Dry, unimproved calcareous grassland. The moth and foodplant require quite a rough sward to thrive. **Status and distribution** Resident. Nationally Scarce A. Very restricted, in southern England. Found on Salisbury Plain, Wiltshire; Porton Down and Shipton Bellinger on the Wiltshire–Hampshire border; between Findon and Eastbourne in Sussex; and near Dover, Kent. Old records from Gloucestershire.

Forester

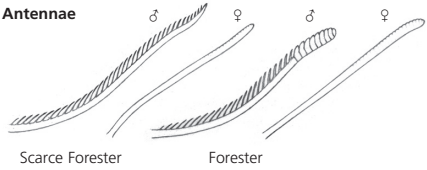
plate 3

Adscita statices (L.)

Local 54.002 (163)



Field characters and similar species FW M 12–15mm F 11–13mm. The three British forester moths are superficially almost identical, but can be separated by careful comparison of individuals of the same sex. Males have feathery, slightly larger, broader antennae than females. When comparing the same sex, Forester and Scarce Forester are about the same size, but Cistus Forester is smaller. See also under Scarce Forester. **Flight season** One generation. Mid-May–Jul, occasionally into Aug. Flies in sunshine and spends much time feeding at flowers such as Ragged-Robin, Field and Devil's-bit Scabious, clovers and Viper's-bugloss, even in cloudy weather. Mating pairs are seen in the afternoon. Male sometimes flies again an hour or so before sunset on warm evenings, and very occasionally comes to light, sometimes away from suitable habitat. One fertile female recorded visiting garden flowers 35km from the nearest known colony. **Life cycle** Overwinters as a part-grown larva, low down among the sward. Larva Jul–early May, pupating in a cocoon concealed near the ground. **Larval foodplants** Common Sorrel and Sheep's Sorrel. Will feed on Broad-leaved Dock in captivity. **Habitat** Open habitats ranging from damp, neutral grassland to limestone grassland, chalk downland, acid and sandy heathland, mature coastal sand-dunes, and woodland rides and clearings. **Status and distribution** Resident. Local. Well distributed but local in some parts of England and Wales, where many colonies have been lost as a result of agricultural intensification. Very local in western Scotland in Kirkcudbrightshire, Argyllshire and on Jura, Lismore and Mull. Widespread but very local in Ireland. Local in the Channel Islands but frequent and increasing on Alderney since 2003.

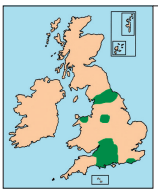


Cistus Forester

plate 3

Adscita geryon (Hb.)

Nb 54.003 (164)



Field characters and similar species FW M 10–12mm F 9–10mm. Both sexes are distinctly smaller than the same sex of Forester and Scarce Forester. See Scarce Forester for differences in antennae. **Flight season** One generation. Late May–Jul or early Aug. Visits flowers, including those of Kidney Vetch, Wild Thyme and Common Bird's-foot-trefoil. Male flies in sunshine but female spends much of the time perching on stems. **Life cycle** Overwinters as a larva, low down among the sward. Larva Jul–May. Pupates in a cocoon formed close to the ground and concealed. **Larval foodplants** Common Rock-rose. **Habitat** Open grassland on chalk and limestone hills, favouring warm, flower-rich, south-facing slopes. Egg-laying has been observed on rather small plants in short and fairly sparse sward (up to 5cm tall). **Status and distribution** Resident. Nationally Scarce B. Sometimes numerous on breeding sites, but these

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

are highly localised. Extends from Dorset east to Sussex, with old records from Kent, and north through Wiltshire and Gloucestershire, following calcareous strata north-east to Oxfordshire and formerly to Buckinghamshire and Bedfordshire. Very local in the north Midlands and northern England, including Staffordshire, the Derbyshire Dales, Yorkshire, Co. Durham and Arnside, Cumbria. In Wales, recorded from Denbighshire and Caernarvonshire, notably on the Great Orme.

Zygaeninae

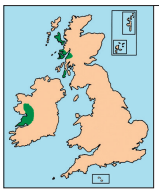
Transparent Burnet

plate 3

Zygaena purpuralis (Brünn.) 54.004 (172)
ssp. *segontii* Trem.
RDB; presumed extinct

ssp. *caledonensis* Reiss
Na

ssp. *sabulosa* Trem.
Ireland

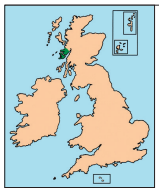


Field characters and similar species FW 14–16mm. Distinguished by thinly scaled forewing, and uniquely among burnets in Britain or Ireland, with three blunt red streaks, the outermost of which is hatchet-shaped. The red is sometimes inclined to purplish, and in the rare f. *obscura* Tutt is replaced by blackish. On Skye, and rarely elsewhere, forms occur with red markings replaced by orange or yellow. Scotch Burnet and Slender Scotch Burnet also have thinly scaled forewings, but are smaller and thinner, with distinct spots rather than streaks. **Flight season** One generation. Early Jun–Jul. Both sexes fly in warm weather, preferring sunshine, and visit flowers such as Wild Thyme. During dull or wet weather they sit about, often fully exposed, on flower-heads or other vegetation, sometimes for days. **Life cycle** Overwinters as a larva, sometimes twice. Larva Jul–May. Pupates in a cocoon spun and concealed near the ground. **Larval foodplants** Wild Thyme. **Habitat** Steep south- and south-west-facing heathy and grassy slopes and undercliffs on or near the coast, and inland on limestone. Large fluctuations in population density have been recorded, sometimes in response to changing grazing levels. **Status and distribution** Resident. The Nationally Scarce A ssp. *caledonensis* occurs on the Hebridean islands of Mull, Ulva, Lismore, Kerrera, Eigg, Rum, Canna and the west coast of Skye. Also on the mainland coast of Argyll at Ardnamurchan and Oban, in a limestone area 7km inland of Oban, and on the Mull of Kintyre. Ssp. *segontii* occurred in small colonies along the cliffs near Abersoch on the Lleyn Peninsula, Caernarvonshire. Not seen since 1962, in spite of searches, and could be extinct. Ssp. *sabulosa* occurs in western Ireland, mainly in the Burren district of Cos. Clare and Galway, very locally in Limerick and West Mayo, and on Inishmore in the Aran Islands.

Slender Scotch Burnet

plate 3

Zygaena loti ([D. and S.]) 54.005 (167)
ssp. *scotica* (Rowl.-Br.)
RDB (protected from sale)

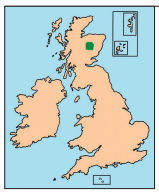


Field characters FW 14–16mm. Outermost red forewing spots merged, forming a large, kidney-shaped blotch. The other four spots are distinct and hindwing has a very narrow black border. Thorax black with greyish-white hairs, especially in female. Legs in male outwardly black, in female largely yellowish brown. **Similar species** Six-spot Burnet may have merged outer spots, but is usually larger, with forewing more thickly scaled and body less hairy. See also Scotch Burnet and Transparent Burnet. **Flight season** One generation. Early Jun–early Jul. Male searches out the female, which spends much of the time perching and nectaring, particularly at the flowers of the larval foodplant. Male often visits other flowers, particularly milkworts and Wild Thyme. **Life cycle** Overwinters as a larva, sometimes twice. The eggs are laid in batches on the foodplant. Larva late Jul–late May or early Jun. Pupates in an oval-shaped, dull white cocoon, spun on or near the ground. **Larval foodplants** Common Bird's-foot-trefoil. Most larvae are found on the shorter plants, generally less than 6cm tall, and often in poor condition. **Habitat** On south- or south-west-facing slopes by the sea, where the underlying rock is basaltic. Foodplant and moth are most numerous in areas where slippage, disturbance or moderate grazing occur (but colonies are vulnerable to overgrazing). Less numerous where other plants have colonised and where the height of the vegetation is greater than 6cm. **Status and distribution** Resident. Red Data Book species. Ssp. *scotica* is endemic to Scotland, where it is restricted to five or six sites on the Hebridean island of Mull, and on the small nearby island of Ulva. Formerly found (pre-1945) near Lochaline and Drimnin on the Morvern peninsula, West Inverness-shire.

Scotch Burnet (Mountain Burnet)

plate 3

Zygaena exulans (Hohen.) 54.006 (166)
ssp. *subochracea* White
RDB



Field characters FW 10–16mm. The thinly scaled forewing, with five distinct but sometimes very small red spots, broad black border of hindwing and yellow shoulder patches of female distinguish this burnet. **Similar species** See Slender Scotch

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Burnet, New Forest Burnet and Transparent Burnet. **Flight season** One generation. Mid-Jun–late Jul. Flies strongly in sunshine but hides low down among vegetation in bad weather. Both sexes visit flowers, particularly Common Bird's-foot-trefoil, but also Mountain Everlasting and others. **Life cycle** Overwinters once or more as a larva. Larva Jul or Aug–late May or Jun. Spins a cocoon low in the vegetation. **Larval foodplants** Mainly Crowberry, eating the terminal shoots and unripe berries. Also Cowberry, Bilberry and heather. **Habitat** The higher slopes and summits of mountains, where the vegetation consists mainly of prostrate Crowberry and heathers, lichens and scattered Bilberry, Mountain Everlasting and Trailing Azalea. **Status and distribution** Resident. Red Data Book species. Known only from the eastern Cairngorms near Braemar, Aberdeenshire, at 700–850m, where it can be numerous very locally. One (probably wind-blown) individual was recorded in 1984 near Loch Builg, to the north. There is also an old unconfirmed record from Lochnagar, to the south-west.

New Forest Burnet

plate 3

Zygaena viciae ([D. and S.]) 54.007 (168)
ssp. *ytenensis* Briggs
Extinct

ssp. *argyllensis* Trem.
RDB (protected species)

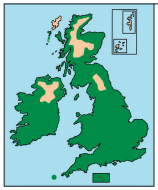
Field characters FW 12–14mm. A small burnet moth, with very round-tipped forewing and five clearly defined red spots, and a broad, dark area beyond. Antennae slender and weakly clubbed. **Similar species** See Scotch Burnet. Five-spot Burnet is larger and stouter, with more pointed wings. **Flight season** One generation. Jul. Adults are rather sedentary, especially female. They nectar on Wild Thyme and occasionally other flowers. Male flies only if the weather is warm and calm. **Life cycle** Overwinters as a larva, sometimes more than once. Eggs are laid in batches in late Jul. Larva Jul–early Jun. Pupates in a papery cocoon concealed on the underside of leaves and on grass stems low down in the vegetation. **Larval foodplants** Meadow Vetchling and Common Bird's-foot-trefoil. **Habitat** In Scotland, ssp. *argyllensis* is restricted to a steep, south-facing, herb-rich grassy slope with ledges above, flushed by water from calcareous rocks. During the late 1980s the slope was heavily grazed, and by 1990 breeding was confined to ledges inaccessible to the sheep, with a total adult population estimated at about 15 individuals. Sheep are now excluded, and as a result the sward is taller, herb-rich and, crucially, is allowed to flower. **Status and distribution** Resident. Red Data Book species; highly vulnerable and protected by law from collection or disturbance. Ssp. *argyllensis* known from one site on the coast of western Argyllshire, where it was discovered in 1963. Following the reduction in grazing, the population has increased greatly and in 2005 it colonised a small adjacent area to the west. Ssp. *ytenensis* formerly occurred in the New Forest, Hampshire, in woodland rides and clearings, but was last seen there in 1927.

Cocoon of New Forest Burnet on underside of leaf.

Six-spot Burnet

plate 3

Zygaena filipendulae (L.) 54.008 (169)
ssp. *stephensi* Dupont
Common



Field characters FW 15–19mm. The only British burnet with six separate red spots on forewing (red patch at base is divided by a vein and counts as two spots). In some forms, outermost spots are merged, also sometimes the middle pair. Very rarely, red colour is replaced by yellow throughout (f. *flava* Robson). **Similar species** See Slender Scotch Burnet. **Flight season** One generation. Late Jun–Aug. Visits flowers such as thistles and knapweeds. Male patrols, searching for unmated females. **Life cycle** Overwinters as a larva, sometimes twice. Larva Aug–Jun. Pupates in a cocoon formed in an exposed position along a grass or other plant stem. **Larval foodplants** Mainly Common Bird's-foot-trefoil, but also Greater Bird's-foot-trefoil. **Habitat** Flowery grassland, usually on light soils, including downland, permanent pasture, woodland rides, sand-dunes and other grassy coastal habitats. **Status and distribution** Resident. Common. Well distributed in England, Wales and Man. Formerly, largely coastal in Scotland, reaching the northernmost parts of the mainland and the Outer Hebrides, but has recently spread inland, especially in the south and north-east. Widespread in Ireland, more so around the coast. Very local in the Channel Islands.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

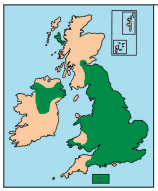
Narrow-bordered Five-spot Burnet

plate 3

Zygaena lonicerae (Schev.) 54.009 (171)
ssp. *latomarginata* (Tutt)
Common

Talisker Burnet ssp. *jocelynae* Trem.
RDB (protected from sale)

ssp. *insularis* Trem.
Ireland



Field characters and similar species FW 15–19mm. The differences between the adults of this species and Five-spot Burnet (especially ssp. *decreta*) are comparative and slight, but become apparent when a number of specimens are compared. In Narrow-bordered, forewing is generally longer and more pointed, tip of hindwing is more pointed and black border of hindwing is narrower. Examples with the middle pair of spots merged are frequent in Five-spot Burnet, but rare in Narrow-bordered. Additionally, in Five-spot (all subspecies), eggs are laid in several layers, forming an irregular heap, whereas in Narrow-bordered they are laid in a single layer. Eggs are readily laid in captivity. Larva of Narrow-bordered has much longer hairs than that of Five-Spot, and the cocoon is translucent in Narrow-bordered, but opaque in Five-spot.

Talisker Burnet (ssp. *jocelynae*) is larger than ssp. *latomarginata*, with longer, black hair on head, thorax and abdomen, and larger, sometimes suffused and merged forewing spots. Ssp. *insularis* has larger spots than ssp. *latomarginata*, with a tendency for middle pair to merge. **Flight season** One generation. Late Jun–Jul. Nectars at many flowers, sometimes in numbers, and can be seen at rest, often beside the cocoon. **Life cycle** Overwinters as a larva. Larva Jul–Jun. Often sits exposed on the foodplant, especially when fully grown. Pupates in a white papery cocoon spun high on a plant stem. **Larval foodplants** Mainly Meadow Vetchling, Red Clover, Sainfoin and Greater Bird's-foot-trefoil. Occasionally Common Bird's-foot-trefoil, White Clover and Bitter-vetch. **Habitat** Rough grassland, on well-drained calcareous ground, and on damper clays, uncut roadside verges and embankments, woodland rides and the margins of wetlands. Ssp. *jocelynae* occurs mainly on steep, grassy coastal slopes. **Status and distribution** Resident. Common. Ssp. *latomarginata* is well distributed over most of England to Cumbria and Northumberland, and in north and south Wales. In south-west England, formerly extending only to Somerset, but colonies have been found in Devon since 2010. In Scotland, formerly restricted to the far south, but has recently become widespread in the south-east, north to the Edinburgh area. Widespread in the Channel Islands. Ssp. *jocelynae* is a Red Data Book taxon. Confined to Skye, Inner Hebrides. Ssp. *insularis* is local in Ireland, mostly in the northern half, and in decline.

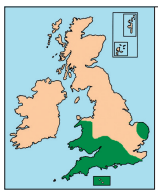
Five-spot Burnet

plate 3

Zygaena trifolii (Esp.) 54.010 (170)
ssp. *decreta* Ver.
Local

ssp. *palustrella* Ver.
Local

ssp. *subsyracusia* Ver.
Channel Islands



Field characters and similar species FW 14–19mm. Can be difficult to distinguish from Narrow-bordered Five-spot Burnet ssp. *latomarginata* (see under that species), even using features of genitalia. Habitat, time of year and geographical location provide additional clues. Flight periods overlap, but that of Narrow-bordered is earlier than that of ssp. *decreta*. Absence of bird's-foot-trefoils usually precludes the presence of a Five-spot colony. Rarely, the red is replaced by yellow. Ssp. *palustrella* has thinner scaling and is usually smaller than ssp. *decreta*. Yellow forms are more frequent than in ssp. *decreta*, but are still uncommon. Ssp. *subsyracusia* is slightly smaller and more brilliantly red. **Flight season** One generation. Ssp. *decreta* Jul–early Aug. Ssp. *palustrella* late May–Jun. **Life cycle** Overwinters as a larva, sometimes twice. Ssp. *decreta* larva Aug–early Jun. Pupates in a cocoon formed in an exposed position on the stem of a tall plant. Ssp. *palustrella* larva late Jun–early May. Pupates in a cocoon formed low down and concealed in the vegetation. **Larval foodplants** Ssp. *decreta* favours Greater Bird's-foot-trefoil and (occasionally) Common Bird's-foot-trefoil. Ssp. *palustrella* feeds on Common Bird's-foot-trefoil. **Habitat** Ssp. *decreta* usually occurs in damp grassland, heathland and wetlands. Since 2003, colonies have been discovered on dry grassland, sand-dunes and dry dune-slacks in Cornwall, with the larvae feeding on Common Bird's-foot-trefoil. These are thought to have recently colonised from wetland colonies in the local area. A colony found in 2007 in Buckinghamshire, in a scrubby field on clay, also on Common Bird's-foot-trefoil, is also regarded as belonging to this subspecies, although its flight period is in early Jun. Ssp. *palustrella* favours dry calcareous grassland on chalk and limestone. **Status and distribution** Resident. Local. Ssp. *decreta* occurs in southern and south-west England, and parts of Wales, usually near the coast. Also very locally in Berkshire and Buckinghamshire. Its detailed distribution is imperfectly known because of confusion with Narrow-bordered Five-spot Burnet. Ssp. *palustrella* is distributed along the North and South Downs from Hampshire to Kent, Wiltshire (including Salisbury Plain), and locally in Gloucestershire (Cotswolds), Berkshire and Buckinghamshire. Ssp. *subsyracusia* habits are as for ssp. *palustrella*. Widespread in the Channel Islands.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Drepanidae Hook-tips and lutestrings

Oak Hook-tip

Buff Arches

The Drepanidae are divided into two sub-families. Of the 400 or so species of Drepaninae worldwide, only eight occur in Europe. They have broad wings and slender bodies, like the geometrid moths. Six are resident in the British Isles and a seventh is an occasional immigrant. On all but one of these, the tips of the forewings are strongly hooked. Some rest with their wings in a rather tent-like position, while others hold them flat to the surface. Some fly by day or are sometimes disturbed from among the foliage of the larval foodplants, or netted on the wing at dusk. However, they are most frequently encountered in light-traps, to which they come quite regularly, but usually in small numbers. Some adults are able to feed, but have a rather short tongue and do not visit flowers; they are only occasionally attracted to baits, aphid honeydew and oozing sap. The larvae of all the British species feed on the foliage of trees and shrubs. The females attach the eggs to the leaves, either singly or in rows. The hind pair of claspers of the larvae are pointed and the tail end is held in a characteristic raised position. Pupation takes place in a slight cocoon, spun between leaves of the foodplant. The cocoon drops with the leaves to the ground in the overwintering generation. See also the unrelated Beautiful Hook-tip *Laspeyria flexula* (page 213).

The Thyatirinae (previously regarded as a separate family is a small group of about 200 species worldwide, with ten in Europe, nine of which are resident in the British Isles. Superficially, they resemble the noctuid moths, although they are slightly slimmer in build and all hold their wings close to the body when fully at rest. Most have prominent scale-tufts or ridges on the thorax. The larvae of Peach Blossom and Buff Arches feed exposed, whereas the remainder of the group conceal themselves between spun leaves. Pupation occurs either on or under the ground, or between leaves of the foodplant, which then fall to the ground. Most overwinter in this stage.

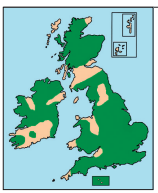
Drepaninae

Scalloped Hook-tip

plate 4

Falcaria lacertinaria (L.)

Common 65.001 (1645)



Field characters FW 14–18mm. Distinctive. Forewing has irregularly scalloped and toothed outer edge with chequered fringes, two dark parallel cross-lines and a single small dark central dot. Rests with wings raised, tent-like. There is little variation in markings, but second-generation moths are smaller and paler brown. First-generation moths often have stronger brown lattice-like or flecked markings and are more silvery grey, especially in northern Britain. **Similar species** Beautiful Hook-tip has smooth outer edge to forewing, with only two projections and fringes unchequered, and two dark central dots; rests with wings flat. **Flight season** Two generations. Late Apr–late Jun and mid-Jul–Aug, except in Scotland, where there is one generation from late May–Jun. Nocturnal. Comes to light, sometimes in numbers, and can be disturbed by day from the foodplant. **Life cycle** Overwinters as a pupa, in a cocoon in a folded leaf. Larva Jun–Jul and Aug–Sep; Jul–Aug in Scotland. Can be frequent

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

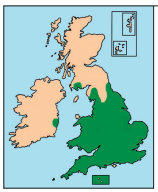
on birch regrowth only 2m tall, and is more numerous in warm, sunny situations. **Larval foodplants** Downy Birch and Silver Birch. **Habitat** Usually in woodland, scrub, heathland and bogs; also hedgerows and gardens. **Status and distribution** Resident. Common. Widely distributed in most of England, Wales, mainland Scotland, the Inner Hebrides and Ireland. In the Channel Islands, possibly immigrant only. Singletons on Jersey in 1999, and Guernsey and Alderney in 2011.

Oak Hook-tip

plate 4

Watsonalla binaria (Hufn.)

Common 65.002 (1646)



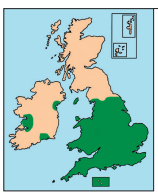
Field characters FW 13–18mm. Quite a distinctive orange-brown moth, with two well-defined pale cross-lines on forewing, and a lilac tinge when freshly emerged. Has two prominent blackish spots in centre of forewing, and two small dots on hindwing. Male is often darker, and female is generally larger with orange hindwing. Varies little, but first-generation moths are larger and more richly coloured. Rests with wings spread flat. **Similar species** See Barred Hook-tip. **Flight season** Two generations. May–Jun and late Jul–mid-Sep. Male flies high around oaks by day and both sexes may be disturbed from lower branches. Flies from dusk and comes to light. **Life cycle** Overwinters as a pupa, in a tough brown cocoon spun in a tightly folded oak leaf. Larva Jun–Jul and late Aug–Sep. **Larval foodplants** Pedunculate and Sessile oaks, and almost certainly Turkey Oak. Reported occasionally on Silver Birch. **Habitat** Most numerous in oak woodland, but also occurs in hedgerows, parkland and gardens. **Status and distribution** Resident. Common. Well distributed in southern Britain, north to Cumbria and Co. Durham, and in the Channel Islands. Recently recorded very locally from south-west Scotland. One record from Ireland, one at light near Glenealy, Co. Wicklow, in 2008.

Barred Hook-tip

plate 4

Watsonalla cultraria (Fabr.)

Local 65.003 (1647)



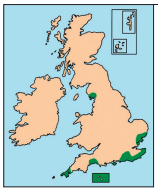
Field characters and similar species FW 12–17mm. Not dissimilar to Oak Hook-tip, but orange-brown forewing lacks lilac tinge and has a broad, darker central cross-band. Has a single dark, rather small central forewing spot (rarely two), and no central spots on hindwing. Little variation in markings, and only slight variation in colour. Rests with wings flat. **Flight season** Two generations. May–Jun and mid-Jul–early Sep. Male sometimes flies by day, rather high around the foodplant. Both sexes fly at night and come to light. **Life cycle** Overwinters as a pupa, in a white cocoon within a curled Beech leaf or between two leaves spun together. Larva Jun–Jul and Sep. **Larval foodplants** Beech. Accepts oak in captivity. **Habitat** Beech woods, especially on calcareous soils and other places with mature Beech. Has colonised many areas where Beech is an introduction. **Status and distribution** Resident. Local. Well distributed in southern Britain, although more local in the Midlands, Wales and northern England. Has recently spread in Yorkshire and Lancashire. First recorded on Man in 2008. In Ireland, probably a recent colonist, first recorded in 1999, in Co. Down, and first recorded in the Irish Republic in 2007, very locally in Cos. Clare, Limerick and Waterford, and subsequently in Cos. Galway and Louth. First recorded on Guernsey in 2013, but considered to be an overlooked resident.

Dusky Hook-tip

plate 4

Drepana curvatula (Borkh.)

Immigrant 65.004 (1649)



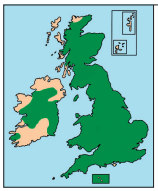
Field characters and similar species FW 16–21mm. Varies in colour from orange-brown with a slight lilac tinge, to dark brown with lilac-grey banding. Less variegated examples are not dissimilar to Pebble Hook-tip (and, like that species, rests with wings spread flat), but central spots on forewing are small, and hindwing has a strong, dark cross-line beyond middle. See also Scarce Hook-tip. **Flight season** Two generations in mainland Europe. May–Jun and late Jul–Aug. Nocturnal and comes to light. **Life cycle** Overwinters as a pupa. Larva Jun–Jul and Sep in mainland Europe. **Larval foodplants** Birch, Alder and oak in mainland Europe. **Status and distribution** Immigrant and possible future colonist. First recorded on 13 Aug 1960, a female at Dover, Kent. Over 90 more since, all but three since 1990 and mainly on or near the coast of southern and eastern England, from Cornwall to Lincolnshire. One in Westmorland in 2006 and several in the Channel Islands. Most have been in Aug, with some in May and Jul.

Pebble Hook-tip

plate 4

Drepana falcataria (L.)

Common 65.005 (1648)



Field characters FW 17–21mm. Central, rather pebble-like spot on forewing and distinct purplish-brown blotch along outer edge, near wing tip, are the main diagnostic features. Hindwing is generally paler, especially in leading half. Rests with wings spread flat. In the northern half of Scotland, ground colour of wings is straw white and outer markings darker (f. *scotica* Bytinski-Salz); formerly regarded as a distinct subspecies. Form

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

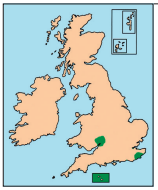
pallida Stephan is very pale, approaching ssp. *scotica*, but less strongly marked. **Similar species** See Dusky Hook-tip and Scarce Hook-tip. **Flight season** Two generations: in most places, late Apr–Jun and mid-Jul–early Sep, with occasional individuals of a possible third generation in Oct. In Scotland, one generation: mid-May–late Jul. Occasionally found at rest by day near foodplant. Comes to light, usually in small numbers. **Life cycle** Overwinters as a pupa, in a cocoon between leaves. Larva late Jun–late Jul and Sep in southern Britain, Jul–Aug in the north. **Larval foodplants** Downy Birch, Silver Birch and sometimes Alder. **Habitat** Woodland, heathland and other habitats with birch, including town gardens. Also Alder carr. **Status and distribution** Resident. Common. Found in suitable habitat throughout mainland Britain, except on high ground, and on Man, the Inner Hebrides and the Channel Islands. Widespread but local in Ireland.

Scarce Hook-tip

plate 4

Sabra harpagula (Esp.)

RDB; suspected immigrant 65.006 (1650)



Field characters FW 17–20mm. Distinctive. Forewing more strongly hooked than in related species, with a second distinct projection roughly midway along outer edge. The brown and gold blotch in centre of forewing and lilac and black outer markings are also diagnostic. Second-generation moths from mainland Europe are noticeably smaller. **Similar species** Pebble and Dusky hook-tips are superficially similar but lack the features mentioned above. **Flight season** One generation. Early Jun–mid-Jul. Can produce a partial second generation in captivity. Seldom seen, except in light-traps, to which it comes quite readily, more especially males. **Life cycle** Overwinters as a pupa, in a tough, thin cocoon spun in a curled leaf, which later falls to the ground. Larva late Jul–late Sep, sometimes mid-Oct. Apparently lives high in the canopy, since it is rarely beaten from the lower branches, but has been found on the trunk shoots (epicormic growth) of tall trees.

Fully grown larva of Scarce Hook-tip.

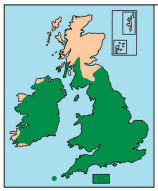
Larval foodplants Small-leaved Lime. **Habitat** Woodland with abundant Small-leaved Lime. **Status and distribution** Resident and occasional suspected immigrant. Red Data Book species. Currently appears to be resident only in the Wye Valley, on the border between Monmouthshire and Gloucestershire, where it was discovered in 1961. Here, the population seems to be stable. Formerly found at Leigh Woods, near Bristol, but not since 1938, despite searches. Single suspected immigrants on 26 Aug 2000 at Rye Harbour Nature Reserve, East Sussex, on Guernsey in 1996, and on Jersey in 2005–08.

Chinese Character

plate 4

Cilix glaucata (Scop.)

Common 65.007 (1651)



Field characters FW 10–13mm. Unmistakable. When at rest, with wings held steeply over the body, it closely resembles a bird dropping. There is little variation, but first generation tends to be more intensely marked than second. **Flight season** Two generations. Late Apr–early Jun and Jul–early Sep, tending to overlap in the north. Sometimes found at rest on vegetation by day. Nocturnal and comes regularly to light, usually in small numbers. Often seems to escape predation by birds on the outside of moth traps in the morning. **Life cycle** Overwinters as a pupa, in a cocoon attached to leaves, debris or bark. Larva mid-Jun–mid-Jul and late Aug–Sep. **Larval foodplants** Mainly Blackthorn, Hawthorn and Crab Apple. Bramble, Rowan and Pear are also recorded. **Habitat** Hedgerows, scrub and open woodland, on many soil types and in both damp and dry situations; also in gardens. **Status and distribution** Resident. Throughout England and Wales except on the highest ground, and in the Channel Islands and Man. In Scotland, only in parts of the south. Widespread in Ireland, but less so in the west.

Thyatirinae

Peach Blossom

plate 4

Thyatira batis (L.)

Common 65.008 (1652)

Field characters FW 16–19mm. Unmistakable, with pink and brown petal-like markings on forewing. Shows little variation. **Flight season** One generation. Late May–late Jul. Occasionally a partial second generation from late Aug–Sep in southern Britain. Hides in ground cover by day, becoming active from dusk, when it is attracted to sugar and wine ropes. Regular at light, usually in small numbers. Often fails

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

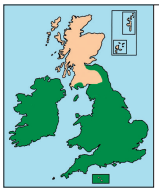
to enter the trap, instead fluttering around in short, hopping flights. **Life cycle** Overwinters as a pupa, in a cocoon on the soil surface or just below it. Larva early Jul–mid-Sep. Remains on the foodplant when small, but when larger hides in leaf litter by day, feeding mainly at night. **Larval foodplants** Bramble. **Habitat** Most numerous in light woodland and scrub, but also breeds at lower density in many other places where Bramble grows, including urban areas. **Status and distribution** Resident. Common. In suitable habitat throughout England, Wales, mainland Scotland and the Hebrides, Man, Ireland and the Channel Islands.

Buff Arches

plate 4

Habrosyne pyritoides (Hufn.)

Common 65.009 (1653)



Field characters FW 17–20mm. Forewing markings have a flint-like quality and are unmistakable, etched with white and orange-brown 'arches', as seen when at rest. Shows little variation. **Flight season** One generation. Late Jun–early Aug, with occasional individuals in the autumn. Active from dusk and often attracted to sugar and wine ropes. Comes frequently to light, and is sometimes numerous. **Life cycle** Overwinters as a pupa in a loose cocoon underground. Larva late Jul–mid-Oct. Reportedly more frequent on Bramble beneath trees than in the open; feeds mainly at night. **Larval foodplants** Bramble and Dewberry. Possibly also Raspberry, which it will accept in captivity. **Habitat** Most numerous in open woodland, particularly coppiced areas and young plantations; also scrubby grassland and many other places where Bramble grows, including gardens. **Status and distribution** Resident. Common. Throughout England and Wales, north to Cumbria, Northumberland and Man. Scarce in southern Scotland. Widespread and frequent in Ireland. Abundant in the Channel Islands.

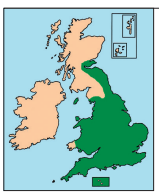
Figure of Eighty

plate 4

Tethea ocularis (L.) 65.010 (1654)

ssp. *octogesimea* (Hb.)

Common



Field characters FW 16–20mm. White and rather finely etched figure '80' in centre of forewing is diagnostic. Cross-lines generally rather fine, and that beyond '80' mark curves more or less around it before reaching leading edge. Forewing light to dark brown, often with a purplish sheen. The dark f. *fusca* Cock. was first recorded in south and south-east England in the 1940s, and has since spread; it is suspected to have arrived by immigration. **Similar species** See Poplar Lutestring and Figure of Eight. **Flight season** One generation. Late May–Jul. Nocturnal. Comes to light, wine ropes and sugar. **Life cycle** Overwinters as a pupa, in a frail cocoon formed between leaves of the foodplant, which fall to the ground in autumn. Larva mid-Jul–Sep. Rests by day between two leaves spun flatly together; feeds at night. **Larval foodplants** Aspen and other poplars. **Habitat** A wide variety, including broadleaved woodland, carr, river valleys, plantations, parkland, hedgerows and gardens. **Status and distribution** Resident and possibly immigrant. Common. Throughout most of England and Wales, north to Cumbria and Northumberland. First recorded on Man in 1998. Has recently been recorded over a wide area of eastern Scotland, north to West Lothian and Fife. Widespread in the Channel Islands.

Poplar Lutestring

plate 4

Tethea or or ([D. and S.]) 65.011 (1655)

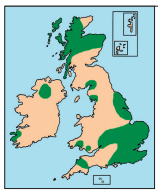
Local

ssp. *scotica* (Tutt)

Local

ssp. *hibernica* (Turn.)

Ireland



Field characters and similar species FW 16–19mm. Ssp. *or* is not unlike Figure of Eighty. The dark cross-lines and bands or 'lute-strings' on forewing are wavier, generally thicker and more numerous, usually numbering three or four in basal half. Central whitish mark is not clearly numerical and cross-line beyond it turns toward wing tip before reaching leading edge. Central markings may be faint or occasionally replaced by a dark mark. See also Yellow Horned and Figure of Eight. In ssp. *scotica* the dark markings are usually more sharply defined and ground colour paler grey, sometimes with a purplish tinge when freshly emerged, although indistinctly marked brownish forms also occur. Ssp. *hibernica* is midway between ssp. *or* and ssp. *scotica* in terms of colour, but with weaker markings. **Flight season** One generation. Late May–early Aug in England and Wales, Jun–early Jul in Scotland and Ireland. Nocturnal. Comes to light, sugar and wine ropes. **Life cycle** Overwinters as a pupa, in a cocoon formed between leaves of the foodplant, which fall to the ground in autumn. Larva mid-Jul–Sep. Lives by day between two leaves spun flat together; feeds openly at night. **Larval foodplants** Aspen, and sometimes other poplars. **Habitat** Broadleaved woodland and other habitats with well-established Aspen, including low regrowth. **Status and distribution** Resident. Local. Ssp. *or* is widespread south of a line from the Severn to the Humber (although rare in the south-west) and local in Wales. Very local further north, but records extend to the Scottish border. Ssp. *scotica* is widespread in the Scottish Highlands and found in the Hebrides. Ssp. *hibernica* is very local in Ireland, mainly in the north.

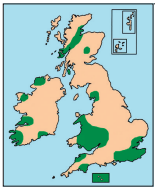
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Satin Lutestring

plate 4

Tetheella fluctuosa (Hb.)

Local 65.012 (1656)



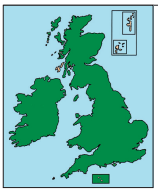
Field characters and similar species FW 17–21mm. Similar to Common Lutestring, but generally larger. Diagnostic features are the small dark crescent or dash in centre of forewing and small dark dash arising on leading edge just inside pale outermost cross-line. Most examples in the south have outer part of forewing broadly pale. F. *albilinea* Lempke, which is darker with narrow whitish bands, predominates in Scotland and has occurred elsewhere. In the west of Ireland, ground colour is paler. F. *unicolor* Lempke, with more uniformly dark greyish-brown forewing, has occurred regularly at Hamstreet, Kent, since 1955, and also in Surrey, Sussex and Staffordshire. **Flight season** One generation. Jun–early Aug. Sometimes disturbed by day from tree foliage. Nocturnal. Comes to light, often in quite large numbers, especially in the west of its range, and occasionally to sugar or wine ropes. **Life cycle** Overwinters as a pupa, in a cocoon formed between leaves of the foodplant, falling to the ground in autumn. Larva late Jul–mid-Sep. Rests in spun leaves by day and feeds at night. **Larval foodplants** Birches. Also recorded on Alder. **Habitat** Mainly long-established, mature broadleaved woodland; wooded heathland in south-east England. **Status and distribution** Resident. Local. Locally widespread and frequent in south-east England, especially the Weald of Kent, Sussex and Surrey. Also found locally in east Hampshire, south-west England, Forest of Dean, west Midlands, south and north-west Wales and the Lake District. In Scotland, quite widespread around the Great Glen, Inverness-shire, and recorded locally in East Ross, Sutherland, Perthshire, Mull and Arran. In Ireland, widespread but very local, mainly in the west. Local and rare in the Channel Islands.

Common Lutestring

plate 4

Ochropacha duplaris (L.)

Common 65.013 (1657)



Field characters and similar species FW 14–18mm. Rather like Satin Lutestring, but usually smaller. Diagnostic features are the pair of small dark dots in centre of forewing (occasionally almost merged) and diagonal black dash arising from forewing tip. These characters are visible in all forms. Considerable variation occurs in strength of cross-lines and bands. The more or less uniform grey-brown f. *obscura* Tutt predominates in many parts of England, and blackish-brown melanic forms are found in the London area, the Midlands and Scotland. Strongly banded forms are more frequent in the north and west, including Ireland, where outer area of forewing is often whitish. **Flight season** One generation. Mid-Jun–mid-Aug. Nocturnal. Comes to light and sugar, sometimes in fair numbers, but at many sites only occasionally. **Life cycle** Overwinters as a pupa, in a cocoon formed between leaves of the foodplant, which fall to the ground in autumn. Larva late Jul–early Oct. Rests in spun leaves by day and feeds at night. **Larval foodplants** Birches. Also reported from Alder, Hazel and oaks. **Habitat** Light woodland and scrub where birches are frequent, often in river valleys in northern Britain, but more generally in woodland and heathland further south. In south-east England, not unusual in suburban gardens. **Status and distribution** Resident. Common. Throughout most of Britain and the Channel Islands, Man and Ireland, but scarcer on calcareous soils, for instance in the Chilterns and Cotswolds. In Scotland, extends to Caithness and the Outer Hebrides (old records from Hoy, Orkney).

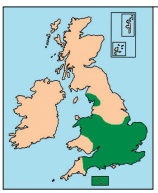
Oak Lutestring

plate 4

Cymatophorina diluta ([D. and S.])

ssp. *hartwiegi* (Reisser)

Local 65.014 (1658)



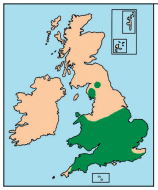
Field characters and similar species FW 15–17mm. Usually easy to recognise, with two strong, black-edged brown cross-bands on pale grey forewing. There are several darker forms. In f. *nubilata* Robson, forewing is largely brown, but darker cross-lines remain. This form is frequent and widely distributed. Rare forms have grey-brown forewing, with broad, dark grey-brown or black central cross-band. Other lutestring moths either lack the brown bands or have a predominantly brown forewing. **Flight season** One generation. Late Aug–Sep, sometimes early Oct. Flies from early dusk, coming to sugar and wine ropes, and later to light, sometimes in fair numbers. **Life cycle** Overwinters as an egg, attached to a twig of the foodplant. Larva Apr or early May–early Jul. Hatches after bud-burst; emerges from spun leaves to feed at night. Pupates in a cocoon, formed among foliage on the tree. **Larval foodplants** Pedunculate Oak and Sessile Oak. **Habitat** Long-established broadleaved woodland containing mature oak trees. **Status and distribution** Resident. Local. Well distributed in southern England, from Dorset to Kent, and quite widespread northwards to the clay vale between Oxford and Peterborough, the Midlands, Wye Valley, and north and west Wales. More thinly scattered and local in the rest of England and Wales south of the Humber. In the west, extends well into Cumbria, but rare in Yorkshire and only very old records from Northumberland and the Scottish borders. Recorded once in the Channel Islands in 2006, on Guernsey.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Frosted Green plate 4

Polyploca ridens (Fabr.)

Local 65.015 (1660)



Field characters FW 15–17mm. Rather distinctive. The predominantly dark green colour, prominent ear-like tufts on thorax, and variable mixture of black, green and greenish-white marbling on forewing distinguish this moth from other spring-flying moths of similar size and build. The most frequent form in much of south-east England and the Midlands is blackish green (f. *fumosa* Warn.). An extreme melanic form is f. *unicolor* Cock., which lacks markings and is found in Surrey and Hertfordshire. The brightest forms are more frequent further north and west. **Flight season** One generation. Mid-Apr–mid-May. Comes to light, often in numbers, but seldom to sugar or other baits. **Life cycle** Overwinters as a pupa, in a compact cocoon formed under moss at the base of a tree, in leaf litter or in soil. Larva late May–mid-Jul. Eggs are laid singly on the twigs of the foodplant. Larva feeds at night and rests by day on the underside of a leaf curled downwards by silk threads. **Larval foodplants** Pedunculate and Sessile oaks; possibly Turkey Oak. **Habitat** Mainly long-established broadleaved woodland with mature trees, but also hedgerows in well-wooded areas. **Status and distribution** Resident. Local. Widespread in the southern half of England, north to Lincolnshire (the ancient lime woods near Bardney), Nottinghamshire (Sherwood Forest) and throughout Wales. Very local in Cumbria and otherwise rare in northern England. A single record in Northumberland in 2011.

Yellow Horned plate 4

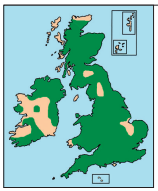
Achlya flavicornis (L.) 65.016 (1659)

ssp. *galbanus* (Tutt)

Common

ssp. *scotica* (Tutt)

Common



Field characters FW 17–20mm. Ssp. *galbanus* is quite distinctive, with orange antennae that give the moth both its English and scientific names. Forewing grey with greenish-white or white frosting, especially on central portion of leading edge, but varying in extent. Pale central markings vary somewhat in size and shape, as do cross-lines. Ssp. *scotica* is larger, with darker mauvish-grey forewing, and more heavily marked than ssp. *galbanus*. Central markings are greenish white, but frosting on leading edge is usually whitish. Intermediates occur in northern England. **Similar species** See Poplar Lutestring, which has brown antennae and flies much later in the year. **Flight season** One generation. Late Feb–mid-Apr. Comes to light. Also visits sugar, sap runs and sallow catkins. Sometimes found at rest on posts, particularly in open habitats, or with wings pressed close around twigs of small birches; occasionally flies on sunny afternoons. **Life cycle** Overwinters as a pupa, in a thin cocoon among leaf litter on the ground. Larva mid-May–mid-Jul. Hides by day between two leaves tightly spun together and feeds at night. **Larval foodplants** Silver Birch and Downy Birch. **Habitat** Woodland, and on heathland and moorland with birch scrub. **Status and distribution** Resident. Common. Ssp. *galbanus* is well distributed and fairly frequent in suitable habitat in most parts of England and Wales, more so on acid soils and clays than on lighter, calcareous soils. Widespread in Ireland. Ssp. *scotica* is well distributed in mainland Scotland (except the extreme north), particularly in the major river valleys, and the Inner Hebrides, and has been recorded from Orkney.

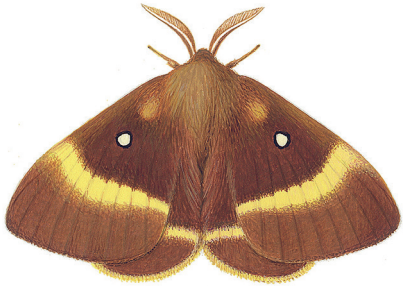
Lasiocampidae Eggar and lappet moths

This family of about 1,000 species occurs throughout the world. Ten species are natural residents in the British Isles, an eleventh is almost certainly extinct, and a twelfth is an occasional immigrant and resident as a possible introduction. These are thickset, medium-sized or large moths with deep, rounded, usually warm brown or yellowish wings, generally bearing a small central spot or two cross-lines on the forewings.

The males have broadly feathered antennae, with which they can detect the scent of unmated females from several hundred metres. The males of two of the largest British species (Oak Eggar and Fox Moth) do this by day and are often seen flying

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

rapidly on sunny afternoons. Females of these species and both sexes of others are nocturnal and come to light-traps. Adults are unable to feed. Some species, such as the Oak Eggar, broadcast their eggs in flight, but most attach them to the foodplant. The larvae are covered in dense hairs, which protect them from being eaten by most birds, except cuckoos, and can sometimes cause skin irritation in humans when handled. Some feed openly by day and are often seen basking in the sun. Pupation occurs in a substantial, sometimes tough cocoon formed above ground, attached to vegetation and generally incorporating some of the larval hairs.



Oak Eggar

Drinker

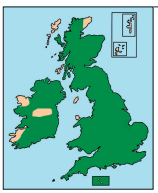
Poecilocampinae

December Moth

plate 5

Poecilocampa populi (L.)

Common 66.001 (1631)



Field characters FW 15–22mm. Fairly unmistakable. Cream and buff collar on black thorax and creamy-white cross-bands on charcoal-coloured forewing can be striking. Very little variation, but female is larger. **Similar species** Small Eggar is somewhat similar but is reddish brown with a prominent white central spot on forewing and usually flies in late winter or early spring. **Flight season** One generation. Late Oct–Jan in southern Britain, from early Oct in the north. Nocturnal. Comes to light, sometimes in large numbers, otherwise seldom seen. **Life cycle** Overwinters as an egg, attached to a twig or trunk. Larva Apr–Jun. Feeds at night, resting along a twig or on bark by day. Pupates under loose bark or among plant debris. **Larval foodplants** Broadleaved trees, including oaks, birches, elms, hawthorns, Blackthorn, poplars and sallows. **Habitat** Most numerous in woodland, but also frequent in scrub, hedgerows and established gardens. **Status and distribution** Resident. Common. In suitable habitat throughout most of Britain and the Inner Hebrides. One record from Man, in 1970. Widespread in Ireland. Local and rare in the Channel Islands.

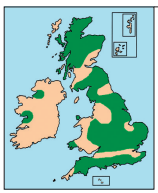
Malacosomatinae

Pale Eggar

plate 5

Trichiura crataegi (L.)

Common 66.002 (1632)



Field characters FW 14–17mm. The only pale grey eggar found in the British Isles. Wavy black or dark grey outer edge of central band on forewing, and absence of a dark central spot or crescent, are also diagnostic. Female is duller and slightly brownish. Markings vary little, but both sexes tend to be darker in the cooler climate of upland areas. **Similar species** See Pine Processionary and Oak Processionary. **Flight season** One generation. Aug–Sep. Comes to light, sometimes in numbers, especially male. **Life cycle** Overwinters as an egg on the foodplant. Larva Apr–Jun, but in upland parts of Scotland and possibly northern England a second winter is sometimes passed as a nearly fully grown larva. Pupates in a cocoon formed in leaf litter. **Larval foodplants** Principally birches, Blackthorn and hawthorns, favouring sunny locations, and also recorded from sallows, Hazel, Crab Apple, oaks, Bilberry, Bell Heather and Heather. **Habitat** Open woodland, hedgerows, heathland, moorland, scrub and gardens. **Status and distribution** Resident. Common. Well distributed in most of England north into Yorkshire, but possibly in decline in some areas, especially the Midlands and the south-east, and scarce west of the Pennines. Local in Wales.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

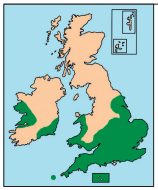
Widespread in mainland Scotland and the Inner Hebrides, especially in river valleys, but rare in the south-west. Very local in Ireland, in the Burren, Cos. Clare and Galway, and in the north, in old woodlands on light soils in Co. Fermanagh, and in Cos. Sligo and Leitrim.

Lackey

plate 5

Malacosoma neustria (L.)

Common 66.003 (1634)



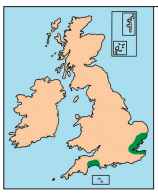
Field characters and similar species FW M 13–16mm F 16–21mm. Rather variable in colour, from straw yellow to reddish brown, although usually easily recognisable (but see Ground Lackey). Diagnostic features are two roughly parallel cross-lines (only rarely weak or absent) on forewing, brown and white chequered fringes with two very distinct reflective white patches (duller in Ground Lackey), and hindwing either the same colour as forewing or paler. Female larger in both species. **Flight season** One generation. Late Jun–Aug. Fairly frequent at light, especially male. **Life cycle** Overwinters as an egg, laid in bands around a twig of the foodplant. Larva Apr–Jun, living in groups in webs, on which they bask until almost fully grown. Pupates in a tough yellow cocoon among low stems or plant debris. **Larval foodplants** Many broadleaved trees and shrubs, particularly of the rose family, including Hawthorn, Blackthorn, cherries, plums, Apple and cultivated *Potentilla* shrubs, but also oaks and willows. **Habitat** Open, sunny situations, especially hedgerows, scrubby places, gardens and open woodland. **Status and distribution** Resident. Common. Well distributed and frequent throughout most of the southern half of Britain, north to South-east Yorkshire, around coastal areas of Wales and in the Channel Islands. Very scarce or absent in the north Midlands. A few scattered old records from the remainder of northern England, Man and south-west Scotland. In Ireland, locally widespread in the west, notably in Co. Clare, and in the south-east. There are old records from the north.

Ground Lackey

plate 5

Malacosoma castrensis (L.)

Na 66.004 (1635)



Field characters and similar species FW M 13–16mm F 17–21mm. Similar in colour and markings to Lackey, but differing in several respects. Two cross-lines (often weak or absent) on forewing form a waist at the centre as a result of an outward-facing kink in first cross-line, more obvious in male, and first cross-line curves strongly towards base in trailing half of wing. Forewing margin is chequered brown and buff; hindwing is same colour as forewing, or darker, with fringes paler than wing (darker in Lackey). **Flight season** One generation. Jul–Aug. Nocturnal. Occasionally found at rest but normally seen only at light. **Life cycle** Overwinters as an egg, laid in single-layered bands around a standing stem of a saltmarsh plant, usually remaining in place during winter inundations by the sea. Larva Apr–Jul, pupating among saltmarsh plants in a slight, transparent cocoon. **Larval foodplants** Herbaceous saltmarsh plants, including Sea Plantain, Common Sea-lavender, Sea Wormwood, Sea-purslane, Grass-leaved Orache and Golden-samphire. Also Wild Carrot. Can be reared on hawthorns and Blackthorn but must have warmth, and preferably sunshine. **Habitat** Saltmarshes and coastal shingle. **Status and distribution** Resident. Nationally Scarce A. Largely confined to the saltmarshes of the south-east coast of England, namely the north Kent marshes (including Fowley Island), the estuaries of Essex, the Suffolk marshes around Orford Ness, and north to Benacre Ness, near Southwold. Well established on shingle and saltings at Axmouth, Devon, where it was discovered in 1995. Nineteenth-century records from near Exeter suggest this may be a long-overlooked population. Early 20th-century records from Sussex (Pevensey).

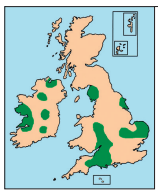
Lasiocampinae

Small Eggar

plate 5

Eriogaster lanestris (L.)

Nb 66.005 (1633)



Field characters FW 15–21mm. A deep reddish-brown moth with a whitish spot in centre and at base of forewing. Female is larger and has a large tuft of grey scales at end of abdomen, used to cover the egg batches. **Similar species** See December Moth. **Flight season** One generation. Jan–Mar. Rarely seen, except occasionally in light-traps. **Life cycle** Overwinters as a pupa in a hard, rounded brown cocoon, usually near the ground, but has been found in a bat box up a tree. Often passes two or three winters before emerging, and in captivity up to seven. Larva Apr–Jul. Larvae live gregariously until part way through the final instar, spinning a compact web, basking on this during warm sunshine and feeding mainly at night. Hedges and bushes lightly trimmed in the autumn are preferred to uncut ones. **Larval foodplants** Chiefly Blackthorn or Hawthorn, occasionally elms, Spindle, Apple and Grey Willow. **Habitat** Hedgerows and scattered bushes in open country. **Status and distribution** Resident. Nationally Scarce B and much decreased. Populations are subject to large fluctuations in numbers, for reasons that are unclear. Now most frequent in

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Somerset and Dorset; also in Gloucestershire and Wiltshire, and found locally in other areas, including west Oxfordshire, Northamptonshire, Huntingdonshire, Norfolk and north Yorkshire (Pickering, Scarborough), Cumbria (several recent sites) and Wales, including Monmouthshire (Gwent Levels around Newport). Older records exist from many other parts of mainland Britain, extending north to southern Scotland. In Northern Ireland, currently known only from Cos. Derry and Fermanagh, with old records from Enniskillen. In the Irish Republic, found mainly in the Burren area of Co. Clare, and recently in Cos. Limerick, Westmeath and Tipperary.

Grass Eggar

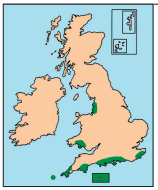
plate 5

Lasiocampa trifolii ([D. and S.])

Na 66.006 (1636)

Pale Grass Eggar ssp. *flava* C.-Hunt

RDB



Field characters FW M 21–24mm F 25–30mm. Grass Eggar is quite a distinctive large reddish-brown moth, with a curved outer cross-line on forewing and clear white spot near centre. An inner cross-line is sometimes present. Shows considerable geographical variation, with darker, sometimes blackish-brown forms in more northern and western colonies. Pale Grass Eggar is a straw-yellow or brownish-yellow form, with similar markings to Grass Eggar. The infrequent f. *obsoleta* Tutt lacks cross-lines and central spot has no dark ring. **Similar species** Female Pale Grass Eggar might be confused with female Oak Eggar, which is usually larger, with outer cross-band on forewing wider and inner cross-line absent. **Flight season** One generation. Aug–Sep. Comes to light; unlikely to be seen otherwise. **Life cycle** Overwinters as an egg, laid loose among short vegetation. Larva late Mar–Jul, feeding at night. Pupates in a tough brown cocoon on the ground, usually attached to vegetation. **Larval foodplants** Seems to vary from colony to colony: mainly False Oat-grass at Dungeness; Tree Lupin on Hayling Island, Hampshire; Marram at Studland, Dorset; Bramble at Prawle Point, Devon; and Creeping Willow at Formby, Lancashire. Also Kidney Vetch, Common Bird's-foot-trefoil, Red Clover, Spiny Restharrow and Thrift. **Habitat** Lightly vegetated sand-dunes, sea-cliffs and coastal shingle, and acid heathland inland. **Status and distribution** Resident. Grass Eggar: Nationally Scarce A. Very local on sand-dunes on the coasts of Scilly, Dorset, Hampshire, south Wales (Carmarthenshire), Cheshire and Lancashire (where it is now found only at Formby). Old records from Somerset and Glamorgan. Also on sea-cliffs in south Devon and Cornwall, and heathland inland in Dorset and formerly in Hampshire. Widespread and frequent in the Channel Islands. Pale Grass Eggar: Red Data Book taxon. Confined in mainland Britain to Dungeness, Kent, but until the 1950s also occurred at the Crumbles, near Eastbourne, Sussex. Occurs as 3–4% of the population at one site on Alderney, Channel Islands.

Oak Eggar

plate 6

Lasiocampa quercus (L.)

Common 66.007 (1637)

Northern Eggar ssp. *callunae* Palmer

Common

Field characters FW M 25–34mm F 33–40mm. Rich, deep brown colour of male, together with white central spot and broad pale outer band on forewing, is unmistakable. Buff or light brown female, with a similar pattern, is also distinctive. Northern Eggar is larger than Oak Eggar, and in male the pale basal patch on forewing is often larger; female Northern Eggar is darker and browner than female Oak Eggar. The blackish-brown f. *olivacea* Tutt is found in Oak Eggars on sand-dunes on the Cheshire and Lancashire coasts, and in Northern Eggars on moorland in Yorkshire and the northern half of Scotland. **Similar species** See Grass Eggar, which is usually smaller. **Flight season** One generation. Jul–Aug in the south and in most of Ireland, late May–Jul in the north (even from late Apr on Irish bogs). Male flies fast in a zigzag fashion by day, usually in afternoon sunshine. Female flies from early dusk and comes to light early in the night. **Life cycle** In the south, overwinters once, as a third instar larva; larva Aug–Jun, often basking in sunshine. In the north, overwinters once as a small larva and once as a pupa; larva Jul–May. Larval hairs may cause skin irritation. Pupates among leaf litter in a very tough brown cocoon. **Larval foodplants** On heaths and moors, mainly heathers and also Bilberry. Also Bramble, Blackthorn, hawthorns, sallows, Hazel, Sea-buckthorn and other woody plants. In captivity, also Garden Privet and Ivy. **Habitat** Heathland, moorland, woodland edges, hedgerows, scrub, breckland, downland, fens, sand-dunes and sea-cliffs. **Status and distribution** Resident. Common. Widespread and often frequent over most of Britain, including the Outer Hebrides and Orkney, in Ireland and the Channel Islands. Much less frequent in the intensively farmed areas of the central lowlands of England. Formerly on Man, but now apparently extinct there. Although nominally split into subspecies, the situation is more complex and key features vary within populations. Moths with a one-year life cycle (Oak Eggars) are found in south-east, south-west, eastern and southern England, East Anglia, the south Midlands, and the Cheshire and Lancashire coasts. However, many of those from Hampshire, Dorset and south-west England (and females from the north-west coast) resemble Northern Eggars. Typical Northern Eggars,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

with a two-year life cycle, occur on moorland in northern England, Wales and Scotland. There appears to be an intermediate zone with either a one-year or two-year life cycle in the Midlands and the Welsh borders. In Ireland, the situation may roughly parallel that in Britain. The flight period in most places suggests a one-year life cycle, although moths on moorland in some areas resemble Northern Eggar.

Fox Moth plate 6

Macrothylacia rubi (L.)

Common 66.008 (1638)

Field characters FW M 22–26mm F 26–31mm. Combination of large size and two narrow, roughly parallel (less so in female) pale cross-bands on otherwise plain forewing (without a central white spot) makes this moth unmistakable. Male is predominantly red-brown, female largely grey-brown. Moths from the cooler northern and upland areas are often darker, less red and greyer than those from southern lowlands. **Flight season** One generation. May–Jun. Male flies rapidly by day, but sometimes comes to light. Female is strictly nocturnal and can be frequent at light. **Life cycle** Overwinters as a fully grown larva, on or just beneath the ground under moss or leaf litter. Larva Jun–Apr, feeding until Sep. Emerges briefly, without feeding again, to bask in spring sunshine, and pupates in a long, cigar-shaped cocoon near the ground. **Larval foodplants** Include heathers, Bilberry and Creeping Willow on moors and heaths, Bramble, Meadowsweet in wet flushes, and Salad Burnet on downland. **Habitat** Heathland, moorland, downland, damp meadows, coastal grassland, sand-dunes and open woodland. **Status and distribution** Resident. Common. Widely distributed and locally frequent throughout most of the British Isles, including Man, the Outer Hebrides and Orkney. In Ireland, mainly in the north and west. Widespread but infrequent in the Channel Islands.

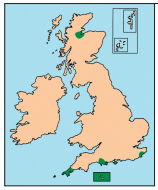
Fully grown larva of Fox Moth.

Pinarinae

Pine-tree Lappet plate 6

Dendrolimus pini (L.)

Immigrant; resident of uncertain origin 66.009 (1639)



Field characters FW 29–42mm. Quite distinctive, but very variable in colour. Forewing with inner central cross-line curving around a roughly central white spot. Central cross-line scalloped, curved to leading edge. Outermost cross-line very irregular and jagged, often forming the outer edge of a cross-band. In one frequent form, wings are warm reddish brown, with slight to very extensive pale grey frosting. Outer band may be grey, brown or white. Other forms are dark brown or grey. Female is larger, with more elongated forewing. Varies geographically in mainland Europe, where several subspecies are recognised. **Flight season** One generation in mainland Europe, Jun–Sep, but two generations in the south, May–Oct. Comes to light. **Life cycle** In mainland Europe, overwinters as a part-grown larva among fallen needles or moss on the ground. Larva Sep–late Jun, reascending the tree in the spring. Forms a cocoon in a bark crevice, on a branch or among needles. **Larval foodplants** Pines, spruces and other conifers. **Habitat** Coniferous woodland, plantations and parkland. **Status and distribution** Rare immigrant and highly localised resident of uncertain origin. A male was recorded at light on 12 Aug 1996 at Freshwater, Isle of Wight, during an exceptional period of immigration, with further single males at light on the Lizard, Cornwall, in 2003; Littlestone, Kent, in 2004; 16 in the Channel Islands (Guernsey and Jersey) from 1989 to 2009; one on the Isle of Wight in 2010; and one at Portland Bill, Dorset, in 2011. In Scotland, a male was recorded at Leachkin, just outside Inverness, on 28 Jul 2004. In 2007, two were caught at light in late Jun in mature mixed woodland near Kiltarlity, roughly 14km west of Leachkin, with six at this site in late Jun 2008, and four in pheromone traps that year, indicating the presence of a breeding population. The origin of this is uncertain. Immigration resulting in natural colonisation or accidental introduction, perhaps via the nearby port of Inverness, seems possible. There is also the possibility that it is an overlooked resident, but it does not appear to be present in native pinewoods, as might have been expected. In 1999, a female was reared from a larva found on pine purchased from a nursery in Essex, which had received stock from Italy that year. Prior to the modern records, a larva was (dubiously) recorded near Richmond Park, Surrey in 1748, a male was recorded in Norwich in 1809, and a male in the Natural History Museum, London, is

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

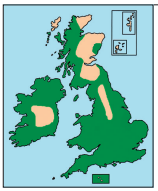
labelled 'Brighton', 1894. Widespread in mainland Europe. **Biosecurity and monitoring** As the population may not have a natural origin and because the species is a serious forest pest in parts of mainland Europe, biosecurity measures are in place and monitoring is being carried out (see Forestry Commission website for further information).

Drinker

plate 7

Euthrix potatoria (L.)

Common 66.010 (1640)



Field characters FW M 21–25mm F 28–35mm. Distinguished from other large eggars by outer cross-line on forewing, which runs diagonally to wing tip, and small additional white spot near middle of leading edge. Male is normally warm reddish brown, with yellowish patches. Female varies from deep yellow to very pale buff, whitish, or reddish brown like male (f. *obscura* Tutt). In the fens of East Anglia, an entirely yellowish male form is not infrequent (f. *pallida* Tutt), but is rare elsewhere. **Flight season** One generation. Jul–Aug. Comes to light, the male more frequently. **Life cycle** Overwinters as a small larva. Larva Aug–Jun. Pupates in a tapering cream-coloured papery cocoon spun above ground, usually on a grass stem but sometimes under a log. **Larval foodplants** A wide range of coarse grasses, reeds and sedges, including Cock's-foot, couches, Common Reed, Reed Canary-grass and Wood Small-reed. **Habitat** Most frequent in tall, damp grassland, fens, marshes, boggy areas on heathland and low moorland, damp open woodland, scrub and ditches, but also in drier places, including urban gardens. **Status and distribution** Resident. Common. Well distributed throughout most of England, but absent from parts of northern England (mainly higher ground). In the east, extends north to Northumberland and very locally in eastern Scotland, including and the Berwickshire coast. Well distributed in the western half of Scotland, to the north coast. Local and rare on Man. Well distributed in most of Ireland, and in the Channel Islands.

Small Lappet

plate 7

Phyllodesma ilicifolia (L.)

Former resident; presumed extinct 66.011 (1641)

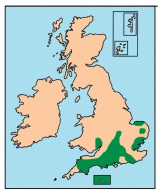
Field characters and similar species FW 18–20mm. Like a very much smaller Lappet in shape, markings and resting posture, but with a light brown forewing, greyer towards outer edge. **Flight season** One generation. Late Apr–May. Comes to light, but was rarely found by this method in Britain. Occasionally found at rest by day on the foodplant. **Life cycle** Overwinters as a pupa in a cocoon formed near the ground. Larva Jun–mid-Aug. **Larval foodplants** Bilberry. **Habitat** Moorland and open woodland. **Status and distribution** Former resident, now probably extinct. The first British records were from Yorkshire in 1850 near Ripon, Dallowgill Moor in Nidderdale and Blubberhouses Moor, where it was found in small numbers until 1882. It was discovered at Cannock Chase, Staffordshire, in 1851 and found occasionally there as larvae up to about 1900, and from the Long Mynd, Shropshire, in 1889. There is an unconfirmed record of a larva in 1864 at Lynton, North Devon, and another in Aug 1938 from Porlock, Somerset. The last confirmed records are of one to light on 15 May 1965 at Weston-super-Mare, Somerset, and another in 1939 at the Rugeley end of Cannock Chase. A report of larvae in 1985 in south-west England was a hoax. It remains possible that undiscovered populations exist in some remote places, but Cannock Chase has subsequently been searched many times without success.

Lappet

plate 7

Gastropacha quercifolia (L.)

Common 66.012 (1642)

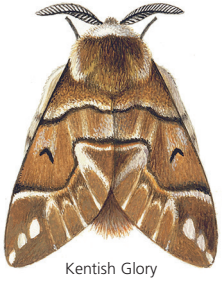


Field characters FW 28–42mm. The large size, purplish-brown coloration, scalloped outer edge of wing, resting posture and prominent snout are diagnostic. Little variation. Pale buff and blackish forms are very rare. **Flight season** One generation. Late Jun–mid-Aug. Comes to light in small numbers. **Life cycle** Overwinters as a small larva. Larva Aug–late May. Feeds at night, and when large rests low on a main stem by day. Pupates in a tough cocoon near the ground, attached to vegetation. **Larval foodplants** Chiefly Blackthorn, Hawthorn, Crab Apple and cultivated Apple. Also sallows, and reportedly Buckthorn and Alder Buckthorn. Most often found on small, isolated bushes. **Habitat** Hedgerows and thorn scrub on downland, and open woodland. **Status and distribution** Resident. Common. Formerly well distributed in England, south of a line roughly from the Severn to the Wash, extending more locally into the Midlands, Wales and Yorkshire. Has declined since the 1980s, if not for longer. Now mainly found in south-west and southern England, the south-west Midlands and East Anglia. Also on Alderney (where it is frequent) and Guernsey.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Endromidae

This family includes just one species in the British Isles, the Kentish Glory, which has been recorded from almost every country in Europe except Ireland, Albania, Greece and Turkey. It occurs in birch forests from Europe, through Asia to southern Siberia and the Far East.



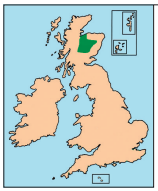
Kentish Glory

Kentish Glory

plate 7

Endromis versicolora (L.)

Na 67.001 (1644)



Field characters FW M 27–30mm F 34–39mm. A large, rather stout moth with unmistakable brown and white forewing markings. Slightly smaller, darker male has orange-brown hindwing, whereas that of female is largely brownish white. **Flight season** One generation. Late Apr–mid-May. The extinct southern populations emerged from late Mar. Male flies from mid-morning to early afternoon. Both sexes fly from dusk and come to light, and can sometimes be found by day at rest on birch twigs or other vegetation, up to 2–3m from the ground. They do not feed. **Life cycle** Overwinters as a pupa, in a coarse webbed cocoon formed on the ground. Larva mid-May–mid-Aug, feeding at first gregariously and then singly. Egg batches are laid on the outer twigs of low birch scrub, less than 2m above the ground in open, sunny, sheltered places. **Larval foodplants** Silver Birch, and less often Downy Birch and Alder. **Habitat** Open birch woodland and lightly wooded moorland where birch or Alder is freely regenerating. **Status and distribution** Resident. Nationally Scarce A. Restricted to the central and eastern Highlands of Scotland, at Rannoch and the Upper Tay valley in Perthshire, the Spey catchment in Inverness-shire, the Morayshire coast, Deeside in Aberdeenshire and Kincardineshire, and possibly at Glen Strathfarrar, south-west of Inverness. It has declined at sites such as Aviemore and Rannoch, where the birch has become mature, but has increased in central Deeside, where birch regrowth has become extensive. In the 19th century, local in Kent, Sussex, Berkshire, East Anglia, Herefordshire, Worcestershire and Monmouthshire. It survived in the west Midlands in the 20th century, but was last seen in southern Britain in the Wyre Forest, Worcestershire, in about 1970.

Saturniidae

Emperor moths

Emperor Moth

This family comprises about 1,300 species. It includes the giant silk-moths, some of the largest known moths. Many have large central eye-spots on the wings. The distribution is worldwide, but more of the species occur in the tropics of Central and South America than elsewhere. About a dozen occur in Europe, some having been introduced from other parts of the world. Only one species is resident in the British Isles. The adults do not feed.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Saturniinae

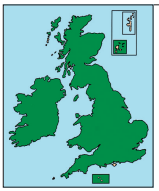
Emperor Moth

plate 7

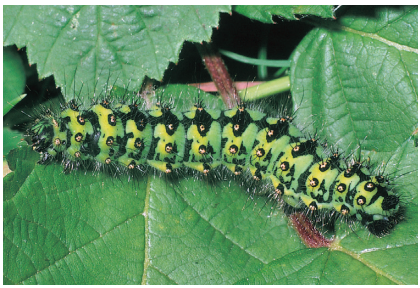
Saturnia pavonia (L.)

Common

68.001 (1643)



Field characters FW M 27–32mm F 35–41mm. Unmistakable. Variation is rare, but both sexes from northern or upland sites are more intensely coloured, with female even bluish. Smoky individuals and a form lacking eyespots have occurred. **Similar species** Great Peacock Moth *Saturnia pyri* ([D. and S.]), found in the southern half of mainland Europe, is occasionally recorded as an adventive. It is reminiscent of Emperor Moth, but much larger (FW 63–77mm) and with dark brown ground colour. **Flight season** One generation. Apr–late May. Male flies rapidly by day in sunshine (especially in mid- to late afternoon) and could be mistaken for a nymphalid butterfly, such as Small Tortoiseshell *Aglais urticae* (L.). Seldom seen in numbers, unless a virgin female is found. One female may attract many males. Female flies at night and comes to light in small numbers, usually early in the night, and can sometimes be found at rest by day. **Life cycle** Overwinters as a pupa (sometimes twice), within a droplet-shaped, light brown, tough papery cocoon with a closed circle of upward-pointing spines around the narrow opening to repel predators. It is attached to a plant stem near the ground. Eggs are laid in batches, attached to the foodplant. Larva late May–Aug, living in groups at first and often sitting exposed by day. **Larval foodplants** Mostly woody plants, including heathers, Meadowsweet, Alder Buckthorn, Bramble, hawthorns, Blackthorn, sallows and birches. **Habitat** Heathland, moorland, bogs, fens, hedgerows, field margins, woodland rides, mature sand-dunes and other open scrubby places. **Status and distribution** Resident. Common. Widely distributed in most parts of mainland Britain (but at low density in some parts of the south), the Channel Islands, Man, Orkney, the Hebrides and Ireland.



Larva of Emperor Moth

Sphingidae Hawk-moths

The Sphingidae comprises about 1,050 species and occurs worldwide, with most found in the tropics. There are nine species resident in the British Isles. Nine others occur as immigrants, some regularly breeding, but the early stages are unable to survive the winter, although one species, the Hummingbird Hawk-moth, hibernates as an adult, mainly in south-west England. At least ten further species have been reported in Britain, having in some cases probably been imported with cargoes, for example of fruit or vegetables. Hawk-moths are impressive medium to large moths, often strikingly coloured, and include the biggest moths in Britain in terms of wingspan and body size. They are known as hawk-moths because of their fast and manoeuvrable flight and the large size of many species.

With the exception of the day-fliers, the adults of most hawk-moths come regularly to light, and are only occasionally found at rest by day, usually when newly emerged. Those that feed can be found by searching out their nectar plants, to which they will return repeatedly.

Pine Hawk-moth

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

A number have brightly coloured hindwings and flash these when disturbed, in order to deter predators.

The Sphinginae include the largest hawk-moths. They tend to hold their wings close to the body at rest. Some have very long tongues and hover in front of the flower to feed, like the Macroglossinae, while others, such as the Death's-head Hawk-moth, have reduced tongues but may still feed.

Within the Smerinthinae, the many species have a reduced proboscis and they do not feed, including the three British species. The hindwings often have circular patches or eyespots, and the leading edge of the hindwing sometimes projects beyond the leading edge of the forewing at rest. The females are generally bigger than the males, and the males rest with the tip of the abdomen curled upwards.

The Macroglossinae have long tongues, hence the name, and the group includes many species that hover to take nectar from flowers by day or at dusk. Two British species have evolved a resemblance to bees, with largely transparent wings and squat bodies. Many of the Macroglossinae look like jet-fighters, with a delta-wing-shaped resting posture. Their caterpillars often have eye-spots on the body segments.

The eggs are attached to the foodplant, usually singly or in pairs. The larvae are not hairy and most species have a horn at the tail end. This tends to be long and well developed in the Sphinginae and Smerinthinae, while in the Macroglossinae the tail horn is often reduced; in the Small Elephant Hawk-moth it has disappeared altogether. The larvae feed on the leaves of both woody and herbaceous plants. The pupae of many species can be found by searching at the base of the larval foodplant, either among moss and leaf litter, or by digging in the soil.

Smerinthinae

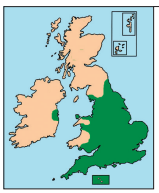
Lime Hawk-moth

plate 8

Mimas tiliae (L.)

Common

69.001 (1979)



Field characters FW 23–39mm. Its colour, wing shape and markings distinguish this species from all other resident British hawk-moths. The two dark olive-green central forewing markings may be enlarged to form a cross-band, or reduced to one small spot (f. *centripunctata* Clark). Form *brunnea* Bartel is largely reddish brown and its central markings are brick red. **Similar species** Willowherb Hawk-moth is superficially similar, but smaller and more thickset. **Flight season** One generation. May–early Jul. Sometimes found at rest on tree trunks, walls and among lime foliage. Comes to light, often early in the night. **Life cycle** Overwinters as a pupa just below ground, usually near the larval foodplant. Occasionally the pupa has been found high in the tree in leaf litter trapped in crooks of branches, and in bird nestboxes. Larva late Jun–mid-Sep. Sometimes found crawling down the trunks of urban limes or on the ground, sadly sometimes squashed. **Larval foodplants** Limes, elms, Downy Birch, Silver Birch and Alder. In the London area, reported from planes and cultivars of Wild Cherry. **Habitat** Most habitats in which the foodplants grow in lowland situations, particularly broadleaved woodland, parks and gardens, including urban areas. **Status and distribution** Resident. Common. Widely distributed and fairly frequent in England north to Yorkshire, where it became well established in the 1950s, and more recently in Durham and south Northumberland (the latter since 2009). In the west, extends to Cumbria. More local in Wales, and most frequent there in the south-east. Recorded once from Man, in 1936. In Ireland, three records from Dublin City, the first in 2010 and a larva in 2015. Local and rare on Jersey, and one on Alderney, on 8 Jun 2007.

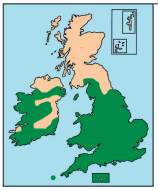
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Eyed Hawk-moth

plate 8

Smerinthus ocellata (L.)

Common 69.002 (1980)



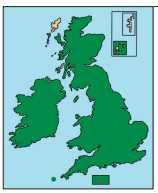
Field characters FW 36–44mm. Unmistakable. Eyespots on pink hindwing are diagnostic. When disturbed, it exposes these and rocks to and fro. This has been proven to deter insectivorous birds. Forewing markings vary little, except in colour and degree of contrast, ranging from pinkish brown to deep chocolate or even blackish. **Similar species** Poplar Hawk-moth has a similar resting posture but no eyespots. **Flight season** Usually one generation. Early May–mid-Jul. Sometimes a partial second generation in the south, early Aug–late Sep. Occasionally found at rest by day. Comes to light, usually in small numbers. **Life cycle** Overwinters as a pupa underground, below or near the larval foodplant. Larva late Jun–Sep, sometimes later. The pupa is shiny blackish brown and easily distinguished from the rough blackish-brown pupa of Poplar Hawk-moth. **Larval foodplants** Wild and cultivated willows and sallows (frequently on small bushes), Apple, and both wild and ornamental Crab Apple. Occasionally reported from Aspen and poplars. **Habitat** Gardens, orchards and most situations in which willows grow, including parks, riversides, fens, scrub and woodland. **Status and distribution** Resident. Common. Widely distributed and fairly frequent over most of lowland England and Wales, north to Cumbria and north Yorkshire. Previously recorded in Northumberland and Durham, but rare or absent there since the 1970s. Very local in south-west Scotland. Local on Man. Widespread in Ireland. Widely distributed but occasional in the Channel Islands.

Poplar Hawk-moth

plate 8

Laothoe populi (L.)

Common 69.003 (1981)



Field characters FW 30–46mm. Unmistakable. Pattern on wings is very constant. Chestnut-brown patches on hindwing are diagnostic. At rest, hindwing projects well beyond leading edge of forewing. Some individuals have a strong pinkish or violet tinge to wings. An uncommon buff-coloured form is more frequent in female. **Similar species** See Eyed Hawk-moth. **Flight season** One generation in most places. May–Jul or early Aug. A partial second generation in the south, Aug–Sep, which in recent years has become annual north to at least Lancashire, and occasionally further north, e.g. in Banffshire. Comes frequently to light, male usually after midnight, female earlier and in smaller numbers. **Life cycle** Overwinters as a pupa underground, near the larval foodplant. Larva Jun–Sep, occasionally later. **Larval foodplants** Poplars, including Aspen, White Poplar, Black-poplar and Lombardy-poplar. Also frequent on sallows and willows, particularly Goat Willow and Grey Willow. **Habitat** Most situations in which the larval foodplants grow, including parks and gardens, fens, woodland, heathland and moorland (but not at high altitude). **Status and distribution** Resident. Common. The most widely distributed and frequent hawk-moth in the British Isles. Recorded from all parts of mainland Britain, Ireland and the Channel Islands, on Man, in the Hebrides and on Orkney.

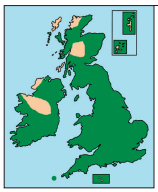
Sphinginae

Convolvulus Hawk-moth

plate 9

Agrius convolvuli (L.)

Immigrant 69.004 (1972)



Field characters FW 50–55mm. A very large moth, with variably marbled and extensively streaked ash-grey forewing and reddish-pink banding on abdomen. Male is quite heavily marked with blackish streaks and bands, often with a broad, central cross-band. Larger, plainer female has shorter, thinner antennae. **Similar species** Privet Hawk-moth is predominantly brown. Pine Hawk-moth is smaller, lacks pink bands on abdomen, and forewing markings are less extensive. The North American Pink-spotted Hawk-moth (or Sweet Potato Hornworm) *Agrius cingulata* (Fabr.) was imported to Britain in 1778 and 1826 with shipments of Sweet Potato from North America, and has also been recorded on ships off the French coast. It has recently established itself in the Cape Verde Islands west of Senegal, West Africa, and occurs as a migrant north to Canada and south to Patagonia, and may land on ships destined for Europe. It is best distinguished from Convolvulus Hawk-moth by pink patch at hindwing base and absence of reddish patches at base of abdomen. **Flight season** Jun–Dec (occasionally as early as Apr), with the largest numbers from late Aug to late Nov. Nocturnal. Feeds at dusk, and sometimes at dawn, at tubular flowers such as tobacco plants, petunias, lilies and phlox. The proboscis is extremely long and no other moth occurring in the British Isles can feed at some of these flowers; white varieties that open at night and have a strong scent are particularly attractive to the species. Comes to light, and is occasionally found at rest by day, usually on tree trunks, posts, rocks and walls. Has occasionally been seen on migration, flying a few metres above the sea. **Life cycle** Unable to overwinter. Larvae are occasionally found in the British Isles. Pupates underground. **Larval foodplants** Field Bindweed, Hedge Bindweed and other members of the Convolvulaceae, including cultivated varieties.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

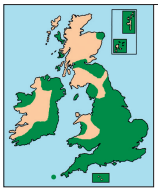
Habitat Can be found anywhere, including gardens. **Status and distribution** Immigrant. Annual in southern Britain, especially on southern and eastern coasts of England. Usually 100+ records per year in recent times, sometimes in much larger numbers. Recorded more sparsely over the rest of the British Isles north to Orkney and Shetland (but here the most frequent hawk-moth). Exceptional years include 2003 (2,671 adults and many larvae) and 2006 (2,335 adults, including 42 in one light-trap on 10 Sep on the Lizard, Cornwall). By comparison, only 204 were recorded in 2011, which was otherwise notable for immigrant species. Resident in Africa, from where some of the adults that emerge in Jun–Aug fly north to Europe and breed, the offspring of which form the majority of those reaching Britain and Ireland.

Death's-head Hawk-moth

plate 9

Acherontia atropos (L.)

Immigrant 69.005 (1973)



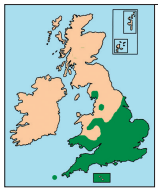
Field characters FW 52–60mm. A very large moth, and unmistakable. The skull-like marking on thorax, banded yellow abdomen and yellow hindwing are diagnostic among British hawk-moths. When disturbed, it raises its head and front legs in a threat posture and makes an audible squeaking sound by expelling air through the short proboscis, past a structure that vibrates like a saxophone reed. **Flight season** Mainly late Aug–late Oct, but sometimes as early as May and into late Nov. Nocturnal. Seldom seen except in light-traps or in beehives, which it is able to enter in order to feed on the honey without being attacked by the bees. Occasionally found at rest by day. **Life cycle** Unable to overwinter. Adults arriving in the summer sometimes produce larvae that pupate in Aug–Oct. Pupates underground, in a fragile cocoon. **Larval foodplants** Usually Potato, Deadly Nightshade and occasionally other members of the Solanaceae. Can be reared on Garden Privet. **Habitat** Until the widespread use of chemical insecticides and mechanisation of harvesting, larvae and pupae were often found in Potato fields, sometimes in large numbers. They are still found occasionally, with organic crops, allotments and gardens perhaps offering the best opportunities. **Status and distribution** Immigrant. Recorded in small numbers most years, usually in the south and east of England, but has reached most parts of the British Isles, including Orkney, Shetland, Man, the eastern half of Ireland and the Channel Islands. It has also been recorded at the lights of oil-rigs in the North Sea. Highest annual total was almost 400 adults in 1956. Peak years recently include 2003 (34 adults), 2004 (25 adults and 44 larvae), 2006 (33 adults) and 2011 (18 adults). **Folklore** Widely regarded as an omen of death, due to the skull marking on the thorax. Atropos was one of the Fates of Greek mythology, who cut the thread of life. The moth featured in the film *Silence of the Lambs* (1991) was the closely related Eastern Death's-head Hawk-moth *Acherontia styx* West., an Oriental species.

Privet Hawk-moth

plate 9

Sphinx ligustri L.

Common 69.006 (1976)



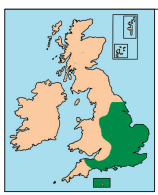
Field characters FW 41–55mm. The pale-clouded, dark chocolate-brown forewing, pink and black banded hindwing and abdomen, and blackish thorax make this very large moth unmistakable. There is some variation in the intensity of the pink and the darker markings. Very rarely, the pink is replaced by white (f. *albescens* Tutt) or the abdominal bars are yellow (f. *lutescens* Tutt). **Similar species** See Pine Hawk-moth and Convolvulus Hawk-moth. A single Wild Cherry Sphinx *Sphinx drupiferarum* Smith *in* Abbot (a North American species) was caught at light on 21 May 1965 at Weston-super-Mare, Somerset, probably as an adventive. It is similar to Privet Hawk-moth, but greyer and lacks pink on hindwing and abdomen. **Flight season** One generation. Jun–Jul. Sometimes found freshly emerged on tree trunks and fence posts. Active after dark and comes to light, and feeds at flowers. **Life cycle** Overwinters, occasionally twice, as a pupa underground, sometimes at a depth of 30cm or more. Larva Jul–Sep. **Larval foodplants** Wild Privet, Garden Privet, Ash (particularly young saplings in woodland, sometimes lower branches of big trees), Lilac and Guelder-rose. Occasionally reported on Holly, Honeysuckle, Snowberry and the cultivated shrubs *Viburnum tinus*, *Forsythia* and *Spirea*. **Habitat** Downland, hedgerows, open woodland, gardens, fens and coastal scrub, preferring calcareous soils. **Status and distribution** Resident. Common. Well distributed from Cornwall and Scilly to Kent, and northwards to the south and east Midlands, Lincolnshire, south-west Wales and the Channel Islands. More local in the rest of the Midlands and Wales. Scattered, mainly very old, records from northern England and Man.

Pine Hawk-moth

plate 9

Sphinx pinastri L.

Local 69.007 (1978)



Field characters FW 35–41mm. The characteristic features are the rather plain, white-dusted grey or brownish-grey forewing, with three or four black streaks in centre, chequered fringes and uniformly dark brown hindwing. Abdomen has black bars, with no trace of pink banding. **Similar species** See Convolvulus and Privet hawk-moths. **Flight**

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

season One generation. May–early Aug. Sometimes found by day at rest on tree trunks or fence posts. Flies at night and comes to light, sometimes in numbers. Feeds from flowers after dark, particularly Honeysuckle. **Life cycle** Overwinters as a pupa. Larva late Jun–mid-Sep. Found on small and mature trees, and prefers older needles to young shoots. Pupates under leaf litter or just beneath the ground. **Larval foodplants** Mainly Scots Pine, but occasionally Maritime Pine, Norway Spruce and Cedar-of-Lebanon. **Habitat** Conifer plantations, shelterbelts and wooded heathland. Regularly recorded in small numbers at light-traps in other habitats, even urban areas, where breeding seems unlikely and it is far more probable that these are dispersing or pioneering individuals. **Status and distribution** Resident. Local. The increase in conifer plantations since the 1930s has enabled it to spread slowly northwards. By the start of the 1980s it was well established and frequent in Dorset, Hampshire and the Isle of Wight (since 1947), Surrey, Sussex, Kent and East Anglia. It has since increased and spread more widely in southern England and into south-west England, the Midlands, Lincolnshire and Yorkshire (1990s). Widespread and increasing in the Channel Islands.

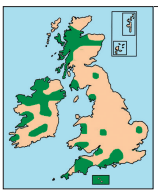
Macroglossinae

Narrow-bordered Bee Hawk-moth

plate 10

Hemaris tityus (L.)

Nb 69.008 (1982)



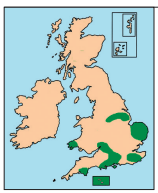
Field characters and similar species FW 18–21mm. The two bee hawk-moth species have largely transparent wings and a compact body, but are more agile than the bumble-bees they mimic. They do not alight to feed and are also much larger than bee-flies (*Bombylius*). The most obvious differences between the two species is that in Narrow-bordered, dark brown bands around the outer edges of wings are narrower than in Broad-bordered, especially on hindwing and towards trailing edge of forewing. Also, in Narrow-bordered, the transparent window (or cell) near base in leading half of forewing is undivided (split by a longitudinal fold in Broad-bordered), and central cross-vein is much thicker in Broad-bordered. In Narrow-bordered, abdomen has blackish bands (usually reddish in Broad-bordered). When freshly emerged, wings have a thin covering of grey-brown scales, lost on the first flight. These may obscure some of the wing markings. Hummingbird Hawk-moth can look similar in flight, but is very different on close examination. **Flight season** One generation. Mid-May–Jun or early Jul (exceptionally Apr, as in 2003). Active in sunshine, particularly in late morning and early afternoon. Feeds at flowers such as Bugle, Ground-ivy, louseworts, Viper's-bugloss, Common Bird's-foot-trefoil, Rhododendron and Red Valerian. Can be lured to cut Lilac flowers. **Life cycle** Overwinters as a pupa. Larva mid-Jun–mid-Aug. The flimsy cocoon is found among plant litter or just below ground. **Larval foodplants** Devil's-bit Scabious. Less frequently Small Scabious and Field Scabious. **Habitat** Unimproved grassland, including wet acidic pasture, lightly grazed chalk downland and other calcareous grasslands, acid bogs and drier heathland. **Status and distribution** Resident. Nationally Scarce B. Much decreased, especially in the south and east, probably due to agricultural intensification, including the change from cutting hay to making silage. Still widespread but local, mainly in south and west Wales, south-west England, Dorset, some of the chalk grasslands of Wiltshire, in Hampshire, the Scottish Highlands (where it has recently recovered) and Inner Hebrides. Survives at one site on the Norfolk–Suffolk border, near Thetford, but no recent records from previous sites across a large area of central, southern and eastern England. Widespread but local in Northern and western Ireland, and in the Burren, Co. Clare. In the Channel Islands, recorded recently from Alderney and once from Jersey, in 1917.

Broad-bordered Bee Hawk-moth

plate 10

Hemaris fuciformis (L.)

Nb 69.009 (1983)



Field characters and similar species FW 20–24mm. Very similar to Narrow-bordered Bee Hawk-moth – see under that species for differences. When freshly emerged, the wings are covered with a thin layer of light brown scales, lost on the first flight. **Flight season** Usually one generation. Mid-May–early Jul. Occasionally a partial second generation in southern England, Aug–Sep. Active in sunshine, particularly in late morning and early afternoon. Feeds at tubular flowers such as Bugle, Honeysuckle, Ragged-Robin, louseworts, Viper's-bugloss, Yellow-rattle, Rhododendron and aubretias. **Life cycle** Overwinters as a pupa just below ground. Larva late Jun–Aug. **Larval foodplants** Wild Honeysuckle, occasionally cultivated honeysuckles and Snowberry. **Habitat** Rides, clearings and edges in open woodland, and heathland. **Status and distribution** Resident. Nationally Scarce B. Much decreased due to the decline in coppicing, maturation of dense stands of conifers and browsing of Honeysuckle by increased deer populations. Found only in the southern half of England and in Wales, and locally in the Channel Islands. Recorded north to southern Yorkshire (Doncaster area). Has major strongholds in East Anglia, including Thetford Forest and Breckland, and heathlands on the Suffolk coast

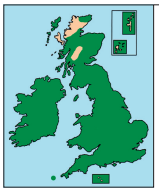
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

and in the ancient lime woods of Lincolnshire. Also in central southern England, particularly the New Forest, Hampshire, on heathland in Dorset and in the woodlands of South Wiltshire. Now absent from many areas and very thinly scattered in the Midlands, Wales and south-west England.

Hummingbird Hawk-moth plate 10

Macroglossum stellatarum (L.)

Immigrant; suspected resident 69.010 (1984)

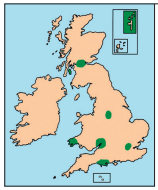


Field characters and similar species FW 20–24mm. Resembles a hummingbird as it flits rapidly between plants, hovering to feed at tubular flowers of such species as Viper's-bugloss, Red Valerian, phlox, jasmines, buddleias, petunias and Lilac. Orange-brown colour of hindwing and undersides of wings is evident in flight. This, together with warm greyish-brown forewings, distinguishes this moth from the two species of bee hawk-moth, which behave similarly but have largely transparent wings. **Flight season** Most immigrants arrive in Apr–Dec, but especially in Aug and Sep. Hibernators may fly on warm days from Jan onwards. Active by day, mainly in sunshine, but sometimes in overcast weather, rain, and at dusk or after dark. Occurs at light, especially when on migration, and did so in numbers in 2003 and 2006, including eight in one trap on 10 Sep 2006 on the Lizard, Cornwall. **Life cycle** Larva mainly Jun–Oct, most frequently found in Aug. Hibernates as an adult in unheated outbuildings, garages, lofts and porches, and in crevices and holes in walls and trees. Pupates in a flimsy cocoon spun close to the ground, among the foliage of the foodplant or in leaf litter. **Larval foodplants** Lady's Bedstraw, Hedge Bedstraw and Wild Madder. Also seen laying eggs on Red Valerian. **Habitat** Can occur anywhere, from coastal sites to inland gardens, woodland rides and urban windowboxes. **Status and distribution** A frequent immigrant from southern Europe and North Africa, most numerous near the south coast, but has reached all parts of the British Isles and the Channel Islands. The number recorded annually varies considerably but often exceeds 500 in a year. The highest totals are 4,000+ in 1947, 5,400+ in 2003, 6,586+ in 2006 and 9,096 in 2011. A suspected breeding resident in south-west England, where it has been recorded hibernating in small numbers over the last 30 years or more. More recently, this has occurred annually, with scattered examples elsewhere in southern Britain and southern Ireland. **Folklore** Apparently long considered a messenger of good tidings in Italy and Malta. A small swarm was reported flying over the water in the English Channel, headed to England from France on D-Day, 1944. One was seen by the senior author on the day his daughter was born!

Oleander Hawk-moth plate 10

Daphnis nerii (L.)

Immigrant 69.011 (1985)



Field characters FW 48–51mm. The swirling cream and pinkish-brown markings on the green forewing and thorax of this large hawk-moth make it totally unmistakable. Whitish band across front end of abdomen is also distinctive. **Flight season** Usually occurs Aug–Oct and generally seen at light. Feeds on the wing at tubular flowers such as Honeysuckle and tobacco plants after dusk. **Larval foodplants** Oleander and Lesser Periwinkle. Feeds on privets in captivity. Larvae are very rarely found in Britain. **Habitat** Abroad, it breeds in very warm, open places such as scrubby hillsides. **Status and distribution** A very scarce but fairly regular immigrant. About 100 British records in total. Not seen in some years. The most reported in a year is 15, in 1953. Most frequently recorded in southern England; occasional elsewhere, including mainland Scotland, Shetland, St Kilda, Ireland and the Channel Islands. Its distribution as a resident includes Sicily, Crete, Cyprus and northern Africa. It breeds more extensively in southern Europe in most summers, the offspring probably making up a large proportion of the migrants that reach Britain.

Willowherb Hawk-moth plate 10

Proserpinus proserpina (Pall.)

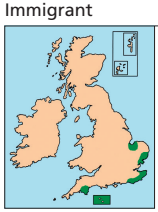
Immigrant/Adventive 69.012 (1984a)

Field characters FW 18–21mm. A fairly unmistakable, relatively small, thickset hawk-moth, with jagged-edged, banded green or brownish-green forewing and black-bordered orange-yellow hindwing. **Similar species** See Lime Hawk-moth. **Larval foodplants** Willowherbs, Common Evening-primrose and Purple-loosestrife. **Habitat** In mainland Europe, damp woodland clearings and sandy waste ground. **Status and distribution** Either rare immigrant or adventive. Two records: a male at light at Denton, near Newhaven, East Sussex, on 25 May 1985; and one (possibly imported) found at rest on a stone pillar at St Katharine Docks, east London, on 18 Jul 1995. Its distribution includes Spain, North Africa, southern France and Italy.

Spurge Hawk-moth plate 11

Hyles euphorbiae (L.)

Immigrant 69.013 (1986)



Field characters and similar species FW 28–31mm. A dull olive-green hawk-moth, with a broad, pale, sometimes pink-tinged and/or speckled stripe along forewing, which extends close to and sometimes reaches

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

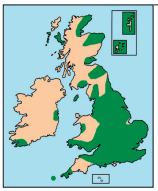
leading edge at various points. Undersides of both wings are pinkish. Bedstraw Hawk-moth is similar, but forewing stripe is distinctly narrower and does not approach leading edge, and undersides of wings are not pink. See also Striped Hawk-moth. **Flight season** Recorded in Britain in every month from May to Oct. **Larval foodplants** Perennial herbaceous spurges. Larvae are found only very rarely in the British Isles. **Habitat** Abroad, it breeds in open, sunny situations, including coastal sand-dunes and field margins. **Status and distribution** A very scarce immigrant to the British mainland, usually recorded on or near the coast in the southern half of Britain. About 60 recorded. In recent years, usually seen at light, but often recorded as larvae in the more distant past. Between 1990 and 2008, 12 adults were recorded, in Devon (one in 1991), Kent (eight, one in 1993, one in 1997, one on 3 Aug 2002, three in 2003 and two in 2004), in Suffolk (one in 2003 and one in 2006) and Sussex (one in 2008). In 2011, three were recorded in Kent and one in Suffolk, and in 2015 one in Devon. Larvae have been found in Kent, Sussex and Suffolk. Exceptionally, a larva was recorded at Otterburn, Northumberland, in 1860, at Rhododendron flowers. Breeds fairly widely and commonly in Spain and much of France (and formerly in the Channel Islands), and in central and southern Europe.

Bedstraw Hawk-moth

plate 11

Hyles gallii (Rott.)

Immigrant; transitory resident 69.014 (1987)



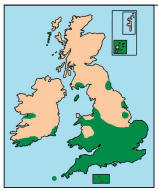
Field characters and similar species FW 34–38mm. A fairly unmistakable, dark olive-green hawk-moth, distinguished from Striped Hawk-moth by lack of white stripes highlighting the veins across forewing and along top of thorax. See also Spurge Hawk-moth. **Flight season** May–Aug. Flies from dusk and visits nectar flowers. Comes to light. **Life cycle** Overwinters as a pupa, but does not usually survive in Britain. Larva Jul–Sep in the British Isles. Likes to bask in sunshine. **Larval foodplants** Bedstraws, Rosebay Willowherb, madders and fuchsias. **Habitat** In the British Isles, usually breeds in open coastal habitats such as sand-dunes, or on waste ground inland. **Status and distribution** Immigrant. Currently fairly regular in small numbers in most years. Periodically invades (sometimes with temporary establishment in lower-rainfall areas) in large numbers after long periods of scarcity or absence. For example, 65 adults and about 1,000 larvae were noted in 1888, with 250 in Kent and large numbers also in Suffolk, Cheshire and Lancashire. The highest annual total between 1889 and 1954 was seven in 1935. In 1955, 50 adults were reported, and it was temporarily resident in north Norfolk from 1956 to 1958. More recently, 65 adults and about 200 larvae were found in 1973, for which an origin in eastern Europe was suggested. At least 44 adults were recorded in 2003, when the species was again suspected of overwintering. Currently thought to be resident very locally in north Norfolk, Suffolk and Lincolnshire. Immigrants have been recorded from most parts of mainland Britain (about 200 in the decade to 2011), Scilly, Man, the Inner Hebrides, Orkney, Shetland and the Channel Islands. In the Irish Republic, recorded from the south-east and the south-west, including larvae. Resident in southern France and eastwards throughout most of Europe, north to Denmark, southern Scandinavia and Russia.

Striped Hawk-moth

plate 11

Hyles livornica (Esp.)

Immigrant 69.015 (1990)



Field characters FW 33–42mm. Distinguished by the white stripes highlighting veins on forewing and a doubled-back white stripe on each side of the thorax. **Similar species** See Bedstraw, Silver-striped and Spurge hawk-moths. Striped Hawk-moth was formerly considered to be a subspecies of the very similar White-lined Hawk-moth *Hyles lineata* (Fabr.), found in North America, but that has an additional white stripe on each side of thorax. Two adventive White-line Hawk-moths have been recorded, one reputedly found in Bridlington, north Yorkshire, in 1897 (specimen in the Natural History Museum, London), and one found dead in a goods yard in Daventry, Northamptonshire, in Nov 1997 on packing cases imported from the United States, but not correctly identified until 2013. **Flight season** Apr–Dec, but mainly May–early Jun and Aug. Flies mainly at dusk and just before dawn, when it feeds from flowers such as Red Valerian and petunias, but when migrating can be active late at night. Comes to light. **Life cycle** Unable to overwinter. Larva Jun–Jul and Sep–Oct; only occasionally found in the British Isles. **Larval foodplants** An unusually wide range of unrelated foodplants has been reported, but usually on Rosebay and other willowherbs, or Hedge Bedstraw. Also occasionally on snapdragons, fuchsias, buckwheats, sorrels and docks. **Habitat** Usually breeds in open, warm habitats, particularly on the coast and in gardens, but also in rides in open woodland. **Status and distribution** Immigrant. Recorded most years, usually in small numbers. There was a major influx in 1931, and another in 1943 (540+ seen). Recently, there were 60 in 1992, 80 in 1996, 68 in 2002, 142 in 2003, 59 in 2004 and 383 in 2006. In contrast, only seven were reported in Britain in 2011, a noteworthy year for immigrants generally. Recorded from most parts of southern Britain (with the greatest number in south-west and southern England), southern Ireland and the Channel Islands. Rare in Scotland. Resident all around the Mediterranean coast, and much more widely in northern Africa.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

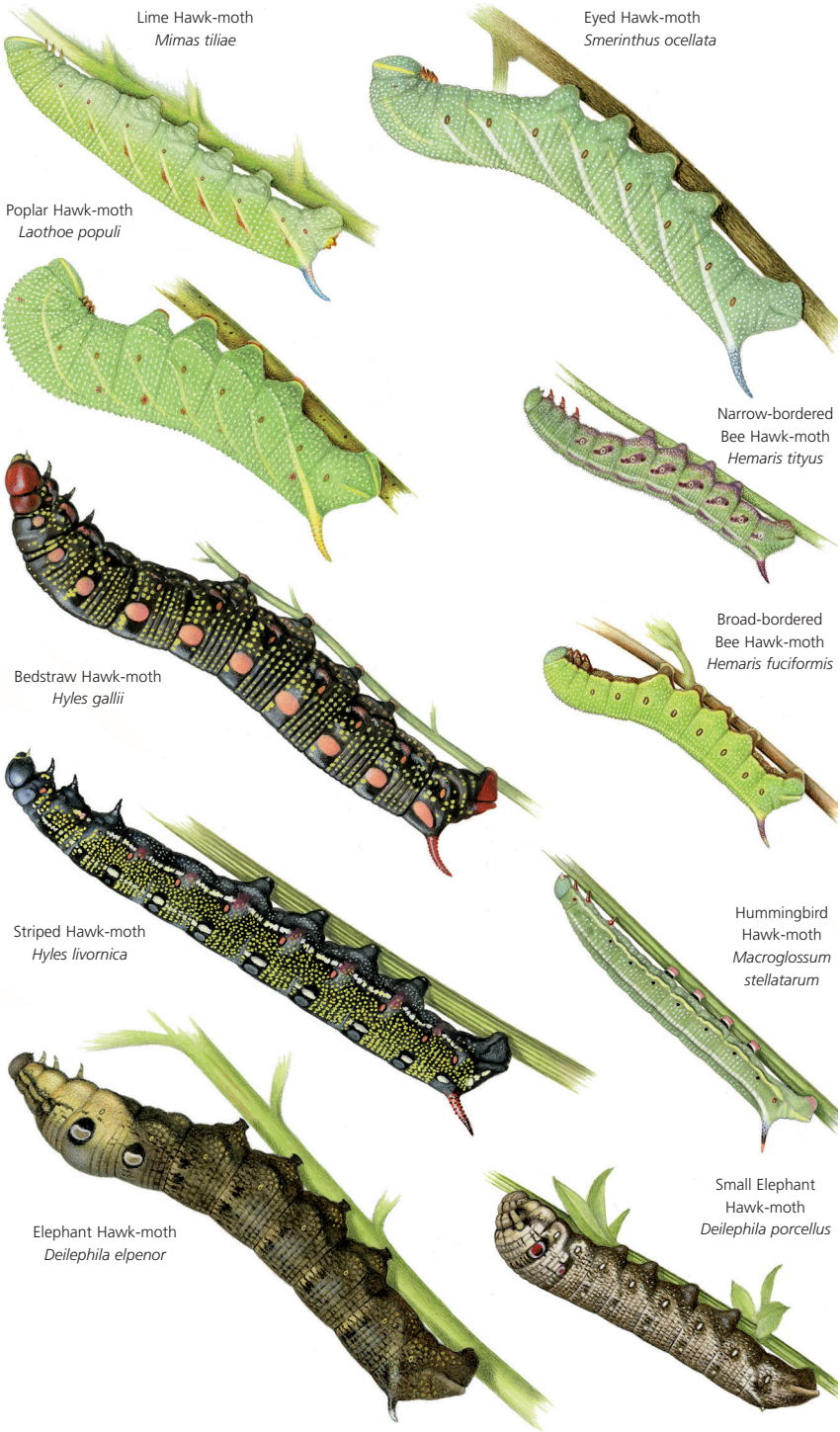
Convolvulus Hawk-moth
Agrius convolvuli

Death's-head Hawk-moth
Acherontia atropos

Privet Hawk-moth
Sphinx ligustri

Pine Hawk-moth
Sphinx pinastri

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

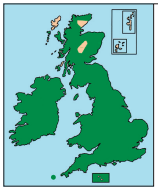


This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Elephant Hawk-moth plate 11

Deilephila elpenor (L.)

Common 69.016 (1991)

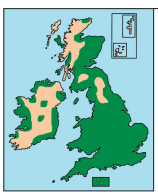


Field characters FW 28–33mm. Unmistakable. Forewing pink and olive-green, hindwing pink and black. Clearly defined pink pattern on olive-green thorax and abdomen, including stripe along abdomen. The sexes are similar and there is very little variation. **Flight season** Until recently, only one generation recorded. May–early Aug, but smaller numbers of fresh adults are now reported annually later in the summer, north at least to Lancashire. Sometimes found at rest by day among the foodplant. Flies from dusk, feeding on the wing at Honeysuckle and other tubular nectar flowers, and sometimes sugar. Comes to light, sometimes in numbers. **Life cycle** Overwinters as a pupa. Larva late Jun–Sep. This larva sometimes arouses people's curiosity, often when it is found searching for a pupation site, due to its size and large eye markings. Feeds at night, but comes up to rest on a stem in the late afternoon on fine days, when it can be very conspicuous. Pupates in a flimsy cocoon among plant debris on or just below the surface. **Larval foodplants** Most frequently found on Rosebay Willowherb, Great Willowherb, other willowherbs and bedstraws. Also recorded on Enchanter's-nightshade, fuchsias and Himalayan Balsam, and occasionally on a range of other plants. **Habitat** A wide variety, including rough grassland, often with disturbed or burnt ground where Rosebay Willowherb has colonised, hedgerows, ditches, gardens, woodland rides and clearings, heathland and sand-dunes. **Status and distribution** Resident. Common. Very widely and well distributed throughout England and Wales, Man and Ireland. In Scotland, prior to the 1980s it was local in the southern half only. Since then it has spread and is now found in most parts of the mainland up to the north coast, and in the Hebrides. Uncommon in the Channel Islands.

Small Elephant Hawk-moth plate 11

Deilephila porcellus (L.)

Local 69.017 (1992)

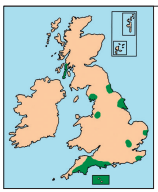


Field characters FW 21–25mm. The only small pink and yellowish-brown hawk-moth found in the British Isles. **Flight season** One generation. May–Jul. Freshly emerged adults are occasionally found by day. Flies from dusk and visits flowers such as Viper's-bugloss, campions, Honeysuckle, Red Valerian and Rhododendron. Comes to light, occasionally in large numbers and sometimes quite early in the night. **Life cycle** Overwinters as a pupa. Larva late Jun–early Sep, feeding at night and hiding in the debris at the base of the plant by day. Pupates in a flimsy cocoon formed on the ground among leaf litter, or just below the surface. **Larval foodplants** Usually bedstraws, particularly Lady's Bedstraw, but also Hedge, Marsh and Heath bedstraws. Also recorded on Rosebay Willowherb and Purple-loosestrife. **Habitat** Generally in open habitats with a short grassy sward, including unimproved chalk and limestone grassland (where it can be very numerous), commons, golf courses, heathland, sand-dunes, shingle beaches and damp, neutral grassland. **Status and distribution** Resident. Local. Recorded widely but fairly locally in England and Wales. More local in northern England and on Man. In Scotland, mainly in the south, the Central Belt, Perthshire, the north-east and coastal areas north to Sutherland. Widespread in Ireland, but largely coastal. Abundant in the Channel Islands.

Silver-striped Hawk-moth plate 11

Hippotion celerio (L.)

Immigrant 69.018 (1993)



Field characters and similar species FW 33–35mm. Smooth-edged, tapered cream and silver stripe running along forewing in a gentle curve from body to wing tip is the main diagnostic feature. Pinkish areas on hindwing are crossed by several dark brown veins, further distinguishing it from Striped, Bedstraw and Spurge hawk-moths. Female is generally slightly smaller than male, and has slightly shorter antennae. **Flight season** Two generations. May–Nov. Most that reach the British Isles are of the second generation, occurring from Aug. Flies from dusk and visits nectar flowers, including Ivy. Comes to light, sometimes early in the night. **Life cycle** Unable to overwinter. Very few larvae have been found in Britain; mainly in Oct. **Larval foodplants** Mainly Grape-vine and Virginia-creeper, but Lady's Bedstraw, Great Willowherb, fuchsias, bindweeds, Honeysuckle and mulleins are among the reported foodplants abroad. **Habitat** Generally in open places, particularly on the coast. **Status and distribution** Scarce but fairly regular immigrant. Recorded widely but sparsely across the southern half of Britain, and rarely further north and in Ireland. In most years, fewer than ten are recorded, with none in some years. The largest annual total is 41, in 1885. More recently, there were 15 in 1963, 14 in 2006, and about 50 since 2000. Resident in Africa, where it is widespread and abundant, and breeds along the north coast. From here, it colonises southern Europe each summer, producing one or two generations between May and Oct, a few of which reach the British Isles.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Geometridae

Orange Underwing

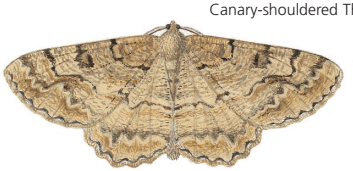
Common Emerald

Birch Mocha

Garden Carpet

Mottled Pug

Canary-shouldered Thorn


Mottled Beauty

There are two families of macro-moths in the British Isles that are much larger than the others: the Geometridae, with over 300 species recorded, and the Noctuidae, with over 370 species. The Geometridae comprises at least 20,000 described species in total, and is distributed worldwide. The British members are divided very unevenly into five sub-families: Sterrhinae – mochas and waves (38 species); Larentiinae – carpets, pugs and allies (164); Archiearinae – orange underwings (2); Ennominae – thorns, beauties, umbers and allies (91); and Geometrinae – emeralds (12).

The Geometridae is a varied group, but most species have broad, rather triangular forewings and rather light, slender bodies, enabling low-energy flight rather than power and speed. Probably as a consequence, only three species regularly arrive in the British Isles as immigrants in any numbers, and it is likely that these are carried on jet-streams for much of their journey. Geometrid moths are readily distinguished from butterflies by their antennae, which in some cases are feathery in the males and slender in the females, but never clubbed.

Many species fly at dusk, before light-traps are fully effective, and are best searched for with a net or by tapping vegetation to disturb them by day. Many come readily to light, but sometimes only late at night, and some have dawn or daytime flights, the latter more especially in northern Britain. The females of a number of species are flightless, with reduced or vestigial wings, so must walk to disperse their eggs. This uses less energy, enabling them to remain active on winter nights at temperatures at or below freezing. They are seen at light-traps only on the rare occasions they crawl in, and instead are best searched for on woody vegetation. Many geometrids have functional tongues and can drink moisture, but relatively few can be found reliably by searching flowers or by trying to attract them to sugary baits, probably because low-energy flight requires less frequent refuelling.

Another distinguishing feature of the family is that the caterpillars have only two pairs of hind legs, or prolegs, situated at the rear end. A few species, notably the two orange underwings and the Light Emerald, have traces of a much smaller third pair of prolegs, indicating that the family has evolved from forms with more than two.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

The central region of the body lacks legs and is looped up when the caterpillar moves, drawing the hind end up to the three pairs of legs at the head end. Some can cover distances quickly in this way, which is likely to be an advantage when moving about in trees, and a large proportion eat the foliage of woody plants. The geometrids are often referred to as 'loopers' or 'inch-worms' after this mode of progression, while 'geometrid' means 'ground-measurer' in Greek. If dislodged, many fall on a silken thread; they then clamber back up this or up the plant stem. A few use this as a means of dispersal, being windblown on these threads. Some pupate in cocoons attached to the plant and need never leave the tree canopy, but the majority pupate in or close to the ground.

Sterrhinae
Mochas and waves

Maiden's Blush

Mullein Wave

Ochraceous Wave
plate 12

Idaea serpentata (Hufn.)

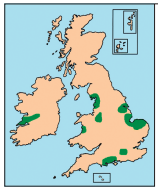
Uncertain; former resident on Jersey — 70.001 (1697)

Field characters and similar species FW 10–11mm. Forewing narrower and not as pointed as in Bright Wave, and brighter orange-brown. Cross-bands stronger; generally four visible across forewing, three on hindwing. Blackish markings on outer edge stronger than in Bright Wave, and may extend to hindwing. **Flight season** One generation in the northern half of mainland Europe, Jul. Readily disturbed by day, and comes to light. **Life cycle** Overwinters as a larva. Larva Aug–May. Probably pupates in debris on the ground. **Larval foodplants** Unknown in the wild. Docks and bedstraws in captivity. **Habitat** In central Europe, in dry meadows, woodland glades and forest clearings. **Status and distribution** Former resident on Jersey. Rare immigrant elsewhere. A breeding population was discovered on Jersey in 1941 but was lost to building construction in the 1950s. No confirmed reports subsequently. Several poorly labelled specimens from 19th-century collections are possibly from England. Two from the Redhill area of Surrey, in 1865 and 1869, and a third, near Dartford, Kent, in 1909, may be genuine. Widely distributed and fairly frequent in mainland Europe.

Purple-bordered Gold
plate 12

Idaea muricata (Hufn.)

Nb — 70.002 (1698)



Field characters FW 8–10mm. The vivid pink and yellow markings distinguish this from all other small geometrids. Extent of the pink varies considerably. Form *auroraria* Borkh., with large yellow patches and margins, is the most frequent. Form *totarubra* Lambillion is almost entirely pink, apart from small central yellow spots, a fine purple outer cross-line and yellow fringes. **Similar species** Gold Fringe *Hypsopygia costalis* (Fabr.) (a micro-moth, Pyralidae) is often pinkish, but with yellow spots on the leading edge. Day-flying pyralid moths, such as *Pyrausta* spp. (pages 16–17), do not have yellow fringes and sit with hindwings hidden when fully at rest. See also Tawny Wave. **Flight season** One generation. Late Jun–Jul. Easily disturbed from low vegetation by day, flying from dusk onwards and at sunrise, and comes to light. **Life cycle** Overwinters as a larva. Larva Jul–late May. Pupates in a cocoon among plant debris on the ground. **Larval foodplants** Marsh Cinquefoil is recorded in the wild. Dandelion and Knotgrass are accepted in captivity. **Habitat** Damp heaths, bogs, mosses, marshes, fens and wet grassland. **Status and distribution** Resident. Nationally Scarce B. In England and Wales, found in several discrete areas: the heathlands of east Dorset and Hampshire; the New Forest bogs; Surrey heathland, in particular Chobham Common; fens, heaths, bogs and broads in East Anglia, from Dersingham Bog and Roydon Common near King's Lynn to the Ant and Bure marshes, and the pingos in Breckland; the surviving mosses of Shropshire, Cheshire and north-west England; and at Thorne Moors, straddling the Lincolnshire–Yorkshire border. Recorded from Cors Fochno (Borth Bog), Dyfi NNR, in west Wales. In the 19th century, occurred at Ham Fen, east Kent, and on Man. In the Republic of Ireland, very local in the south-west and west.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

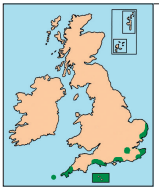
Bright Wave

plate 12

Idaea ochrata (Scop.)

RDB; Immigrant

70.003 (1696)



Field characters FW 10–12mm. A small sandy-brown moth with a rather pointed forewing, often fading to a lighter shade of brown. There are small blackish-brown dots in fringes of wings, close to outer edge of wing itself, which may be visible only with a hand-lens. Two central cross-lines are usually distinct, the inner stronger, and a third innermost line is usually weak. **Similar species** See Ochraceous Wave and Tawny Wave. **Flight season** One generation. Mid-Jun–early Aug, but usually ending by third week of Jul. Easily disturbed by day from grass swards, where it rests on stems. Flies from late afternoon, at dusk and after dark. Comes to light, sometimes in large numbers. **Life cycle** Overwinters as a part-grown larva, on stems near the ground. Larva Aug–May. Pupates in a light cocoon among debris on the ground. **Larval foodplants** Probably a progression of herbs. Has been found after winter on Smooth Tare, of which it eats the flowers, seedpods, foliage and stems. Also found in association with Hare's-foot Clover flowers, on which plant it can complete its development. Also flowers of other species, including vetches, Lesser Stitchwort and daisies. **Habitat** On the nature reserve, breeds on vegetated shingle, outside the grazed areas only. The golf-course breeding sites are in the 'roughs', open areas with fine grasses and herbs growing on stabilised sand. On shingle with sand-dunes at Kingsdown, Kent, and formerly in Suffolk. On sandy undercliffs on the north shore of Pegwell Bay, Kent. **Status and distribution** Resident and immigrant. Red Data Book species. As a resident in Britain, now known only from three golf courses and a nature reserve, in a continuous population from just north of Sandwich to Deal, in Kent. It is quite numerous, with outlying populations on the north shore of Pegwell Bay and on vegetated shingle at Kingsdown, and has been recorded from Kingsdown golf course. Formerly resident on the Suffolk coast between Thorpeness and Aldeburgh, but not seen since 1990, and previously at Colne Point near St Osyth, Essex, where it was last seen in 1985. Widespread but local in the Channel Islands. Over 20 records of suspected immigrants. These include singletons at Sennen, West Cornwall, in 2008; Beaminster, Dorset, in 2009; Rye Harbour NR, East Sussex, on 25 Jul 1996; Scilly in 2006; Westcott Downs, Surrey, in 2006; Great Yarmouth, Norfolk, in 2004; Portland, Dorset, in 1994 and 2011; Axminster, Devon, in 1987; Bradwell-on-Sea, Essex, in 1985; Harpenden, Hertfordshire, in 1983; Bournemouth, Dorset, in 1900; and Setley, Hampshire, in 1915/16.

Larva of Bright Wave.

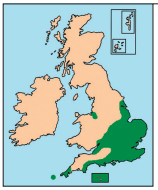
Least Carpet

plate 12

Idaea rusticata ([D. and S.])

Local

70.004 (1699)



Field characters FW 9–11mm. A small species that is distinctive due to the dark blackish-brown markings on whitish forewing, which form a central band and extend broadly along leading edge to thorax. Markings vary in intensity. **Flight season** Mostly one generation. Late Jun–late Aug, but sometimes reported from late May, with a partial second generation from mid-Sep–late Oct and occasionally Nov and Dec. Can be found by day at rest on trees and fences or by tapping bushes, but flies at night and comes to lighted windows and other lights. **Life cycle** Overwinters as a larva. Larva Aug–late May or Jun, sometimes Jul–Aug and Oct–May. Pupates in a cocoon among plant debris on the ground. **Larval foodplants** Ivy, Traveller's-joy, the garden crucifer Golden Alison and probably many other plants, eating withered and dead leaves. **Habitat** Gardens, verges, hedgerows, scrubby downland and chalk embankments. **Status and distribution** Resident. Local. First recorded in 1831 in the London area (and established on Portland in the late 19th century), but local and rare until the mid-20th century. Has since increased greatly (numbers in the Rothamsted Insect Survey light-trap network increased by over 74,000% between 1968 and 2007) and is now well distributed and frequent to abundant in the London area and elsewhere in south-east England. Its range has also expanded into the south Midlands, central southern England and East Anglia, with records north to Cheshire and Yorkshire, and along the south coast to Cornwall and Scilly. Widespread and frequent in the Channel Islands, and increasing on Alderney.

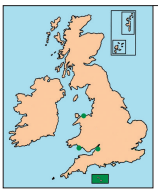
Silky Wave

plate 12

Idaea dilutaria (Hb.)

RDB

70.005 (1704)



Field characters FW 8–10mm. Wings cream, silky, with slightly wavy, somewhat indistinct, light brown cross-lines. Dark central dots are usually absent or very small, especially on forewing. Outer edge of forewing has rather faint dark dashes in

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

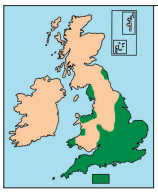
leading half, or lacks dark markings. **Similar species** Dotted Border Wave and Dwarf Cream Wave both have distinct dark central dots on both forewing and hindwing, and conspicuous dark dots or dashes along outer edges. Satin Wave is larger and whiter. See also Isle of Wight Wave. **Flight season** One generation. Late Jun–late Jul, with peak numbers in early Jul. Easily flushed by day from ground vegetation. Flies from dusk and comes to light. **Life cycle** Overwinters as a part-grown larva, low down in the sward, on or near the foodplant. Larva Aug–end May. Pupates in a cocoon on the ground. **Larval foodplants** Common Rock-rose and possibly other low-growing plants, the larvae stripping the stems and then feeding on the withering leaves. **Habitat** Sparse swards containing well-established and not overgrazed Common Rock-rose, on well-drained, mainly south-facing calcareous slopes. **Status and distribution** Resident. Red Data Book species. Currently known from only three localities in Britain: Avon Gorge, near Bristol, where it was discovered at Durdham Down in 1851; Great Orme, Caernarvonshire, where it has been known for many decades; and on Gower, Glamorgan, where it was rediscovered in the 1990s and has a strong population. One was recorded from Gloddaeth Hill, south of the Great Orme, in the 1970s. In the Channel Islands, in recent times only confirmed from Guernsey (one in 2006).

Dwarf Cream Wave

plate 12

Idaea fuscovenosa (Goeze)

Local 70.006 (1705)



Field characters FW 9–11mm. Wings creamy white, with fairly distinct, usually light brown cross-lines and a small but noticeable blackish central dot on both wings, that on forewing after second cross-line. Base of leading edge of forewing brownish. A series of very fine blackish dashes along outer edges, best seen with a hand-lens. **Similar species** Dotted Border Wave has brownish-white wings, with conspicuous dots rather than dashes along outer edges, and is on average slightly larger. See also Silky Wave, Small Fan-footed Wave and Isle of Wight Wave. **Flight season** One generation. Early Jun–late Jul. Sometimes disturbed by day from scrub, hedgerows, tall herbs or rough grass. Flies from dusk and comes to light in small numbers. **Life cycle** Overwinters as a larva. Larva Aug–May. **Larval foodplants** Apparently little known in the wild, but in captivity will eat fresh or withered leaves of Dandelion, Knotgrass and Bramble. **Habitat** Hedgerows, scrubby grassland, woodland edges and rides, the edges of marshes, gardens and other places, usually with tall herbaceous growth. More frequent in sandy or calcareous situations, scarcer on acid heathland and heavy clays. **Status and distribution** Resident. Local. Quite well distributed and fairly frequent in southern, south-western and eastern England, including East Anglia and the Channel Islands. More local in the Midlands, Merseyside and northern England, extending to Cumbria and Northumberland. Local and mainly coastal in Wales.

Isle of Wight Wave

plate 12

Idaea humiliata (Hufn.)

Former resident, presumed extinct; suspected immigrant 70.007 (1706)

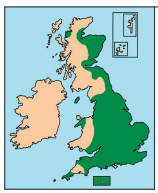
Field characters and similar species FW 9–10mm. Similar to Silky Wave and Dwarf Cream Wave but with a reddish-brown streak along leading edge of forewing, which is also generally narrower and more yellowish. Sometimes has a very fine brown line along outer edges of both wings. Both these markings are best seen with a hand-lens. **Flight season** One generation. Jul. Flies at sunset and at sunrise. **Life cycle** Overwinters as a small larva. In mainland Europe, larva Aug–May. Pupates in a cocoon on the ground. **Larval foodplants** Restharrows, speedwells and a range of other herbaceous plants are recorded in mainland Europe. Reared on Dandelion and docks. **Habitat** In Britain, on steep grassy, chalk sea-cliffs. **Status and distribution** Former resident, presumed extinct, and suspected immigrant. As a resident, known only from the sheer chalk cliffs west of Freshwater, Isle of Wight, where it was discovered in the early 1890s. It was captured intermittently in fair numbers for the next 20 years, and again in Jul 1931, when it was last seen. The main grassy ledge from which it was known subsequently collapsed into the sea. Other ledges remain, but are virtually inaccessible. One in Portsmouth, Hampshire, in 1954, raised hopes that it may have come from a resident population, but none has been found.

Small Dusty Wave

plate 12

Idaea seriata (Schr.)

Common 70.008 (1707)



Field characters FW 9–11mm. Both wings are light to dark grey, usually dusted with dark grey, with a distinct central dot and fine, often dotted black cross-lines. Usually has a narrow, rather diffuse, fairly straight central cross-band and outer cross-line, often with kink near middle, and a line of very fine, dark dashes or dots along outer edge. The uncommon melanic f. *bischoffaria* La Harpe is blackish, with pale outer edges. **Similar species** Unlike any related British species, but sometimes mistaken for an unidentifiable pug. Of these, it is perhaps most similar in size, colour and markings to Slender Pug and Maple Pug. However, neither is dusted in appearance, cross-lines are kinked near leading edge and hindwing often lacks a distinct central dot. **Flight season** Two substantial generations in the southern half of Britain, Jun–Jul and Aug–late Sep. Mainly one generation further

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

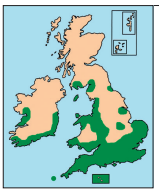
north, Jul–Aug, but a second occurred in Aberdeenshire in late Sep 2003. Sometimes seen on walls, or disturbed from hedges or other thick vegetation by day. Often sits on lighted windows, or on interior walls. Comes to light regularly, in small numbers. **Life cycle** Overwinters as a larva. Larva Sep–May and Jul. Pupates in a cocoon on the ground. **Larval foodplants** Shows a general preference for withered leaves and other plant debris. Has been beaten from Ivy clumps, and in captivity will eat herbaceous plants such as Dandelion and docks. **Habitat** Gardens, hedgerows and rough ground, often near human habitation; even breeds in windowboxes and on potted plants. **Status and distribution** Resident. Common. Widely and fairly well distributed throughout most of England, also in the Channel Islands, the lowlands of Wales and in the eastern half of Scotland, north to the Moray Firth. Only a few records from Man.

Satin Wave

plate 12

Idaea subsericeata (Haw.)

Common 70.009 (1709)



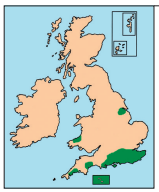
Field characters FW 10–12mm. Wings greyish white and rather silky. Forewing rather pointed, leading edge arched towards tip. Cross-lines fairly distinct and quite angled. Central and marginal dots very small and faint, or absent. **Similar species** See Dotted Border Wave and Silky Wave. **Flight season** Usually one generation. Jun–Jul. In some years, a partial second generation in southern England, mid-Aug–late Sep. Comes to light, usually in small numbers. **Life cycle** Overwinters as a larva. Larva Aug–May. Pupates in loose earth. **Larval foodplants** Apparently little known in the wild, but in captivity will eat Dandelion, Knotgrass and other herbaceous plants. **Habitat** Woodland, scrub, hedgerows, rough grassland and some gardens, especially on chalk and limestone, but also on heathland. **Status and distribution** Resident. Common. Well distributed and fairly frequent in south-west, central southern and south-eastern England and in the Channel Islands. Widespread but more thinly distributed in Wales (mainly around the coast), the south and west Midlands, and in East Anglia, where it is most frequent in Breckland. Very local in Lincolnshire and local along the west coast of northern England to Cumbria, and in south-west Scotland. Very local on Man. Local and mainly coastal in the southern half of Ireland, from Cos. Kerry to Dublin and in Cos. Clare and Galway.

Dotted Border Wave

plate 12

Idaea sylvestraria (Hb.)

Nb 70.010 (1701)



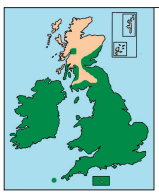
Field characters FW 10–11mm. Wings usually brownish white, with a thin scattering of blackish scales and usually rather indistinct, wavy brownish cross-lines that vary in strength. Both wings have a small, distinct central black dot, and a line of blackish dots along outer margins, which are visible to the naked eye. Form *circellata* Guen., brown with distinct cross-lines, is found mainly in Lancashire and Cheshire, but forms approaching it have occurred elsewhere. **Similar species** See Silky Wave. Satin Wave has at most faint central and marginal dots and is nearly always whiter. See also Dwarf Cream Wave. **Flight season** One generation. Late Jun–early Aug. Sometimes disturbed from heathers by day, flying from dusk onwards and coming to light. **Life cycle** Overwinters as a larva. Larva Aug–end May. Pupates on the ground. **Larval foodplants** Unknown in the wild, but unlikely to be dependent on a single plant genus. Dandelion, Knotgrass, Bramble and other plants accepted in captivity. **Habitat** Open heaths, often with scattered bushes. **Status and distribution** Resident. Nationally Scarce B. Well established in Devon, Dorset, Hampshire, Surrey and Berkshire, and with scattered colonies in south-east England. Few, very scattered, mainly old records from Sussex, the Midlands (Hartlebury Common, Worcestershire), north Lincolnshire (Scotton Common) and south Yorkshire (Strensall Common and Thorne Moors), Cheshire and north-west England. In the Channel Islands, annual in small numbers on Alderney and recorded from Jersey (since 2004) and Guernsey (three in 1997).

Single-dotted Wave

plate 12

Idaea dimidiata (Hufn.)

Common 70.011 (1708)



Field characters FW 9–11mm. Diagnostic feature is a darkening of outer area towards trailing corner of the rounded straw-white forewing. On well-marked examples, this is clearly evident as a dark brown band, but even those that are lightly marked have at least two small dark blotches. **Similar species** Small Fan-footed Wave and Treble Brown Spot have much less rounded forewing, with outer band strong in leading half. **Flight season** One generation. Jun–Aug. Visits flowers from dusk, such as Creeping Thistle. Comes regularly to light, usually in small numbers. **Life cycle** Overwinters as a larva. Larva Aug–May. Pupates in a slight cocoon in plant debris. **Larval foodplants** In the wild, recorded on the flowers of Cow Parsley, Burnet-saxifrage and

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

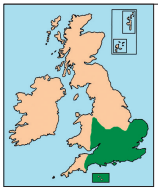
Hedge Bedstraw, but in captivity will eat herbaceous plants such as Dandelion, preferring withered leaves. **Habitat** Woodland, hedgerows, gardens, marshes and fens. Often in damp situations. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout England, Wales, Man, Ireland and the Channel Islands. Widespread in southern Scotland, mainly in coastal counties, north to Argyll and Kincardineshire.

Treble Brown Spot

plate 12

Idaea trigeminata (Haw.)

Local 70.012 (1711)



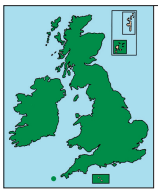
Field characters FW 10–11mm. Quite distinctive. Constant diagnostic feature is dark brown outer cross-band on otherwise rather plain straw-white forewing, more or less forming three blackish-brown blotches extending neatly outwards from the thin cross-line. Blotch near leading edge is linked only by the cross-line, but hind pair are often merged. Usually has a dark streak from base of leading edge. Distinct dark central dot on both wings. **Similar species** Form *fimbriolata* Steph. of Small Fan-footed Wave is similar in size and shape, but has continuous dark outer band on forewing and usually lacks dark streak on leading edge. See also Single-dotted Wave. **Flight season** Two generations. Late May–Jul, with a smaller second generation late Jul–late Sep in parts of southern England. Sometimes found by day at rest on wooden fences. Flies from dusk and comes to light. **Life cycle** Overwinters as a larva. Larva Aug–May. Pupates in loose earth. **Larval foodplants** Apparently little known in the wild, but recorded on withered and dead leaves of Ivy. In captivity will eat herbaceous plants. **Habitat** Most frequent in woodland rides and edges; also hedgerows and chalk downland, and occurs regularly in some gardens. **Status and distribution** Resident. Local, but increasing. Numbers in the Rothamsted Insect Survey light-trap network increased by 4,300% from 1968 to 2007. Well distributed and fairly frequent in southern England from Dorset eastwards, in East Anglia and the south and west Midlands, and in the Channel Islands. Extends into south-east Wales, and more locally into south-west England and the north-west Midlands.

Small Fan-footed Wave

plate 12

Idaea biselata (Hufn.)

Common 70.013 (1702)



Field characters FW 10–11mm. Both whitish-buff wings have a prominent black central dot. Leading edge of forewing is arched toward tip, and second cross-line beyond the black dot usually curves around it. Strength of markings is variable, but usually has a broad, darker, continuous outer cross-band, with an irregular pale cross-line running along its outer edge. In the frequent f. *fimbriolata* Steph., this band is dark grey, and wings are occasionally darker generally. **Similar species** See Treble Brown Spot. Dwarf Cream Wave is smaller and central dots are smaller, that on forewing is usually after second cross-line, and outer area is not noticeably darker. See also Single-dotted Wave. **Flight season** Mainly one generation. Late Jun–late Aug. In some recent years, small numbers of a probable second generation in Sep–Oct from southern England north to Lancashire. Can be disturbed by day from low branches and thickets. Visits flowers from dusk, such as Creeping Thistle. Comes to light, sometimes in large numbers. **Life cycle** Overwinters as a larva. Larva Aug–May. Pupates in leaf litter. **Larval foodplants** Little known in the wild. In captivity will eat herbaceous plants such as Dandelion and plantains, preferring withered leaves. This suggests it normally lives close to the ground. **Habitat** Broadleaved woodland, where it can be abundant; also conifer plantations, hedgerows and mature gardens in suburban and rural areas. **Status and distribution** Resident. Common. Well distributed and fairly frequent, and recorded throughout the British Isles (not Shetland), except on higher ground in the north.

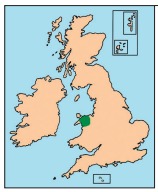
Weaver's Wave

plate 12

Idaea contiguaria (Hb.)

ssp. *britanniae* (Müll.)

Na 70.014 (1710)



Field characters FW 9–11mm. The narrow, elongate forewing, fine blackish cross-lines, heavy dark dusting and blackish-brown patches along leading edge, coupled with the habitat, single out this species. **Similar species** See Mullein Wave, which is much larger. **Flight season** One generation. Late Jun–Jul. By day it sits in sheltered spots, in crevices and under ledges of rocks, sometimes quite openly. Not very flighty or alert, so easy to box. Flies from dusk and comes to light. **Life cycle** Overwinters as a part-grown larva among the foodplant. Larva early Aug–May. Pupates in a slight cocoon. **Larval foodplants** Mostly Heather. Also found away from Heather, eating other plants such as Crowberry and Navelwort. **Habitat** Heather-clad hillsides, either preferring, or most easily found in, areas with exposed lichen-covered rocks. **Status and distribution** Resident. Nationally Scarce A. Found only in north-west Wales, on the mountains and hillsides of Merionethshire and Caernarvonshire.

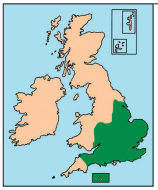
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Small Scallop

plate 12

Idaea emarginata (L.)

Local 70.015 (1712)



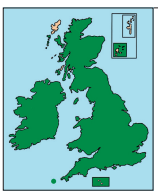
Field characters FW 11–13mm. The scalloped outer edges of the wings, fine curved cross-lines and central dots on both wings make this rather plain, sandy-brown moth easily recognisable. Female tends to be smaller and darker. Some examples have a diffuse dark central cross-band, but otherwise there is little variation. **Flight season** One generation. Mid-Jun–late Aug. Flies from dusk and comes to light in small numbers. **Life cycle** Overwinters as a very small larva. Larva Aug–May. Pupates in a cocoon among debris on the ground. **Larval foodplants** Bedstraws, and recorded on Field Bindweed. In captivity will eat other herbaceous plants, including Groundsel, docks and withered Dandelion. **Habitat** Generally rather damp places, including woodland, fens, rough grassland and hedgerow ditches; also mature gardens. **Status and distribution** Resident. Local. Well distributed, usually at low density, in southern and eastern England, the east and west Midlands, and Lincolnshire. Local in south-west England, Wales and in Yorkshire, where it is largely restricted to Strensall and Allerthorpe commons, with occasional records from Spurn. Recorded once on Jersey, in 1931, and once on Guernsey, in 2006.

Riband Wave

plate 12

Idaea aversata (L.)

Common 70.016 (1713)



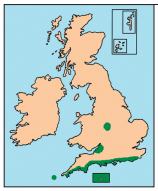
Field characters FW 14–16mm. Forewing rather long and tapered, sometimes slightly hooked, with leading edge strongly arched to tip. Ground colour fawn to sandy brown, and wings are peppered, sometimes heavily, with blackish scales, giving them a slightly rough appearance. A helpful feature is the third cross-line, which usually has a distinct kink near leading edge. The riband (meaning ribboned) form, with dark grey cross-band, may be more frequent in dense woodland than in open habitats. This form is more frequent in southern Britain than in the north, and apparently absent from parts of north-east Scotland. The plain f. *remutata* L. is as frequent as the riband form in the south and predominates in the north. **Similar species** See Plain Wave and Portland Ribbon Wave. **Flight season** Usually one generation, but may have a partial second, increasingly frequent northwards to Lancashire and Yorkshire, especially in 2006. Mid-Jun–mid-Aug and Sep–Oct. Sometimes disturbed by day, both from low swards and from tree trunks. Visits flowers from dusk, such as Creeping Thistle. Comes to light, sometimes in quite large numbers. **Life cycle** Overwinters as a small larva. Larva Jul–May. Pupates in a slight cocoon near the ground, in plant debris. **Larval foodplants** A range of low-growing herbaceous plants, including bedstraws, Wood Avens, Primrose, Dandelion and docks. **Habitat** Most habitats, including gardens, hedgerows, woodland, heathland, calcareous grassland, fens, river valleys and coastal situations. **Status and distribution** Resident. Common. Well distributed and generally frequent to abundant, and found throughout England, Wales, Man, lowland mainland Scotland, the Hebrides, Orkney, Ireland and the Channel Islands.

Portland Ribbon Wave

plate 12

Idaea degeneraria (Hb.)

RDB; Immigrant 70.017 (1714)



Field characters and similar species FW 13–15mm. Similar to Plain Wave in size, shape and ground colour, but forewing more noticeably hooked than in related species. Diagnostic feature is dark brown shading between first and second cross-lines of forewing; this varies in strength but is always darkest near inner edge of second line. Basal area is usually somewhat darkened, and hindwing usually darker near base. The dark band on some Riband Waves is between second and third lines. **Flight season** In Dorset, one generation, mid-Jun–mid-Jul. Two generations in the Channel Islands and mainland Europe, May–Jun and Sep–Oct. Occasionally disturbed by day, but usually seen at light. **Life cycle** Overwinters as a larva. Larva late Jul–late May. Pupates in loose earth. **Larval foodplants** Unknown in Britain, but in captivity accepts Bramble, Lady's Bedstraw, Traveller's-joy, Honeysuckle and Dandelion. In the Channel Islands, 12 larvae have been found feeding on the yellowing leaves of an ornamental Crack-willow in late Oct. **Habitat** Open grassy and bushy areas of coastal limestone, including undercliffs and hollows, which experience a warm micro-climate. **Status and distribution** Resident and immigrant. Red Data Book species. Resident in Dorset, on scrubby undercliffs on the east coast of the Isle of Portland, where it was first noted in 1831, and St Alban's Head and Winspit, Isle of Purbeck. Recent annual records (of both generations) at Maenporth, Cornwall, and recent records from Devon have suggested at least temporary residency. A number of immigrants/vagrants (usually in the autumn) recorded on Scilly and mainly in southern coastal counties east to Sussex, including over 20 in 2006. Resident and frequent in the Channel Islands.

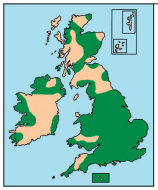
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Plain Wave

plate 12

Idaea straminata (Borkh.)

Local 70.018 (1715)



Field characters and similar species FW 13–15mm. Very similar to some examples of the unbanded form of Riband Wave, but slightly smaller and distinguished by its smooth and rather silky, muddy-brown wings and generally fainter cross-lines. Third cross-line on forewing is not kinked at leading edge, as it usually is in Riband Wave. See also Portland Ribbon Wave. **Flight season** One generation. Late Jun–early Aug. Flies from dusk. Comes to light, usually in small numbers. **Life cycle** Overwinters as a larva. Larva Aug–May. Pupates among plant debris. **Larval foodplants** Little known in the wild, but in captivity will eat herbaceous plants such as Dandelion and Knotgrass, and also sallows. **Habitat** Mainly open woodland and scrubby heathland, but sometimes hedgerows, country lanes and permanent rough grassland. **Status and distribution** Resident. Local. Locally and thinly distributed (and seldom numerous) throughout most of England, Wales, mainland Scotland and the Inner Hebrides. Recorded from Man. Widespread but very local in Ireland. Rare on Jersey and Guernsey, one on Alderney in 2011.

Lewes Wave

plate 12

Scopula immorata (L.)

Former resident, presumed extinct 70.019 (1683)

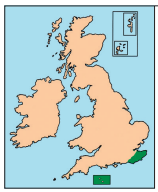
Field characters FW 11–14mm. The mixture of whitish, brown and blackish scales gives this moth a soft grey-brown appearance. Several wavy bands are usually visible across forewing, the outermost of which is whitish and often broken. The fringes are chequered and male has slightly feathered antennae, barely visible to the naked eye. Initially settles with wings spread and slightly raised, exactly like a Grizzled Skipper butterfly *Pyrgus malvae* (L.). **Similar species** Common Heath can be somewhat similar, but is more coarsely marbled and male has strongly feathered antennae. **Flight season** One generation. Early Jun–mid-Jul, rarely from late May. Partial second generation, Aug–Sep, after hot summers. Flies from dusk and comes to light. Easily disturbed from low vegetation by day. **Life cycle** Overwinters as a larva. Larva Aug–May. **Larval foodplants** Never confirmed in Britain. Possibly Heather. Wild Thyme and Wild Marjoram quoted in mainland Europe but not present on the British site. **Habitat** An open, heathy area with much Heather, on Weald Clay and Tunbridge Wells Sand, surrounded by conifer plantations. In mainland Europe, fallow fields and other warm, dry, open situations. **Status and distribution** Extinct former resident. Only unquestionably recorded from one locality in Britain, the north-western section of the Vert Wood complex, near Laughton, East Sussex, where it was first collected about 1850 and last seen on 22 Jun 1961. Often numerous at this site, but the breeding grounds were lost to agriculture and forestry, and the remnants probably became too overgrown for this moth (waist-high Heather was reported).

Sub-angled Wave

plate 12

Scopula nigropunctata (Hufn.)

RDB; Immigrant 70.020 (1684)



Field characters FW 14–16mm. Wings brownish white, with very fine brown speckling. Hindwing has a small but distinct point midway along outer edge. Both fore- and hindwing have a small black central dot, and several wavy grey-brown cross-lines, the central broader with diffuse edges, fairly straight and angled at leading edge of forewing. **Similar species** Cream Wave and Lesser Cream Wave have less angled and more or less wavy cross-lines, and hindwing has no distinct point on outer edge. See also Rosy Wave. **Flight season** One generation. Jul–early Aug. Can be disturbed from foodplant by day. Comes to light from dusk onwards. **Life cycle** Overwinters as a part-grown larva, probably on the foodplant or other plant stems above ground rather than in litter, based on observations in captivity. Larva Aug–May. Pupation reported both between leaves and in soil in captivity. **Larval foodplants** Unknown in the wild. Adults have been beaten from Traveller's-joy, on which larvae have been reared in captivity. Also accepts many small herbs, including Smooth Tare, other legumes and Tormentil, which are consistently present where the moth occurs. **Habitat** Open bushy coastal grassland, broad flowery woodland rides and clearings. **Status and distribution** Resident and suspected immigrant. Red Data Book species. Breeds only in the extreme south-east of England. Folkestone Warren, Kent, is the only long-term breeding site (present at intervals since 1858). Intermittent breeding is recorded in the Hamstreet/Orlestone woodland complex in Kent (where it was first noted in 1951 but is not currently resident), Friston Forest (discovered in 1984) and Beckley, Sussex, and possibly in a wood near Charing, Kent (two in 2002). Appears to be occurring increasingly frequently as an immigrant, with about 40 records away from known populations, mainly in other parts of Kent but also from Dorset and the Isle of Wight to Sussex. Further colonisation may be just a matter of time. One recorded on Jersey, in 2003.

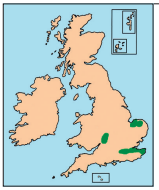
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Lace Border

plate 12

Scopula ornata (Scop.)

Na 70.021 (1687)



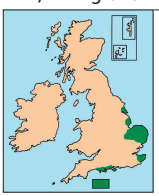
Field characters FW 12–13mm. Aptly named; the chalky-white wings, with banded grey-brown outer edges, brown blotches and a very fine, irregular blackish outer cross-line, make this moth unmistakable. There is very little variation. **Flight season** Two generations. May–Jun and mid-Jul–early Sep. Easily flushed from the sward by day. Flies from dusk, comes to light in small numbers and recorded at sugar. **Life cycle** Overwinters as a part-grown larva in the sward. Larva Jun–Jul and Aug–Apr. Pupates in a slight cocoon on the ground. **Larval foodplants** Wild Thyme, Wild Marjoram and probably other herbs. Has been reared on garden mints. **Habitat** Calcareous grassland, on both chalk and limestone. Some sites are lightly grazed downland and one is the bank of a disused railway line. **Status and distribution** Resident. Nationally Scarce A and much declined. Local but still sometimes frequent on a number of sites on the North Downs of Surrey and north Kent. Regular at one site in West Norfolk (and discovered in 2013 at a site in East Norfolk), and several recorded in Gloucestershire. Only scattered records elsewhere, including Devon (Yarner Wood, 1984) and Somerset (Millwater Mead, 1980s). Formerly recorded in the Cotswolds and in other parts of southern England, from the Isle of Wight and Hampshire to Essex and Suffolk, and from south Wales. Overlooked colonies may await discovery but some have undoubtedly been lost or much reduced due to changes in agriculture. Recorded once on Jersey, in the 1930s.

Tawny Wave

plate 12

Scopula rubiginata (Hufn.)

RDB; Immigrant 70.022 (1688)



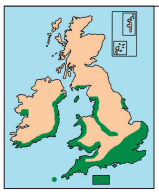
Field characters FW 9–11mm. A rich, deep pinkish-brown moth when fresh. The intensity of the pink varies and some examples are dull brown. Early-season immigrants are often paler than those produced in the wild and in captivity in Britain. Three dark cross-lines are usually apparent across forewing. **Similar species** Bright Wave is sandy brown and forewing is more pointed, with a series of tiny dark dots in fringes, and cross-lines are generally less distinct, especially that closest to base. Ochraceous Wave has four cross-lines or bands, and is more orange in colour. The dark form of Purple-bordered Gold is a more vivid pink, has only a single purple outer cross-line and usually retains a small yellow spot near centre of wings. **Flight season** Two generations. Mid-Jun–mid-Jul and mid-Aug–early Sep. Readily flushed by day, flies a short distance and alights on a stem. Flies from dusk onwards and comes to light. Most suspected immigrants have been at light in late Jul–early Aug, slightly in advance of the residents. **Life cycle** Overwinters as a part-grown larva in the sward. Larva Jul–Aug and Sep–May. Pupates in a light cocoon among plant debris on the ground. **Larval foodplants** As yet undiscovered in the wild. Reared in captivity on Dandelion and Knotgrass (both unlikely to be the wild foodplants), Field Bindweed, and various legumes, including clovers, trefoils and Black Medick. **Habitat**, **Status and distribution** Resident. Red Data Book species. Breeding is probably confined to a few of the surviving Breckland areas around the Norfolk–Suffolk border, including rides in Thetford Forest, and to coastal sand-dunes in the Aldeburgh–Thorpeness area of Suffolk. Has also occurred as a scarce immigrant (over 50), on southern and eastern coasts of England from Cornwall to Spurn Head, Yorkshire, and in the Channel Islands.

Mullein Wave

plate 13

Scopula marginepunctata (Goeze)

Local 70.023 (1689)



Field characters FW 12–15mm. Quite distinctive, usually with a creamy ground colour on both wings, fine blackish markings and a variable scattering of blackish scales. Form *mundata* Prout is white, lacks dusting and has fine blackish cross-lines; it occurs in Sussex, Dorset and the Isle of Wight. Heavily dusted examples can have a coarse grey or grey-brown appearance, and a blackish form, usually with whitish fringes (f. *aniculosata* Ramb.), has been found in south-west England and Scotland. **Similar species** See Weaver's Wave. **Flight season** Mainly two generations. Jun–Jul and Aug–Sep. One generation in Scotland, Jun–Jul. Often seen at rest on rocks. Comes to light, sometimes in fair numbers. **Life cycle** Overwinters as a larva. Larva Jul and Sep–May. Pupates in loose earth. **Larval foodplants** Herbaceous plants, including Wild Marjoram, Wood Sage, Horseshoe Vetch, Yarrow, Mugwort and stonecrops. **Habitat** Mainly on or near the coast, especially rocky places and coastal grassland, but also saltmarshes. Inland, found in urban areas, in ruderal and other habitats. **Status and distribution** Resident. Local. Well distributed and locally fairly frequent in coastal areas of England and Wales from Cumbria to Suffolk, including Man, Anglesey, Scilly and the Isle of Wight, and in the Channels Islands. Locally abundant in urban parts of the London area, and found locally in neighbouring counties, including Hertfordshire, where it is a fairly recent colonist. Local in Norfolk and scattered records from the east coast (Spurn, Yorkshire to Northumberland) and in the Midlands. In Scotland, very local in the south-west. In Ireland, locally frequent mainly on southern and eastern coasts.

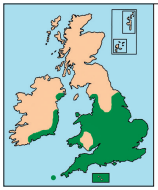
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Small Blood-vein

plate 13

Scopula imitaria (Hb.)

Common 70.024 (1690)



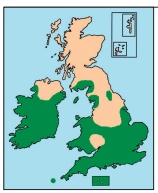
Field characters FW 13–15mm. A distinctive sandy-brown moth, with three fine, wavy, darker cross-lines on forewing, the central one slightly curved, usually with dark shading on its outer edge, and continuous with a similar line on hindwing when moth is at rest. Fore- and hindwings with small but distinct point midway along outer edge, less pronounced on forewing, and small black central dot. **Flight season** Two generations. Jul–Aug and a smaller second one in Sep–Oct. Sometimes seen at rest or disturbed by day. Comes to light in small numbers. **Life cycle** Overwinters as a larva, probably on foodplant. Larva Aug–May. Probably pupates in debris on the ground. **Larval foodplants** Rarely recorded in the wild, but has been found on Garden Privet and Honeysuckle, and may also feed on herbaceous plants, which it eats in captivity. **Habitat** A wide range, including gardens, hedgerows, broadleaved woodland and open coastal sites. **Status and distribution** Resident. Common. Well distributed and fairly frequent in England north to Yorkshire and Cheshire. More local in Lancashire (where it is mainly coastal in the north of the county) and south Cumbria. In Ireland, recorded locally in the east and south from Co. Down to Co. Cork, mainly on the coast. Widespread and frequent in the Channel Islands.

Lesser Cream Wave

plate 13

Scopula immutata (L.)

Local 70.025 (1692)



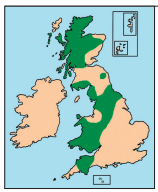
Field characters FW 12–13mm. Wings rather rounded, white or creamy white, with a fine scattering of black scales and several slightly wavy or curved pale brown cross-lines. Central black dot, strongest on hindwing, sometimes absent on forewing. Hindwing not pointed. **Similar species** Cream Wave is larger and forewing is more pointed, with leading edge more arched near tip, and cross-lines generally more irregular. See also Smoky Wave, Rosy Wave and Sub-angled Wave. **Flight season** One generation. Late Jun–early Aug. Flies from dusk, when sometimes seen in fair numbers, and comes to light in smaller numbers. **Life cycle** Overwinters as a larva in plant debris, in which it later pupates. Larva late Aug–May. **Larval foodplants** Meadowsweet and Common Valerian. In captivity, eats a wider range of plants, including hawthorns, Purple-loosestrife and Groundsel. **Habitat** Damp grassland and marshes with rank vegetation, in river valleys and other low-lying areas, and on dry breckland heaths. **Status and distribution** Resident. Local. Well distributed in south-west, central southern and eastern England and coastal counties of Wales. Local in the remainder of southern Britain and on Man, and very local in northern England and south-west Scotland. Widespread and locally frequent in Ireland. Rare in the Channel Islands. One on Alderney (20 Aug 2011) of an unusual, rather yellowish form.

Smoky Wave

plate 13

Scopula ternata (Schr.)

Local 70.026 (1694)



Field characters FW 12–15mm. Wings lacking central black dots, dull greyish white with fine grey-brown speckling, generally heavier in the larger male. The slightly wavy brownish cross-lines are often blurred, especially in male. **Similar species** Lesser Cream Wave has small black central dots, strongest on hindwing, and cross-lines generally more curved. See also Cream Wave. **Flight season** One generation. Jun–Jul. Easily disturbed from low vegetation by day, sometimes in fair numbers. Comes to light in small numbers. **Life cycle** Overwinters as a larva. Larva Aug–late May. Pupates close to the ground in plant debris, or just below it. **Larval foodplants** Heather and Bilberry. On calcareous soils the foodplant is apparently unknown. **Habitat** Heathland, moorland and very locally on rocky limestone grassland with a short sward. **Status and distribution** Resident. Local. Quite well distributed and fairly frequent in Devon and Somerset, Wales, the north Midlands from Staffordshire and Derbyshire northwards, and northern England. In Scotland, in the south, the Central Belt, and more generally in the Highlands and Western Isles. Two old records from Man and one from Northern Ireland (Co. Antrim in 1997).

Cream Wave

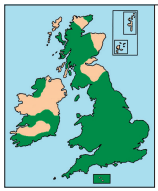
plate 13

Scopula floslactata floslactata (Haw.)

Local 70.027 (1693)

ssp. *scotica* Cock.

Local



Field characters FW 13–16mm. Wings creamy white, with a thin scattering of dark scales and three or four distinct wavy, light or dark brown cross-lines. Forewing rather pointed, with leading edge noticeably arched toward tip and outer edge fairly straight. Hindwing more or less rounded. Black central dot on hindwing very small, usually absent on forewing. Ssp. *scotica* is similar in shape, but smaller and darker, with thicker (occasionally very thick) dark speckling. **Similar species** See Lesser

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

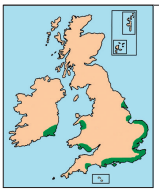
Cream Wave. Smoky Wave is somewhat similar, especially to ssp. *scotica*, but has no dark central dots and cross-lines are straighter and often less distinct, especially in male. See also Sub-angled Wave. **Flight season** One generation. May–Jun, into Jul in Scotland. Often disturbed from hedgerows, undergrowth and low branches by day. Comes to light in small numbers. **Life cycle** Overwinters as a fully grown larva. Larva Jul–Apr. Pupates in loose earth. **Larval foodplants** Bedstraws, Woodruff and Bush Vetch reported. Will eat other herbaceous plants in captivity. **Habitat** Broadleaved woodland, hedgerows, damp scrubby grassland and some gardens. **Status and distribution** Ssp. *floslactata* resident and possibly an occasional immigrant. Local. Fairly well distributed and sometimes frequent in most parts of England and Wales, and found on Man and the Channel Islands. In Ireland, locally frequent in the southern half, and very local in the north-west. Two at light in very open habitat at Worth Matravers, Dorset, on 19 and 20 Aug 1996 during a major migrant influx. A partial second generation can occur further south in Europe. Ssp. *scotica* is widespread but local in western and central Scotland, north to Caithness and Sutherland.

Rosy Wave

plate 13

Scopula emutaria (Hb.)

Nb 70.028 (1691)



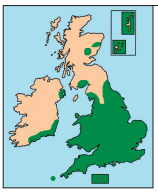
Field characters FW 11–13mm. The milky-white wings often have a delicate pastel pink tinge and a thin scattering of dark scales. Central cross-line is the broadest and is straight, extending towards forewing tip, but usually fading before reaching it. Beyond it is a row of small dark dots. Hindwing has a small but distinct point midway along outer edge. Varies slightly, mainly in strength of markings. **Similar species** Sub-angled Wave is similar in shape, but substantially larger. Lesser Cream Wave has rounded wings and curved cross-lines. Both lack a line of small dark dots toward outer edge of forewing, and are never pinkish. **Flight season** One generation. Late Jun–Jul. Often disturbed by day, seldom flying more than a few metres. Flies from just before dusk. Can be found in numbers after dark, resting on grass stems. Less frequent at light. **Life cycle** Overwinters as a part-grown larva, several of which have been found on stems of Sea Beet at one coastal site in north Kent. Larva Aug–May. Pupates in a cocoon in debris or on the ground. **Larval foodplants** As yet undiscovered in Britain. Although found on Sea Beet, has not been successfully reared from the egg on it, and this plant is absent from many occupied sites. Common Sea-lavender is a suspected foodplant. Has been reared on Knotgrass, chickweeds, Hop Trefoil, Common Bird's-foot-trefoil and Sea Campion. **Habitat** The edges of coastal and estuarine saltmarshes, coastal sand-dunes and acid bogs inland. **Status and distribution** Resident. Nationally Scarce B. Found locally along the south and east coasts of England in Dorset (Wareham Heaths and the saltmarshes and mires around Poole Basin), Hampshire and the Isle of Wight (coastal sites and in the New Forest), Sussex, Kent and Essex (including the Thames estuary), and in East Anglia to north Norfolk, Gibraltar Point in Lincolnshire and Spurn, south Yorkshire. One recorded at Dawlish Warren, Devon, in 2009, possibly an immigrant. In Wales, locally on the Gower Peninsula, Glamorgan, and along the west coast, including the Porthmadog area. In Ireland, very local in the south-east on sand-dunes, in Cos. Waterford and Wexford (first found in 2005). Two recorded on Jersey, in 1999.

Blood-vein

plate 13

Timandra comae (Schmidt)

Common; suspected immigrant 70.029 (1682)



Field characters FW 15–18mm. Larger than related species and easily recognisable, with light creamy-buff wings and a variable degree of very fine, dark speckling. The virtually straight, diagonal pink or brownish-red line running from forewing tip to trailing edge and across hindwing, and the bright pink fringes, are diagnostic. Pink markings vary in intensity and may fade to brown with age, but pattern varies little. Entirely dark, smoky-brown or purplish-black forms (f. *nigra* Rebel) are rare. **Flight season** Usually two generations, occasionally a partial third in the south. May–early Jul, early Jul–mid-Sep, and mid-Sep–Nov. Often seen on, or disturbed from, low vegetation by day. Comes to light. **Life cycle** Overwinters as a larva. Larva Jul and Sep–Apr. Pupates near the ground among plant debris. **Larval foodplants** Docks, Common Orache, Common Sorrel, Knotgrass and probably other related plants. **Habitat** A wide range, but particularly in damp places with rank, herb-rich vegetation, including hedgerows, ditches, woodland rides, wet meadows and gardens. **Status and distribution** Resident. Common. Well distributed and fairly frequent in England and Wales to north Yorkshire and Lancashire, where it has recently increased and expanded locally into Cumbria and Northumberland. Single, very scattered records from various parts of Scotland, considered to be immigrants or vagrants. A number from Orkney and Shetland (especially since 2000), thought to be Scandinavian in origin. Local in Ireland, mainly in the south-east but also reported, as a rarity, from Northern Ireland. Widespread and frequent in the Channel Islands.

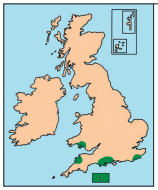
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Dingy Mocha

plate 13

Cyclophora pendularia (Cl.)

RDB 70.030 (1675)



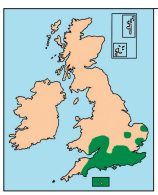
Field characters and similar species FW 12–14mm. The heavy, rather coarse freckling on this pinkish-grey moth separates freshly emerged individuals from related species. Only likely to be confused with dark forms of Birch Mocha, from which it is further distinguished by forewing shape. In Dingy Mocha forewing is slightly more hooked, trailing corner is more curved and inset, and hindwing has a more distinctive point, but these features can be obscured if individual is worn. **Flight season** Two generations. May–early Jun and Jul–early Aug. Flies at dusk. Occasionally comes to light. **Life cycle** Overwinters as an exposed pupa, attached to a leaf by a silk girdle. Larva Jun–Jul and Aug–Sep, the timing depending on weather. **Larval foodplants** Small-leaved sallow species such as Eared Willow and Grey Willow, growing as single small bushes or in larger clumps. **Habitat** Open, boggy heathland and damp grassland with sallow scrub (including open areas within forestry plantations), but not where this is shaded by other trees or heavily browsed by cattle and horses. **Status and distribution** Resident. Red Data Book species. Recent records are now almost confined to Dorset heathlands near Wool and Wareham, and grassland sites in the Blackmore Vale and east to Hampshire (heathland in the Ringwood area and in the New Forest in the early 2000s). Also found very locally in North Devon and a single recent record from Glamorgan, south Wales (2006), from where there are old records. Two at Icklesham, Sussex, on 26 and 27 Jul 2013 are considered most likely to have been immigrants. Formerly resident in South Wiltshire and historically in Sussex, Surrey and Kent. Many old records of '*pendularia*' refer to Birch Mocha, which was formerly known by this name, but this may be evident if mention is made of the foodplant or habitat. One on Guernsey in Jul 2013.

Mocha

plate 13

Cyclophora annularia (Fabr.)

Nb 70.031 (1676)



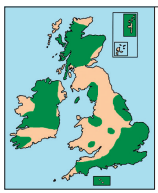
Field characters FW 11–14mm. The most distinctive of the mochas, with unique and exquisite wavy black markings, including an outer cross-band on yellowish-cream fore- and hindwings. The markings vary somewhat in extent and intensity. Very rarely, the central rings are missing. **Flight season** Two generations. Mid-May–mid-Jun and late Jul–Aug. Flies from dusk. Comes to light in small numbers, and is occasionally disturbed by day from the larval foodplant or nearby vegetation. **Life cycle** Overwinters as a naked, silk-girdled pupa attached to a leaf or among moss. Larva Jun–Jul and late Aug–Sep. **Larval foodplants** Field Maple, both large trees and smaller bushes. Will eat Sycamore and other *Acer* species in captivity. **Habitat** Scrub, woodland and hedgerows, preferring long-established hedges and woods. **Status and distribution** Resident. Nationally Scarce B. A species of southern Britain, like its larval foodplant, but the moth is much more restricted. Quite well distributed in southern counties from South Devon to Kent, and north into Somerset and along the Severn Valley through Gloucestershire to Worcestershire, roughly following Triassic and Jurassic mudstone beds, with scattered records from south Wales. Also in Wiltshire, Surrey, Berkshire and Buckinghamshire. Formerly widespread further north-eastwards, roughly following Cretaceous greensands towards the Wash and Lincolnshire, and also into East Anglia, but now apparently scarce in these areas. Recorded on Guernsey and recently on Alderney.

Birch Mocha

plate 13

Cyclophora albipunctata (Hufn.)

Local 70.032 (1677)



Field characters FW 12–14mm. The plain greyish or whitish ground colour of the wings distinguishes most examples. Some have a diffuse pinkish-red or greyish central cross-band, and the extent of the blackish markings varies. Second generation is sometimes darker, more greyish; Scottish moths are palest, and larger. Form *subroseata* Woodforde is rather dark grey, often with an extensive rosy flush. It occurs in most populations as a variable percentage. **Similar species** See Dingy Mocha. **Flight season** Two generations north to Yorkshire, early May–late Jun and late Jul–end Aug; one generation further north, May–early Jul. Occasionally disturbed from birch by day. Active from dusk. Comes to light, sometimes in numbers. Occasionally visits flowers such as Creeping Thistle and Common Ragwort, and sugary baits. **Life cycle** Overwinters as a pupa attached to a birch leaf.

Larva of Birch Mocha.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva late Jun–Jul and, in the south, late Aug–mid-Oct. **Larval foodplants** Downy and Silver birches. Will eat Alder in captivity. **Habitat** Mainly woodland and heathland, seldom in gardens or among scattered, recently established trees. **Status and distribution** Resident. Local. The most widespread and frequent of the mochas. Most densely distributed in southern and south-east England and East Anglia. Local in Lincolnshire and Yorkshire. Very local and apparently in decline in the Midlands and Wales, but extends north to Cumbria. Local on Man (first recorded in 1986). In mainland Scotland, widespread from the Central Belt north to Caithness, including the Inner Hebrides (vagrant in Shetland), but scarce in the south. Found locally across most of Ireland. Resident in the Channel Islands, but apparently rare.

Note on the following five species

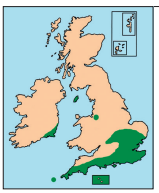
This group can be especially difficult to identify. The vast majority of specimens conform to the diagnostic features given. However, each species varies such that atypical individuals do occur that may defy identification, as can worn specimens, since some of the characters used are quite small and easily obscured as scales are lost. Therefore if, after comparing the notes under the species, ambiguity remains, reference to characters of the genitalia should be used to provide confirmation. Those of the males are distinct, but those of the females are difficult to separate. However, captive females will readily lay eggs from which moths can easily be reared.

Blair's Mocha

plate 13

Cyclophora puppillaria (Hb.)

Immigrant; recent colonist 70.033 (1678)



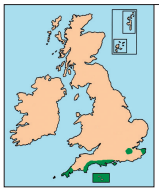
Field characters FW 12–15mm. Forewing with tip pointed. Rather plain, or softly speckled light or darker pinkish brown. Quite variable. Central cross-line is irregular, often rather blurred or absent, and inner and outer rows of dots and dark (or red) ring on central spot (fore- and hindwing) can all be weak or bold. Forewing with very fine, usually broken, dark line along outer edge, extending to tip, where it is bolder, forming a tiny but distinct oblique dark fleck. The colour and markings of individuals reared in captivity can be much more intense, ranging from pinkish buff to orange-brown or deep red. **Similar species** Second-generation Clay Triple-lines may have dark-ringed white central spots, larger on hindwing than on forewing, but usually inner and outer cross-lines on forewing are continuous. Also, forewing tip is more strongly pointed, and although dark dashes on outer edge may extend to tip, they are not bolder here. False Mocha is more coarsely freckled, usually has dark blotches near outer edge of forewing, and forewing tip is usually blunter, without the bold dark fleck. See also Jersey Mocha. **Flight season** Apr–Nov. Immigrants usually arrive Aug–Oct, particularly the latter month. Unlikely to be seen except in light-traps. **Larval foodplants** In mainland Europe, Evergreen Oak, possibly also Strawberry-tree, rock-roses and myrtles. Has been reared on young and old leaves of Pedunculate Oak and on privets. Single larvae were found on myrtle (*Myrtus* spp.) at Bonchurch, Isle of Wight, in Jan and Mar 2008, the first found in the wild in Britain. **Habitat** Mainly recorded in coastal and open situations, and woodland. **Status and distribution** Scarce but increasingly regular immigrant, with over 650 recorded since the first in 1946. The largest annual total is 163, in 2011. Most have been on or near the south coast of England, occasionally further inland, north to Cheshire, and at least once on Man. Evidence of at least temporary residency on Tresco, Scilly, in 1956–57 and in very recent years on the Isle of Wight and in Sussex. In Ireland, two in Co. Cork in 1982 and in Co. Wexford in 2006, and one in Co. Waterford in 2011 and in Co. Wicklow in 2013. Immigrant and possible transitory resident in the Channel Islands. Resident in southern and eastern Europe.

Jersey Mocha

plate 13

Cyclophora ruficiliaria (H.-S.)

Immigrant; recent colonist 70.034 (1678a)



Field characters FW 12–16mm. Forewing with tip pointed. Dark, solid central cross-band, fine inner line, and dotted outer line. In first generation, wings pinkish brown, finely and quite densely speckled with black and red scales. Central spot on fore- and hindwing is small and whitish. On hindwing, central spot is usually evident, often without a dark ring (may be thinly ringed). Fringes reddish. Second generation is similar but markings are generally weaker, sometimes with weak darker blotches near outer edge. **Similar species** Most likely to be mistaken for Clay Triple-lines, which generally has a more strongly pointed forewing tip. Its second generation is pink and may not have a dark ring around central spots. However, the cross-lines are usually stronger, it is not normally speckled and the fringes are not red, but it varies and worn specimens can be deceptive. See also Blair's Mocha (variable), Maiden's Blush and False Mocha (the latter with dark-ringed central spots). **Flight season** Two generations. Apr–Jun and Jul–Sep. Immigrants recorded mid-Jul–mid-Sep, the majority in Aug. **Larval foodplants** Oaks, accepting Pedunculate Oak and Turkey Oak in captivity. **Habitat** Woodland and well-wooded places. **Status and distribution** Immigrant and recent colonist. At least 30 British records of suspected immigrants away from breeding areas. First recorded in mainland Britain at Portland, Dorset, a female at light on 19 Jul 2003. However, a male, thought to be a worn Blair's Mocha, came to light on 18 Aug 1996 at Worth Matravers, Dorset, the correct identity of which was established in 2011 by dissection. Two in 2004, one

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

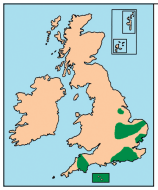
at Chickerell and one at Upwey, both near Weymouth, Dorset. Two in 2006, at Maenporth, Cornwall, with eight there in 2007 and four in 2008 (including one in May), suggesting residency. Single records in 2008 at Thanet, Kent; Walditch, Dorset; and Bonchurch, Isle of Wight. Currently resident very locally near Falmouth, Cornwall, and probably on the Isle of Wight. Resident in the Channel Islands (first recent record on Jersey in 2002, with specimens from there dating back to 1917).

False Mocha

plate 13

Cyclophora porata (L.)

Nb 70.035 (1679)



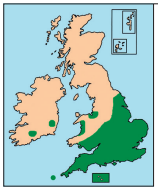
Field characters FW 12–14mm. Forewing with tip only slightly pointed. Outer edge curved, sometimes with slight central bulge. Fore- and hindwing buff or light pinkish brown, coarsely freckled and sometimes with a pink blush, and with a strongly black-ringed central white dot. Central dark cross-line somewhat indistinct, basal and outer lines in the form of a series of dark dots. **Similar species** Maiden's Blush, with central spots absent or lacking dark ring, tip usually more strongly pointed and outer edge with more distinct bulge. Second-generation Clay Triple-lines may have dark-ringed central spots on fore- and hindwing, but are more pinkish and lack coarse freckling, with forewing more strongly pointed, usually with three complete cross-lines. See also Blair's Mocha and Jersey Mocha. **Flight season** Two generations. Mid-May–early Jul and late Jul–late Aug. Second generation usually more numerous, reaching peak numbers in mid-Aug. Flies from dusk. Comes to light, including actinic traps, but usually in small numbers compared with Maiden's Blush. Occasional at sugar and wine ropes. **Life cycle** Overwinters as a pupa, attached by a silk girdle to the underside of an oak leaf, falling with it to the ground. Larva mid-Jun–late Jul and late Aug–early Oct. **Larval foodplants** Pedunculate Oak and probably Sessile Oak. **Habitat** Woodland, heathland and carr. May prefer scrubby oak and coppice regrowth, in habitats ranging from warm, sheltered locations to dense, high forest. Appears to be associated mainly with large, long-established areas. **Status and distribution** Resident. Nationally Scarce B, formerly Local. Formerly found locally across a large part of southern Britain, including parts of Wales, north to Cheshire and Yorkshire. In decline, and recent records are much more restricted and localised, mainly from south-west England, Hampshire, Surrey, Sussex, the south-east Midlands and East Anglia, and apparently none from Wales. Possible causes of decline include the cessation of small-scale rotational woodland management. Has survived large-scale conifer planting on some sites but may be largely dependent on the unplanted portions. One record from Guernsey in 2006. Old specimens examined from Jersey now reidentified as Jersey Mocha.

Maiden's Blush

plate 13

Cyclophora punctaria (L.)

Local 70.036 (1680)



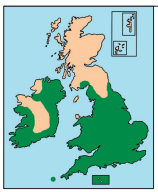
Field characters FW 13–16mm. Usually relatively distinctive. Forewing tip pointed, outer edge with central bulge, light pinkish brown or buff, speckled with dark grey scales. Central cross-line largely red, usually with a central reddish blush, sometimes extensive. Inner and outer cross-lines composed of dark dots. Central spots usually absent, or white, and not dark-edged. In second generation, reddish flush often weak or absent, and red or brown outer blotches may be present. In a rare form, extensively dark grey. **Similar species** See False Mocha (may have pink blush but with dark-edged central spots), Clay Triple-lines (plainer, pinkish or orange-brown, may have pale central spot, and sometimes dark-ringed) and Jersey Mocha. **Flight season** Two generations. Early May–early Jul and mid-Jul–late Sep. Sometimes seen by day at rest on leaves of the foodplant, or on Bracken and other vegetation below, and can be found by tapping the lower branches of oaks. Visits flowers after dark, such as Alder Buckthorn, and can be seen flying in numbers around the oak canopy. Often numerous at light, including actinic traps. **Life cycle** Overwinters as a pupa, attached to a fallen oak leaf. Larva late Jun–Jul and mid-Aug–Sep. **Larval foodplants** Oaks, certainly Pedunculate Oak, probably Sessile Oak and possibly Turkey Oak, both in the canopy and on lower foliage. **Habitat** Oak woodland, from open scrubby growth to dense mature stands, and wooded hedgerows. **Status and distribution** Resident. Local. Well distributed and sometimes locally abundant in southern parts of England, the Midlands and Lincolnshire, and in the Channel Islands. More local in the north Midlands and Yorkshire, and in Wales. In Scotland, recorded locally from Berwickshire, Perthshire and, most recently, Moray (1984). Rare in Ireland, with few, scattered records, some recent, all in the southern half.

Clay Triple-lines

plate 13

Cyclophora linearia (Hb.)

Local 70.037 (1681)



Field characters and similar species FW 14–16mm. Forewing with tip distinctly hooked or pointed. In first generation, unspeckled, pale orange-brown, with one to three strong dark cross-lines. Fore- and hindwing sometimes with pale central dot, rarely dark-ringed. Second-generation moths are similar, but pinkish brown and generally smaller, usually with three continuous cross-lines on forewing

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

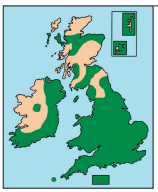
and usually a distinctly dark-ringed central spot on hindwing (and sometimes weakly dark-ringed on forewing). See False Mocha, Blair's Mocha, Maiden's Blush and Jersey Mocha. **Flight season** Mainly one generation. Late May–early Jul; a partial second generation, mid-Aug–mid-Oct, has recently become more frequent and widespread, probably in response to climate change. Nocturnal. Comes to light. Occasionally seen at rest by day on Bracken or other foliage. **Life cycle** Overwinters as a pupa, attached to a leaf or stem. Larva late Jun–late Aug; second generation, Sep–Oct. **Larval foodplants** Beech. Also recorded on Sweet Chestnut. **Habitat** Can be numerous in mature Beech woods, but also found on hedgerow trees, in parks and in gardens. May have been introduced to new areas on nursery plants. **Status and distribution** Resident. Local. Southern Britain north to south Cumbria and Northumberland. More local in the northern part of its range. In Scotland, one in the south-west, in Kirkcudbrightshire in 2011. Formerly very local in the southern half of Ireland, but in the last few years has expanded its range and is now widespread and found in many areas. Widespread in the Channel Islands.

Vestal

plate 13

Rhodometra sacraria (L.)

Immigrant 70.038 (1716)



Field characters FW 12–14mm. Quite variable in colour, but forewing pattern and upright resting posture with forewings held at a steep angle when fully at rest, covering the plain whitish hindwings, make it easily recognisable. The colour of the adults depends on the temperatures experienced by the pupae. High temperatures produce a lemon-yellow ground colour and a vivid pink cross-band (sometimes with extensive pink clouding). At lower temperatures, ground colour can be a duller straw yellow or leaden brown to deep crimson, and cross-band is brown or even black. Thus, immigrants from southern Europe tend to be more brightly coloured than those that have developed further north. **Similar species** Straw Belle, especially male, is larger, with fine speckling on forewing and a dark band on underside of hindwing (visible from upperside), and rests with wings rather flat. See also Yellow Belle. **Flight season** Immigrants arrive Apr–Nov, but the majority are found Aug–Sep, when any home-bred moths also emerge. Easily disturbed by day, but does not usually fly far, often resting on a grass stem. Comes to light. **Life cycle** Unable to overwinter. Breeds continuously in southern Europe and North Africa, but unlikely to produce more than one generation in the British Isles. **Larval foodplants** Has been found on Knotgrass in the wild. In captivity will eat other herbaceous plants, such as docks. **Habitat** Warm, open, sunny places. Has been found breeding on weeds in wheat fields in years of great abundance. **Status and distribution** Immigrant. Annual and fairly frequent, especially since the 1980s, in southern Britain (particularly the south coast), Man, Ireland (mainly in the east and south) and the Channel Islands. Over a thousand were recorded in 1947, 1983, 2003, 2006, 2011 and 2013. Peaks in 2006 (over 2,700) and 2011 (about 1,990). Infrequent in Scotland but has reached Orkney and Shetland. Widespread and often abundant in southern Europe and North Africa.

Larentiinae
Carpets, pugs and allies

Silver-ground Carpet

July Highflyer

Brindled Pug

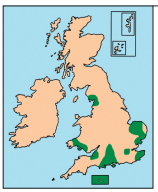
Treble-bar

Oblique Striped

plate 14

Phibalapteryx virgata (Hufn.)

Nb 70.039 (1718)



Field characters FW 10–12mm. Forewing grey or grey-brown and rather pointed, quite sharply in female, which is generally smaller. Cross-bands fairly straight or slightly curved to leading edge, or at most slightly angulated and of more or less even thickness. Usually a short, dark, narrow diagonal dash at wing tip, not reaching the dark cross-bands. Often rests with wings closed, revealing reddish-brown undersides of wings, with many fine, wavy dark cross-lines. **Similar species** Oblique Carpet has straw-coloured forewing with angulated, unevenly thickened cross-bands, as does Many-lined, which also has a pale streak from forewing tip. **Flight season** Two generations. May–Jun and Aug. Readily disturbed from grassy swards by day, often abundantly. Flies from sunset and comes to light, sometimes in large numbers. **Life cycle** Overwinters as a pupa, in a cocoon on the surface of the ground among plant debris. Larva Jun–Jul and Sep. **Larval**

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

foodplants Lady's Bedstraw. Will eat other bedstraws in captivity. **Habitat** Calcareous grassland, including downland, breckland and coastal sand-dunes. **Status and distribution** Resident. Nationally Scarce B. Widespread and fairly common in the breckland of East Anglia. Also found on chalk downland in Wiltshire, Hampshire, Berkshire and the Isle of Wight. On coastal sand-dunes at Hayling Island, Hampshire; Camber Sands, East Sussex; from Sandwich to Deal in Kent; the Isle of Wight; Dorset; Somerset; south Wales, including Pembrey (Carmarthenshire); and Cumbria. Also resident in Essex in the Colne Estuary. Older records from the coasts of Lancashire, north Wales, Devon and Cornwall. Widespread in the Channel Islands.

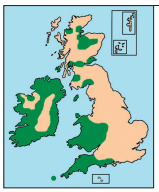
Lead Belle

plate 14

Scotopteryx mucronata (Scop.)

ssp. *umbrifera* (Heydemann)
Local 70.040 (1733)

ssp. *scotica* (Cock.)
Local



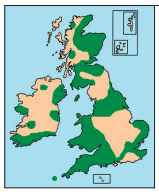
Field characters and similar species FW 15–19mm. Ssp. *umbrifera* is very similar to July Belle. Typically, forewing is rather light leaden grey (although sometimes darker) and the zigzag outermost cross-line is well defined. Small black central spot is usually tear-shaped, and placed roughly midway between second and third cross-lines, or sometimes closer to third. However, these characters are somewhat variable. The later flight period of July Belle is helpful, but they may overlap, making it sometimes necessary to examine the genitalia for confirmation. Ssp. *scotica* is darker but quite variable. The darkest forms are found in Scotland, including f. *luridaria* Borkh., which is blackish grey with bright-edged cross-lines. See also Spanish Carpet. **Flight season** One generation. Mid-May–mid-Jun. Easily disturbed from the foodplant by day. Comes to light. **Life cycle** Overwinters as a larva on the foodplant, feeding during mild weather. Larva Aug–Mar. May pupate on foodplant or in debris below. **Larval foodplants** Gorse, Broom, Petty Whin and Dyer's Greenweed. **Habitat** Usually acid heathland and moorland, but sometimes other scrubby places and rough pasture. **Status and distribution** Resident. Both subspecies are Local. Ssp. *umbrifera* is found locally, sometimes in fair numbers, in south-west England and near the south coast of Wales. Ssp. *scotica* occurs locally in the more northern part of Wales, northern England, Man, Scotland and Ireland.

July Belle

plate 14

Scotopteryx luridata (Hufn.)

ssp. *plumbaria* (Fabr.)
Common 70.041 (1734)



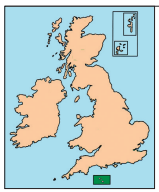
Field characters and similar species FW 15–19mm. Very similar to, and sometimes indistinguishable from, Lead Belle. Black central spot on forewing is usually smaller, round and dot-like, and tends to be nearer second cross-line than third. Also, zigzag outermost cross-line is usually rather faint. However, these characters are variable and some individuals closely resemble Lead Belle. See also Spanish Carpet. **Flight season** One generation. Mid-Jun–early Aug, sometimes from late May in the south. Frequently disturbed from the foodplant and other low vegetation by day. Flies at dusk. **Life cycle** Overwinters as a larva. Larva Sep–May. Pupates in a cocoon in plant debris. **Larval foodplants** Gorse, Dyer's Greenweed and Petty Whin. **Habitat** A range of open, scrubby places, including heathland and moorland. Also on downland, very open woodland and, unlike Lead Belle, coastal shingle. **Status and distribution** Resident. Common. Quite well distributed in south-west and central southern England, East Anglia, the west Midlands, Wales and Man, but very local or scarce in the rest of England, with few or no recent records from parts of the Midlands and the south-east. Widespread in Scotland, but very local in the north-west. One on Jersey, in 1975. Identification problems bedevil the records of both Lead Belle and July Belle.

Spanish Carpet

plate 14

Scotopteryx peribolata (Hb.)

Immigrant; resident in Channel Islands 70.042 (1730)



Field characters FW 13–15mm. A distinctive light grey moth, with several narrow brown and blackish cross-bands on forewing. Easily distinguished by shape of outer edge of central cross-band, the middle part of which bulges out strongly toward outer edge. **Similar species** Superficially similar to Lead Belle and July Belle, which both have a much straighter third cross-line and generally simpler markings. See also Fortified Carpet. **Flight season** One generation. Late Aug–Sep. Easily disturbed by day from the foodplant. Comes to light. **Life cycle** Overwinters as a larva. Larva Sep–May. Probably pupates on the ground. **Larval foodplants** Broom and Gorse. **Habitat** Among prostrate Broom on cliffs in the Channel Islands. Hot, scrubby situations in mainland Europe. **Status and distribution** Resident in the Channel Islands,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

where it is locally frequent. Rare immigrant in Britain, with 11 individuals recorded, the most recent in 1996. Suspected of establishing a temporary breeding population in Dorset in the hot, dry summers of the early 1990s. The first British record was one in 1890 or 1899 at Westward Ho, north Devon, the second on 26 Aug 1951 at Fernhurst, Sussex, and one on 6 Sep 1962, in Devon again, at Bishopsteignton. One was recorded at Studland, Dorset, on 12 Sep 1990, two there on 29 Aug 1991 and three on 3 Sep 1991. One was recorded on 6 Sep 1994 at Greatstone, Kent, and one on 9 Sep 1996 at Lizard Point, Cornwall.

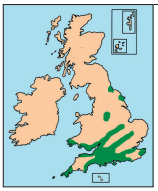
Chalk Carpet

plate 14

Scotopteryx bipunctaria ([D. and S.])

ssp. *cretata* (Prout)

Nb 70.043 (1731)



Field characters FW 15–18mm. Quite a distinctive, delicately marked moth. The only British species in which forewing is quite pointed, pale grey with numerous finely scalloped grey and brownish cross-lines and bands, and two small black central dots. Tint and strength of markings vary only slightly. Central bands are sometimes fused. **Flight season** One generation. Jul–Aug. Easily disturbed from the ground or rocks by day and sometimes flies of its own accord. Comes to light, sometimes in numbers. **Life cycle** Overwinters as a part-grown larva. Larva Aug–Jun. Feeds at night, and pupates in a cocoon on the ground. **Larval foodplants** Common Bird's-foot-trefoil and other trefoils, clovers and vetches. **Habitat** Unimproved limestone and chalk grassland, cliffs and quarries, both on the coast and far inland. Areas of bare ground or rock are favoured for roosting and basking, and may be essential. **Status and distribution** Resident and possible immigrant. Nationally Scarce B. Locally frequent in southern and south-eastern England and along the south coast of Wales. Local in the Midlands and north Wales, and on carboniferous limestone in the Buxton–Matlock area in north Derbyshire. Extends north to include coastal chalk in Yorkshire, particularly around Flamborough Head, and chalk and Magnesian limestone sites in Co. Durham, including inland quarries. Also recorded on limestone in north Lancashire and on the Northumberland coast opposite Lindisfarne. Two recorded on the Kent coast at Lydd-on-Sea, one on 17 Sep 1986 and one at Greatstone on 2 Aug 1990, possibly immigrants.

Fortified Carpet

plate 14

Scotopteryx moeniata (Scop.)

Suspected rare immigrant 70.044 (1729)

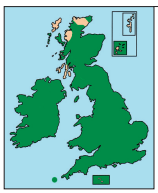
Field characters and similar species FW 17–22mm. A striking moth, quite unlike related resident British species. Forewing cold grey, outer edge of dark grey central cross-band with strong, angular outward projection, and its inner edge almost straight, edged pale orange-brown. Spanish Carpet is smaller, with forewing more obviously banded, and projection on outer central band is rounded. **Flight season** Mid-Jul to early Sep in mainland Europe. **Larval foodplants** Broom and Dyer's Greenweed. **Habitat** Warm, dry places such as woodland edges and scrubby heathland. **Status and distribution** Suspected rare immigrant to the Channel Islands and perhaps Britain. One on Guernsey in 1973. The two British records are regarded as unconfirmed, although they are supported by specimens. One from 'near Baron Wood, Carlisle, some years prior to 1855' and one, from Holgate, near York, on 19 Aug 1866. Widespread across continental Europe, including France and north to Denmark. Resident locally across much of Europe, including France, Holland and Denmark.

Shaded Broad-bar

plate 14

Scotopteryx chenopodiata (L.)

Common 70.045 (1732)



Field characters FW 16–19mm. Quite variable in colour, but easily recognisable. Forewing smooth, light tawny or dull brown, with a distinct darker central cross-band, itself composed of several narrower bands, the central one of which is paler and often greyish. Usually a dark diagonal streak at wing tip. Examples from the north tend to be darker. **Similar species** See Mallow, which is superficially similar, but is larger and flies later in the year. Snout is superficially similar, but with very long palps. **Flight season** One generation. Late Jun–Aug, sometimes Sep in the north. Frequently disturbed from grass swards and other low herbage by day. Can be found feeding at flowers after dark, but comes to light only in small numbers. **Life cycle** Overwinters as a larva. Larva Aug–Jun. Probably pupates in plant debris. **Larval foodplants** Clovers and vetches. **Habitat** A wide range of open grassy places, including hedgerows, calcareous grassland, neutral meadows, acid heathland, woodland rides, rough roadside verges and coastal sand-dunes. **Status and distribution** Resident. Common. Well distributed and frequent in England, Wales, Man, Ireland and much of Scotland (including Orkney), but very local in the north-west. Widespread but infrequent in the Channel Islands.

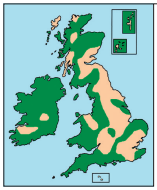
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Oblique Carpet

plate 14

Orthonama vittata (Borkh.)

Local 70.046 (1719)



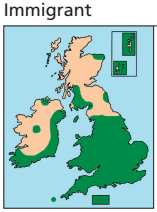
Field characters FW 11–14mm. Key features are straw-coloured forewing, with a dark brown streak extending from tip to more or less join the fine, dark outer cross-lines. Outermost area is pale. Central cross-band is narrower and usually darker in trailing half, and its outer edge is distinctly angulated near leading edge. Intensity of markings varies. **Similar species** See Many-lined, Oblique Striped and Gem. **Flight season** Two generations. Late May–Jun and Aug–Sep. One generation in the northern half of Scotland. Flies from dusk. Comes to light in small numbers. **Life cycle** Overwinters as a larva. Larva Sep–Apr and Jul in the south. Aug–early Jun in the north. **Larval foodplants** Common Marsh-bedstraw, Heath Bedstraw and possibly other bedstraws. **Habitat** Fens, marshes, bogs, watermeadows, damp woodland and ditch banks. **Status and distribution** Resident. Local. Well distributed in south-west England, most of Wales and East Anglia, otherwise thinly distributed in southern Britain. Widespread but local in northern England, Man and in Scotland, including the Hebrides and Orkney. Vagrant on Shetland. Quite well distributed in Ireland. Local and occasional on Jersey, rare on Guernsey.

Gem

plate 14

Nycterosea obstipata (Fabr.)

Immigrant 70.047 (1720)



Field characters FW 12–14mm. Forewing of male is orange-brown with numerous cross-lines, a narrow, irregular, sometimes broken, dark central cross-band and a rather ill-defined dark streak at wing tip. That of female has a similar pattern, but is deep rosewood brown with very fine, wavy whitish cross-lines. In female (and sometimes in male), central dot is ringed with white. **Similar species** Male is somewhat like Oblique Carpet, which has a bold, dark streak from tip of forewing. **Flight season** Immigrants arrive Apr–Nov. Any home-bred moths usually emerge in Aug or Sep. Seldom seen except at light, usually as singletons. **Life cycle** Unable to overwinter. Breeds continuously in southern Europe and North Africa, but unlikely to produce more than one generation in Britain and Ireland. **Larval foodplants** Apparently little known in the wild in Britain and Ireland, but in captivity will eat a wide range of herbaceous plants, including Groundsel, Common Ragwort, Field Bindweed, docks and chrysanthemums. **Habitat** Warm, sunny places of all kinds, including gardens. **Status and distribution** Immigrant. Annual, but numbers vary considerably from year to year, with breeding in some. About 4,000 recorded between 2000 and 2015. Highest annual totals are 744 in 2002 and 1,185 in 2006. Mostly found in southern Britain and southern Ireland, but with a scatter of records from coastal and inland sites in northern England, Man and Scotland, including the Northern Isles. Regular in the Channel Islands.

Red Carpet

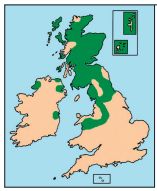
plate 14

Xanthorhoe decoloraria decoloraria (Esp.)

Common 70.048 (1723)

ssp. *hethlandica* (Prout)

Shetland



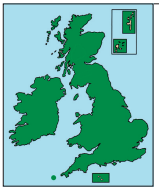
Field characters FW 12–15mm. In ssp. *decoloraria*, forewing rather broad, light grey to tawny brown, with a slightly pointed tip. Outer area is plain, with a short, dark diagonal mark at tip, sometimes rather obscure. Central band is pinched or narrowed in trailing half. It is usually reddish, often edged with blackish brown, but in one recurrent form it is as pale as ground colour. In ssp. *hethlandica*, forewing rather dull tawny brown with a dull red band. Examples resembling this subspecies occur elsewhere, especially in Scotland, but they are generally brighter. **Similar species** Flame Carpet has two distinct projections on outer edge of central band. Red Twin-spot Carpet usually has two blackish spots near outer edge of forewing. Both have a more rounded forewing tip and no dark diagonal mark. **Flight season** One generation. Late Jun–mid-Aug. Easily disturbed by day from shaded rocks, stone walls and tree trunks, and flies at dusk. Comes to light. **Life cycle** Overwinters as a small larva. Larva Aug–late May. Pupates in a cocoon formed among plant debris. **Larval foodplants** Lady's-mantles, and in captivity on groundsels, bedstraws and chickweeds. **Habitat** High moorland and grassy hillsides with exposed rock. Less restricted in Orkney and Shetland, occurring in a variety of situations, including roadside verges and coastal sand-dunes. **Status and distribution** Resident. Common. Local in Shropshire, the northern half of Wales, Staffordshire, the Peak District of Derbyshire and in North-west Yorkshire. Well distributed in Cumbria, Co. Durham, Northumberland and Scotland, including the Hebrides and Orkney. Very local in Ireland, mainly in the northern half (but also recorded from Co. Wicklow), and on Man. Ssp. *hethlandica* widespread in Shetland.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Garden Carpet plate 14

Xanthorhoe fluctuata (L.)

Common 70.049 (1728)

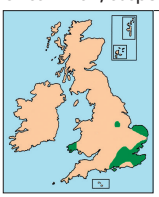


Field characters FW 13–16mm. A grey or greyish-white moth, occasionally tinted pale buff. Central cross-band on forewing is blackish in leading half, usually pale in trailing half – a diagnostic feature. Forewing also has a blackish base and usually a blackish blotch on leading edge near tip. Central band varies in thickness, and is occasionally reduced to a small spot at leading edge (f. *costovata* Haw.). Blackish or grey thorax contrasts with whitish abdomen. Male has only very short feather projections. Form *thules* (Prout) is darker, sometimes entirely blackish, so that central band often contrasts less sharply with ground colour. This form predominates in the Northern Isles and in northern and north-east Scotland, and occurs elsewhere, including urban parts of London, where frequencies of up to 40% are recorded. **Similar species** Occasional examples with cross-band more or less uniformly dark somewhat resemble Galium Carpet, which has a less rounded, more pointed, elongated forewing with a slightly concave leading edge, and the whitish areas form distinct narrow bands either side of dark central band. See also Striped Twin-spot Carpet and Twin-spot Carpet. **Flight season** Two or three overlapping generations from the Isle of Wight to Lancashire, Apr–Oct. Two generations in northern Britain, occasionally three, as in 2006. Sometimes found at rest on walls by day. Flies from dusk and comes to light. **Life cycle** Overwinters as a pupa, underground. Larva Jun–late Oct or early Nov. **Larval foodplants** Herbaceous plants of the cabbage family, including Garlic Mustard, Shepherd's-purse, wild Horse-radish, Hairy Bitter-cress, alyssums and cultivated brassicas; also garden nasturtiums. **Habitat** Particularly numerous in gardens, allotments and rough ground in urban areas, but found in most habitats, including woodland and open coastal situations. **Status and distribution** Resident. Common. Well distributed and frequent to abundant throughout the British Isles.

Balsam Carpet plate 14

Xanthorhoe biriviata (Borkh.)

Uncommon; suspected immigrant 70.050 (1721)

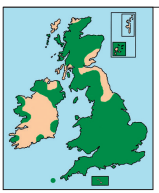


Field characters FW 12–14mm. Distinguished from most carpets by outer edge of dull black and dark grey central cross-band on forewing, which has a pronounced, quite pointed tooth-like projection, and is rather smooth-edged. Spring generation is quite pale, with a whitish cross-band beyond central one; it is tinged with brown, and with noticeably brown banding near base of forewing. Summer generation is generally darker, without the white band. **Similar species** First-generation Common Carpets are greyer, basal area is not noticeably browner than remainder of forewing, and hindwing is more strongly banded. Sharp-angled Carpet and Wood Carpet are somewhat similar to the spring generation, but fly later in the year. Central band of Dark-barred Twin-spot Carpet is generally more plain and has more irregular edges. See also Large Twin-spot Carpet. **Flight season** Two generations. Late Apr–Jun and Jul–early Sep. Flies in late afternoon and evening sunshine, and from dusk. Comes to light. **Life cycle** Overwinters as a pupa. Larva Jun and Aug–Sep. **Larval foodplants** Mainly Orange Balsam, an introduced plant, but adults have been trapped in woods away from this plant. Also found on Small Balsam, another introduction, long naturalised in woods and shady waste places, and a common garden plant. **Habitat** In lightly wooded watermeadows and other damp pasture, and tow-paths bordering rivers and canals alongside which Orange Balsam often grows. Recently found in several damp woods away from rivers. **Status and distribution** Resident. Uncommon; on introduced foodplant. Equivalent to Nationally Scarce but this category is normally reserved for species that feed in the wild on at least one native foodplant. First captured in Britain in 1951, and reported in 1955, then was rapidly found over a wide area of England, suggesting it had been overlooked for some time. Recorded very locally in Hampshire, Sussex, Kent, Surrey, Berkshire, Oxfordshire, Buckinghamshire, Middlesex, Cambridgeshire, Norfolk and, most recently, Nottinghamshire and Bedfordshire. Singles in Derbyshire (about 20km west of the Nottinghamshire records) at Repton, in 1978; at Yarner Wood, Devon, in 1982; and in 1999 at Westonbirt, Gloucestershire. In Wales, found in Pembrokeshire. Several records on the Suffolk and Essex coasts, considered most likely to be immigrants.

Red Twin-spot Carpet plate 14

Xanthorhoe spadicearia ([D. and S.])

Common 70.051 (1724)



Field characters and similar species FW 12–13mm. Forewing with reddish or purplish-brown central cross-band, but this can be very dark and may appear blackish until examined closely, especially when worn. Twin spots near outer edge in leading half usually present. Rather plain-looking forms with these spots faint or absent and the central band narrowed or rather pale occur in northern Britain (where confusion with Red Carpet is possible). Dark-barred Twin-spot Carpet can usually be distinguished by the absence of red or purple in the central band, but the uncommon reddish-banded form of it could be overlooked among Red Twin-spot Carpets. Reasonably

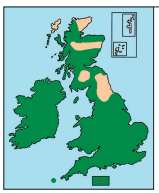
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

consistent distinguishing features are that Red Twin-spot Carpet generally has brighter markings, central band is more distinctly edged with white, and the pale, narrow band immediately beyond is slightly thicker and contrasts more sharply with the ground colour (especially outer area). It therefore has a more banded appearance than Dark-barred, which has more understated markings. Both species often rest with wings closed, especially at night. On the underside, Red Twin-spot is often more brightly coloured, with orange-brown towards the forewing tip. Dark-barred is plainer and greyish. This feature can be used to pick out potential Dark-barred among the usually more numerous Red Twin-spot Carpets. The presence of a notch in the central cross-band, on its inner edge in the leading half, to distinguish Dark-barred has recently been shown to be unreliable. This character appears to be more frequent in Dark-barred, but many Red Twin-spot Carpets also show a clear notch. In cases of doubt, genitalia should be examined. **Flight season** Two generations from the Isle of Wight to south-west Scotland and Co. Durham, and in Ireland, mid-Apr–Jun and late Jul–Aug, the second often more numerous. One generation (with sometimes a small second) further north and east, May–Jul. Often found at rest on leaves by day. Easily disturbed from bushes and low vegetation. Flies from dusk and comes to light. **Life cycle** Overwinters as a pupa, in a cocoon formed among plant debris. Larva Jul and Sep where there are two generations, late Jun–late Aug elsewhere. **Larval foodplants** A range of herbaceous plants, especially bedstraws; also Ground-ivy and Wild Carrot. On moorland favours Heath Bedstraw with some cover from Bracken or bushes. **Habitat** A wide range, including gardens, woodland, hedgerows, downland, fenland, moorland and coastal sand-dunes. **Status and distribution** Resident. Common. Well distributed and frequent throughout most of England, Wales and Scotland, extending to the Hebrides and Orkney. Local and less frequent on Man and thinly distributed in Ireland. Widespread and abundant in the Channel Islands.

Dark-barred Twin-spot Carpet plate 14

Xanthorhoe ferrugata (Cl.)

Common 70.052 (1725)

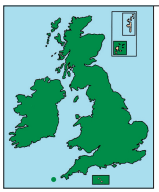


Field characters and similar species FW 12–13mm. In the most frequent form (f. *unidentaria* Haw.), central cross-band on forewing is blackish grey. The uncommon reddish-brown banded form is very similar to Red Twin-spot Carpet. See under that species for differences, and see also Large Twin-spot Carpet and Balsam Carpet. **Flight season** Two generations, May–Jun and late Jul–Aug, the second more numerous. Easily disturbed by day from bushes and low vegetation. Flies from dusk and comes to light. **Life cycle** Overwinters as a pupa, in a cocoon formed among plant debris. Larva Jul and Sep. **Larval foodplants** Herbaceous plants, including bedstraws, docks and Ground-ivy. **Habitat** A wide range, including gardens, woodland, hedgerows, downland, fens, moorland and coastal sand-dunes. **Status and distribution** Resident. Common. Numbers in the Rothamsted Insect Survey national light-trap network declined by over 90% between 1968 and 2007, and the species is now noticeably scarce in some areas, especially parts of southern England. It remains well distributed in England and Wales to Yorkshire, Cumbria and Man. Very local and scarce in north-eastern England and the eastern half of Scotland. Widespread and frequent on the western side of Scotland, including the Hebrides. Widespread and frequent in Ireland and the Channel Islands.

Flame Carpet plate 14

Xanthorhoe designata (Hufn.)

Common 70.053 (1722)



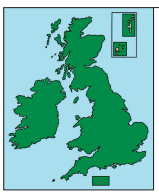
Field characters FW 11–14mm. Grey forewing with rather narrow pinkish-red and black striped central cross-band is diagnostic. This band has a double projection on its outer edge in leading half of wing, and narrows toward trailing edge. Rather variable, especially in extent of the black and pinkish red. **Similar species** See Red Carpet. **Flight season** Two generations, May–early Sep. Sometimes disturbed from bushes and low vegetation by day. Comes regularly to light. **Life cycle** Overwinters as a pupa. Larva early Jun–mid-Jul and late Aug–Sep in the south. Jul–Aug in Scotland. **Larval foodplants** Apparently little known in the wild, but will eat Wallflower and other plants of the cabbage family in captivity. **Habitat** A wide range, including upland grassland and moorland, lowland woodland, hedgerows and downland. **Status and distribution** Resident. Common. Well distributed throughout most of the British Isles, but more numerous in the north and west (although absent from Shetland).

Silver-ground Carpet plate 15

Xanthorhoe montanata montanata ([D. and S.])

Common 70.054 (1727)

ssp. *shetlandica* (Weir)
Shetland



Field characters FW 14–17mm. Ssp. *montanata* is quite a variable moth, but nonetheless distinctive. Diagnostic features are white or brownish-white wings, an irregular brown central cross-band on forewing, and relatively plain hindwing. Central band varies considerably in width, and is occasionally

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

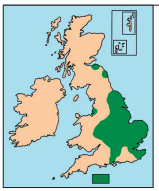
split into two blotches (f. *degenerata* Prout) or reduced to a small blotch near leading edge (f. *costimaculata* Rebel); it also varies in colour, from light greyish brown to intense blackish brown, usually with a whitish component, especially near leading edge. Ssp. *shetlandica* is smaller than ssp. *montanata*, and more brownish, with central band often no darker than ground colour. **Flight season** One generation. Mid-May–late Jul. Easily disturbed from vegetation by day. Often numerous on the wing at dusk and comes to light. **Life cycle** Overwinters as a larva. Larva Jul–May. Pupates in a cocoon in loose earth. **Larval foodplants** Herbaceous plants, including Cleavers, Hedge Bedstraw and Primrose. **Habitat** Rather damp places with tall herbaceous vegetation, including hedgerows, scrub, woodland rides, fens, grassland, gardens and heathland. **Status and distribution** Resident. Common. Well distributed and often abundant throughout most of the British Isles. Ssp. *shetlandica* widespread and frequent in Shetland.

Large Twin-spot Carpet

plate 15

Xanthorhoe quadrifasiata (Cl.)

Local 70.055 (1726)



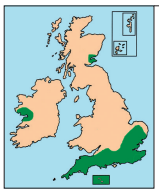
Field characters FW 14–16mm. A fairly distinctive, light brown or greyish-brown moth, generally larger than related species. The prominent, broad central cross-band on forewing is usually grey, with darker cross-lines running through it, and there is usually a slightly elongated, dark central dot. In the less frequent f. *thedenii* Lampa, the central band is almost entirely black. The dark twin spots near outer edge are often faint. **Similar species** See Dark-barred Twin-spot Carpet and Balsam Carpet, both of which are smaller, and with central forewing dot smaller or absent. **Flight season** One generation. Mid-Jun–early Aug. Sometimes flushed from bushes and tree trunks by day. Flies from dusk and comes to light, sometimes in fair numbers. **Life cycle** Overwinters as a small larva. Larva Aug–May. Pupates in loose earth. **Larval foodplants** Herbaceous plants, including bedstraws, Primrose and violets. **Habitat** Damp broadleaved woodland, especially ancient woodland, fenland carr and scrubby heathland. **Status and distribution** Resident. Local. The distribution of this moth suggests that it dislikes high rainfall. It is well distributed and locally sometimes frequent in most of the Midlands and East Anglia, extending into Essex, Hertfordshire, Middlesex, Kent, parts of Surrey and Hampshire. Also in Lincolnshire and Yorkshire, where it appears to be extending its range northwards. Rare or absent from the remainder of England and Wales. Singletons in Northumberland in 2013 and in Scotland at Aberlady, East Lothian, in 2014. Occasional in the Channel Islands (three records, two on Jersey and one on Guernsey).

Royal Mantle

plate 15

Catarhoe cuculata (Hufn.)

Local 70.056 (1736)



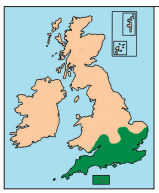
Field characters FW 12–14mm. Unmistakable. On forewing, broad central cross-band is whitish and basal area is banded black and brown. Outer central black cross-band extends only across leading third of wing. In the remainder, its outer edge extends as a very fine, deeply scalloped line. Reddish-brown blotches near outer edge. This combination is diagnostic. **Flight season** One generation. Late Jun–Jul. Flies from dusk and comes to light, usually in small numbers. **Life cycle** Overwinters as a pupa, in the soil surface below plant debris. Larva late Jul–early Sep. **Larval foodplants** Lady's Bedstraw and Hedge Bedstraw, mainly on the flowers. **Habitat** Well-drained grassland on calcareous soils, including chalk downland, limestone quarries, hedge banks, open breckland, wide rides in plantations and coastal cliffs. **Status and distribution** Resident. Local. Locally, usually in small numbers, in south-west, southern and south-east England and East Anglia. Very local and scarce in eastern central Scotland (Perthshire and Fife) and in Ireland in the Burren, Cos. Clare and Galway. Local in the Channel Islands.

Ruddy Carpet

plate 15

Catarhoe rubidata ([D. and S.])

Nb 70.057 (1735)



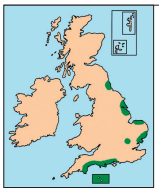
Field characters FW 13–15mm. Unmistakable when fresh. Ground colour of forewing is dull pink or pinkish brown. Grey central cross-band is thickly edged with black, except in trailing half of its outer edge. Here, it consists of a very fine, deeply scalloped black line, a unique combination. Shows only slight variation. **Similar species** Worn or faded examples could be confused with worn Barberry Carpet. **Flight season** One generation. Jun–Jul. Can be beaten from hedgerows by day. Flies from just before dusk, and occasionally comes to light, usually as singletons. **Life cycle** Overwinters as a pupa, in an earthen cocoon. Larva Jul–Aug, more easily found than the adult. **Larval foodplants** Lady's Bedstraw and, quite frequently, Hedge Bedstraw. **Habitat** Downland, hedgerows, banks, field margins, other scrubby places and sea-cliffs, generally on calcareous strata. **Status and distribution** Resident. Nationally Scarce B. Apparently has declined in numbers and range since the 1940s. Recorded locally in small numbers in southern parts of England, including the south Midlands and East Anglia, and very locally in south-east Wales. A few, mainly historical records from

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

the north Midlands and northern England. One in Yorkshire in 1999, the first for over 100 years. Resident in the Channel Islands.

Many-lined plate 15

Costaconvexa polygrammata (Borkh.)
Extinct; recent immigrant 70.058 (1741)



Field characters FW 11–12mm. Forewing dull straw-coloured, hindwing paler, all wings crossed with many fine lines, the inner and central ones angulated at the leading edge. Male has two conspicuous dark brown or blackish streaks across forewing, the inner one running from trailing edge and ending just short of a small central spot, the outer one arising on leading edge but fading near central spot. Female has more evenly coloured cross-bands. In both sexes, a pale streak runs from wing tip and outermost area is dark. Markings vary in intensity, and sometimes a thin, dark grey central band is present. **Similar species** Oblique Carpet is similar but has a dark diagonal band extending from forewing tip. See also Oblique Striped. **Traveller** *Costaconvexa centrostrigaria* (Woll.) (plate 15), a New World species established in the Canary Islands and Madeira, was once recorded as a probable adventive, at light at Hampton, Middlesex, on 12 Jun 1973 (but not correctly identified until 1988). One form of this species is similar to Many-lined, but outer central cross-line on forewing is distinctly kinked in leading half. **Flight season** Probably two generations. Apr–Sep. Flies in the late afternoon and from dusk. **Life cycle** Overwinters as a pupa. Larva probably May–Jun and Aug–Sep, as in mainland Europe, but possibly never found in Britain. **Larval foodplants** Bedstraws. **Habitat** Fens and wet meadows. **Status and distribution** Extinct former resident and immigrant. Recorded at Burwell Fen and Wicken Fen, Cambridgeshire, in the mid-19th century but not since 1879, and reported from damp meadows near Bristol prior to 1870. Forty-one recorded as immigrants, the first in 1993 at West Bexington, Dorset. Others from 2000 onwards, with a peak of 25 in 2006. Most have been along the south coast of England (especially in Dorset), but also on the east coast in East Anglia, one in Yorkshire and one in Northumberland. First recorded in the Channel Islands in 1984 with others since. Widespread in central and southern Europe, but extinct from some central areas. Not a noted regular migrant, but colonised Denmark in the 1990s.

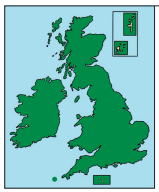
Yellow Shell plate 15

Camptogramma bilineata bilineata (L.)
Common 70.059 (1742)

ssp. *atlantica* (Stdgr.)
Shetland, Outer Hebrides

ssp. *hibernica* Tutt
Ireland

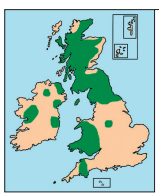
ssp. *isolata* Kane
Blasket Islands, Ireland



Field characters FW 13–16mm. Ssp. *bilineata* is unmistakable. No other species has the combination of yellow or orange-yellow ground colour on both wings, and numerous fine, wavy brownish cross-lines. Bright yellow forms are more frequent in the south, sometimes with two distinct brown cross-bands, especially in female. Examples with brownish forewing are more frequent further north, but bright yellow forms occur as far north as Skye, Inner Hebrides and Sutherland. Ssp. *atlantica* is smaller than ssp. *bilineata*, and yellowish brown, often with strong bands and cross-lines, and sometimes with a yellowish hindwing. Ssp. *hibernica* is similar in size to ssp. *bilineata*, but with a brown forewing. Ssp. *isolata* is very distinctive, being dull blackish brown. **Flight season** One generation. Jun–Aug. Often disturbed by day. Comes only sparingly to light, compared with numbers seen on the wing at dusk or visiting flowers such as Creeping Thistle and Betony. **Life cycle** Overwinters as a larva on the foodplant. Larva Jul–late May. Pupates in loose earth. **Larval foodplants** Cleavers and other bedstraws, wormwoods (including Sea Wormwood), docks, sorrels, Dandelion and other low-growing forbs. **Habitat** All types, including gardens, hedgerows, grassland, sand-dunes, woodland, marshes, heathland and high moorland. **Status and distribution** Resident. Common. The species is found throughout the British Isles. Ssp. *atlantica* is found in Shetland and the Outer Hebrides. Ssp. *hibernica* is found only on sea-cliffs in Cos. Cork and Kerry, south-west Ireland, although forms quite like it occur in northern Scotland. Ssp. *isolata* is found only on the islands of Inishvickillane and Tearaght, the remotest of the Blasket Islands, off the coast of Co. Kerry.

Small Argent and Sable plate 15

Epirrhoe tristata (L.)
Common 70.060 (1737)



Field characters and similar species FW 11–13mm. Not unlike a small, dark example of Common Carpet, but with brown or dark greyish-brown markings and brightly chequered fringes. White outer cross-bands of both forewing and hindwing

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

have a series of small dark dots running through them. See also Argent and Sable. **Flight season** One generation in many places. Late May–early Jul. A partial second generation in south-west England and Ireland, in Aug. Flies by day in sunshine and at dusk, and sometimes seen in hundreds at some of the larger sites. **Life cycle** Overwinters as a pupa, in a cocoon on the ground. Larva late Jun–Aug, and again in the autumn in south-west England and Ireland. **Larval foodplants** Heath Bedstraw. **Habitat** High moorland, including areas recently planted with conifers, and high limestone grassland. Also upland woodland and hedgerows, and a few lowland localities on heaths and mosses. **Status and distribution** Resident. Common. Local in Devon and Somerset, Herefordshire (Black Mountains), the west and north Midlands, and south Yorkshire. Well distributed in the uplands of Wales, the Pennines, the Lake District, north-east England, and in mainland Scotland (although here scarce in the north-east) and the Inner Hebrides. A single old record from Orkney. Local on Man and in Ireland, mainly in the Burren, Co. Clare, but occurs elsewhere, including Northern Ireland.

Common Carpet

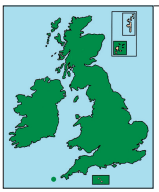
plate 15

Epirrhoe alternata alternata (Müll.)

Common

70.061 (1738)

ssp. *obscurata* (South)
Outer Hebrides



Field characters FW 13–14mm. Although rather variable, ssp. *alternata* is usually not difficult to recognise. Dark central cross-band on forewing is rather irregular but has only one, rather blunt, outer projection, and sometimes a distinct grey component. Rarely, it is reduced to a spot or patch. Basal area of hindwing is well marked, and white bands running across outer half of forewing and hindwing have a distinct grey line running through them, although this is sometimes rather faint. Ssp. *obscurata* is quite different in appearance, being generally paler, particularly the central cross-band, and with brownish markings. **Similar species** See Wood Carpet, Galium Carpet, Balsam Carpet and Sharp-angled Carpet. **Flight season** Late Apr to early Oct, with numbers generally building to a peak in Aug, suggesting continuous, or overlapping generations. This pattern occurs in parts of both southern and northern Britain, but further analysis is needed. Frequently disturbed from low vegetation by day. Visits flowers from dusk, such as Ragwort. Comes to light, sometimes in fair numbers. **Life cycle** Overwinters as a pupa, in a cocoon on the ground. Larva Jun–Jul and Sep–Oct in the south, Jul–Aug in the north. **Larval foodplants** Cleavers, Hedge Bedstraw, Lady's Bedstraw and other bedstraws. **Habitat** A very wide range, including hedgerows, woodland, calcareous grassland, acid heathland and moorland, fens, marshes, sand-dunes, gardens and other urban situations. **Status and distribution** Common. Well distributed and frequent to abundant throughout most of the British Isles, apart from Shetland. Ssp. *obscurata* is restricted to the Outer Hebrides, where it is frequent.

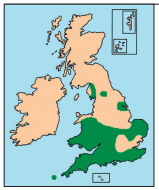
Wood Carpet

plate 15

Epirrhoe rivata (Hb.)

Local

70.062 (1739)



Field characters and similar species FW 14–16mm. Easily confused with Common Carpet, some examples of which are very similar, so care is needed. Wood Carpet is generally slightly larger, the white cross-band beyond central band on forewing is broader and the thin grey line running through it is very faint or largely absent, although sometimes stronger near leading edge. Also, central white band on hindwing is broader and has no thin grey line. See also Sharp-angled Carpet and Balsam Carpet. **Flight season** One generation. Mid-Jun–early Aug. Occasionally netted at dusk. Comes to light. **Life cycle** Overwinters as a pupa, in a cocoon on or just below ground. Larva late Jul–late Sep. **Larval foodplants** Hedge Bedstraw and Lady's Bedstraw. Accepts Cleavers in captivity. **Habitat** Woodland rides and edges, small copses, old hedgerows and boundary banks, chalk lanes, scrubby downland, small grassy fields, sea-cliffs and mature sand-dunes. **Status and distribution** Resident. Local. Possibly under-recorded due to confusion with Common Carpet. Locally widespread, particularly on lighter soils, in most southern parts of England, including the south Midlands, East Anglia and Lincolnshire, and in Wales. Very local in south Yorkshire (notably at Spurn) and elsewhere in northern England. Recorded once from Man, in 1974. Rare in the Channel Islands.

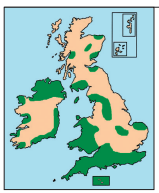
Galium Carpet

plate 15

Epirrhoe galiata ([D. and S.])

Local

70.063 (1740)



Field characters FW 13–15mm. Main diagnostic feature is leading edge of forewing, which is slightly concave in middle. Also, forewing is rather narrower and more tapering than in similar species, and dark central cross-band is relatively broad. Ground colour is usually either white or greyish white, contrasting sharply with dark central cross-band. This varies from blackish to paler with grey and brown components, and has a very irregular outer edge, with either a single or double outer projection. Darker, brownish-grey forms with black forewing bands occur in western Ireland. **Similar species** In Common Carpet, leading edge of

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

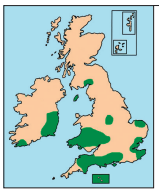
forewing is not concave, central cross-band is narrower, with a less regular outer edge, and hindwing is more heavily marked. See also Garden Carpet. **Flight season** Two generations in southern Britain and in Ireland, late May–mid-Jul and Aug. One generation further north, Jun–early Aug. Sometimes disturbed by day. Flies from dusk and comes to light. **Life cycle** Overwinters as a pupa. Larva late Jun–Jul and Sep in the south and in Ireland; Aug in the north. **Larval foodplants** Lady's Bedstraw, Heath Bedstraw and Hedge Bedstraw. **Habitat** Open grassy places on the coast, including coastal cliffs, sand-dunes and shingle. Also on calcareous grassland inland and locally on moorland. **Status and distribution** Resident. Local. Well distributed in south-west England and southern coastal counties to Kent. Found north to Gloucestershire, more locally elsewhere in southern England and the Midlands, and in Norfolk. Widespread in Wales, the Pennines and north to Cumbria, but very scarce or absent east of the Pennines. In Scotland, local in the south-west, and with widely scattered records on the west and east coasts and in the Central Highlands, north to the Moray Firth. Local on Man. Abundant in the Channel Islands.

Cloaked Carpet

plate 15

Euphyia biangulata (Haw.)

Nb 70.064 (1793)



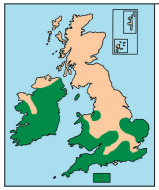
Field characters and similar species FW 14–17mm. The most conspicuous feature is the dark central band across forewing, with its double-toothed outer edge projecting into a whitish band, but see also Sharp-angled Carpet and White-banded Carpet. However, the greenish scales on base of forewing, like a growth of algae, distinguish this moth. Hindwing pale brownish white, with darker border. **Flight season** One generation. Late Jun–mid-Aug. Occasionally disturbed by day. Comes to light, usually from about midnight. **Life cycle** Overwinters as a pupa, in a cocoon in loose earth. Larva late Jul–mid-Sep, feeding at night. **Larval foodplants** Stitchworts. Accepts Common Chickweed in captivity. **Habitat** Damp, mossy woodland and wooded rocky ravines with streams, and old banked hedgerows along sunken lanes. **Status and distribution** Resident. Nationally Scarce B. Quite well distributed, but usually found in small numbers, in south-west England, much of Wales and on Man. Local but increasing in range in east Dorset, Hampshire, the Isle of Wight and west Surrey. Recorded very locally in the Midlands north to Derbyshire, near the coasts of Essex and north Kent and in Norfolk. In Scotland, very local in the south-west (Dumfriesshire and Kirkudbrightshire). In Ireland, found locally in the south-east, from Cos. Wicklow and Kildare to Co. Clare, mainly in coastal counties. Local in Jersey.

Sharp-angled Carpet

plate 15

Euphyia unangulata (Haw.)

Local 70.065 (1794)



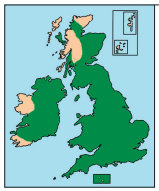
Field characters FW 13–15mm. Outer edge of central cross-band sweeps cleanly from trailing edge, to form a sharp point. This contrasts starkly with whitish band beyond, which usually has only the faintest of grey lines running through it. Usually, cross-band is fairly uniformly dark. Hindwing largely whitish, with grey borders and only faint grey lines near base. **Similar species** Common Carpet and Wood Carpet both have a more irregular central cross-band, with a blunt outer projection and sometimes a noticeable grey component. Also, markings near base of hindwing are stronger. See also White-banded Carpet, Cloaked Carpet and Balsam Carpet. **Flight season** One generation. Late Jun–early Aug. May be disturbed from bushes and other vegetation by day. Flies from dusk and comes to light in small numbers. **Life cycle** Overwinters as a pupa underground. Larva Jul–Sep. **Larval foodplants** Unknown in the wild. Common Chickweed and stitchworts in captivity. **Habitat** Woodland and wooded hedgerows. **Status and distribution** Resident. Local. Quite well distributed, but usually seen in small numbers, from south-west England to Kent, East Anglia, and south and west Wales. Local in the south and west Midlands and the rest of Wales. Occasional records from northern England and southern Scotland, including a single confirmed from Kielder Castle, Northumberland, in 1971. Local and rare on Man. Widespread and locally frequent in Ireland. Recorded on Alderney (2008) and on Guernsey.

Shoulder Stripe

plate 16

Earophila badiata ([D. and S.])

Common 70.066 (1746)



Field characters FW 14–18mm. Forewing quite broad and somewhat pointed, mid-brown, purplish brown or charcoal brown, with distinct straw-yellow, brownish-yellow or brown central cross-band. Cross-lines are variably edged with black, more so the inner ones, hence the English name. **Flight season** One generation. Mar–May, sometimes from late Feb in the south. Often seen flying from dusk onwards and comes to light. Recorded drinking fluid on old rose hips. **Life cycle** Overwinters as a pupa, in a cocoon in loose earth. Larva Apr–Jul. **Larval foodplants** Dog-rose and other wild roses. **Habitat** Woodland, hedgerows and other scrubby places, including gardens. **Status and distribution** Resident. Common. Well distributed and frequent throughout England, Wales

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

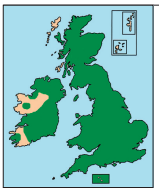
and Man, and in Scotland except the west and north-west, where it is local, north to Caithness. Widespread in Ireland. Local in the Channel Islands.

Streamer

plate 16

Anticlea derivata ([D. and S.])

Common 70.067 (1747)



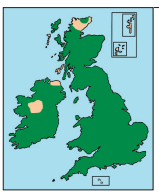
Field characters FW 14–16mm. Quite distinctive. Some examples have a violet tint when freshly emerged. The quite rounded forewing has a broad, pale central band, thickly edged with black on basal side, and with a deeply elbowed outer margin, which is darkened only in leading half. The name 'streamer' refers to this black marking streaming from leading edge. The pattern varies very little, but central band may be whitish, grey or brown. **Similar species** See Barberry Carpet, with which worn specimens could be confused. **Flight season** One generation. Apr–May, sometimes from late Mar in the south. Occasionally found on fences by day. Flies from dusk and comes to light. **Life cycle** Overwinters as a pupa, in a cocoon in loose earth. Larva May–Jul. **Larval foodplants** Dog-rose and probably other species of wild rose. Also more rarely reported from Hawthorn and Blackthorn, but wild rose often grows intermingled with these. **Habitat** Open woodland, rides and edges, hedgerows, gardens and other scrubby places. **Status and distribution** Resident. Common. Fairly well distributed and locally frequent throughout England, Wales, Ireland, Man, mainland Scotland and the Inner Hebrides. Resident in the Channel Islands.

Beautiful Carpet

plate 16

Mesoleuca albicillata (L.)

Common 70.068 (1748)



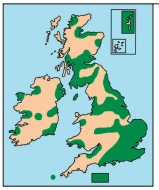
Field characters FW 15–18mm. Unmistakable, with very broad, rounded white or creamy-white forewing and broad white central cross-band. Dark basal area and blotch near tip consist of black, brown and purplish-blue lines. Shows very little variation. **Flight season** One generation. Late May–early Aug. Sometimes disturbed by day and comes to light in small numbers. **Life cycle** Overwinters as a pupa in loose earth. Larva Jul–Sep. **Larval foodplants** Bramble, Dewberry, Raspberry and Hazel. **Habitat** Mainly open broadleaved woodland and conifer plantations on ancient woodland sites. Sometimes in long-established scrub and hedgerows, especially on chalk. Occurs on heavy clays but more numerous on well-drained soils. **Status and distribution** Resident. Common. Everywhere usually seen in small numbers. Fairly well distributed throughout England and Wales. Widespread in mainland Scotland, the Western Isles, Man and Ireland. Rare on Jersey.

Dark Spinach

plate 16

Pelurga comitata (L.)

Common 70.069 (1749)



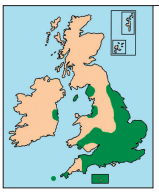
Field characters FW 16–18mm. Forewing broad and quite rounded, straw-coloured or light brown. Central cross-band wavy, always darker, with a strong, single, often curved outward central projection, and with increasingly paler bands towards its centre, marked by wavy contours and with a small dark dot in palest band. The pattern varies only in minor detail. **Similar species** Northern Spinach has a double projection on central band. Spinach has a distinctive resting posture. Both nearly always lack a dark central dot. **Flight season** One generation. Jul–Aug. Flies from dusk and comes to light. **Life cycle** Overwinters as a pupa underground. Larva late Aug–Oct. **Larval foodplants** The flowers and seeds of goosefoots and oraches. **Habitat** Like its foodplants, it is associated with rough, open weedy places, including coastal sites, derelict urban land, gardens, allotments and farmland. It is therefore vulnerable to habitat loss, and 'overtidiness'. Records suggest that it is more numerous in gardens than in the wider countryside, but this is possibly a result of more intensive light-trapping. **Status and distribution** Resident. Common. Numbers in the Rothamsted Insect Survey national light-trap network declined by 96% between 1968 and 2007. Formerly well distributed and locally frequent in the London conurbation, more so than elsewhere in Britain. Despite the decline, still quite widespread in southern and south-east England, East Anglia, Essex, Hertfordshire, the east Midlands, the Liverpool–Manchester area, south Yorkshire and north Lincolnshire. Local or very local in the rest of England, Wales, Man, Scotland and Ireland, and more frequent on or near the coast. Local in the Channel Islands.

Mallow

plate 16

Larentia clavaria (Haw.)

Common 70.070 (1745)



Field characters FW 19–22mm. The deep, distinctly pointed reddish-brown forewing, with light whitish dusting, cross-bands finely edged with white, inner edge of central one jagged or with notches, and a pale zigzag line along outer edge, is diagnostic. Little variation. **Similar species** See the superficially similar Shaded Broad-bar. **Flight season** One generation. Sep–early Nov. Comes to light in small numbers, otherwise seldom seen. **Life cycle** Overwinters as an egg. Larva Apr–Jun. Pupates underground. **Larval foodplants** Common Mallow, Marsh-mallow, Tree-mallow and Hollyhock.

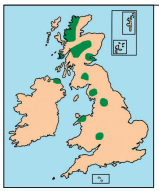
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Habitat Rough, weedy or marshy places, roadside verges, riversides and gardens. **Status and distribution** Resident. Common. Fairly well distributed in southern and south-eastern England, the south and east Midlands, Lincolnshire and Yorkshire. Local in south-west England, Wales and in the north-west to Cumbria and on Man. Recorded very locally in Cumbria and Northumberland, and in southern and central Scotland, but not since 1906. Rare in Ireland, in Cos. Dublin and Wicklow. Widespread and frequent in the Channel Islands.

Yellow-ringed Carpet plate 16

Entephria flavicinctata flavicinctata (Hb.)
Nb 70.071 (1743)

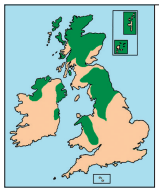
ssp. *ruficinctata* (Guen.)
Local



Field characters FW 17–18mm. In ssp. *flavicinctata*, the dusting of bright golden-orange scales through central bands of forewing is diagnostic. However, some individuals have only a few such scales and others have a very dark ground colour (ssp. *ruficinctata*), so examine closely. **Similar species** Grey Mountain Carpet has no hint of orange or golden scales, but is otherwise very similar and is often found flying with Yellow-ringed Carpet. **Flight season** On the west coast of mainland Scotland and the Inner Hebrides, two generations, in May and Aug, of predominantly the pale ssp. *flavicinctata*. In central and north-west Scotland, one generation in Jul–early Aug, of the dark ssp. *ruficinctata*, which can produce two generations in captivity. Fond of resting on bare vertical rock surfaces and flighty if disturbed by day. Flies after dark and comes to light in small numbers. **Life cycle** Overwinters as a larva. Larva Sep–Apr and Jun–Jul where there are two generations, Sep–early Jun when there is only one. Pupates in a cocoon in earth or a rock crevice. **Larval foodplants** Ssp. *flavicinctata* has been found on English Stonecrop in several parts of mainland Scotland and the Inner Hebrides, and on Mossy Saxifrage in Yorkshire. Ssp. *ruficinctata* has been found on Yellow, Mossy and Purple saxifrages, and sometimes Roseroot. Prefers the flowers, but will eat the leaves. **Habitat** Rocky places, ravines and gorges. Associated with limestone or other strata containing lime formations. **Status and distribution** Resident. Nationally Scarce B. Ssp. *flavicinctata* occurs on the west coast of mainland Scotland and on the Inner Hebridean islands of Canna, Rum, Muck, Coll, Mull, Iona, Islay and Jura. Populations with one generation occur in the Yorkshire Dales (near Grassington), Cumbria, Snowdonia, north Wales (recently rediscovered), and in the Black Mountains of Breconshire and Herefordshire, and there are 19th-century records from Dovedale, Derbyshire. In Ireland, occurs on the north coast at Murlough Bay, Co. Antrim. Also a single record from Cuilcagh Mountain, above Florencecourt, Co. Fermanagh, in 1914. Ssp. *ruficinctata* with one generation occurs in central and north-west Scotland, but a population with two generations and with the adult appearance of ssp. *ruficinctata* has been reported from Dumbarton, and dark forms are occasional elsewhere, e.g. on Rum.

Grey Mountain Carpet plate 16

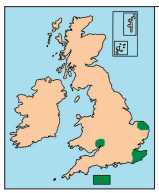
Entephria caesiata ([D. and S.])
Common 70.072 (1744)



Field characters FW 16–19mm. Size, habitat, flight season and habit of resting on vertical rock surfaces by day help in distinguishing this grey upland moth from other geometrids. Central band across forewing is usually conspicuous and edged with white. Otherwise forewing is mottled in appearance. Hindwing plain and pale brownish- or greyish white, with a chequered border. A blackish form, still with the whitish cross-lines, occurs in Scotland (f. *hethlandicaria* Bang-Hass) alongside paler forms. This form is raised to sub-specific status in the current British list, but other authorities regard it as a colour form. **Similar species** See Yellow-ringed Carpet. Striped Twin-spot Carpet is much smaller and less boldly marked. **Flight season** One generation. Late Jun–early Aug, later in the north, and in northern Scotland late Jul–early Oct. Easily disturbed by day from rocks and vegetation. Flies from dusk and comes to light, sometimes in numbers. **Life cycle** Overwinters as a small larva. Larva Jul or Aug–late May or Jun. Pupates in a cocoon among the stems or debris of the foodplant. **Larval foodplants** Heathers and Bilberry. **Habitat** Mountains and moorland, usually where there are exposed rocks. **Status and distribution** Resident. Common. Well distributed and frequent in the uplands in mid- and north Wales, northern England and Scotland, and in the Hebrides, Orkney and Shetland. Frequent but more localised in the uplands of south Wales, the English border counties and the north Midlands. Local and infrequent on Man. Local in Ireland, predominantly in the northern half.

White-banded Carpet plate 16

Spargania luctuata ([D. and S.])
Na 70.073 (1786)



Field characters FW 14–15mm. The single broad, angled white band (into which projects a blunt dark tooth with two rounded lobes) across centre of otherwise largely dark forewing is diagnostic; band is continued, but wider, on hindwing, which has a broadly blackish border. **Similar species** Cloaked Carpet has green scales, like algae, on forewing base near thorax. Outer edge of dark

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

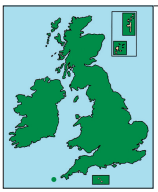
central band of Sharp-angled Carpet has a single sharp tooth. In both, the outer area is paler than in White-banded Carpet and the hindwing has a grey border. **Flight season** Two generations. Mid-May–mid-Jun and mid-Jul–late Aug, but the second generation may be only partial. Easily disturbed from low vegetation, and sometimes flies in afternoon sunshine and in the early evening. Comes readily to light. Sometimes, in Orlestone Forest, 100 or more have been recorded at a single Robinson MV trap in a night. **Life cycle** Overwinters as a pupa on the ground, among plant debris. Larva mid-Jun–late Jul and late Aug–Sep. **Larval foodplants** Rosebay Willowherb. Has been reared on Broad-leaved Willowherb and Square-stalked Willowherb, so may not be totally dependent on Rosebay. **Habitat** Broad rides, clearings and bonfire sites in woodland or plantations, rather than on open ground such as railway embankments, where the foodplant also grows abundantly. **Status and distribution** Resident. Nationally Scarce A. A fairly recent colonist. The first was recorded at Stone, north-west Kent, on 2 Jun 1924 and widespread colonisation took place in the 1950s. Now well established in the large woodland complexes of the Orlestone Forest area of south-east Kent, several woodlands in East Sussex, locally in West Sussex, and in East Anglia, including Thetford Forest in Norfolk and west Suffolk. Has sometimes established breeding colonies elsewhere that have persisted for several years. Single moths in Brentwood, Essex (1974); Usk (1975) and Llandogo (2004), both Monmouthshire; and Harpenden, Hertfordshire (1992). One on Alderney in 2006.

July Highflyer

plate 16

Hydriomena furcata (Thunb.)

Common 70.074 (1777)



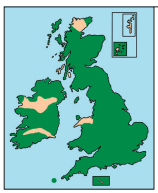
Field characters FW 14–18mm. Forewings of all three 'highflyer' moths are distinctly shouldered at base, best seen when at rest. July Highflyer flies later in the year than Ruddy and May highflyers; it lacks pointed black streaks near forewing tip but has diagonal dash. Hindwing usually dull grey, with at most a faint dark central cross-line. It is an extremely variable moth. In shaded southern woodland, forewing usually green or blackish brown. In more open habitats, especially in the north and west, paler and more variegated greyish or reddish forms predominate, often with a whitish central cross-band. Populations associated with moorland, especially those feeding on Bilberry, tend to produce smaller moths. **Similar species** See May Highflyer and Ruddy Highflyer. **Flight season** One generation. Mid-Jun–Aug in southern Britain, mid-Jul–early Oct in Scotland. Often disturbed by day. Comes to light, sometimes in large numbers. **Life cycle** Overwinters as an egg on the foodplant. Larva Apr–early Jun, probably slightly later in the north. Feeds at night and hides between spun leaves by day. Pupates near or below ground. **Larval foodplants** Hazel, sallows, Creeping Willow, Bilberry and Heather. Also reported on Lodgepole Pine and Sitka Spruce. **Habitat** Quite varied. In the south, most numerous in woodland, especially mature Hazel coppice. Also fens, carr, heathland and other scrubby places, including mature parks and gardens, and on moorland, particularly in the north. On Man, abundant in hedged meadows in the Curraghs wetland area. **Status and distribution** Resident. Common. Well distributed and frequent to locally abundant throughout the British Isles.

May Highflyer

plate 16

Hydriomena impluviata ([D. and S.])

Common 70.075 (1778)



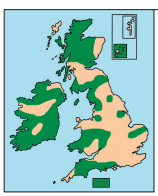
Field characters and similar species FW 13–16mm. As in Ruddy Highflyer, there are two to three short, parallel blackish streaks near forewing tip, but diagonal dash at tip (present in Ruddy Highflyer and July Highflyer) is usually absent. A frequent form is either grey or greenish grey, usually with a fairly broad whitish-grey central cross-band. The blackish-grey f. *obsoletaria* Schille, with only faint markings, is widespread and frequent, and accounts for up to half of the London population. In northern Britain, there is more variation but it is never reddish, like some forms of the Ruddy Highflyer, and has a shorter, deeper forewing. See also Ruddy Highflyer. **Flight season** One generation. May–early Jul. Occasionally found by day resting on trunks. Comes to light, usually in small numbers. **Life cycle** Overwinters as a pupa, often under loose bark on the foodplant. Larva Jul–Sep or Oct, even early Nov, growing slowly. Feeds at night and hides by day between leaves spun together. **Larval foodplants** Alder. **Habitat** Damp woodland, carr, and the banks of lakes and rivers. **Status and distribution** Resident. Common. Fairly well distributed throughout most parts of England, Wales, Man, Ireland and Scotland, including the Hebrides and Orkney, where it is breeding on Alders introduced in the 1850s. Recorded annually on Guernsey since 2003 and locally frequent on Alderney since 2011.

Ruddy Highflyer

plate 16

Hydriomena ruberata (Freyer)

Local 70.076 (1779)



Field characters and similar species FW 14–17mm. Similar to May Highflyer. The reddish-brown forms are distinctive, since May Highflyer is never this colour. Greyish forms can usually be distinguished by the generally slightly longer, relatively narrow

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

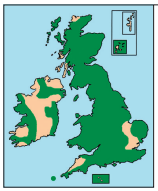
forewing with more pointed tip. There is sometimes a paler, whitish-grey central cross-band, but this seldom contrasts so sharply with ground colour as in the most variegated forms of May Highflyer. May Highflyer usually lacks a short, dark diagonal dash at forewing tip, which is nearly always present in Ruddy Highflyer. **Flight season** One generation. May–Jun. Readily disturbed among foodplants by day, sometimes resting on sallow trunks. Often seen flying at dusk. Comes to light. **Life cycle** Overwinters as a pupa. Larva Jul–Sep. Feeds at night and hides by day between leaves spun together. **Larval foodplants** Broadleaved willows. In many places, particularly favours Eared Willow, often on low growth less than about 30cm in height. Abundant on Grey Willow on Orkney. **Habitat** Moorland, heathland, bogs, marshes, sallow carr and open woodland. **Status and distribution** Resident. Local. Mainly a northern, western and upland species, like one of its preferred foodplants, Eared Willow. South-west England, south Wales, Dorset, Hampshire (very local, mainly in the New Forest), East Anglia and the Midlands (very local), northern England and Man. In Scotland, most frequent in the north-west, but found from the Borders north to Caithness and Orkney, including the Hebrides. Widespread and locally frequent in Ireland. Alderney (2006) and Guernsey.

Pine Carpet

plate 16

Pennithera firmata (Hb.)

Common 70.077 (1767)



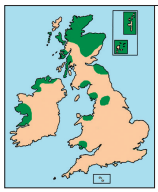
Field characters and similar species FW 13–16mm. Forewing sandy, greyish brown or dark reddish brown. Main feature is inner edge of central cross-band, which is sharply indented, greatly narrowing the band. In Grey Pine Carpet, this edge is usually obtusely angled, although it may be somewhat indented (but not sharply). In male Pine Carpet, antennae are finely feathered (visible under a hand-lens), whereas they are thread-like in Grey Pine Carpet. **Flight season** One generation. Jul–Nov. Easily disturbed from branches of the foodplant by day. Comes to light, sometimes in large numbers. **Life cycle** Overwinters as an egg or a very small larva, on the foodplant. Larva usually autumn–Jul, sometimes later, individual rates of growth being highly variable. Pupates among pine needles on the tree or in fallen debris. **Larval foodplants** Scots Pine and Corsican Pine. **Habitat** Coniferous woodland, plantations and shelterbelts, especially in sandy areas. **Status and distribution** Resident. Common. Well distributed and often abundant in the areas of native and planted pine forest throughout mainland Scotland and in the large plantations of Wales, northern and southern England, and East Anglia. More local elsewhere, but more frequent on sands and light soils. Recorded from the Hebrides and Orkney. Local on Man. Widespread but somewhat local in Ireland. Widespread in the Channel Islands.

Chestnut-coloured Carpet

plate 16

Thera cognata (Thunb.)

Nb 70.078 (1770)



Field characters FW 11–14mm. Forewing with chestnut-brown or grey-brown ground colour, broad and rounded. Central cross-band usually relatively broad in trailing half, with no waist, major indentation or scalloping. Single dark dash at wing tip. Moths from the Hebrides, Orkney and Shetland are larger and darker than mainland forms, and those from western Ireland are large and pale, sometimes with violet tints. Unlikely to be seen far from Common Juniper. **Similar species** See Juniper Carpet (forewing more pointed, central band scalloped and several dark dashes near tip) and the larger Grey Pine Carpet. **Flight season** One generation. Jul–Aug. Comes to light, sometimes in numbers. **Life cycle** Overwinters as a small larva. Larva Sep–early Jun. Pupates in a light spinning among the leaves of the foodplant or among fallen needles. **Larval foodplants** Common Juniper. **Habitat** Moorland, lightly wooded hillsides and rocky outcrops, including coastal situations. **Status and distribution** Resident. Nationally Scarce B. Widely and well distributed in Scotland, wherever the foodplant grows, including the Hebrides, Orkney and Shetland. Also present locally in Cumbria, Yorkshire, and north and south Wales. Local in western Ireland (mainly in Cos. Clare and Galway, and the Aran Islands) and along the north-west coast, mainly in Co. Donegal.

The difficult species in the genus *Thera*

Grey Pine Carpet, Spruce Carpet and Fir Carpet are part of a group of species in Europe (along with *Thera variata* and *T. cembrae*) that are genetically very close to one another. They are variable in appearance and often difficult to separate on external characters, and even on genitalia. It is therefore thought that they hybridise, and safe identification of adults is not always possible. The occurrence of *T. vetustata* in Britain also highlights the possibility that the widespread *T. variata* (originally confused in Britain with what we now know as Spruce Carpet *T. britannica*) could also occur. In cases where identification is uncertain and/or one of the Continental species is suspected, the moth(s) should be retained for an expert opinion.

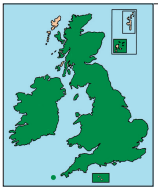
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Spruce Carpet

plate 16

Thera britannica (Turn.)

Common 70.079 (1769)



Field characters and similar species FW 13–17mm. Similar to some forms of Grey Pine Carpet, and some examples, especially darker ones, are borderline for the features given here. If these are females, it may not be possible to assign them to one species or the other. Ground colour varies from light grey to blackish grey, often heavily marked and dusted with white, especially either side of central cross-band, which is sometimes tinged with brown and is often more fluted (smoother in Grey Pine Carpet). The outermost cross-line is whitish and usually strongly marked (weaker in Grey Pine Carpet). For differences in male antennae, see under Fir Carpet. See also Juniper Carpet and Cypress Carpet. **Flight season** Two generations. May–Jul and Sep–Nov. Frequently disturbed by day from rest on trunks or among branches of the foodplant. Comes to light, sometimes in large numbers. Occasionally occurs during the winter months. **Life cycle** Overwinters as a small larva. Larva autumn–May and late Jun–Jul. Pupates on or below ground. **Larval foodplants** Many coniferous trees, mainly Norway Spruce, Sitka Spruce and Western Hemlock-spruce; also Scots Pine, Douglas Fir, Western Red-cedar and occasionally Lawson's Cypress. **Habitat** Most abundant in coniferous woodland and plantations, but also found in parkland and many gardens. **Status and distribution** Resident. Common. Well distributed, frequent to abundant, and increasing in distribution throughout England, Wales, Man and Ireland. Formerly more local than Grey Pine Carpet in Scotland, now well distributed and recorded north to Caithness, where it is now established, and Orkney. Recorded on Jersey and Alderney.

Fir Carpet

plate 16

Thera vetustata ([D. and S.])

Suspected immigrant 70.080 (1769a)

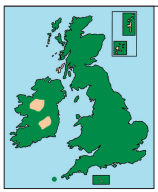
Field characters FW 12–14mm. Blackish central cross-band wholly or largely reduced to a sub-rectangular blotch on the leading edge. Sometimes has a spot on trailing edge and one or two additional spots nearby, but except in rare cases these are well separated. Forewing usually whitish, variably dusted grey or light brown. Less often, darker and predominantly brown or grey. **Similar species** In Grey Pine Carpet, Spruce Carpet (and the very similar Continental species *Thera variata*), forewing band is occasionally reduced to a blotch. In male Spruce Carpet and Fir Carpet, microscopically the antennal segments are toothed (more strongly in Fir Carpet), whereas the antennae are thread-like in Grey Pine Carpet and *T. variata*. See also Blue-bordered Carpet, with blue-grey border on chalky-white forewing (dark forms with distinct darker border on hindwing), and Garden Carpet, with more irregular blotch, less rounded forewing and slightly feathered antennae in male. Other carpet moths occasionally produce aberrant forms with the central band reduced. **Flight season** In mainland Europe, two generations. Late May–late Jul and mid-Aug to mid-Oct. Comes to light, usually in small numbers. **Life cycle** Overwinters as a larva. Larva Sep–Apr, Jun–Aug. **Larval foodplants** Usually European Silver-fir, also Norway Spruce. **Habitat** Natural coniferous forests in mountainous areas and in plantations, usually above 300m in the north of its range and usually from 1,200m in the south. **Status and distribution** Two records, both in light-traps. One at Miles Cross, Symondsbury, near Bridport, Dorset on 17 Oct 2006 (not correctly identified until 2012), and one at Climping, Sussex, on 9 Oct 2011. The moth is not known to be migratory, but both moths were caught following periods of weather favouring immigration from mainland Europe. However, accidental importation, e.g. with tree stock, is possible. Widely distributed, mainly in mountainous areas, in central and southern Europe.

Grey Pine Carpet

plate 17

Thera obeliscata (Hb.)

Common 70.081 (1768)



Field characters FW 13–17mm. Highly variable in ground colour, from light sandy brown to light or dark greyish brown or blackish. Central cross-band can be reddish brown, dark brown or dark greyish brown. This varies slightly in shape, but is always strongly narrowed toward trailing edge, with inner edge not sharply indented and edges usually fairly smooth or slightly scalloped. Outermost cross-line usually weak. Female is generally larger. **Similar species** See Spruce Carpet, Pine Carpet, Fir Carpet (including differences in antennae) and Chestnut-coloured Carpet. **Flight season** Two generations. May–Jul and Sep–Nov. Often disturbed from trunks and branches of the foodplant by day. Comes to light, sometimes in large numbers. **Life cycle** Overwinters as a larva. Larva Sep–Jun and Jul–Aug. Pupates underground. **Larval foodplants** Many coniferous trees, including Scots Pine, Norway Spruce, Douglas Fir, Western Hemlock-spruce, Western Red-cedar, Lawson's Cypress and Monterey Cypress. **Habitat** Coniferous woodland, plantations, parkland and gardens, on many soil types. **Status and distribution** Resident. Common. Well distributed and frequent to abundant throughout southern Britain, Man and Ireland, Scotland (including the Hebrides). Recorded from Orkney and Shetland (but here possibly an immigrant from Caithness, where it is well established) and the Channel Islands. This moth has greatly increased in range and abundance due to large-scale planting of conifers in the 19th and 20th centuries.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Juniper Carpet

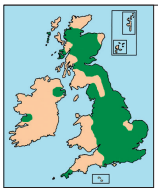
plate 17

Thera juniperata juniperata (L.)

Common 70.082 (1771)

ssp. *scotica* White
Local

ssp. *orcadensis* Cock.
Possibly extinct; Orkney



Field characters FW 11–14mm. Ssp. *juniperata* has a rounded but somewhat pointed, finely marked, light brownish-grey forewing. Central cross-band is variable (with outer edge deeply scalloped), usually consisting of a series of rounded, rather pebble-like blotches, finely etched in black, often with a sharp indentation on basal side and sometimes broken or missing in trailing half. One to three more or less diagonal black dashes near wing tip, sometimes reaching or entering central band. Female is smaller, with narrower forewing. Moths from south-west Ireland are reported to be smaller, paler and less strongly marked than British ones. Ssp. *scotica* is smaller than ssp. *juniperata*. Ssp. *orcadensis* is also small, but generally with a paler, creamier ground colour, and more boldly banded than ssp. *scotica*. **Similar species** Cypress Carpet has a streaky appearance and less refined markings. Spruce Carpet is larger, with forewing more clouded and a single diagonal dash at tip. See also Chestnut-coloured Carpet. **Flight season** One generation. Ssp. *juniperata* late Sep–early Nov, ssp. *scotica* Sep–Oct. Sometimes found at rest on the foodplant by day; after dark, when much more obvious, sometimes in large numbers, with mating pairs. Comes to light. **Life cycle** Overwinters as an egg on the foodplant. Larva mid-Jul–early Sep. Pupates either spun up among the living needles of the foodplant or among fallen needles accumulating in the plant or below it. **Larval foodplants** Junipers, including garden varieties. **Habitat** Ssp. *juniperata* is found on native stands of the foodplant, mainly on chalk downland and limestone grassland, also in gardens and parks, on a wide range of soil types. Ssp. *scotica* and *orcadensis* are found in moorland, upland grassland and coastal situations, often on prostrate forms of the foodplant. **Status and distribution** Resident. Ssp. *juniperata* was originally local and confined mainly to the chalk downs of south-east, south and central England, the Cotswolds, and the limestone of north Wales, Cumbria and Co. Durham. Since the 1960s, it has massively increased its distribution by exploiting junipers now popularly cultivated in gardens. Single bushes can support populations for many generations, and the eggs, larvae and pupae are transported on plants by the nursery trade. Now found over much of England, although it apparently remains very local in the south-west and in Wales. In Ireland, recorded from the Burren, Co. Clare, Connemara, Co. Galway, Dublin and Belfast. Recorded on Jersey (1999) and on Guernsey. Ssp. *scotica* is widespread but local in mainland Scotland, mainly in the Highlands, including the Hebrides. Ssp. *orcadensis* is restricted to Orkney, but has not been found since the 19th century.

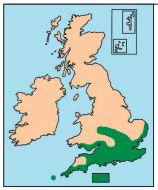
Larva of Juniper Carpet.

Cypress Carpet

plate 17

Thera cupressata (Geyer)

Recent colonist 70.083 (1771a)



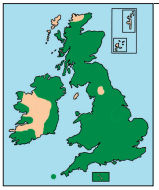
Field characters and similar species FW 12–15mm. Distinguished from related species by its more streaky appearance. Has several dark brown streaks or dashes near forewing tip, another in central band, and a dark bar placed centrally on or close to trailing edge. Brown central cross-band on forewing is often indistinct, and may be absent in trailing half, whereas it is well defined and finely etched in Juniper Carpet, which may have several dark streaks towards forewing tip. Spruce Carpet, although superficially similar, lacks the dark streaks. **Flight season** Two generations. Late May–Jul and late Sep–late Nov. Can be found at rest on the foodplant at night. Comes to light. **Life cycle** Overwinters as a larva. Larva Nov–May and late Jul–Sep. **Larval foodplants** Monterey Cypress and, in captivity, Leyland Cypress. **Habitat** Parkland and gardens. **Status and distribution** Recent colonist. Uncommon. First recorded in mainland Britain in 1984 in West Sussex. Has spread and is now established from Scilly and Cornwall to Kent, including the Isle of Wight. Has also spread north into Surrey, Berkshire, Essex, Somerset and south Wales (since 2006). Three recorded in Warwickshire since 2010, several in Buckinghamshire since 2005, and single records in Worcestershire, Oxfordshire, Hertfordshire, Suffolk and Norfolk. Frequent in the Channel Islands (first recorded in 1985).

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Blue-bordered Carpet plate 17

Plemyria rubiginata rubiginata ([D. and S.])
Common 70.084 (1766)

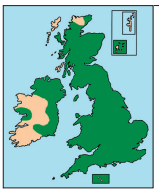
ssp. *plumbata* (Curt.)
Local



Field characters FW 12–15mm. Ssp. *rubiginata* is distinctive; forewing somewhat narrow, rounded, with chalky-white ground colour and blue-grey outer border. Brown central cross-band is reduced to a large blotch on leading edge, and sometimes a small spot on trailing edge. Ssp. *plumbata* differs in that central cross-band is usually either complete or almost so, and outer border is darker. In f. *semifumosa* Cock., forewing is dark grey, with central band still discernible, and in extreme examples hindwing is also grey. This form is frequent in ssp. *plumbata*, but rare in ssp. *rubiginata*. **Similar species** See Fir Carpet. **Flight season** One generation. Late Jun–early Aug. Flies at early dusk and again later, when it comes to light in small numbers. **Life cycle** Overwinters as an egg, in the fork of a twig on the foodplant. Larva late Apr–early Jun. Pupates in a slight cocoon on the foodplant. **Larval foodplants** Alder and Blackthorn mainly, but also birches, Hawthorn, plums and Apple. **Habitat** Alder stands by streams and in flood meadows, damp woodland (especially around ponds), hedgerows, scrub, orchards and sometimes gardens. **Status and distribution** Resident. Ssp. *rubiginata* is common, and fairly well distributed in the lowlands in England, Wales and Ireland, but adults are seldom seen in numbers. Widespread in the Channel Islands. Ssp. *plumbata* is quite well distributed and locally frequent throughout northern England and Scotland, reaching Caithness and the Inner Hebrides.

Barred Yellow plate 17

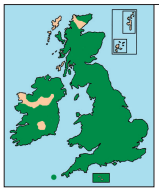
Cidaria fulvata (Forst.)
Common 70.085 (1765)



Field characters FW 12–14mm. The bright orange-yellow forewing with an irregular reddish-brown and purplish-brown central cross-band makes this moth unmistakable. There is very little variation. **Flight season** One generation. Jun–early Aug. Often seen flying around the foodplant from dusk. Comes to light. **Life cycle** Overwinters as an egg on the foodplant. Larva May–Jun. Pupates in a flimsy cocoon in plant debris on the ground. **Larval foodplants** Dog-rose, Burnet Rose and probably other wild and cultivated roses. **Habitat** Open broadleaved woodland, scrub on calcareous grassland, hedgerows and gardens. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout England, Wales, Man and Scotland, reaching Orkney and the Inner Hebrides. Rather local in Ireland and more frequent in the eastern half, and in Cos. Clare and Galway. Widespread but infrequent in the Channel Islands.

Broken-barred Carpet plate 17

Electrophaes corylata (Thunb.)
Common 70.086 (1773)



Field characters FW 14–16mm. Diagnostic feature is narrow, very irregular (even jagged), dark cross-band on forewing, usually pinched or broken in trailing half. Extensive whitish edgings to the dark patches, generally with buff within main white cross-lines, so that forewing has an intricately patterned or frosted appearance. Form *albocrenata* Curt., without the central band, is an infrequent form found in Scotland. **Similar species** Large female might be confused with Water Carpet, which has a smooth, rather shiny texture, and less regular outer edge of dark central band. See also Small Phoenix and Netted Carpet. **Flight season** One generation. May–early Jul. Can sometimes be disturbed from bushes by day. Flies from dusk. Comes to light, sometimes in numbers. **Life cycle** Overwinters as a pupa, probably in plant debris. Larva Jul–Sep, sometimes early Oct, growing very slowly. **Larval foodplants** Various broadleaved trees, including Hawthorn, Midland Hawthorn, Blackthorn, Downy Birch, Sweet Chestnut and Pedunculate Oak. **Habitat** Mainly broadleaved woodland, hedgerows and other scrubby places; also parks and gardens. **Status and distribution** Resident. Common. Well distributed and locally frequent throughout England, Wales, lowland mainland Scotland north to Caithness, the Inner Hebrides and in Ireland. Recorded once on Man, in 2000, on the Calf of Man. Local in the Channel Islands.

Larva of Broken-barred Carpet.

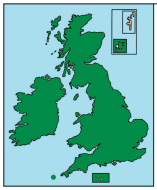
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Purple Bar

plate 17

Cosmorhoe ocellata (L.)

Common 70.087 (1752)



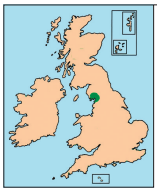
Field characters FW 13–15mm. When freshly emerged, this moth has a smooth, silky appearance. Ground colour is creamy white, and the broad, dark central cross-band is composed of purplish grey, black and brown. These features are diagnostic. There is little variation. **Flight season** Two generations in the southern half of Britain and Ireland. May–early Jul, and a partial second in early Aug–mid-Sep. Usually one generation in the north and Northern Ireland, Jun–Aug. Sometimes disturbed by day. Flies from dusk, and comes to light. **Life cycle** Overwinters as a fully-grown cocooned larva. Larva Jun–Jul and Sep–Apr in the south, Jul–Aug in the north. **Larval foodplants** Bedstraws, such as Hedge Bedstraw and Heath Bedstraw. **Habitat** A wide range, including hedgerows, scrub, woodland edges, grasslands, heathland, breckland, sand-dunes and gardens. In smaller numbers on heavy clay soils. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout most of the British Isles except Shetland.

Netted Carpet

plate 17

Eustroma reticulata ([D. and S.])

RDB 70.088 (1772)



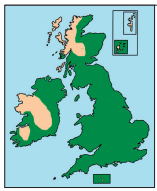
Field characters FW 13–14mm. Forewing has a distinctive, complex network of white stripes, most of which follow smooth curves. Dark central bar is so broken up with white stripes, especially on veins, that it hardly reaches trailing edge. Some variation in size and shape of dark areas on forewing. Hindwing grey, with a scalloped darker outer band. **Similar species** In Small Phoenix (f. *insulata* Haw.), dark central bar remains pronounced at trailing edge and abdomen tip is curled upwards when at rest. Central bar and patterns on Broken-barred Carpet have jagged edges. **Flight season** One generation. Early Jul–mid-Aug. Sometimes disturbed by day among foodplant or seen at rest nearby. Flies at dusk, and comes to light. **Life cycle** Overwinters as a pupa, in an earthen cocoon on the surface of moist ground by the foodplant. Larva late Jul–early Sep, occasionally later. Rests under a leaf of the foodplant by day, usually along the mid-vein. Feeds at night, initially making holes in the leaves, then eating into the seedpods. **Larval foodplants** Touch-me-not Balsam. Accepts other balsams such as Orange Balsam in captivity, and the pods (but not the leaves) of the invasive Indian Balsam, which is widely naturalised in the Lake District habitats of the moth and often out-competes Touch-me-not Balsam. **Habitat** Wet woodland (below 150m) in areas of high rainfall, in very wet, shaded flushes, by streams or seepages, and on lake shores. Minor ground disturbance is required for foodplant establishment; the plant will grow and flower in open situations, but larvae are more frequent where there is dappled shade. **Status and distribution** Resident. Red Data Book species. Recorded from the Lake District, Cumbria, since 1856 and from north Wales at intervals since 1886. As a native species the foodplant is virtually confined to these two areas of Britain. The main localities for the moth in the Lake District are Lake Windermere, Coniston and, until recently, Derwent Water. The Welsh sites are near Bala (1930) and Dolgellau (1973), but despite annual searches throughout the 1990s, there have been no recent confirmed records.

Phoenix

plate 17

Eulithis prunata (L.)

Common 70.089 (1754)



Field characters FW 17–19mm. Quite distinctive. Larger than similarly marked moths, with broader forewing and very wavy outer edge to broad brown central band. Varies only slightly in colour and in fine detail of markings. Male rests with end of abdomen curled upwards. **Similar species** Water Carpet is superficially similar but smaller and flies in Apr–May. See also Small Phoenix. **Flight season** One generation. Jul–Aug. Flies from dusk. Comes to light in small numbers. **Life cycle** Overwinters as an egg on foodplant. Larva Apr–Jun. Pupates between spun leaves on foodplant. **Larval foodplants** Black Currant, Red Currant and Gooseberry. More frequent on shaded plants. **Habitat** Gardens, allotments and woodland, especially along stream-sides. **Status and distribution** Resident. Common. Widely distributed and regularly seen, in small numbers, throughout England, Wales and Man. Also in Scotland, north to Caithness and Orkney, but very local in the north-west. Local in Ireland. Widespread at low density in the Channel Islands.

Chevron

plate 17

Eulithis testata (L.)

Common 70.090 (1755)

Field characters FW 13–19mm. Quite a distinctive moth. Diagnostic features are the chevron-shaped central cross-band of forewing, and diagonal whitish line at wing tip, which usually forms part of the outline of a roughly triangular orange or brown blotch on outer edge. Ground colour varies considerably, from bright brownish orange to light or dark reddish brown, with a variable degree of whitish

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Chevron.

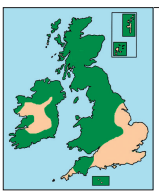
frosting, another characteristic feature. Female much smaller than male, with narrower forewing. Darkest forms usually found in the north. **Similar species** Northern Spinach lacks whitish frosting, has a dark line at forewing tip, and central cross-band is not V-shaped or less so, with a distinct double outer projection. **Flight season** One generation. Jul–mid-Sep. Male flies at dusk. Comes to light and can be found at rest at night on low vegetation. **Life cycle** Overwinters as an egg on the foodplant. Larva May–Jun. Pupates between spun leaves on foodplant. **Larval foodplants** Sallows, Creeping Willow, Aspen and probably other poplars. Also reported from birches, Hazel, Heather and, in the Hebrides, Rowan. **Habitat** Most numerous on moorland and scrubby upland grassland, but also in lowland heathland and open woodland, fens, marshes and dune-slacks. **Status and distribution** Resident. Common. Well distributed and frequent in regions with moorland or heathland; more thinly distributed, local and less frequent elsewhere. Found in all parts of the British Isles.

Northern Spinach

plate 17

Eulithis populata (L.)

Common 70.091 (1756)



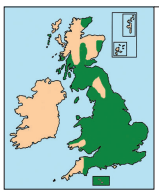
Field characters FW 13–18mm. Forewing straw yellow to orange-brown or dark brown. Has a distinct double tooth-like outward projection on darker central cross-band, which often has a chain of round or oval blotches running through its centre, pale in trailing half. Has a short, dark diagonal line at wing tip, forming one side of the roughly triangular dark blotch along outer edge. These features are often faint in dark brown examples, which are most frequent in the north, the darkest of all in Orkney and Shetland. Female much smaller. **Similar species** See Chevron, Spinach and Dark Spinach. **Flight season** One generation. Jul–Aug. Easily disturbed by day from low vegetation, rocky outcrops and isolated bushes. Flies from dusk and can be found at rest on heathers and Bilberry after dark. Comes to light, sometimes in numbers. **Life cycle** Overwinters as an egg on the foodplant. Larva Apr–Jun. Pupates in a light cocoon on foodplant or in debris below. **Larval foodplants** Bilberry. **Habitat** Moorland, heathland and open, mainly upland woodland. **Status and distribution** Resident. Common. A northern and western species, well distributed and frequent to abundant in the uplands of south-west England, Wales, Man, the Midlands (south to Leicestershire, Staffordshire and Worcestershire), northern England, all of Scotland and Ireland. Scattered records from further south in the Midlands and East Anglia, some presumed wanderers but others indicating small past and (possibly) extant populations on relict heathlands and mosses. In the Channel Islands, old records from all three islands and one on Guernsey in 2013.

Spinach

plate 17

Eulithis mellinata (Fabr.)

Common 70.092 (1757)



Field characters and similar species FW 16–18mm. This moth shares a unique resting posture with Barred Straw: the wings are held out horizontally, away from the body and well clear of the surface, with trailing edge of hindwing and tip of abdomen curled upwards. Both species have straw-yellow forewing, but on Spinach outer edge of central cross-band has a large central tooth-like projection and fringes are chequered. Northern Spinach can be somewhat similar, but central band is darker and it rests with wings flat against surface and closer to body. See also Barred Straw. **Flight season** One generation. Mid-Jun–late Aug. Flies from dusk. Comes regularly to light, sometimes in fair numbers. **Life cycle** Overwinters as an egg on the foodplant. Larva Apr–May. Pupates among spun leaves on foodplant or on the ground. **Larval foodplants** Black Currant and Red Currant. **Habitat** Gardens and allotments, including those in major urban areas, and woodland. A lowland moth, unlike Northern Spinach. **Status and distribution** Resident. Common. Numbers in the Rothamsted Insect Survey national light-trap network declined by 96% between 1968 and 2007. Formerly well distributed and fairly frequent throughout England, Wales and Man. Has probably declined in numbers because fewer households grow the foodplants now, but there may be additional factors. Still well distributed in some areas, including the London conurbation, Essex and East Anglia, and the Birmingham and Liverpool–Manchester conurbations. Local in Scotland, mainly in the south and north-east, but recorded north to Caithness. Very rare in Ireland, recorded only from the Dublin area in 1966–67, and possibly introduced with cultivated foodplants. Occasional in the Channel Islands.

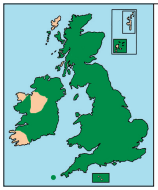
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Barred Straw

plate 17

Gandaritis pyraliata ([D. and S.])

Common 70.093 (1758)



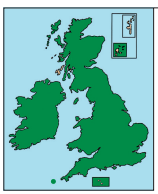
Field characters and similar species FW 15–18mm. Similar in colour and unusual resting posture to Spinach, also with central cross-band not usually darker than ground colour. However, this band is narrower in Barred Straw, its edges parallel and V-shaped, the outer edge lacking a strong projection. Other markings few and simple. Fringes plain brown. Usually a row of brown spots or smears in outer part of forewing (faint or absent in Spinach, which has chequered fringes). **Flight season** One generation. Late May–late Aug, occasionally to early Sep. Sometimes disturbed from dense vegetation by day. Flies from dusk, and comes to light. **Life cycle** Overwinters as an egg. Larva mid-Apr–mid-Jun. Pupates among plant debris. **Larval foodplants** Cleavers and other bedstraws. **Habitat** Gardens, hedgerows, ditches, roadside verges, woodland rides and edges, and rough, scrubby grassland. **Status and distribution** Resident. Common. Well distributed and frequent throughout England, Wales, the Channel Islands, Man and most of Scotland, where it is more local in the north-west but extends to the Hebrides, Caithness and Orkney. Widespread in Ireland, but much less so in the west.

Small Phoenix

plate 18

Ecliptopera silaceata ([D. and S.])

Common 70.094 (1759)



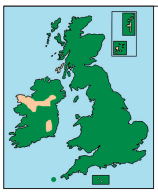
Field characters FW 13–17mm. There are two frequent forms in most populations of this quite distinctive moth, one with the dark central cross-band on the forewing complete, and another (f. *insulata* Haw.) with it divided centrally by two pale curved lines (sometimes partial), converging on the inner edge. Outer edge of central band curves outwards in leading half, rather than bulging or projecting strongly. Both forms have a distinctive series of dark wedge-shaped markings beyond the central band. These are also present on the underside and are conspicuous when wings are held closed. Male rests with tip of abdomen curled upwards. **Similar species** See the spring-flying Water Carpet, also Devon Carpet, Broken-barred Carpet, the larger Phoenix and the rare Netted Carpet. **Flight season** Two generations, to the southern half of Scotland and in most of Ireland. Late Apr–Jun and late Jul–early Sep. One generation further north, occasionally a second as in 2003 in Aberdeenshire (mid-Aug–early Oct), and in 2006 third-generation individuals in Oct northwards to Lancashire. Readily disturbed from among the larval foodplant by day. Flies from dusk, and comes to light and sugar. **Life cycle** Overwinters as a pupa among plant debris. Larva late Jun–late Jul and late Aug–Sep. **Larval foodplants** Various species of willowherbs, including Rosebay Willowherb and the related Enchanter's-nightshade. Possibly on Touch-me-not Balsam. **Habitat** Most numerous in woodland rides and glades, but found wherever the foodplants occur, in gardens, overgrown allotments, hedgerows, roadside verges, canal banks, calcareous grassland, heathland, fens and derelict urban sites. **Status and distribution** Resident. Common. Well distributed and recorded throughout most the British Isles, except Shetland.

Red-green Carpet

plate 18

Chloroclysta siterata (Hufn.)

Common 70.095 (1760)



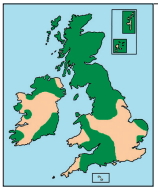
Field characters FW 14–17mm. Usually distinguished from other green geometrid moths by reddish-brown marbling on forewing, often comprising streaks radiating from base. However, this may be absent or much reduced, especially in female. Usually a distinct white or pale blotch on leading edge, just beyond central band, which in male has a solid black bar on or near trailing edge. Central cross-band and basal blotch on forewing may be weak or strong, in one striking form largely greenish black. Female is generally a slightly darker, richer green, and slightly larger on average. Hindwing grey. **Similar species** See Autumn Green Carpet and Beech-green Carpet. **Flight season** One generation. Sep–Nov, and female Mar–May after hibernation. Comes to light, Ivy flowers and sallow catkins. **Life cycle** Overwinters as an adult (female only). Larva Jun–Aug. Pupates in plant debris. **Larval foodplants** Various broadleaved trees, perhaps mainly oak, but recorded from Blackthorn, Apple, cherries, Dog-rose and Rowan (all rose family), and also birches, limes and possibly Ash. **Habitat** Broadleaved woodland, wooded hedgerows and gardens, and well-wooded areas, particularly in moorland regions. **Status and distribution** Resident. Common. Well distributed in most parts of Britain, on Man and in Ireland, and recorded from the Hebrides, Orkney and Shetland. Formerly, distinctly local and infrequent in the south, but has increased in range and numbers since the 1980s, for example in Hampshire, Surrey, Hertfordshire and elsewhere in the s outh-east, Warwickshire and, to a lesser extent, in the east Midlands. Local but increasing in the Channel Islands, especially on Alderney, where it is now frequent.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Autumn Green Carpet plate 18

Chloroclysta miata (L.)

Local 70.096 (1761)



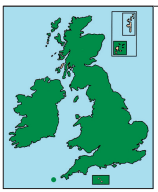
Field characters and similar species FW 15–17mm. Similar to Red-green Carpet, but generally paler and with broader forewing. There are no reddish-brown streaks, and cross-lines and bands are usually more evenly and extensively whitish, with no solid black bar near trailing edge in male. Some examples are as dark as some Red-green Carpets, but hindwing is whitish, although sometimes with extensive dark grey dusting. An uncommon form has a reddish-brown band either side of central cross-band. See also Beech-green Carpet. **Flight season** One generation. Sep–Nov, and Mar–May after hibernation. Often found at rest on leaves by day. Comes to light, Ivy flowers and sallow catkins. **Life cycle** Overwinters as adult female. Larva Jun–Aug. Pupates in plant debris. **Larval foodplants** Sallows, birches, Alder, limes, wild roses, Rowan and probably other broadleaved trees. **Habitat** Broadleaved woodland, scrub, hedgerows and gardens in well-wooded areas, particularly in upland and moorland regions. **Status and distribution** Resident. Local. Quite well distributed and fairly frequent in the north and west of Britain (including Man, the Hebrides, Orkney and Shetland), where it is sometimes seen in large numbers, especially in the autumn, along with Red-green Carpet. Formerly widespread in the south and east, but now very scarce or absent there. Widespread but rather scarce in Ireland.

Common Marbled Carpet plate 18

Dysstroma truncata truncata (Hufn.)

Common 70.097 (1764)

Arran Carpet ssp. *concinnata* (Steph.)
Na



Field characters and similar species FW 14–19mm. One form of the highly variable Common Marbled Carpet ssp. *truncata* has a large, light brown central patch on forewing, and is unmistakable. Many other forms are very similar to Dark Marbled Carpet (for differences see under that species). Dark grey or blackish forms predominate in some places, especially in southern areas. Arran Carpet is very similar to some darker forms of Common Marbled Carpet, but pattern of white on central band is more irregular and often rather blotchy, and outer edge of band is more irregular and sometimes more pointed. However, some examples indistinguishable from Common Marbled Carpet occur in the same areas and elsewhere in Scotland. See also Dark Marbled Carpet. **Flight season** Common Marbled Carpet has two generations in most places, May–Jun and late Aug–Oct or Nov. One generation, early Jul–Aug, at high altitude in Scotland and parts of Ireland, also at low altitude in the northern half of Scotland, except in hot summers such as 2003. Arran Carpet has one generation, Jul–Aug. Both subspecies are easily disturbed by day, come readily to light, may be found at rest after dark, and visit flowers including Ivy, overripe Blackberries and, occasionally, sugar. **Life cycle** Overwinters as a larva. Larva Sep–May and Jun–Aug, or late Aug–Jun where there is one generation. Pupates among foliage on the foodplant. **Larval foodplants** Many plants, mainly woody species, including sallow, birches, Bilberry, Bramble, heathers, privets and Hawthorn, but also docks. Arran Carpet on Heather and Bilberry. **Habitat** Common Marbled Carpet has a wide range, including gardens and urban parks, broadleaved woodland and scrub, hedgerows and bushes on calcareous grassland, fens, heathland, moorland and coastal habitats. Arran Carpet occurs on moorland. **Status and distribution** Resident. Common. Common Marbled Carpet is well distributed and frequent throughout most of the British Isles, except Shetland, where it is absent. Arran Carpet is Nationally Scarce A. Endemic. Formerly considered to be a separate species. Reliably recorded only from extreme western locations in Scotland, including Arran, the Inner Hebrides (Islay, Colonsay, Oronsay, Eigg, Rum, Canna, Skye) and the Outer Hebrides (Harris and Lewis, South Uist).

Dark Marbled Carpet plate 18

Dysstroma citrata citrata (L.)

Common 70.098 (1762)

ssp. *pythonissata* (Mill.)
Shetland and Orkney

Field characters and similar species FW 14–19mm. Ssp. *citrata* is variable, and very similar to the equally variable Common Marbled Carpet, and Arran Carpet. The most reliable character is the longer and more pointed central projection of outer edge of central band on forewing. This is also present on the underside. On underside of hindwing, central cross-line usually has a sharp central point and is right-angled or at a slightly acute angle (generally more rounded and at a slightly obtuse angle in Common Marbled Carpet, but some specimens are borderline). Dark-banded examples often have a distinct white flash in leading half outside central band, usually much less distinct in equivalent forms of Common Marbled Carpet. Most populations are equally variable, but darker forms are more frequent in industrial areas in the Midlands and northern Britain. Ssp. *pythonissata* is darker and less variable than ssp. *citrata*, often with

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

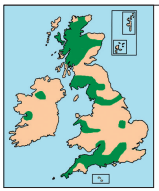
narrow white cross-lines. **Flight season** One generation. Jul–Aug in the south, late Jul–Sep further north, to Oct in northern Scotland. Emerges later than the first generation of Common Marbled Carpet. Easily disturbed by day, and comes frequently to light. **Life cycle** Overwinters as an egg. Larva Apr–Jun. Pupates among plant debris. **Larval foodplants** Many plants, mainly woody species, including birches, heathers, Bilberry and sallow. Also recorded from Wild Strawberry. **Habitat** Most frequent in woodland, heathland and moorland, but also in scrub, hedgerows and gardens. **Status and distribution** Resident. Ssp. *citrata* Common. Fairly well distributed and moderately frequent in most parts of mainland Britain, and in the Hebrides, Man and Ireland. More frequent and often abundant in the north, especially on moorland. Local and more restricted to woodland and heathland in central and eastern parts of southern Britain. Scarce but increasing in the Channel Islands. Ssp. *pythonissata* throughout Shetland and Orkney.

Beech-green Carpet

plate 18

Colostygia olivata ([D. and S.])

Local 70.099 (1774)



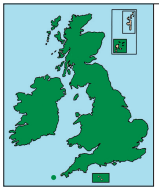
Field characters FW 13–15mm. The rounded, rather ample, dull green forewing (sometimes lighter, and fading with age to yellowish or brownish), with numerous fine, wavy black cross-lines, and distinct, continuous, fine white edging of darker central band, make this moth distinctive when in fresh condition. Hindwing brownish grey, with chequered fringes. Markings vary only slightly, but examples from northern Britain are darker. **Similar species** See Red-green Carpet and Autumn Green Carpet, with narrower, less rounded forewing. Both fly in the autumn and spring. See also Green Carpet. **Flight season** One generation. Jul–Aug. Easily disturbed by day from trees, rocks, fences and hedgerows. Flies from dusk. Comes to light in small numbers. **Life cycle** Overwinters as a small larva. Larva Sep–May. Pupates among plant debris. **Larval foodplants** Hedge Bedstraw, Lady's Bedstraw and Heath Bedstraw. **Habitat** Woodland and moorland. In southern Britain usually restricted to calcareous soils. **Status and distribution** Resident. Local. Very local in southern Britain, being most frequently found in south-west England, especially on the coast, the south side of the Isle of Wight, the Chilterns and the Cotswolds. Local in north Wales and northern England, but more widespread and frequent in mainland Scotland (especially the northern half) and recorded from the Inner Hebrides. Other scattered populations inland, for example formerly at Selborne, Hampshire. Recorded very sparsely from various parts of Ireland. Reported twice from Guernsey, in 1970 and 1973.

Green Carpet

plate 18

Colostygia pectinataria (Knoch)

Common 70.100 (1776)



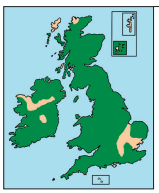
Field characters FW 12–15mm. When freshly emerged, green ground colour of forewing and arrangement of black blotches and cross-lines separates this often abundant moth, but the ground colour soon fades to white or pinkish white. However, the pattern varies little, and once learned it can be recognised in any condition. **Similar species** Beech-green Carpet lacks the bold black blotches on leading edge of forewing. **Flight season** Two generations from the Isle of Wight north to at least Lancashire and Yorkshire (the latter since 2004), May–mid-Jul and Aug–early Sep. The second generation was formerly considered occasional and partial but has recently become annual, and sometimes numerous. Mainly one generation in northern Britain, Jun–Aug, with occasional second-generation moths after exceptional summers such as 2003. Easily disturbed by day. Frequently seen at dusk, and comes to light, usually in small numbers. **Life cycle** Overwinters as a larva. Larva Jun–Jul and Sep–May where there are two generations, Aug–May where there is one. Pupates in a cocoon in loose earth. **Larval foodplants** Hedge Bedstraw, Heath Bedstraw and other bedstraws, probably including Cleavers. Suspected to feed on Sheep's Sorrel in damp moorland on Orkney, and Wild Marjoram and White Dead-nettle also reported. **Habitat** Ubiquitous, from gardens to hedgerows, woodland rides, grasslands, fens and high moorland. **Status and distribution** Resident. Common. Well distributed and frequent throughout the British Isles, except Shetland, where it is absent.

Mottled Grey

plate 18

Colostygia multistrigaria (Haw.)

Common 70.101 (1775)



Field characters FW 13–17mm. The delicate markings, rather shiny texture (when fresh) and chequered veins on forewing distinguish this moth from all others that fly in the early spring. Leading edge of forewing in male is slightly concave in centre; narrower in female, which is smaller. Ground colour usually straw white, sometimes yellowish-tinged. Dark brownish-grey f. *nubilata* Tutt is found in the Midlands, northern England and Scotland. **Similar species** Plain, pale forms of Early Tooth-striped are superficially similar, but forewing is not shiny, is more elongated and rounded with leading edge arched (not concave), especially near tip, and veins are not chequered. Also, hindwing is comparatively small. **Flight season** One generation.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Mar–Apr. Flies from dusk. Often found at rest on short vegetation at night. Comes to light in small numbers, and feeds at sallow blossom. **Life cycle** Overwinters as a pupa. Larva May–Jun. **Larval foodplants** Lady's Bedstraw, Heath Bedstraw, Cleavers and probably other bedstraws. **Habitat** Heathland, moorland, downland, and woodland rides and clearings. **Status and distribution** Resident. Common. Fairly well distributed and may be under-recorded, due to early flight season, in England (although rather scarce and local in parts of central southern England, south and east Midlands, Hertfordshire and Essex, where it may be extinct), Wales, Man, mainland Scotland and the Inner Hebrides. Usually seen in small numbers but can be numerous. Widespread but apparently local in Ireland.

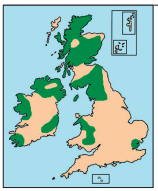
Striped Twin-spot Carpet

plate 18

Coenotephria salicata (Hb.)

ssp. *latentaria* (Curt.)

Common; possible rare immigrant 70.102 (1753)



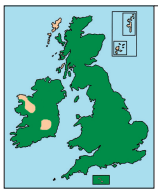
Field characters FW 12–15mm. A rather weakly marked, light to dark grey moth. Forewing has numerous faint cross-lines and a slightly darker central cross-band, often with a paler band within it, always with a somewhat elongated, small blackish central spot. Male has finely feathered antennae. **Similar species** Garden Carpet f. *thules* is usually darker, especially leading half of central cross-band, which often obscures the small blackish central spot, and in male antennae have only very short feather projections. See also Grey Mountain Carpet (antennae not feathered) and Twin-spot Carpet. **Flight season** Mainly one generation. May–Jul. In some places at low altitude there is a second generation, Aug–early Sep. Often disturbed by day. Comes to light. **Life cycle** Overwinters as a fully grown cocooned larva, pupating in Apr or May. Larva feeds Jul–early Aug, in some places again in autumn. **Larval foodplants** Bedstraws. **Habitat** Mainly moorland, particularly where rocks are exposed, but also open woodland, sand-dunes and other grassy places in upland and northern areas. **Status and distribution** Resident. Common. Wales (more frequent in the north and west), northern England, Man, parts of mainland Scotland, the Hebrides and Orkney. In Ireland, widespread but mainly in the north and west. Local and scarce in south-west England. Several records of presumed vagrants or immigrants, including Dorset (1940s), Surrey (1962, 1982), and Essex (1976, 2004).

Water Carpet

plate 18

Lampropteryx suffumata ([D. and S.])

Common 70.103 (1750)



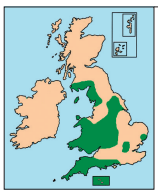
Field characters FW 14–17mm. Forewing somewhat shiny, rather tapered, with leading edge curved. Broad, dark brown central cross-band has a strong double outer projection. Usually ground colour is brownish white or light brown. The colours are usually rich and bright, highlighted by white edging. Form *piceata* Steph. is almost uniformly dark brown, but with the usual markings still evident. The infrequent f. *porritii* Robson has an intensely blackish-brown central band contrasting sharply with pale ground colour, and occurs mainly in northern England. **Similar species** See Devon Carpet. Small Phoenix is not shiny on forewing, central cross-band lacks an outer projection and there are well-defined tooth-like marks near outer edge. See also Phoenix, which flies in Jul–Aug, and Broken-barred Carpet. **Flight season** One generation. Apr–May. Sometimes disturbed by day, especially in open habitats. Flies from dusk and comes to light, especially to actinic traps near dense vegetation. Usually recorded in small numbers but sometimes locally numerous. **Life cycle** Overwinters as a pupa among plant debris. Larva May–Jun. **Larval foodplants** Lady's Bedstraw, Hedge Bedstraw, Cleavers and Heath Bedstraw. **Habitat** Damp woodland, scrub, hedgerows, ditches, high moorland, fens and some mature gardens. **Status and distribution** Resident. Common. Found throughout most of England, Wales, Man, Scotland (including the Hebrides) and Ireland. Local in the Channel Islands, but increasing on Alderney.

Devon Carpet

plate 18

Lampropteryx otregiata (Metc.)

Nb 70.104 (1751)



Field characters and similar species FW 12–14mm. Not unlike a diminutive Water Carpet, but forewing less shiny, more rounded. Outward projection of central cross-band more pronounced and rounded, its outer edge generally straighter in leading half and with less sharp indentations. Some individuals have rather dark forewing with weak markings. See also Small Phoenix, which lacks a strong central projection on outer edge of central cross-band. **Flight season** Two generations. Mid-May–Jun and early Aug–mid-Sep. Occasionally disturbed by day among shrubs near larval foodplant. Flies at early dusk and later, and comes to light. **Life cycle** Overwinters as a pupa, probably on the ground below moss or plant debris. Larva Jun–Jul and Sep–Oct. The eggs are laid on the

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

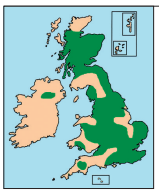
foodplant, near the flowers. **Larval foodplants** Common Marsh-bedstraw and probably Fen Bedstraw. **Habitat** Damp woodland, on heavy soils. **Status and distribution** Resident. Nationally Scarce B. Expanding. Quite well distributed in south-western England and much of Wales. Extends through Dorset, south Hampshire and very locally elsewhere in southern England, including recent records from Berkshire and Buckinghamshire, East Anglia (Suffolk), north to Derbyshire, Nottinghamshire, Yorkshire, Lancashire and Cumbria. Found very locally in south-west Scotland, in Wigtownshire in 2013, and in Kirkcudbrightshire and Dumfriesshire in 2015. Reported from Man in 2006. Recorded once on Jersey, in 1974, and since 2003.

Northern Winter Moth

plate 19

Operophtera fagata (Scharf.)

Common 70.105 (1800)



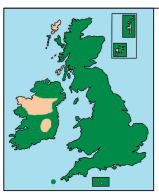
Field characters and similar species FW 14–18mm. Male is quite similar to Winter Moth, but paler and somewhat silky in appearance. Forewing is more tapered and hindwing whitish. In the distinctive female, vestigial wings reach half length of body and forewing is noticeably black-banded. See also *Epirrita* species, which are generally larger and greyer. **Flight season** One generation. Oct–Dec, but mainly Nov. Male frequently seen in light-traps. Both sexes sometimes found by searching foodplants after dark. **Life cycle** Overwinters as an egg on foodplant. Larva Apr–Jun. Pupates underground. **Larval foodplants** Mainly birches and Alder in woodland, but also reportedly on Beech and fruit trees such as Apple, plums and cherries. **Habitat** Woodland, heathland, scrub, gardens and orchards. **Status and distribution** Resident. Common. Records almost certainly confused with Winter Moth. Widespread throughout much of England, Wales and mainland Scotland north to West Ross, and the Inner Hebrides. Somewhat local and seems to have become less numerous and more local in recent years, but can be abundant among birch. Rare on Man. Recorded recently in Ireland in Tyrone, Fermanagh and Monaghan, and probably overlooked elsewhere.

Winter Moth

plate 19

Operophtera brumata (L.)

Common 70.106 (1799)



Field characters FW 13–16mm. The males of this species are the brownish moths most often seen in numbers flying weakly in car headlights in the late autumn and winter, especially near woods and hedgerows. They are a drab light to dark brown, with a darker central forewing band, often indistinct. Hindwing brown. Male varies quite markedly in size.

Larva of Winter Moth.

Female cannot fly and has only rudimentary black-banded grey wings (extending no more than one-third length of body), and is sometimes carried in flight during copulation by the male. It is much smaller than the other wingless female geometrid moths found in autumn. **Similar species** See Northern Winter Moth. *Epirrita* species are usually greyer and larger, with a more pointed forewing tip. See also March Moth (female). **Flight season** One generation. Oct–Jan, peaking in late Nov or Dec. Sometimes continuing as late as Mar, especially in western Scotland. Comes to light, including lighted windows. Both sexes can be found at rest or walking up tree trunks after dark. **Life cycle** Overwinters as an egg, on a twig or in a bark crevice near a leaf bud. Larva Apr–early Jun, falling to the ground to pupate in a tough cocoon on or below ground. **Larval foodplants** Almost any broadleaved tree or shrub, including oaks, birches, sallows, hawthorns, Blackthorn, Hazel, Sycamore, Wild Service-tree and Apple. Also heathers and Bog-myrtle. **Habitat** Ubiquitous, from gardens to moorland, except at high altitude. **Status and distribution** Resident. Common. Well distributed and abundant throughout the British Isles. **Pest status** Long known as a pest on Apple in commercial orchards, the larvae damaging the young fruitlets. More recently, a pest on Lodgepole Pine and Sitka Spruce plantations in northern Britain, damaging the lead shoots of young trees.

November and autumnal moths

The four species of *Epirrita* found in Britain are at first sight confusingly similar. The Small Autumnal Moth can be distinguished on the basis of its earlier flight season, generally smaller size and restriction to moorland. The other three species are difficult to separate and have forewings that vary from almost uniform, unbanded, dark grey-brown to light grey-brown with distinct banding. The banding pattern on the forewing is a useful guide to identification, but it is far from infallible and confirmation using morphological features is required. Strongly patterned individuals seem to be more frequent

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

in the north and uplands, but the markings vary considerably within each species. The drab forms are more frequent in lowlands and often lack any helpful wing markings.

However, males of the three difficult species can easily be identified by examination of the underside of the abdomen tip under a hand-lens or low-power microscope, facilitated by the removal of some of the scales with a fine brush. The relevant features are often easier to see on a live or freshly dead moth than on a dried specimen, on which the abdomen may have constricted. In this case, the features may more easily be seen by removing the abdomen and softening it with a potassium hydroxide solution (see Townsend *et al.* 2010). Rather than handling active live moths, another possibility is to anaesthetise them by placing them in ethyl acetate vapour until they are still, then quickly removing them. Provided the vapour is not too strong, they will usually revive.

The females differ from the males in having more rounded forewings, with more of a 'shouldered' base. They are often heavily banded, but there are no reliable morphological differences between the species so identity cannot be confirmed. It is possible to obtain eggs and rear the larvae through to adulthood to examine the males. However, this is seldom necessary as males are usually in plentiful supply, enabling selection of likely candidates for each of the three species for detailed examination, using the forewing characters as a guide, thereby providing voucher specimens without killing larger numbers.

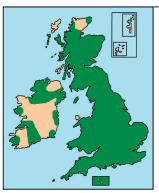
The adults can be obtained by tapping lower branches and a few can sometimes be seen flying just before dusk, or even earlier, but the main flight is after dark. Both sexes come to light, often in large numbers. Usually, November Moth is the most numerous of the three species found in woodland and gardens, where many individuals are particularly dark and drab. Variation can be local, with certain forms tending to predominate, so one may get to know how the various species look in a particular area, although in another part of the country they may look rather different.

November Moth

plate 19

Epirrita dilutata ([D. and S.])

Common 70.107 (1795)



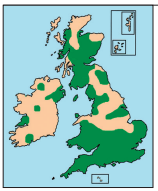
Field characters and similar species FW 15–20mm. Well-marked individuals with central spot (if present) on forewing close to, or incorporated into, inner margin of outer cross-band are likely to be November Moth. Clasper (valve) of male, viewed from underside of abdomen tip, has a curved spur. Trailing edge of last plate on underside of abdomen (eighth sclerite) has two teeth that are widely spaced (0.43mm apart on average) (see text figure). See also Winter Moth and Northern Winter Moth. **Flight season** One generation. Early Oct–Nov, but from mid-Sep in northern Britain. **Life cycle** Overwinters as an egg on a twig or bark. Larva late Apr–Jun. Pupates underground. **Larval foodplants** Most broadleaved trees and shrubs, including oaks, birches, elms, sallows, Aspen, Ash, Hazel, hawthorns, Blackthorn, plums, Crab Apple and Bilberry. **Habitat** The least choosy *Epirrita* species, most abundant in broadleaved woodland but frequent in scrub, hedges and gardens. **Status and distribution** Resident. Common. Well distributed and abundant throughout mainland Britain, Man, some of the Inner Hebrides and Ireland. Local in the Channel Islands.

Pale November Moth

plate 19

Epirrita christyi (Allen)

Common 70.108 (1796)



Field characters and similar species FW 15–20mm. Well-marked individuals with central spot (if present) on forewing separated from inner edge of outer cross-band, which curves around it, are likely to be Pale November Moth. Banded, pale grey *Epirrita* moths tend to be Pale November Moth, but plain brownish forms predominate on some sites. Clasper (valve) of male, viewed from underside of abdomen tip, has a curved spur. Teeth on outer edge of underside of eighth abdominal segment are closely spaced (0.23mm apart on average). See also Winter Moth and Northern Winter Moth. **Flight season** One generation. Late Sep–Nov. Peak numbers usually mid–late Oct, a little later than November Moth. **Life cycle** Overwinters as an egg on a twig or bark. Larva late Apr–Jun. Pupates underground. **Larval foodplants** Beech, elms, birches, Alder, Hazel, hawthorns, sallows. Beech and Wych Elm appear to be favoured and this is sometimes the most numerous of the *Epirrita* species where these trees are abundant. Accepts Hornbeam in captivity. **Habitat** Most often reported from mature woodland, from which samples of *Epirrita* moths can be obtained to search out this species. In Lancashire, more frequent in upland woodland than in the lowlands. Foodplants, habitat preferences and distribution are incompletely known due to difficulties of identification of the moth and its larvae. **Status and distribution** Resident. Common. Likely to be overlooked, but certainly more localised than November Moth. Confirmed records are widespread but somewhat thinly scattered throughout England,

Epirrita male genitalia

November Moth *E. dilutata*

Pale November Moth *E. christyi*

Autumnal Moth *E. autumnata*

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

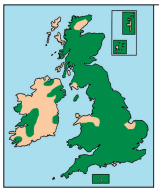
Wales, Man, Scotland north to Sutherland, Northern Ireland and the Irish Republic. Can be locally abundant, as in one sample from Yorkshire and another from Essex.

Autumnal Moth

plate 19

Epirrita autumnata (Borkh.)

Common 70.109 (1797)



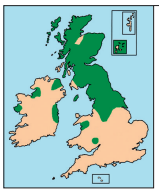
Field characters FW 16–20mm. Forewing often banded, frequently strongly, with prominent, heavy 'V' mark in centre where vein forks, and upper vein radiating from this point bearing several alternate bands of dark brown and white scales. Central spot (if present) often distinctly and widely separated from outer central cross-band, which is angled around it. Some examples may have almost uniformly dark forewing, but 'V' mark is usually darker, heavy and more conspicuous than in other species. Clasper (valve) of male, viewed from underside of abdomen tip, has no spur and teeth on underside of eighth abdominal segment are fairly well separated, but short and facing inwards. **Similar species** See November Moth, Pale November Moth and Small Autumnal Moth. **Flight season** One generation. Oct–Nov (slightly earlier in northern Britain), usually starting two or three weeks later than November Moth in the same area. **Life cycle** Overwinters as an egg on a twig or bark. Larva late Apr–Jun. Pupates underground. **Larval foodplants** Birch (both Silver and Downy) and Alder, and also Heather, with occasional records from other broadleaved species. Has also been reported from larches and Scots Pine. Accepts Hawthorn in captivity. **Habitat** Possibly prefers the foodplants in more open situations such as in rides and paths in woodland, where the larvae are sometimes frequent on young regrowth. Abundant in Scottish birch woods. Also mixed broadleaved woodland, some gardens, scrub in uplands and lowlands, heathland and moorland. **Status and distribution** Resident. Common. Confirmed records are somewhat thinly scattered, but it is widespread throughout mainland Britain and can be locally abundant (in both north and south), likewise on Man and in Ireland. Recorded from Orkney and resident in Shetland. Confirmed from Jersey and Alderney, but apparently rare.

Small Autumnal Moth

plate 19

Epirrita filigrammaria (H.-S.)

Common 70.110 (1798)



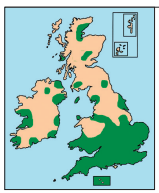
Field characters and similar species FW 14–18mm. An *Epirrita* moth in Aug, on northern moorland, is almost certain to be this species. Like Autumnal Moth, clasper (valve) of male has no spur, but moth is normally noticeably smaller and generally darker. However, the largest examples may be as large as Autumnal Moth, and indistinguishable on wing markings. Banding on forewing varies from weak to very strong and dark. Central spot is distinct and widely separated from banding when present, but often obscure or absent. The other three *Epirrita* species are unlikely to be seen before the second half of Sep. **Flight season** One generation. Aug–Sep. Often seen in large numbers, hanging from stems of Heather just after dark. **Life cycle** Overwinters as an egg attached to the foodplant. Larva mid-Apr–late May. Larvae are quite distinct from the other *Epirrita* species, having a pronounced yellow sub-dorsal stripe from head to tail, a dark green dorsal line and a more olive body colour. Pupates underground. **Larval foodplants** Heather, Bilberry and sallows. Has been reported from larches. **Habitat** Moorland. Tall heathers preferred. Occasionally seen away from moorland, probably as a vagrant. **Status and distribution** Resident. Common. Endemic to the British Isles. Locally widespread and sometimes abundant in northern upland areas, including mainland Scotland, Inner Hebrides, Isle of Arran, Orkney; also Man, Wales, northern England and the north Midlands south to Leicestershire and Shropshire. In Ireland, records are very scattered and mainly from the north and east.

Small White Wave

plate 19

Asthena albulata (Hufn.)

Common 70.111 (1875)



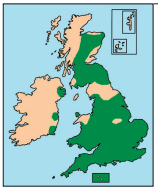
Field characters FW 9–11mm. The small size, pure white ground colour and very wavy brown cross-lines distinguish this moth from all superficially similar species. Markings vary slightly in detail, and occasionally outer lines are faint or absent. **Flight season** May–early Jul, with a partial second generation in some parts of southern Britain, substantial in some southern coastal counties, late Jul–mid-Sep. Easily disturbed by day. Flies mainly from sunset until dark. Comes to light in very small numbers. **Life cycle** Overwinters as a pupa, among plant debris. Larva late Jun–Aug, and sometimes again in Sep in the south. **Larval foodplants** Hazel, Hornbeam, birches and wild roses. **Habitat** Broadleaved woodland, particularly ancient woodland. Larvae are often found on mature Hazel, e.g. overgrown coppice, occasionally on younger regrowth, in dense Hornbeam, and less often on birches. **Status and distribution** Resident. Common. Usually seen in small numbers. Formerly more numerous but still well distributed in the southern half of England and Wales, and rather local north to Cumbria and Northumberland. Very thinly scattered and scarce in mainland Scotland north to Caithness, and on Mull. Resident on Man but seldom seen. Widely scattered records for Northern Ireland and the Irish Republic, mainly in coastal areas. Rare in the Channel Islands.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Dingy Shell plate 19

Euchoeca nebulata (Scop.)

Local 70.112 (1874)

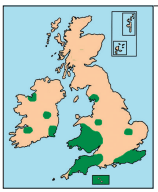


Field characters FW 9–12mm. A subtly marked but nevertheless distinctive moth, which always rests with its wings closed. Sandy-brown undersides have several faint, darker cross-lines and chequered cream and brown fringes, and there is a small central projection on margin of hindwing. On upperside, forewing is sandy brown near base and along leading edge, dusted and banded with muddy brown, and outer area is entirely brown. Shows slight variation, mainly in extent of brown dusting on upperside. **Flight season** One generation. Late May–early Aug. Easily disturbed by day from foodplant. Flies from dusk and later comes to light in small numbers. **Life cycle** Overwinters as a pupa. Larva late Jun–Aug. Pupates in plant debris on the ground, or under moss on the lower parts of the trunk. **Larval foodplants** Alder. **Habitat** Damp woodland, carr and other marshy areas, including river valleys and along other watercourses. Seldom strays far from breeding habitat and undoubtedly under-recorded as a consequence. **Status and distribution** Resident. Local. Locally distributed, but often fairly frequent where the foodplant grows, throughout much of England and Wales. Very local in southern, central and north-eastern Scotland, north to Moray. In Ireland, very local in the east and north, and first recorded in 2008 in Wicklow. Found on Jersey, Guernsey and Alderney.

Waved Carpet plate 19

Hydrelia sylvata ([D. and S.])

Nb 70.113 (1877)

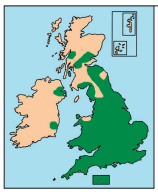


Field characters FW 11–13mm. Diagnostic features are two narrow, wavy brown central cross-bands, wavy, darker brown cross-lines (often rather indistinct), a general peppering of brown scales, and greyish-white ground colour. Amount of dark scales varies. Darker forms and intermediates are frequent in Sussex and Kent. **Similar species** Welsh Wave is larger, typically rests with wings less widely spread and otherwise has bolder cross-lines with a pair of black spikes on outer edge of central band. **Flight season** One generation. Jun–early Aug. Rests on tree trunks and branches by day. Comes to light, usually in small numbers, but over 100 have been recorded at one trap in one night, in Sweet Chestnut coppice in Kent. **Life cycle** Overwinters as a pupa. Larva Jul–Sep. **Larval foodplants** Alder, birches, sallows, Sycamore and Sweet Chestnut. Reported to prefer the youngest leaves. Hazel may be worth investigating as it is often abundant where the moth occurs and is accepted by many other geometrids associated with birches and sallows. An old report from Blackthorn. **Habitat** Woodland and scrub, often by watercourses, on heathland, chalk, hilly sites on sandstone, coastal cliffs and vegetated shingle. **Status and distribution** Resident. Nationally Scarce B. Currently restricted mainly to south-west England and Wales, and south-east England in Kent, Sussex, Surrey and sporadically in Hampshire. Very local elsewhere, mainly in the north and west Midlands and northern England, including Cumbria, but formerly more widespread in these areas. Rare in Ireland. Since 2000, recorded from Cos. Kildare, Sligo and Wexford. Old records from Galway, Wicklow and Kerry. First recorded from the Channel Islands in 2003, on Guernsey.

Small Yellow Wave plate 19

Hydrelia flammeolaria (Hufn.)

Common 70.114 (1876)

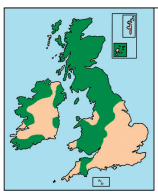


Field characters FW 9–11mm. Unmistakable. Straw-yellow ground colour, very irregular sandy-brown cross-bands on both wings, and small but distinct black central spot on both wings make this moth easily recognisable. Rests with wings flat. On forewing (and sometimes on hindwing), outer cross-lines are often linked centrally by a brown bar, which extends into fringes. **Flight season** One generation. Late May or Jun–Jul. Can be disturbed from low branches of the foodplant by day. Comes to light. **Life cycle** Overwinters as a pupa, among plant debris. Larva late Jul–Sep. **Larval foodplants** Field Maple, Sycamore and Alder. **Habitat** Broadleaved woodland, riverine scrub, hedgerows and sometimes isolated trees in the south. Alder carr in the north. Field Maple reaches its natural northern limit in Northumberland. **Status and distribution** Resident. Common. Fairly well distributed and locally fairly frequent throughout most of England and Wales. Very local and scarce in southern and central Scotland, as far north as West Inverness-shire. In Ireland, very local, recorded from Cos. Wexford, Antrim and Down. Local in the Channel Islands.

Welsh Wave plate 19

Venusia cambrica Curt.

Local 70.115 (1873)



Field characters FW 13–15mm. Diagnostic feature is the pair of blackish spikes projecting outwards from centre of fine blackish cross-line beyond middle of forewing. Shows only slight variation, but there are often further smaller spikes along this line in leading and trailing halves of wing.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

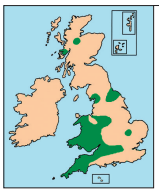
In f. *bradyi* Prout, found frequently in northern England, ground colour is dark grey. **Similar species** See Waved Carpet. **Flight season** One generation. Jun–Aug. Rests by day on rocks and tree trunks, and comes to light, sometimes in numbers. **Life cycle** Overwinters as a pupa, among plant debris. Larva Jul–Sep. **Larval foodplants** Mainly Rowan. Occasionally on Alder, and sometimes birches, which it will also eat in captivity. **Habitat** Moorland, at both low and quite high altitudes, and open woodland. **Status and distribution** Resident. Local. Quite well distributed and locally frequent on the fringes of the Quantocks and the Blackdown Hills in Devon, throughout upland Wales, and in upland areas in the north and west Midlands, northern England and Man. Well distributed in mainland Scotland and found in the Hebrides and Orkney. Local in Ireland, where records are most widespread in the north but extend to the south-west.

Blomer's Rivulet

plate 19

Venusia blomeri (Curt.)

Nb 70.116 (1872)



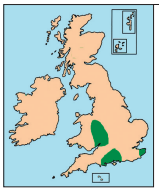
Field characters FW 10–13mm. The large, rusty-brown blotch, with its inner side distinctly edged with black, near tip of pale grey forewing, and very fine, scalloped blackish cross-lines, make this moth unmistakable. Basal and central cross-lines are usually faint. Shows very little variation. **Flight season** One generation. Late May–early Jul. Sometimes seen at rest on tree trunks and low foliage by day. Flies from dusk onwards and comes readily to light. **Life cycle** Overwinters as a pupa, in a cocoon on or just below ground. Larva late Jul–mid-Sep. **Larval foodplants** Wych Elm. Apparently unrecorded from other elms. **Habitat** Woodland, and hedgerows in well-wooded districts, particularly where Wych Elm occurs in a moist climate. **Status and distribution** Resident. Nationally Scarce B. Locally frequent. Closely associated with various calcareous strata, usually in areas with more than 70cm annual rainfall, including exposed Carboniferous limestone sites, from south-west England north to Herefordshire and Gloucestershire, Worcestershire and through the west Midlands to the Buxton area of Derbyshire. Also the Magnesian limestone running north from Nottinghamshire through Yorkshire to the coast of Co. Durham and Northumberland. Quite widespread in Wales, including Monmouthshire, the Carboniferous limestone of Glamorgan and Breconshire, Denbighshire and Anglesey, and in base-enriched flushes, such as in the Aberystwyth area. In Cumbria, at Arnside. On chalk in Wiltshire, the Chilterns, Buckinghamshire and north Lincolnshire (in the 1960s), and on oolitic limestone (including Cornbrash) in Yorkshire. Occasionally elsewhere, including two at light-traps in 1974 in Hampshire, at Minstead and at Crawley. Discovered in Scotland in 2013, one by day at Lochaline, on the West Inverness-shire coast, with more seen in 2014, when it was also recorded at Invermoriston, East Inverness-shire.

Drab Looper

plate 19

Minoa murinata (Scop.)

Nb 70.117 (1878)



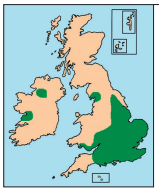
Field characters FW 9–11mm. Unmistakable, with entirely plain, light to dark muddy-brown wings. **Flight season** One main generation. May–Jun, occasionally late Apr, with a partial second generation in late Jul–Aug, which can be substantial on some sites. Male flies during the day, in sunshine, sometimes in numbers, and has occasionally been recorded at light. Seen feeding by day at thistle flowers near larval foodplant. **Life cycle** Overwinters as a pupa, in a cocoon of silk and earth on the ground. Larva late Jun–early Sep. **Larval foodplants** Wood Spurge, preferring the flowers and floral leaves. **Habitat** In very open, sunny, sheltered areas in semi-natural woodland. The foodplant thrives following clearance, coppicing and other disturbance. Also at lower density along ride edges, but probably requires large open areas for long-term survival. **Status and distribution** Resident. Nationally Scarce B. Restricted to southern Britain. Two main centres of distribution: central southern England (Dorset, Hampshire, Wiltshire, Berkshire and West Sussex) and the Welsh borders (from Gloucestershire and Monmouthshire northwards through Herefordshire and Wyre Forest, Worcestershire and Shropshire). Also very locally in Kent. Formerly more widespread, but lost from woods in Somerset, Oxfordshire, Buckinghamshire, Bedfordshire and Essex.

Brown Scallop

plate 19

Philereme vetulata ([D. and S.])

Local 70.118 (1791)



Field characters FW 13–16mm. A rather light, muddy grey-brown moth, with numerous very faint cross-lines and a very small round dark dot near centre of forewing. Fringes are chequered grey and buff, and outer margins of hindwing are more or less evenly scalloped. Central cross-line on forewing is generally situated roughly midway between two cross-lines. Female slightly larger, with broader wings. **Similar species** Dark Umber, which often breeds on the same bushes, is larger and darker. See also Dentated Pug. **Flight season** One generation. Late Jun–Jul. Occasionally disturbed from the foodplant by day, and seen on the wing at dusk. Comes to light in small numbers.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Life cycle Overwinters as an egg on the foodplant. Larva May–Jun. Feeds at night and hides between spun leaves by day. Pupates in a cocoon formed in the ground. **Larval foodplants** Buckthorn. Apparently not recorded on Alder Buckthorn. **Habitat** Woodland edges, scrub and hedgerows. Like its foodplant, most numerous on calcareous soils, including fens, but also found on neutral clays and on a number of more acid sites, especially in Yorkshire. **Status and distribution** Resident. Local. Widely and well distributed in central southern and south-east England, East Anglia and north into the south Midlands. Very scarce or absent from Devon and Cornwall (one record, Bodmin, pre-1906). Occurs more locally north to Yorkshire, and Roudsea Woods, Cumbria, where Buckthorn is near its northern limit. Very local in south Wales. In Ireland, locally frequent in Co. Fermanagh, where it was rediscovered in 1996 (near Crom Castle), and on the Burren limestone, Cos. Clare and Galway. The only previous records were of adults at Killarney, Co. Kerry, in 1939.

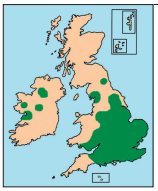
Dark Umber

plate 20

Philereme transversata (Hufn.)

ssp. *britannica* (Lempke)

Local 70.119 (1792)



Field characters FW 17–20mm. A rich brown to very dark brown moth, with broad and rather tapering forewing. The darker central cross-band is strongly angled at leading edge, and has a strong, double-pointed (usually), tooth-like projection on its outer edge, at the angle. Outer margins of both wings are scalloped, especially hindwing. This combination of features is diagnostic. The strength of the cross-lines varies considerably. **Similar species** Brown Scallop is similar in shape, but smaller and paler. **Flight season** One generation. Jul–Aug. Occasionally disturbed from the foodplant by day and seen on the wing at dusk. Comes to light. **Life cycle** Overwinters as an egg. Larva late Apr–early Jun. Feeds at night and hides between spun leaves by day. Pupates in a cocoon formed in the ground. **Larval foodplants** Buckthorn and possibly Alder Buckthorn. **Habitat** Woodland, scrub and hedgerows, particularly on calcareous soils, including fens, but also on neutral clays and more acidic sites. **Status and distribution** Resident. Local. Widely and well distributed in central southern and south-east England, East Anglia and north into the south and east Midlands, but very scarce in Devon and Cornwall. More local from the Wash northwards to Yorkshire and south Cumbria, and one in Northumberland in 2008. Very local in south Wales. In Ireland, found locally in Co. Clare (including the Burren, since 1952) and north into Co. Galway, and more recently in Cos. Mayo, Roscommon and Fermanagh (Crom Castle, in 2000). Reported once from Guernsey, in about 1889.

Argent and Sable

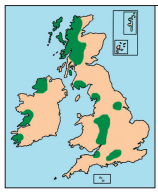
plate 20

Rheumaptera hastata hastata (L.)

Nb 70.120 (1787)

ssp. *nigrescens* (Cockll.)

Nb



Field characters Easily recognised by the distinctive black and white pattern on wings. Ssp. *hastata* is generally larger, FW 16–19mm, and black markings are intensely black. In f. *laxata* Krul., the main white band across forewing is expanded at the expense of the central black markings, making the moth look much whiter. Sometimes this form is almost as small as ssp. *nigrescens*. Occasionally the dark markings are extremely reduced (f. *demolita* Prout). Ssp. *nigrescens* is smaller, FW 13–15mm, and markings are more intricate and often tend to brownish black or greyish black. **Similar species** Small Argent and Sable is superficially similar to ssp. *nigrescens* but smaller, with a straighter leading edge to forewing and central dark band across forewing rarely broken. **Flight season** One generation. May–Jun. Active by day, especially in sunny or warm weather. Males seen searching for scent of females. Female seen egg-laying by day. **Life cycle** Overwinters as a pupa, in plant debris. Larva late Jun–mid-Aug in southern Britain, early Jul–early Sep further north, living between spun leaves. **Larval foodplants** Ssp. *hastata* on seedlings and low regrowth of Downy Birch and Silver Birch, frequently on plants less than 40cm tall, in full sunshine, and on Bog-myrtle. In 2005, found on Grey Willow (in Shropshire). Ssp. *nigrescens* on Bog-myrtle and birches. Unusually, a single larva was found in 2014 feeding on the introduced Himalayan Knotweed, in an area with abundant Bog Myrtle, in Donegal, Ireland. **Habitat** Open and partially cleared or coppiced broadleaved woodland, newly established conifer plantations, moorland and bogs. **Status and distribution** Resident. Nationally Scarce B. There is some uncertainty as to the boundaries of the two subspecies and there appears to be evidence of a cline (gradual differences through a geographical zone). Ssp. *hastata* was formerly found from central southern England through the Midlands and northern England to the southern uplands of Scotland, but is now only thinly scattered, mainly in the west Midlands and south. However, populations in the southern borders of the Scottish Highlands are diminutive but recognisable as ssp. *hastata* f. *laxata*. Similar forms have also been recorded in north Wales and parts of Yorkshire. Ssp. *nigrescens* is widespread in the western half of Scotland, especially in the north-west. In Ireland, the moth is local and found mainly in the west and north-west, with a proportion conforming to ssp. *hastata* f. *laxata*. Considered vagrant on Man, where the only records are singletons in 1893 and 1954. Two reported from Guernsey in about 1889.

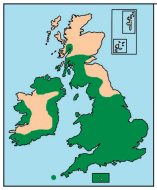
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Scallop Shell

plate 20

Hydria undulata (L.)

Local 70.121 (1789)



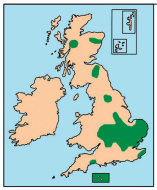
Field characters FW 16–19mm. The numerous, tightly packed, contoured, wavy dark brown cross-lines on whitish-buff wings are diagnostic. There is little variation, but sometimes cross-lines are more broadly spaced across centre of forewing, or somewhat thicker and forming a dark band. **Flight season** One generation. Jun–Jul. Occasionally seen feeding by day at flowers such as Common Valerian. Comes to light, usually in small numbers. **Life cycle** Overwinters as a pupa, in a fragile cocoon in loose earth. Larva Aug–Sep. **Larval foodplants** Sallows, Aspen and Bilberry. **Habitat** Damp woodland, sallow scrub and carr. **Status and distribution** Resident. Local. Widespread in Britain north to Cumbria and Man, in Ireland and in the Channel Islands. Very local in north-east England and the southern half of Scotland.

Scarce Tissue

plate 20

Hydria cervinalis (Scop.)

Local 70.122 (1788)



Field characters and similar species FW 19–22mm. Similar to Tissue, but forewing slightly narrower and more pointed, with a rather rough texture, not shiny, and not marked with pink. Central cross-lines are closer together, often merged, and usually blackish brown. Hindwing outer margins irregularly saw-toothed or more sharply scalloped. On underside, small dark central spots are bold and intense, and there are usually two small bold, dark spots on leading edge of forewing, near base. In Tissue, any spots in this area are rather obscure. **Flight season** One generation. Apr–Jun. Can be seen flying over the foodplant at dusk, and female can be found laying eggs after dark. Comes to light in very small numbers. **Life cycle** Overwinters as a pupa underground. Larva usually Jun–Jul, but recorded to mid-Sep. **Larval foodplants** Wild and cultivated barberries, including Thunberg's Barberry, Mrs Wilson's Barberry and *Berberis ottawensis*, and the garden plant Oregon-grape (*Mahonia* spp.) in sunny situations. **Habitat** Hedgerows, gardens, parks and amenity plantings such as on roadside verges in suburbs. **Status and distribution** Resident. Local. Evidently overlooked. Searches for larvae in recent years have revealed the moth in many rural places where it was not previously recorded. Quite well distributed in the south and west Midlands, and parts of central southern England and East Anglia, but apparently scarce or absent from the southern coastal counties. Very local in the rest of the Midlands, Wales, northern England and in south-east Scotland, with scattered records from the Highlands, (including Banchory, Aberdeenshire, in 2006 and 2007). Recently recorded from Alderney. It is likely that the early stages are transported by the horticultural trade, perhaps explaining some of the extra-limital records.

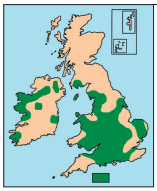
Larva of Scarce Tissue.

Tissue

plate 20

Triphosa dubitata (L.)

Local 70.123 (1790)



Field characters FW 19–22mm. Forewing very broad and quite rounded, brown or greyish brown, and smooth and rather shiny, often delicately marbled with pink. Intensity of markings varies, but usually two narrow, darker brown central cross-bands are discernible, with conspicuous dark patches, well separated by a paler area. Both wings have scalloped outer edges, the hindwing more so, emphasised by a very fine black line. On underside, dark central spots on both wings are quite small and that on forewing is narrow. **Similar species** See Scarce Tissue. **Flight season** One generation. Aug–Oct, and after hibernation Apr–May. Comes to light in small numbers, and to flowers such as sallows, Ivy and buddleias. More frequently found in hibernation sites and as a larva. **Life cycle** Overwinters as an adult, in caves, disused buildings, outhouses and bunkers, sometimes in large aggregations of 40 or more. Larva May–early Jul. **Larval foodplants** Buckthorn and Alder Buckthorn. **Habitat** Woodland, hedgerows, and scrub on calcareous grassland, neutral clays and acid heathland. **Status and distribution** Resident. Local. Somewhat thinly distributed, in much of England, Wales, south-west Scotland and Ireland, where it is mainly recorded from the west, especially on the Burren limestone of Cos. Clare and Galway. Local and rare on Man. Found in the Channel Islands.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

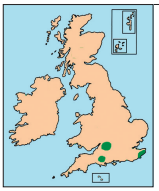
Barberry Carpet

plate 20

Pareulype berberata ([D. and S.])

RDB (protected species); suspected immigrant

70.124 (1785)



Field characters FW 13–15mm. The dark edging to the twin projections of outer central cross-band in leading half of forewing, often forming a crescent mark, is diagnostic, and remains visible when moth is in worn condition. There is a bold, dark brown belt before the pale central band and sometimes a smaller one nearer base, but extent of dark brown shading near thorax and pale central band are variable. Individuals from Hampshire and Wiltshire tend to be darker than those from Suffolk. Hindwing pale brownish white, with darker border. **Similar species** See Ruddy Carpet, also Streamer. **Flight season** Two generations. Early May–mid-Jun, occasionally to late Jun, and late Jul–Aug. Flies from dusk, comes to light and sometimes disturbed from the foodplant by day. **Life cycle** Overwinters as a pupa in a light cocoon, sometimes in leaf litter but usually just below ground. Larva early Jun–mid-Jul, occasionally to late Jul; and late Aug–late Sep. Larvae bask in sunshine. **Larval foodplants** Wild barberries. On one site, breeds on an introduced *Berberis turcomanica*. Will accept some widely grown soft-leaved cultivated species, including Thunberg's Barberry and *B. ottawensis*, but no colonies are known on these in the wild. **Habitat** Mainly open hedgerows, both on pastoral and arable farms. Occasionally edges of woods. Susceptible to trimming of hedges during the larval periods. Bushes in more open situations tend to hold the largest numbers of larvae, but they are regularly found in tall hedgerows. **Status and distribution** Resident and suspected immigrant. Red Data Book species. Now known to be resident only in an area of north Wiltshire/south Gloucestershire, a small area in west Oxfordshire (where it was discovered in 2005 after two were caught at light in a garden nearby in 2004) and very locally in Dorset. Other wild breeding populations were recorded during the 1990s, in Suffolk (now probably lost owing to a fire) and Hampshire (last seen in 1992). Efforts to re-establish populations in previously known areas are ongoing. Occasionally reported at light elsewhere, perhaps suggesting the existence of undiscovered colonies, e.g. Berkshire (modern Oxfordshire) (1979 and 1981), Oxfordshire (1981), Devon (1959), West Sussex (1969) and Hampshire (1984 and 1990). Formerly found locally over a much wider area, extending north at least to Yorkshire and from Somerset to Sussex, but many colonies have been lost through removal of Barberry. One (unlikely) record for Scotland (Kinlochewe, 1937). One (even more unlikely) report for Ireland (Clonmell, Tipperary, 1920–40 – several specimens exist but data-labels are confusing). Probable immigrants at light-traps in Kent in 1996, at Dungeness on 17 Aug and Greatstone on 21 Aug (during a period of exceptional migrant activity), and one at Greatstone on 8 Aug 2008.

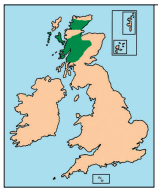
Slender-striped Rufous

plate 20

Coenocalpe lapidata (Hb.)

Na

70.125 (1780)



Field characters FW 13–16mm. Both sexes are distinctive and rest (often on vertical stems) with the paler hindwing partially exposed. Male has sandy-brown forewing, quite deeply coloured when in fresh condition but fading with age. There are numerous wavy, deeper red-brown cross-lines but two or three are particularly conspicuous. Forewing has slightly bulbous shoulders and a swept-back pointed tip, much more prominent in female, which tends to be a paler, whitish brown and smaller. **Flight season** One generation. Sep–early Oct. Flies during the afternoon in dry, sunny weather and can be numerous, but hides in vegetation if dull or cloudy. From dusk, can be found at rest on plant stems. Seldom flies at dusk but both sexes, especially male, fly after dark. Male comes fairly readily to lights placed in the breeding areas, and occasionally wanders. **Life cycle** Overwinters as an egg, on the ground or attached to a plant stem. Larva Apr–early Aug. Pupates in an earthen cocoon in the soil surface. **Larval foodplants** Uncertain. Probably Meadow Buttercup (frequent at the Lairg site); has been reared on this and on the related Traveller's-joy in captivity, which is absent from the breeding sites, and on Dandelion. **Habitat** Rough, upland pasture and open moorland; often associated with wet flushes dominated by rushes. **Status and distribution** Resident. Nationally Scarce A. Almost certainly under-recorded due to the remoteness of some of the places it inhabits and its late flight season. Merited Red Data Book status on the basis of records from 1980–99 (about a dozen sites), but recorded from additional sites more recently. Very local in the Scottish Highlands, from Argyll and Perthshire (e.g. Killiecrankie, Trinafour) in the south, to south Aberdeenshire (discovered at Braemar in

Larva of Slender-striped Rufous.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

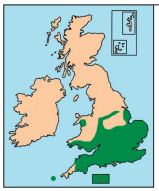
2000 and Ballater in 2002) in the east, and East and West Inverness-shire, Sutherland (e.g. Lairg, Nedd), East and West Ross, and Caithness (e.g. Watten) in the north, and in the Hebrides (e.g. Canna and Rum). In the 19th century, recorded from Shap Fell, Westmorland. There is an unconfirmed record from Widdybank Fell, Co. Durham, between 1980 and 1982. Only historical records from Ireland (in spite of recent searches) from Cos. Antrim, Donegal, Fermanagh, Sligo, Mayo and Galway. Last recorded in Northern Ireland on 20 Sep 1914, between Cuilcagh Mountain and Florencecourt, Co. Fermanagh.

Small Waved Umber

plate 20

Horisme vitalbata ([D. and S.])

Common 70.126 (1781)



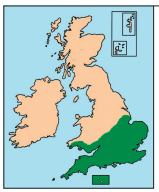
Field characters FW 14–17mm. The broad blackish band from leading half of outer edge to middle of trailing edge, which merges with band on hindwing when this moth is at rest, makes it distinctive. There is slight variation in width of band, intensity of markings and ground colour. **Flight season** Two generations. May–Jun and Aug. Comes to light. **Life cycle** Overwinters as a pupa, in plant debris. Larva Jun–Jul and Sep–Oct. **Larval foodplants** Traveller's-joy. **Habitat** Open woodland, scrub and hedgerows on calcareous soils. **Status and distribution** Resident. Common. Well distributed and frequent in central southern and south-eastern England, East Anglia and the south Midlands. Scarce and local in the extreme south-west, Wales (mainly in the south), the west Midlands north to Staffordshire and in Lincolnshire. One record from south Yorkshire (Potteric Carr in 1996). Local in the Channel Islands.

Fern

plate 20

Horisme tersata ([D. and S.])

Common 70.127 (1782)



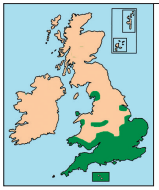
Field characters FW 14–18mm. The fine black line across front end of abdomen coincides with second cross-line on forewings when moth is at rest, making a single black streak, which is diagnostic. Rather plain, with a slightly rough texture, emphasised by faint, broken cross-lines and brown flecks on veins. In shape, not unlike an unbanded version of Small Waved Umber, but browner and quite distinctive. Varies only slightly in shade and intensity of markings. **Flight season** Mainly one generation. Jun–mid-Aug. Very rarely, second-generation individuals in Sep. Occasionally disturbed from the foodplant by day and seen flying at dusk. Comes to light, usually in small numbers. **Life cycle** Overwinters as a pupa, on or below ground. Larva late Jul–Sep. **Larval foodplants** Traveller's-joy, and probably cultivated *Clematis*. **Habitat** Open woodland, hedgerows and scrub on chalk and limestone, including downland. Increasingly found in suburban gardens on a greater range of soil types, more so than Small Waved Umber. **Status and distribution** Resident. Common. Quite well distributed and fairly frequent on calcareous soils in England and Wales south of a line from south-west Wales to Lincolnshire. Widespread in the Channel Islands.

Pretty Chalk Carpet

plate 20

Melanthia procellata ([D. and S.])

Common 70.128 (1784)



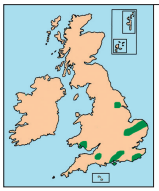
Field characters FW 16–18mm. A moth that lives up to its name, with chalky-white wings. Forewing pattern is diagnostic, with dark brown central cross-band stopping abruptly before middle and a white blotch in dark brown outer border. There is little variation, this chiefly being in the strength of the very fine, dark scalloped lines that extend from the central band to the trailing edge. **Flight season** One generation. Early Jun–late Aug. Sometimes disturbed by day and comes to light. After the prolonged hot summer of 2006, an immaculate specimen was found in Devon on 24 Dec. **Life cycle** Overwinters as a pupa, in plant debris or underground. Larva Aug–Sep. **Larval foodplants** Traveller's-joy. **Habitat** Woodland, scrub, hedgerows and some rural gardens on calcareous soils. **Status and distribution** Resident. Common. Well distributed and fairly frequent on calcareous soils in southern Britain south of a line from the extreme south of Wales to the Wash. Local further north to South-west Yorkshire and south Cumbria. Local in the Channel Islands.

Dentated Pug

plate 20

Anticollix sparsata (Treit.)

Na 70.129 (1863)



Field characters FW 11–13mm. Larger than most pugs (and not really a 'pug' at all), with a diagnostic notch in outer edge of the otherwise shallowly scalloped hindwing margin, in leading half, producing the 'teeth' that give rise to the English name. Ground colour fawnish brown. Forewing rounded, with central spot situated closer to the next inner line than to the next outer one. Dark and light flecks on veins and dark spots along leading edge, these markings sometimes forming more complete cross-lines. **Similar species** See Brown Scallop, which is superficially similar but larger, with more evenly scalloped hindwing margin, forewing more pointed and less rounded, generally

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

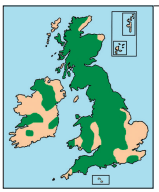
with central dot roughly equidistant between cross-lines and not noticeably flecked or dotted. **Flight season** One generation. Jun–Jul. Sometimes disturbed by day by tapping bushes near the foodplant, in which it seems to roost. Flies at dusk. Comes to light occasionally. **Life cycle** Overwinters as a pupa, in a cocoon spun among the foodplant. Larva Aug–Sep. **Larval foodplants** Leaves and sometimes flowers of Yellow Loosestrife, usually on plants in shaded and sheltered situations. **Habitat** Carr woodland, edges of scrub and verges of droves in fens, marshes and along banks of rivers and canals; also turf moors where peat is dug. **Status and distribution** Resident. Nationally Scarce A. Very local in England, north to Yorkshire. Recent records from a few sites in Yorkshire, Lincolnshire, Norfolk, Suffolk, Huntingdonshire, Cambridgeshire, Hampshire (New Forest and the north-east), Sussex (since 2000), Surrey and the Isle of Wight. More isolated colonies have been recorded in Staffordshire and Somerset. Discovered in Nottinghamshire at Misson Carr in 1996. Found in one of the Oxfordshire fens in 1990. Found in Wales in 1995, possibly for the first time, at Crymlyn Bog NNR, Glamorgan.

Chimney Sweeper

plate 20

Odezia atrata (L.)

Common 70.130 (1870)



Field characters FW 12–15mm. Unmistakable. Almost entirely plain sooty black, fading to brownish black. The only distinct features are fringes of forewing, which are chalky white around wing tip. Shows very little variation. **Flight season** One generation. Jun–Jul, sometimes into Aug in Scotland. Flies by day, usually in sunshine, but male may fly in dull weather. **Life cycle** Overwinters as an egg. Larva Apr–early Jun. Pupates just below ground. **Larval foodplants** The flowers and seeds of Pignut. Rough Chervil and Bur Chervil have been reported as alternative foodplants in the wild, and the moth does occur in the absence of Pignut. Larvae were found recently at one site in Lincolnshire feeding on Cow Parsley. **Habitat** In southern Britain, chalk downland, limestone grassland, old hay meadows and other open, agriculturally unimproved permanent grassy places, including hedgerows and woodland edges. In northern and upland Britain, on a wider range of soil types, especially along stream-sides and other damp places. **Status and distribution** Resident. Common. Well distributed and fairly frequent over much of mainland Britain north to Caithness and the Inner Hebrides. More patchy in southern Britain, and extremely local or absent from large parts of the south-east, including East Anglia. Resident on Man in 1892, but not seen since. Very local in Ireland, although more widespread in the north. Recorded once in the Channel Islands, one on Guernsey, in 1889.

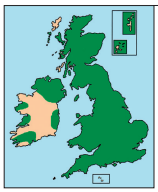
Twin-spot Carpet

plate 20

Mesotype didymata didymata (L.)

Common 70.131 (1809)

ssp. *hethlandica* (Rebel)
Shetland



Field characters FW 11–15mm. The 'twin-spots' refer to the two blackish spots just inside the pale, scalloped outermost cross-line in leading half of forewing. These are often joined at base to form a thick 'U' shape, which, along with the rather coarse appearance, is diagnostic. Ground colour in male is grey, and in generally smaller female is brownish white or greyish white. Male has finely feathered antennae. In ssp. *hethlandica*, many examples of both sexes are browner and duller than ssp. *didymata*, although some are very similar in colour, suggesting a more varied population rather than a separate race. On Orkney, male is mostly very dark grey to blackish and female is pale, except in sandy coastal areas of Deerness, where male is reddish brown. **Similar species** See Striped Twin-spot Carpet and Garden Carpet f. *thules*, which are superficially similar to some males, but both lack the twin spots and have less pointed forewing. In male Garden Carpet, antennae have only very short feather projections. **Flight season** One generation. Jun–Aug. Male is mainly active by day and at dusk, and often flies in numbers in warm, dry weather, especially in mid-afternoon. Female is less inclined to fly and is most often found at rest on vegetation at night. Both sexes fly from dusk and feed at flowers, including Heather, ragworts and grasses. Comes to light, sometimes in fair numbers in upland habitats, usually in small numbers elsewhere, and is more easily found by dusking. **Life cycle** Overwinters as an egg. Larva Apr–Jun. Pupates in a cocoon formed in leaf-litter. **Larval foodplants** A wide range, including Bilberry, Heather, sallows, also Greater Stitchwort, Red Campion, willowherbs and Cow Parsley. Has also been reported (rarely) on the flowers of coarse grasses and wood-rushes, Sitka Spruce and Lodgepole Pine (one larva in 1969). **Habitat** Most abundant on moorland and in light upland woodland. In lowlands, woodland, hedgerows, rough grassland, sand-dunes and sea-cliffs. **Status and distribution** Resident. Common. Ssp. *didymata* is well distributed throughout Britain and on Man. Often abundant in the north and west, but generally much less numerous in southern Britain and reportedly in decline in some areas, including Hampshire and Sussex. Well distributed in Northern Ireland and the northernmost counties of the Republic, but more local and patchy elsewhere. Local and rare in the Channel Islands. Ssp. *hethlandica* is found throughout Shetland.

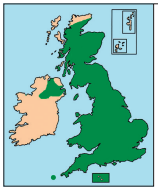
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Rivulet

plate 21

Perizoma affinitata (Steph.)

Common 70.132 (1802)



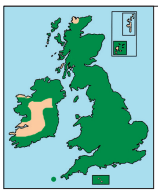
Field characters FW 12–15mm. Forewing dark grey-brown. Has a single narrow white cross-band just beyond middle, with a fine dark line running through it. This band usually has only a single rounded indentation near centre of inner edge, and sometimes an extra, much smaller indentation. There is at most a faint suggestion of a pale cross-band before the middle. Hindwing usually has a distinct whitish central cross-band. **Similar species** See Small Rivulet, which starts flying about two weeks later. **Flight season** Two generations north to at least Yorkshire, late May–mid-Jul and Aug–Sep. One or two generations further north. Where there is only one, late May–Jul. Sometimes disturbed from near the foodplant by day. Flies from dusk, usually near the foodplant, and comes to light in very small numbers. In Banffshire, Scotland, observed in numbers flying by day on treeless sea-cliffs. **Life cycle** Overwinters as a pupa underground. Larva Jul–early Sep. **Larval foodplants** The flowers and seeds of Red Campion. **Habitat** Open woodland, hedgerows, roadside verges and light scrub, especially on chalk downland but on many other soils. Also on well-vegetated sea-cliffs. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout England, Wales, Man, and much of mainland Scotland and the Inner Hebrides, although more local in the north-west and far north. Fairly widespread in Northern Ireland, but apparently absent from the Republic. However, there are historical records covering a wide area and it may be overlooked. Local in the Channel Islands.

Small Rivulet

plate 21

Perizoma alchemillata (L.)

Common 70.133 (1803)



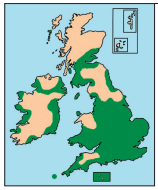
Field characters and similar species FW 9–11mm. Very similar to Rivulet, but noticeably smaller. On forewing, there are two more or less equal-sized indentations on inner edge of white cross-band (second, if present, is usually much smaller in Rivulet), and often a second, usually fainter, white cross-band nearer to base. Hindwing usually only faintly banded. **Flight season** One generation. Early Jun–Aug. Sometimes disturbed by day from near the foodplant. Flies from dusk, and comes regularly to light. **Life cycle** Overwinters as a pupa underground. Larva Jul–early Sep. **Larval foodplants** The flowers and seeds of Common Hemp-nettle. Occurs regularly in areas where Common Hemp-nettle is absent, where it may feed on the related Hedge Woundwort. **Habitat** Quite a wide variety, including open woodland and rides, hedgerows, country lanes, scrubby chalk downland, marshes, derelict open sites, and some suburban and rural gardens. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout England, Wales, Man, mainland Scotland, the Hebrides and Orkney. In Ireland, widespread in the north, but more restricted to coastal counties elsewhere. Local in the Channel Islands.

Barred Rivulet

plate 21

Perizoma bifaciata (Haw.)

Local 70.134 (1804)



Field characters FW 9–11mm. Forewing brown or dull grey-brown with fine, smooth chalky-white edging on rather narrow, rather irregular, dark grey central cross-band, the outer edge of which is distinctly wavy or jagged in leading half. Tip slightly pointed, with two blackish spots nearby. There is slight variation in strength of white markings. **Similar species** See Barred Carpet, which is larger and has more rounded forewing with outer edge of central band scalloped but not jagged or wavy. Heath Rivulet bears a superficial resemblance but is generally smaller, with coarsely marked grey forewing. **Flight season** One generation. Jul–Aug. Occasionally disturbed by day near the foodplant. Flies from dusk, feeds at flowers and comes to light in small numbers. **Life cycle** Overwinters as a pupa underground, sometimes for up to five years. Larva Aug–Oct, living inside the seed capsules until growing too large, when it remains on the foodplant. **Larval foodplants** The ripening seeds of Red Bartsia, and occasionally eyebrights. **Habitat** Most numerous on chalk downland and other calcareous places with short turf, including the edges of well-trodden paths in woodland rides, particularly where limestone chippings are laid. Also on derelict, open ground and sometimes on clay soils. **Status and distribution** Resident. Local. Fairly well distributed and locally fairly frequent in southern Britain, including Wales, north to Yorkshire and Lancashire. Predominantly coastal in Cumbria and Northumberland, Man and the southern half of Scotland. Also on Barra and Uist, Outer Hebrides. Recorded from most parts of Ireland, but local and mainly in coastal areas. Local in the Channel Islands.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Heath Rivulet

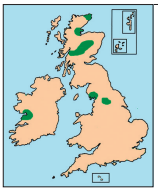
plate 21

Perizoma minorata (Treit.)

ssp. *ericetata* (Steph.)

Nb

70.135 (1805)



Field characters FW 8–10mm. The coarsely textured grey forewing markings, with strong, well-defined, irregular whitish cross-lines and bands, make this very small geometrid fairly distinctive. There is slight variation in strength of pale and dark bands. **Similar species** See Barred Rivulet. **Flight season** One generation. Jul–Aug. Flies in the afternoon, especially in hot sunshine. Also comes to light. **Life cycle** Overwinters as a pupa, in an underground cocoon. Larva mid-Aug–Sep. **Larval foodplants** The flowers and seed capsules of eyebrights. **Habitat** Moorland, upland pasture and limestone grassland. **Status and distribution** Resident. Nationally Scarce B. A northern species, widely distributed (but either under-recorded or in decline) in the Scottish Highlands, occurring particularly in the Cairngorms, and the Spey Valley, notably around Aviemore. Also recorded very locally (and not necessarily recently) on both the north-east and west coasts north to Caithness, Rum and Coll in the Hebrides, and on Orkney. Extremely local in England, mainly in Cumbria and the Pennines. Recorded from Beacon Meadows, Durham, in 1977. The few records from Yorkshire include Thruscross, Washburndale, in 1981; Dib Scar, Grassington, in 1983 and 2008; and a confirmed singleton from Harrogate in 1973. Recorded from the Mourne Mountains in the north-east of Ireland and the Burren, Co. Clare.

Pretty Pinion

plate 21

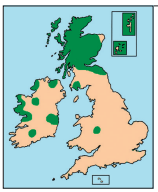
Perizoma blandiata blandiata ([D. and S.])

Local

70.136 (1806)

ssp. *perfasciata* (Prout)

Hebrides



Field characters FW 9–11mm. Ssp. *blandiata* White ground colour, grey markings and black discal spot make this quite a distinctive moth. Diagnostic feature is central cross-band, which is dark grey near leading and trailing edges and faint in the middle, but there is some variation, with the dark grey more extensive on some examples. Sometimes band is pinched or even broken in the middle. Ssp. *perfasciata* is more strongly marked, and central band is more or less entirely dark grey. **Similar species** Lime-speck Pug is superficially similar, but easily distinguished by wing shape and resting posture. **Flight season** One generation. Late May–Jul or even early Aug. Flies in the late afternoon, possibly most active around dusk, but also comes to light. **Life cycle** Overwinters as a pupa, in an earthen cocoon. Larva early Aug–mid-Sep. **Larval foodplants** Flowers and seeds of eyebrights. **Habitat** A wide range of open habitats, including moorland, rough upland pasture, machair and reported from limestone hills. Seems to prefer places where eyebrights grow among slightly taller vegetation, such as on roadside verges, to shorter turf dominated by it. **Status and distribution** Resident. Local. Ssp. *blandiata* is widespread and quite well distributed in Scotland north from the Central Belt, the Highlands and Western and Northern Isles. Found very locally in southern Scotland and Cumbria. There are unconfirmed recent reports from a number of sites in Pembrokeshire, several records from the Wye and Severn Valleys, Gloucestershire, most recently in 1990, and larvae and adults were reported from the Forest of Dean in 1909. Occasional records, mainly of singletons, of unknown origin elsewhere, including Bedlington, Northumberland, (in 1977) and Midhurst, West Sussex (in 1989). In Ireland, well distributed in the Burren, Co. Clare, and elsewhere widely spread but local and tends to be found in coastal areas. One record from Man in 1974, near Rue Point at the northern tip. Recorded once from Guernsey, in 1889, and from Jersey. Ssp. *perfasciata* occurs in the Hebrides.

Grass Rivulet

plate 21

Perizoma albulata albulata ([D. and S.])

Local

70.137 (1807)

ssp. *subfasciaria* (Boh.)

Shetland

Field characters FW 10–12mm. Extensive, fairly regular soft brown or grey-brown cross-bands on chalky-white forewing make this a fairly easy moth to recognise. Intensity of markings varies. Some examples from chalky areas in the south are predominantly white, and the moth is generally darker in the north. Ssp. *subfasciaria* is smaller and darker, with many examples entirely soft grey-brown and with only faint, slightly paler markings, although others have strong white cross-bands. **Similar species** See Sandy Carpet. **Flight season** One generation. May–early Jul. Flies by day, especially towards dusk, sometimes in large numbers, and comes to light. **Life cycle** Overwinters as a pupa underground. Larva mid-Jun–Aug. Lives inside the seed capsules. **Larval foodplants** The ripening seeds of Yellow-rattle. **Habitat** Grassland, usually on calcareous soils, dune-slacks and coastal shingle, from dry to damp situations. **Status and distribution** Resident. Local. Numbers in the Rothamsted Insect Survey national light-trap network declined by 93% between 1968 and 2007. Ssp. *albulata* remains fairly well distributed and locally frequent, mainly in lowland areas and around

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

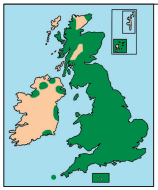
the coast, throughout England, Wales and Scotland, including the Hebrides and Orkney. However, it is by no means reported from everywhere the foodplant occurs. Local on Man. Widespread but local in Ireland. Recorded on the Channel Islands. Ssp. *subfasciaria* is widespread in Shetland.

Sandy Carpet

plate 21

Perizoma flavofasciata (Thun.)

Common 70.138 (1808)



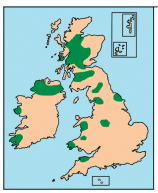
Field characters FW 11–14mm. The rather irregular, sandy-brown cross-bands and lines on white forewing make this moth quite distinctive. Central cross-band has pronounced double central projection on its outer edge. Shows only slight variation. **Similar species** Some Grass Rivulets are similar, but are smaller and have more regular cross-bands on the forewing, and the outward projection on dark central band is much less pronounced. **Flight season** One generation. May–Jul. Sometimes disturbed by day. Flies mainly at dusk, and best found by searching around the foodplant. Comes to light in small numbers but its flight is largely over once darkness falls. **Life cycle** Overwinters as a pupa. Larva mid-Jul–early Sep. Lives inside the seed capsules. **Larval foodplants** The flowers and ripening seeds of Red Campion, and less often White Campion and Bladder Campion. **Habitat** Open woodland, on rides and edges, mature hedgerows, calcareous grassland and sand-dunes. Less frequently in suburban gardens and roadsides, and rare in urban areas. **Status and distribution** Resident. Common. Fairly well distributed and locally frequent in England and Wales, Man and the Channel Islands. Formerly more restricted to the coast in Scotland, but has increased and spread inland in recent years and to the extreme north, the Inner Hebrides and Orkney. Very local in Ireland, mainly on northern and eastern coasts.

Barred Carpet

plate 21

Martania taeniata (Steph.)

Na 70.139 (1801)



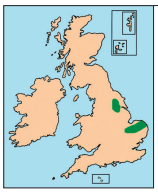
Field characters FW 11–12mm. Forewing brown, sometimes heavily marked with dark grey, with a grey basal blotch and a gently curved grey central cross-band, darkest on veins, thinly edged with white on either side. Outer edge of band is finely scalloped, and has a kink at leading edge. A dark outer band starts at leading edge, but stops abruptly before middle, where there is usually a white patch. Hindwing only faintly banded. **Similar species** Barred Rivulet, normally found in more open lowland habitat, is smaller, with central forewing cross-band usually narrower and with smooth edges, and tip of forewing less rounded, with two small dark spots close by, and no distinct white patch near outer edge. Foxglove Pug and Toadflax Pug can have similar forewing markings, but are smaller, with narrower forewing and intricately banded hindwing, and a distinctive resting posture. See also Yellow-barred Brindle. **Flight season** One generation. Late Jun–mid-Aug or even early Sep. Sometimes flies in late afternoon. Has been seen at rest on moss-covered rocks and found by beating the branches of trees and shrubs such as Holly and Yew. Flies soon after dark and has been reported at the flowers of rushes and grasses. Comes to light in very small numbers. **Life cycle** Overwinters as a larva, probably among moss or plant debris. Larva Aug–May. **Larval foodplants** The only report of a wild larva in Britain dates from the 19th century, when one was found and reared on the seed capsules of a moss growing in a damp situation. Apparently, the only flowering plants present were Wild Strawberry, Dog's Mercury, Germander Speedwell and Ivy. It has been reared on moss capsules subsequently and accepts a range of herbaceous plants, including Common Chickweed, Knotgrass, Dandelion, Ivy-leaved Toadflax (avidly), Wild Strawberry and, recently, Selfheal. **Habitat** Damp woodland and other sheltered, damp places on base-rich rocks. **Status and distribution** Resident. Nationally Scarce A. Scattered and local in Scotland, from the south, Central Belt and western and central Highlands, north to East Ross. Occasionally seen in numbers (e.g. over 100 at Loch Arkaig, on 2 Aug 1978). Also found locally in Cumbria and elsewhere in northern England, and in north and west Wales. Discovered in Cardiganshire in the 1980s. Reported three times from the Monmouthshire side of the Wye Valley since 1859, most recently in 2010. Occurs in North Devon at Watersmeet, near Lynton, where it is recorded regularly and has been known for over 100 years. Other well-known localities include Dovedale, Derbyshire (known since 1866); Arnside Knott, Cumbria; and below Dib Scar near Grassington, Yorkshire. Widely distributed but very local in Ireland, in the north and west. Some reports from southern Britain are misidentifications of Yellow-barred Brindle.

Marsh Carpet

plate 21

Gagitodes sagittata (Fabr.)

Na 70.140 (1810)



Field characters FW 13–17mm. Unmistakable. The white-edged, dark grey or blackish central cross-band, with very strong outer projection, on sandy-brown forewing is diagnostic. Shows little variation, but occasionally central band is broken in middle. **Flight season** One generation. Late Jun–Jul, occasionally even mid-Aug in cool, wet summers. Flies from dusk. Comes to light. Female often disperses from breeding areas. **Life cycle** Overwinters as a pupa, at the base of the foodplant, in a cocoon among plant debris or

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Marsh Carpet.

underground. Larva late Jul–mid-Sep, sometimes from early Jul. **Larval foodplants** Common Meadow-rue, on the ripening seeds. Also reported from Lesser Meadow-rue, a much scarcer plant, which occurs within the range of the moth in western Suffolk and into Cambridgeshire. Most larvae are on the largest and most visible flower-heads, even when newly hatched. Plants swamped by taller species, such as Common Reed, have fewer or no larvae. **Habitat** Fens, marshes, wet meadows, and the banks of ditches, dykes and rivers. **Status and distribution** Resident. Nationally Scarce A. First discovered in Britain in the fens of Huntingdonshire and Cambridgeshire in 1847, and still present in the remnants of these, notably at Woodwalton, Holme, Wicken and Chippenham fens. Subsequently found in fens and marshes in Norfolk and Suffolk, at Misterton Carr in the floodplain of the River Idle, north Nottinghamshire, in 1960 and later at nearby Misson Carr, and at Askham Bog, Yorkshire, in 1978. Discovered in several sites in Lincolnshire from 1880 onwards, and still present near Haxey. Greatly at risk from ill-timed cutting and grazing, and subject to extreme fluctuations in population size – during the 1940s it was considered to be extinct.

Eupitheciini
Pug moths

This group of moths, most of which belong to a single genus, *Eupithecia*, causes macro-lepidopterists the most identification problems. As a group, they are not too difficult to distinguish from other moths (except perhaps the Small Dusty Wave) because most have a quite distinct resting posture and outline. The forewings are stretched out so that their leading edges are in line, or form a shallow arc, and often the abdomen is curled upwards. There are 50 species on the British list, of which one is a suspected rare immigrant. A few were formerly regarded as species, but in the current checklist are treated as races or subspecies of other resident species.

The majority of the pugs are brown or grey, and require detailed examination of wing and body markings to distinguish them. Often it is not possible to be certain of the identity based on wing pattern alone, particularly if the individual is worn or is a melanic form, and these are delicate moths that wear rapidly. It then may be necessary to examine anatomical features more closely. In males, the plate on the underside of the eighth abdominal segment is a characteristic shape in each species and is extremely useful, both to beginners and experienced recorders. It is easily seen under a low-power microscope. With females, it is necessary to dissect out the genitalia (see Riley and Prior 2003 for illustrations of male plates and female genitalia).

The following scheme sorts the pugs into smaller groups by their most obvious features. Work through the groups sequentially to narrow the range of possibilities, then study the field characters in individual accounts, checking also flight season, habitat and known distribution. Some species are listed in more than one group, to cover variation. Within each group, close examination of wing shape, ground colour and wing markings will enable you to distinguish most species. The very dark, or melanic, forms of some species can be the most difficult to determine, but there are helpful differences in wing shape. In some cases, the larvae are more distinctive than the adults and are confined to particular foodplants, leading to more reliable identification in this stage. Most of the species are undoubtedly under-recorded and will be found more widely as, hopefully, more people learn to identify this group.

Pug with notched hindwing margins
Dentated Pug (page 108).

Pugs with large whitish areas or strong white bands on forewing
Marbled Pug (page 125); Pinion-spotted Pug (page 126); Lime-speck Pug (page 126); Bordered Pug (page 132); Shaded Pug (page 133); Scarce Pug (page 128).

Pugs with obvious greenish tints on forewing (these may fade)
Green Pug (page 116); V-Pug (page 115); some fresh Bilberry Pug (page 116); very fresh Sloe Pug (page 115) (has pink and black bands on abdomen, unlike the other three).

Pug with large plain orange patch on forewing
Tawny Speckled Pug (page 132).

Pugs with prominent banding or other strong patterns across wings
Foxglove Pug (page 118); Toadflax Pug (page 118); Pinion-spotted Pug (page 126); Netted Pug (page 119); Scarce Pug (page 128); Narrow-winged Pug (page 124); Juniper Pug (page 120); Cypress Pug (page 121); Double-striped Pug (page 115); Goosefoot Pug (page 124) (rare immigrant).

Pugs with very narrow, pointed wings
Narrow-winged Pug (page 124); Angle-barred Pug (page 125)/Ash Pug (page 125)/Tamarisk Pug (page 125).

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

The remaining pugs are mainly brownish or greyish and can be usefully subdivided as follows:

Noticeably smaller pugs (forewing only 8–10mm)
Slender Pug (page 117) (distinct black central spot; broader, more rounded wings than Maple Pug); Maple Pug (page 117) (usually yellower brown than Slender Pug, with a rougher, blotched appearance; central spot generally less conspicuous, sometimes minute; broken black line around outer edges of all four wings conspicuous, even when worn); Haworth's Pug (page 116) (distinguished from Lead-coloured Pug and Valerian Pug by reddish band on base of abdomen); Lead-coloured Pug (page 119) (central spot of forewing small or absent; no spot in trailing corner); Valerian Pug (page 129) (spot in trailing corner of forewing distinguishes it from Lead-coloured Pug, but beware worn specimens); Marsh Pug (page 119) (straight leading edge to forewing, warm dark brown ground colour and chequered fringes); Thyme Pug (page 126) (black dashes on leading edge of forewing and slit-like central spot); Channel Islands Pug (page 118) (central spot elongate, smaller than Thyme Pug); Juniper Pug (page 120) (variable, but usually with small whitish halo on outer edge of the dark central spot, even in melanics); Double-striped Pug (page 115) (often boldly marked, often with red but later generations often small and markings weaker; cross-line beyond central spot black nearest leading edge, which is straight).

Large, pale grey pugs, with fine markings and a small central spot in middle of forewing
Fletcher's Pug/Pauper Pug (page 123); Grey Pug (page 133) (has larger, less discrete black central spot and heavier markings); Larch Pug (page 122) (has small central dot, stronger markings and a white spot or crest on thorax, and, like Grey Pug, has heavier markings than Fletcher's Pug/Pauper Pug).

Conspicuous (or at least distinct) dark spot in middle of forewing and distinct whitish spot in trailing corner
Wormwood Pug (page 128) (a most frequent pug, ground colour plain brown with a reddish tint, with small creamy-whitish spots on outer edge of forewing, the trailing one especially large and obvious); Ling Pug (page 128) (can be as large as Wormwood Pug, of which it is generally considered a greyer subspecies); Currant Pug (page 130) (very similar to Wormwood Pug, but smaller, with more rounded brown forewing); White-spotted Pug (page 121) (greyer than Currant Pug, with fine cross-lines, generally three conspicuous whitish spots near outer edge of forewing, one on trailing edge of hindwing (usually visible when moth is at rest), one on thorax and one on either side of abdomen); Common Pug (page 130) (the most frequently encountered pug; central spot and tiny corner spot always small (may be absent), grainy brownish appearance); Jasione Pug (page 131) (greyish, quite small, corner spot often minute); Pimpinel Pug (page 123) (brown with greyish wash, corner spot may form enlarged trailing end to weak, pale outer cross-line); Grey Pug (page 133).

Conspicuous dark spot in middle of forewing but no distinct whitish spot in trailing corner
Cloaked Pug (page 117) (a large fawn-grey pug with a distinctive dark bar from near central spot to leading edge of forewing); Mottled Pug (page 131) (several stacked, wedge-shaped dark dashes beyond central spot); Edinburgh Pug/Freyer's Pug/Mere's Pug (page 127) (Freyer's Pug frequent in gardens; strong, fine, angled cross-lines); Triple-spotted Pug (page 127) (not pale, with two bold, rather straight-edged dark spots on leading edge and oval central spot); Bleached Pug (page 129) (large, pale with two conspicuous brown spots on leading edge); Satyr Pug ssp. *curzoni* (page 128) (chequered veins, but compare with Golden-rod Pug (page 122)); Campanula Pug (page 131); Grey Pug (page 133); Larch Pug (page 122) (white crest on thorax); Tawny Speckled Pug (page 132) (two forms); Yarrow Pug (page 132) (sometimes a small orange central patch near central dot); Plain Pug (page 123) (generally has a fairly straight, pale band beyond central spot); Pimpinel Pug (page 123) (light greyish borders; double-check not Wormwood Pug (page 128), or Common Pug (page 130), and see also Yarrow Pug (page 132)); Golden-rod Pug (page 122) (compare with Grey Pug (page 133) and Satyr Pug (page 128)); Brindled Pug (page 120) (flies early in the year, before most other pugs; distinctly curved leading edge on fairly elongate, pointed forewing; this works for melanics, too; central spot usually narrow, elongated); Oak-tree Pug (page 120) (has small black dashes in outer area of forewing (as does Brindled Pug (page 120)) but central spot generally more rounded and conspicuous; see also Juniper Pug (page 120)); Ochreous Pug (page 125) (rather plain, pointed, pale, yellowish-brown forewing); Dwarf Pug (page 122) (pale with conspicuous dark spots on leading edge, giving rise to strong, dark cross-lines); Bilberry Pug (page 116) (like a faded Green Pug (page 116) but cross-line beyond central spot is in the form of a series of small dark dots); Goosefoot Pug (page 124) (rare immigrant).

Pugs not falling easily into the above groupings
Satyr Pug (page 128) (two chequered or black-flecked veins); Common Pug (page 130) (the dark central spot may be completely absent); Shaded Pug (page 133) (white markings indistinct in some examples); Sloe Pug (page 115) (pink and black transverse bands on abdomen; has the appearance of a small, faded Green Pug – with rarely a trace of green); Green Pug (page 116) (faded examples); Cloaked Pug (page 117) (the dark central spot may be so amalgamated with the dark bar from leading edge of forewing that it is not distinct).

Melanics – wings almost uniformly blackish brown or dark grey
Some very dark forms, or melanics, can be identified using forewing shape. Most melanics in gardens turn out to be Grey Pug (page 133) or Green Pug

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

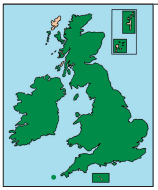
(page 116), which has a rounded forewing, often with some paler outer markings and often a trace of green. However, several other species have melanic forms and often the only safe way to identify them is by microscopic examination of morphological features, as described above.

Double-striped Pug

plate 21

Gymnoscelis rufifasciata (Haw.)

Common 70.141 (1862)



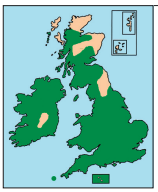
Field characters FW 8–10mm. Quite variable in size, with later generations generally smaller. Leading edge almost straight. Some individuals have strikingly reddish-brown markings near edges of the brownish or whitish forewing, or are more extensively reddish, hence the specific name. The two black-edged cross-lines on forewing that give this pug its English name are usually conspicuous. Characteristically, black on outer cross-line tends to peter out halfway across forewing. More strongly marked individuals have other conspicuous black markings near tip of forewing. Scottish and Irish examples tend to be more brightly marked and may puzzle moth recorders. **Flight season** Recorded in every month of the year, but mainly Mar–Oct in two or three generations, peaking roughly late Mar–May, late Jun–Jul (Jul–Aug in northern Britain) and again from early autumn in southern Britain. Formerly, only one generation in parts of northern Britain, mid-May–Jul. Easily disturbed from bushes by day and sometimes flies in hot sunshine. Main flight is just before dusk. Visits flowers. Regular at light in small numbers. Mating pairs are sometimes numerous on Heather on moorland at night. **Life cycle** Overwinters as a pupa in plant debris. Larva early May–late Oct. **Larval foodplants** Flowers of many plants, including Holly, Ivy, Gorse, Broom, Heather (and cultivars), Rowan, Traveller's-joy, cultivated buddleias and roses; also ragworts, Sea Aster and Wild Marjoram. **Habitat** A wide range, from urban parks and gardens to hedgerows, roadside verges, heathland, moorland and woodland. **Status and distribution** Resident. Common. Well distributed and frequent over much of England, Wales, the Channel Islands, Man, Ireland and Scotland, including the Hebrides and Orkney, and recorded once from Fair Isle (in 2003).

V-Pug

plate 21

Chloroclystis v-ata (Haw.)

Common 70.142 (1858)



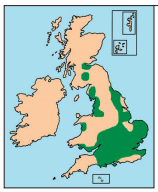
Field characters FW 8–11mm. The bold black V-shaped marking near leading edge of otherwise rather faintly marked, rounded forewing distinguishes this from all other pugs. Green when fresh, but may fade to yellowish. Hindwing grey. Abdomen green, with two parallel rows of black spots and a black belt. Rests with forewings drawn further back than other pugs, covering the hindwings. **Similar species** Green Pug. **Flight season** Two generations. Apr–Jun and mid-Jul–late Aug, the second much larger than the first. This difference is most marked in the north, but even in southern England the second generation is twice the size of the first. Occasionally seen by day on fences and sheds. Flies from dusk. Regular in small numbers at light. **Life cycle** Overwinters as a pupa underground. Larva mid-Jun–mid-Jul and late Aug–early Oct. Late Jun–Aug in northern Britain. **Larval foodplants** Flowers of various plants, including Dog-rose, Hawthorn, Traveller's-joy, Hemp-agrimony, Bramble, Elder, Wild Angelica, Mugwort and Goldenrod. **Habitat** Parks and gardens, even in urban areas; also farm hedgerows, scrub and lowland woodland on many soils, but especially calcareous areas. **Status and distribution** Resident. Common. Well distributed and frequent over much of lowland England and Wales, north to Yorkshire in the east (and rarely in Northumberland) and Cumbria. In Scotland, well distributed in the south, Central Belt and in the west. Apparently increasing and more recently recorded locally north to West Ross, and Angus in the east. Local on Man. Well distributed throughout Ireland and in the Channel Islands.

Sloe Pug

plate 21

Pasiphila chloerata (Mab.)

Common 70.143 (1859)



Field characters and similar species FW 9–10mm. Very similar to some forms of Green Pug, but only faintly green when fresh, fading to brownish grey. Two diagnostic features, one (best seen with hand-lens) is a salmon-pink belt near base of abdomen (blackish in Green Pug), striking in fresh examples but fading as scales are lost. On forewing, pale cross-band beyond central spot is smooth or slightly uneven in leading half of wing. In Green Pug, this band is distinctly wavy or jagged in leading half, and strongly edged with black. See also Bilberry Pug.

Larva of Sloe Pug.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

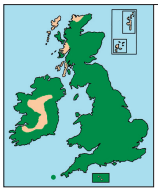
Flight season One generation. May–early Jul. Occasional at light, otherwise seldom seen. **Life cycle** Overwinters as an egg on the foodplant. Larva late Mar–Apr. Pupates among plant debris on the ground. **Larval foodplants** Flowers of Blackthorn. **Habitat** Long-established hedges, thorn scrub and the edges of lowland woodland, especially on heavy soils. **Status and distribution** Resident. Common. Not discovered in the British Isles until 1971, but since found to be widespread and fairly frequent in England, at least as larvae, from east Devon, through central southern England (including the Isle of Wight), the south-east, East Anglia and the south Midlands, and locally north to Yorkshire and Cumbria, with a single record from Northumberland in 2011. In Wales, local in the south but rare elsewhere. Rare in southern Scotland, recorded twice in the south-west and most recently in Edinburgh, Midlothian, in 2014. The majority of records are from the Thames Valley, Essex and the Midlands, where it is quite well distributed, especially on clay and on sites of ancient woodland, suggesting it is a long-overlooked resident.

Green Pug

plate 21

Pasiphila rectangulata (L.)

Common 70.144 (1860)



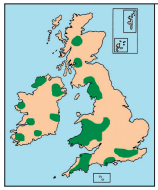
Field characters and similar species FW 8–11mm. Bright green colour of freshly emerged individuals precludes confusion with any pugs other than V-Pug, which is easily distinguished by the heavy black 'V' shape near leading edge of forewing, resting posture and rather plain grey hindwing. Abdomen has a black band near base. Faded Green Pug can begin to resemble Sloe Pug (see under that species for differences). The frequent, almost uniformly dark brown f. *anthrax* Dietze can be recognised by the characteristic broad, rounded forewing of the genus *Pasiphila*, and the central spot remains visible. There are other darker and lighter melanic forms, often with a light greenish line near outer edge of forewing, and in urban areas such as London and in northern Britain the bright green form can be rare. See also Bilberry Pug. **Flight season** One generation. Jun–early Aug. Sometimes beaten from foodplants by day. Comes readily to light. **Life cycle** Overwinters as an egg on the foodplant. Larva Apr–May. Pupates on the ground or in loose earth. **Larval foodplants** Flowers of Crab Apple, cultivated Apple, Pear, Hawthorn, Blackthorn and cherries. **Habitat** A wide range, from urban parks and gardens, hedgerows, scrub and woodland. On many soils, both in damp and dry situations, mainly in the lowlands. **Status and distribution** Resident. Common. Well distributed and frequent, sometimes locally abundant, throughout England, Wales, Man, Ireland, Scotland (reaching the north coast and Inner Hebrides) and the Channel Islands.

Bilberry Pug

plate 21

Pasiphila debiliata (Hb.)

Nb 70.145 (1861)



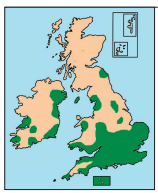
Field characters FW 9–11mm. Has the full, deep, rather rounded wings and arched leading forewing edge of a *Pasiphila* pug, but much lighter in colour and more sparsely marked than most examples of related species. Fresh individuals are a delicate, pale lime green. Forewing with black central spot, and pale cross-band beyond it wavy in leading half, with line of dark dots or short dashes along its inner edge. Further dots along faint cross-line before central dot. The green fades to light brown. **Similar species** Green Pug is darker green and cross-lines are almost always continuously dark-edged in leading half. Both species have a black belt on front of abdomen and a single row of black dots along top of abdomen. See also Sloe Pug. **Flight season** One generation. Jun–Jul. Often found from dusk onwards, flying among the foodplant. Comes to light, sometimes in large numbers. **Life cycle** Overwinters as an egg on the foodplant. Larva Apr–May, in spun leaves, conspicuous when dark frass accumulates within. Easily swept at night. Pupates underground or among the foodplant. **Larval foodplants** Bilberry. **Habitat** Heathland, moorland and woodland, usually sheltered by trees with abundant foodplant below. **Status and distribution** Resident. Nationally Scarce B. Very local in south-west England (mainly south Devon), Hampshire (mainly the New Forest), Berkshire, Surrey, Sussex and West Kent. Also in the west Midlands (including Wyre Forest, Worcestershire and Staffordshire) and more widely in Wales. Recorded very locally in north-west England, and in Scotland in the south-west (Kirkconnell Flow NNR), Central Belt and in East Inverness-shire (Kincraig, 1959, and Glen Moriston, 2014). Recorded in Aberdeenshire in the 19th century. Very local in various parts of Ireland.

Haworth's Pug

plate 21

Eupithecia haworthiata Doubl.

Local 70.146 (1813)



Field characters FW 8–9mm. Reddish band at base of abdomen helps to distinguish this small, rather weakly marked grey-brown pug. Central forewing spot is faint or absent and outer bands are gently curved, and obtusely angled near leading edge, which is slightly curved. **Similar species** See Lead-coloured Pug. Slender Pug has a distinct central spot. **Flight season** One generation. Jun–early Aug. Easily flushed from larval foodplant by day. Comes readily to light. **Life cycle** Overwinters as a pupa, in a cocoon in the surface of the earth. Larva

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

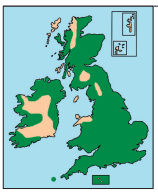
Jul–Aug, feeding within flower buds. **Larval foodplants** Flower buds of Traveller's-joy and cultivated species of *Clematis*. **Habitat** Most places where the native foodplant occurs, which tends to be on chalk or limestone, including open woodland, scrub, hedgerows and some gardens. **Status and distribution** Resident. Local. Quite well distributed, often in abundance, in England north to the south Midlands and south Wales. Local further north, to Cumbria and central Yorkshire and Man (found in 2006). In Scotland, one at Burnmouth on the Berwickshire coast in 2013. In Ireland, records are thinly distributed from Co. Kerry to Northern Ireland, but mainly in the east and south. Local in the Channel Islands.

Slender Pug

plate 21

Eupithecia tenuiata (Hb.)

Common 70.147 (1811)



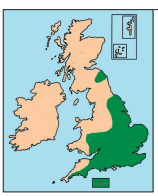
Field characters FW 8–10mm. Combination of size, rounded forewing with distinct round black central spot and predominantly greyish-brown ground colour is usually diagnostic. Dark, often brown, blocks along leading edge are often noticeable on well-marked examples. Form *johnsoni* Harr. is a darker grey-brown and occurs in north-east England and the Midlands. **Similar species** See Maple Pug, Haworth's Pug and Small Dusty Wave. **Flight season** One generation. Jun–Jul. Sometimes found by day at rest on trunks of large sallows. Comes to light, usually in small numbers. **Life cycle** Overwinters as an egg attached to foodplant. Larva Mar–Apr, within catkins, pupating among them or in plant debris below the foodplant. **Larval foodplants** The catkins of Goat Willow, Grey Willow, Eared Willow and probably other *Salix* species. Easy to find by collecting fallen catkins. **Habitat** Damp woodland, scrub, sallow carr, fens, marshes, dune-slacks, banks of ditches, ponds, lake edges, flooded gravel pits and gardens. **Status and distribution** Resident. Common. Quite well distributed (and probably under-recorded) throughout England and Wales, the Channel Islands, mainland Scotland and the Inner Hebrides. Found on Man and in most parts of Ireland, although local and rather scarce.

Maple Pug

plate 21

Eupithecia inturbata (Hb.)

Local 70.148 (1812)



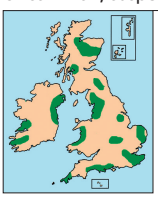
Field characters and similar species FW 8–10mm. Very similar to Slender Pug. Their flight seasons overlap, and both are somewhat variable. Maple Pug often appears more yellowish brown, generally has a rougher, more blotchy appearance, and forewing is, on the whole, slightly narrower and less rounded, and central dark spot is usually smaller. Dark band near outer edge uneven, often broken. Black broken line around outer edges of all four wings usually conspicuous, unless very worn. Darker and almost black forms occur in some areas. Common Pug is usually larger, often warmer brown and with forewing usually more pointed. Other small pugs lack a distinct central spot. See also Small Dusty Wave. **Flight season** One generation. Jul–Aug. Sometimes present in very large numbers, and can be readily disturbed from rest on maple trunks and the vegetation below, and by tapping the branches. Comes readily to light, sometimes in large numbers, particularly if light-trapping under a closed canopy of Field Maple. **Life cycle** Overwinters as an egg attached to foodplant. Larva early May–early Jun, pupating in a cocoon among the flowers. **Larval foodplants** Field Maple, feeding on the flowers. The maples must be large enough to produce plenty of flowers. Ability to exploit introduced maples and other *Acer* species requires investigation. Accepts Sycamore in captivity. **Habitat** Woodland, scrub on chalk and limestone, and hedgerows. **Status and distribution** Resident. Local. Predominantly south-eastern Britain. The bulk of records are south of a line from mid-Wales to the Humber. Well distributed and locally numerous in this area, except in the extreme south-west (but breeding at Looe, Cornwall) and in Yorkshire, where it has recently increased. Recorded very locally in north Wales, north-west England and from southern Scotland, most recently in Roxburghshire in 2011 and Berwickshire in 2012. No confirmed records from Ireland. Widespread in the Channel Islands.

Cloaked Pug

plate 22

Eupithecia abietaria (Goeze)

Uncommon; suspected immigrant 70.149 (1815)



Field characters FW 11–15mm. One of the largest pugs in Britain and Ireland, although quite variable in size, and quite distinctive. Forewing broad, with large, bold, black central spot. Central cross-bands edged inwardly with black, especially on leading edge, where this forms two black blocks, the inner of which often merges with central spot to form a bar. Tawny cross-bands near base and outer edge, and across abdomen near base. Strength of black margins and detail of cross-lines somewhat variable. Sometimes, central cross-band strongly banded dark grey, or both wings generally darkened. **Similar species** Dwarf Pug is smaller and lacks tawny bands. Dotted Carpet is superficially similar, but larger and lacking brown markings. **Flight season** One generation. Jun–Jul. Sometimes disturbed by day from foodplant. Comes to light in small numbers. **Life cycle** Overwinters as a pupa, in a flimsy cocoon among fallen conifer needles or other plant debris on the ground. Larva late Jun–

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

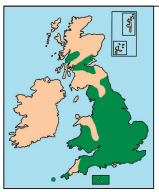
mid-Sep. Feeds on the ripe seeds between the cone-scales, often with several larvae per cone, generally high on the tree, producing clumps of reddish-brown frass, which can be seen hanging from the cones. **Larval foodplants** Mainly Norway Spruce. Also recorded from Sitka Spruce, Noble Fir, European Silver-fir and unspecified larch. Trees must be sufficiently mature so as to produce good numbers of large cones. Tenanted cones can sometimes be collected after felling operations. **Habitat** Plantations and shelterbelts of introduced conifers. **Status and distribution** Resident and suspected immigrant. Uncommon on recently introduced alien hosts. Recorded from a thin scatter of sites throughout England, mainland Scotland, Wales and Ireland, mostly singletons (over 70 individuals to the end of 2014) and often correlated with influxes of known immigrant moths. Recent evidence of breeding colonies in Northamptonshire, Warwickshire, Berkshire, mid-Wales, Co. Durham, Northumberland, Inverness-shire and in Co. Down, Northern Ireland, and it is likely to be resident elsewhere. In the late 19th century, it was best known from the New Forest, Hampshire.

Toadflax Pug

plate 22

Eupithecia linariata ([D. and S.])

Common 70.150 (1816)



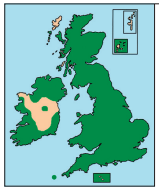
Field characters and similar species FW 9–10mm. Very similar to Foxglove Pug, but slightly smaller and with neater markings. On forewing, central cross-band is gently curved or slightly kinked near leading edge. At base, dark patch rarely extends into trailing half. Central cross-band usually rather uniformly dark grey. Reference to morphological characters may be necessary in some cases. See also the superficially similar Barred Carpet. **Flight season** One or two generations. Late May–early Sep, but most frequent late Jun and early–mid-Aug, when the generations are distinct. A single peak in Jul has been observed, but this may be due to generations overlapping. Seldom seen by day. Comes to light. **Life cycle** Overwinters as a pupa, on the ground or in loose earth. Larva Aug–Sep, feeding in the flowers and later on the seed capsules. **Larval foodplants** Common Toadflax. Use of Purple Toadflax needs investigation, as it is often frequent where Common Toadflax grows in south-east England. Accepts Snapdragon in captivity. **Habitat** Rough chalk and limestone grassland, including roadside verges. Also broken ground and derelict land, including many urban sites. Breeds in some gardens on Snapdragon. **Status and distribution** Resident. Common. Quite well distributed throughout most of England and Wales. Local and scarce in Scotland, mainly in the Central Belt, also recorded locally further south, and north to Argyll and Angus. One record from Man, in 1893. Local and rare in the Channel Islands.

Foxglove Pug

plate 22

Eupithecia pulchellata pulchellata Steph.

Common 70.151 (1817)



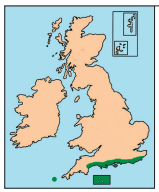
Field characters and similar species FW 10–12mm. Very similar to Toadflax Pug. Slightly larger, and central cross-band on forewing is grey, often with a lighter grey component, its outer edge usually strongly kinked near leading edge. At base, dark patch often extends into trailing half. Reference to abdominal plates or genitalia may be necessary in some cases. Form *hebudium* Sheld. (formerly regarded as a subspecies), found in north-west Wales, the Hebrides and western Ireland, has a greyish-white ground colour and the brown bands are dull. See also the superficially similar Barred Carpet. **Flight season** One generation. May–Jun, until early Aug in the north. Often seen at rest or disturbed from vegetation near larval foodplants. Frequent at light. **Life cycle** Overwinters as a pupa, in loose earth. Larva late Jun–mid-Aug. **Larval foodplants** Foxglove, feeding inside the flower, especially on the stamens. **Habitat** A wide range of situations in which the foodplant grows, from sheltered woodland to open hillsides, moorland, calcareous grassland and sea-cliffs. Also urban sites such as railway cuttings and derelict land. **Status and distribution** Resident. Common. Well distributed and sometimes frequent throughout England, Wales, Man, mainland Scotland, the Hebrides and Orkney, much of Ireland, and in the Channel Islands.

Channel Islands Pug

plate 22

Eupithecia ultimaria Boisd.

Immigrant; recent colonist 70.152 (1855a)



Field characters and similar species FW 7–10mm. A small grey-brown pug, with a conspicuous elongated dark central spot and numerous weak cross-lines. Smaller than Thyme Pug, with less bold cross-lines and more rounded forewing. Most likely to be found and recognised as larvae. Reared individuals are often darker than adults in the wild. **Flight season** One generation. Late Jun–late Aug. Occasionally comes to light. **Life cycle** Overwinters as a pupa, among plant debris. Larva Jul–Aug. **Larval foodplants** Tamarisk, an introduced plant. **Habitat** Coastal situations where Tamarisk has been planted or is naturalised. **Status and distribution** Resident, recent colonist and immigrant. Uncommon, on alien host. Southern England, mainly on the coast, and the Channel Islands. Well established on Guernsey, where it was first recorded at light at St Martin's, on 20 Aug 1984, and on Jersey and Alderney, where it has been found

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

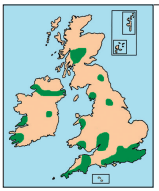
as larvae since 1999. One at light at Bishop's Stortford, Hertfordshire, on 20 Jun 1989 was the first British mainland record. Two recorded at light at Southsea, Hampshire, in 1995, and in 1995 and 1996 larvae were found in some abundance on Hayling Island, Hampshire, and further east along the Sussex coast at West Wittering, Selsey, Atherington and Climping, and on the Isle of Wight. Specimens from West Sussex, at light at Walberton in 1990 and 1995 and Littlehampton in 1992, were subsequently identified. First reported from Scilly in 2004, and resident locally from South Devon to East Kent. Some recent records are suspected to be of immigrants.

Lead-coloured Pug

plate 22

Eupithecia plumbeolata (Haw.)

Nb 70.153 (1814)



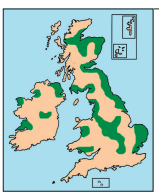
Field characters and similar species FW 9–10mm. Very similar to Haworth's Pug, but without reddish band on abdomen and with straighter leading edge to the more pointed forewing. Cross-lines very wavy. Ground colour usually a washed-out yellowish grey. Central spot inconspicuous or absent. Slender Pug has a distinct central spot. Valerian Pug has a distinct wavy whitish outermost cross-line on forewing, often forming a spot in trailing corner, but may appear very similar when worn. See also Marsh Pug. **Flight season** One generation. Late May–late Jun. Not easily flushed by day. Occasionally flies briefly in the afternoon, with a more pronounced flight just before dusk. Comes to light throughout the night, sometimes in numbers. **Life cycle** Overwinters as a pupa, in plant debris or loose earth. Larva late Jun–mid-Aug. **Larval foodplants** Flowers of Common Cow-wheat. Also reported from Yellow-rattle. **Habitat** Open woodland, the foodplant benefiting from coppicing. Also meadows, dune-slacks and sand-dunes. **Status and distribution** Resident. Nationally Scarce B. Widespread but local in England and Wales north to the Humber. Very local northwards but recorded in north Yorkshire, Cumbria, the Central Belt of Scotland and in East Ross. A few, mainly scattered records from Northern Ireland to the extreme south-west of the Republic.

Marsh Pug

plate 22

Eupithecia pygmaeata (Hb.)

Nb 70.154 (1822)



Field characters FW 8–9mm. A small, rich, dark brown pug, distinguished by very straight leading edge of forewing and rather pointed wing tip. Whitish cross-bands indicated on leading edge. Broken white outermost cross-line and trailing corner spot usually present. Fringes usually chequered brown and white, and central spot faint or absent. **Similar species** When worn, might be mistaken for Lead-coloured Pug, which is usually larger and paler, without the white markings. **Flight season** One generation. May–Jun. Can be seen flying in sunshine around flowers of the foodplant, sometimes in numbers. Occasional at light. **Life cycle** Overwinters as a pupa, probably among plant debris. Larva Jun–Jul. **Larval foodplants** Flowers and seed capsules of Field Mouse-ear and probably other mouse-ears. **Habitat** Marshy ground, wet meadows and fens, but also breckland, vegetated coastal sand-dunes, dune-slacks and derelict open ground. **Status and distribution** Resident. Nationally Scarce B. Very local throughout its range but possibly overlooked. Found in mainland Britain, north of a line roughly from the Thames Basin to the Severn Estuary to West Sutherland and Caithness. Discovered in numbers on a single site on Orkney, in 1977. In Wales, associated mainly with the calcareous strata in the north and south. Older records from south-west England and Man. Few records from Ireland, most frequently from the Burren, Co. Clare, the midlands and north.

Netted Pug

plate 22

Eupithecia venosata venosata (Fabr.)

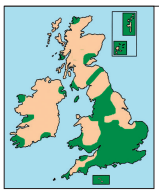
Local 70.155 (1823)

ssp. *hebridensis* W.P. Curt.
Hebrides

ssp. *fumosae* Gregs.
Shetland/Orkney

ssp. *ochracae* Gregs.
Orkney

ssp. *plumbea* Huggins
Ireland



Field characters FW 10–14mm. Ground colour of the full, rounded forewing varies from milky brown to dark grey in different parts of Britain, but the diagnostic net-like, dark brown markings and narrow, dark-edged whitish cross-bands are fairly consistent in pattern, although varying in intensity. In ssp. *fumosae* the ground colour is a darker sandy brown than typical, in ssp. *ochracae* it is light sandy brown and dark markings are weak, and in ssp. *plumbea* it is dark grey. Ssp. *hebridensis* is usually darker than typical but sometimes sandy. **Similar species** Pinion-spotted Pug has a smaller, narrower, pointed forewing, with heavy markings concentrated along leading edge. **Flight season** One generation. May–Jun. Flies from dusk, near foodplant. Occasional at light. **Life cycle** Overwinters as a pupa in loose earth, sometimes over a second winter. Larva mid-Jun–late Jul, sometimes later in northern Britain. **Larval foodplants** Ripening seed capsules of Bladder Campion and Sea Campion, and can be found by collecting these, or by sweeping at night. **Habitat** Mainly on chalk and limestone,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

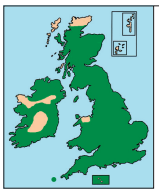
including sites where tracks of limestone chippings have been laid. Hedgerows, field margins, verges of woodland rides, calcareous sea-cliffs and rocky coastlines, and occasionally gardens. **Status and distribution** Resident. Local. Ssp. *venosata* is fairly well distributed and sometimes locally frequent, on calcareous strata throughout England, Wales, Man and the Channel Islands. In Scotland, widely scattered in the south, Central Belt, west and north. It may have become generally scarcer in recent decades, but this may only reflect over-reliance on light-trapping and failure to search for larvae. Ssp. *hebridensis* is found in the Hebrides. Ssp. *ochracae* is found on the coasts of Orkney. Ssp. *fumosae* occurs on Shetland and has also been reported from Orkney. Ssp. *plumbea* is recorded from well-scattered sites around the coast of Ireland; a moth resembling this subspecies has been reported from the Lizard, Cornwall.

Brindled Pug

plate 22

Eupithecia abbreviata Steph.

Common 70.156 (1852)



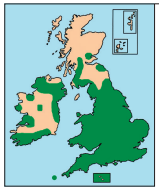
Field characters and similar species FW 10–12mm. An abundant spring pug. Forewing rather mottled, usually with tawny-brown component. Sometimes paler and greyer, especially in the north. Leading edge rather curved, especially towards tip, which is rather pointed. Dark central spot usually distinct, narrow, elongated and slit-like. The pale outer central cross-band has a series of fine black streaks or wedges projecting inwards, and there is often a whitish patch beyond the central dot. The almost blackish f. *hirschkei* Bast. is widespread and frequent alongside the normal form. It can be distinguished from other similar melanic pugs by shape of forewing and central spot, if present. See also Mottled Pug and Oak-tree Pug. **Flight season** One generation. Mar–May. Sometimes found, or disturbed from rest, on trunks and branches of foodplant. Flies from dusk. Comes to light, sometimes abundantly. **Life cycle** Overwinters as a pupa, behind loose bark on foodplant or in loose earth. Larva Jun–Jul. **Larval foodplants** Pedunculate Oak, Sessile Oak and hawthorns. Possibly also Turkey Oak. **Habitat** Particularly numerous in woodland dominated by oak, but also found in hedgerows and gardens. **Status and distribution** Resident. Common. Fairly well distributed and in many places locally abundant in England, Wales, Man, the Channel Islands, mainland Scotland, the Inner Hebrides and Ireland.

Oak-tree Pug

plate 22

Eupithecia dodoneata Guen.

Common 70.157 (1853)



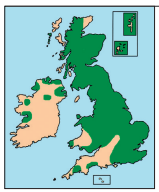
Field characters and similar species FW 8–11mm. Very similarly marked to Brindled Pug, and forewing often with tawny-brown component, but smaller, sometimes more variegated, and with a comparatively large, more rounded central dot (usually with a small pale patch just beyond it) and less pointed forewing. Several black dashes often visible on veins just beyond central spot, often more prominent than in Brindled Pug. Often with orange-brown scales along leading and trailing edges. See also Dwarf Pug, which flies at the same time of year and may occur in the same habitat where exotic conifers have been introduced. Has a larger black central spot, stronger dark cross-lines and borders, lacks tawny brown and has a whiter hindwing. Juniper Pug is slightly larger and more variable in colour, and mainly flies later in the year. **Epping Pug** *Eupithecia massiliata* (Mill.) (plate 22) could be mistaken for a small, greyer and more weakly marked Oak-tree Pug. Two examples of this moth were caught in Epping, Essex, in 2002, having most likely been accidentally imported with cork from Portugal, where it is resident. **Flight season** One generation. Apr–Jun. A few may linger into early Jul after a cold spring. Exceptionally, two in Aug in Buckinghamshire in 2011. Flies from dusk. Comes to light, sometimes in large numbers. **Life cycle** Overwinters as a pupa, on bark of foodplant or in loose earth. Larva late Jun–early Aug. **Larval foodplants** Mainly the calyces of berries, but also the leaves, of mature Hawthorn; also the leaves of Pedunculate Oak. **Habitat** Long-established woodland, shelterbelts, hedgerows and scrub. **Status and distribution** Resident. Common. Has proved to be much more widespread and frequent as recording effort has increased. Well distributed and locally frequent throughout England and Wales. Has increased and spread in the north. Recorded from Yorkshire in 1976, for the first time in over 90 years. First recorded in Northumberland in 1997 and in Scotland in 2002, and now local in the south and the Central Belt. Found locally in most parts of Ireland. Widespread in the Channel Islands.

Juniper Pug

plate 22

Eupithecia pusillata ([D. and S.])

Common 70.158 (1854)



Field characters FW 9–11mm. Very variable. Best identifying features are a small, unmarked whitish or fawn patch just beyond small black central spot, and black dashes on inner edge of outer central cross-band, often in two groups, one

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

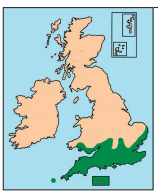
beyond central spot and another in trailing half. Cross-lines vary in intensity, but when present are sharply angled, especially near central spot, and often a blackish cross-line passes through it. Ground colour varies from whitish, particularly in rural Scotland, to dark brown or grey. Some populations contain many variants. The lighter individuals look finely striped with grey. Melanics usually retain a hint of the pale patch. Hindwing weakly marked, with darker border and tiny central spot. The whitish f. *anglicata* H.-S. was discovered on chalk sea-cliffs near Dover, Kent, in 1849, but has not been seen since 1915 and is believed to be extinct. **Similar species** See Oak-tree Pug. **Flight season** One generation. Late Jun or Jul–Sep. Occasionally seen flying near foodplant in hot sunshine. Main flight is at dusk, but later comes readily to light. **Life cycle** Overwinters as an egg on the foodplant. Larva Apr–early Jun. Pupates in a slight cocoon among needles on the foodplant. **Larval foodplants** Common Juniper and cultivated junipers, both erect and prostrate. Also reported from cypresses and red-cedars. **Habitat** Moorland, calcareous grassland; frequent in gardens, parks and plantations on cultivars. **Status and distribution** Resident. Common. Quite widespread and locally frequent, especially where Common Juniper is native. Central southern and south-east England, East Anglia, and from the Midlands northwards through mainland Scotland and the Western and Northern Isles. Local in south-west England and Wales. Rare on Man. Very local in Ireland, on the limestone of the Burren, Cos. Clare and Galway, and in the north-east and north-west. Occasional in the Channel Islands.

Cypress Pug

plate 22

Eupithecia phoeniceata (Ramb.)

Recent colonist 70.159 (1855)



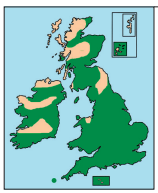
Field characters FW 10–11mm. Easily recognised by oblique cross-lines and unique black streaks in central part of pale brown forewing, and the black belt on abdomen just behind thorax. Forewing fairly narrow and ground colour is paler brown than in most pugs. **Flight season** One generation. Mainly Aug–Sep, but also very small numbers May–Jul and to early Nov. Easily beaten from mature foodplant in early evening. Flies from dusk and comes readily to light. **Life cycle** Overwinters as a larva, feeding from Oct, including mild periods throughout the winter, until Apr or May, pupating in a slight cocoon among needles on the foodplant. **Larval foodplants** Monterey Cypress. Accepts Lawson's Cypress and Leyland Cypress in captivity and probably uses them in the wild. **Habitat** Gardens, parks and plantations where the foodplant is well established. **Status and distribution** Resident. Uncommon, on alien host. A recent colonist first recorded in Britain at Lamorna, Cornwall, on 11 Sep 1959, found in gardens in the same area in 1960 and now well established and locally frequent on Scilly and along the south coast of England from Cornwall to Kent, inland to Basingstoke, north Hampshire and Surrey. Spreading, and recorded along the coasts of Essex and Suffolk. Regular in east Berkshire since 2007 and in Buckinghamshire since 2012, and recorded from Warwickshire. Also found in Somerset, Gloucestershire and along the south Wales coast to Glamorgan. In Ireland, one in Co. Cork, in 1993. Widespread and frequent in the Channel Islands.

White-spotted Pug

plate 22

Eupithecia tripunctaria H.-S.

Local 70.160 (1835)



Field characters and similar species FW 10–12mm. The white spots on well-marked examples of this brownish-grey pug, at trailing corner of both fore- and hindwing, along outer edge of forewing (sometimes linked by a fine white line), on back of thorax (as a crest) and on each side of abdomen (near base), are diagnostic. Some spots may be absent, or become worn off, but most remain discernible. Larch Pug has a white spot or crest on thorax but more sharply angled cross-lines, and any whitish spot at trailing corners is usually indistinct, as in Grey Pug (see also under Grey Pug). See also Golden-rod Pug. Forewing never reddish. The widespread melanic f. *angelicata* Barr. is brownish black all over. It is particularly frequent in the Midlands, but infrequent in the London area, and cannot be distinguished with certainty from melanic Grey, Larch and Golden-rod pugs without examination of the abdominal plates or genitalia. See also Currant Pug and Wormwood Pug (reddish brown, with a dark band on abdomen). **Flight season** Two generations. Mainly May–Jun and Aug, but also recorded in Jul and Sep. Seldom seen except regularly at light, in small numbers. **Life cycle** Overwinters as a pupa, in plant debris or loose soil. Larva late Jun–late Sep. **Larval foodplants** First generation on Elder flowers, the second on the developing fruits of Wild Angelica, Hogweed, Wild Parsnip and Wild Carrot, and also Common Ragwort and Goldenrod. **Habitat** Woodland, hedgerows, roadside verges, the banks of rivers and ditches, damp field corners, fens and unkempt parts of parks and gardens. **Status and distribution** Resident. Local. Widespread and fairly well distributed in England and Wales. Widespread but rather infrequent in Scotland, but reaching the north coast in Caithness and Sutherland, and found in the Inner Hebrides and Orkney. Found on Man, and widespread in Ireland and the Channel Islands.

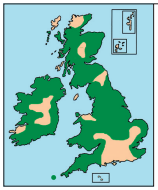
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Golden-rod Pug

plate 22

Eupithecia virgaureata Doubl.

Local 70.161 (1851)



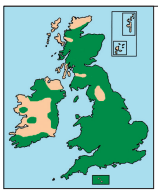
Field characters and similar species FW 10–11mm. A medium-sized greyish-brown pug. Forewing with conspicuous dark central spot. Often a whitish spot in trailing corner of forewing and sometimes hindwing, and sometimes a whitish spot on back of thorax. Can be impossible to distinguish with certainty from Grey Pug on wing markings, but finely chequered veins, arrow-marks on the inner edge of the outer central cross-line, relatively weak cross-lines, a pale spot on the thorax and more rounded forewing are useful indicators. See under Grey Pug for morphological differences in the males. White-spotted Pug usually has more prominent white spots in trailing corner of fore- and hindwing. See also under both these species. A melanic f. *nigra* Lempke, almost uniformly dark grey, is frequently predominant in the Midlands and Lincolnshire, and occurs elsewhere. See also Jasione Pug, Satyr Pug, Dwarf Pug and Larch Pug. **Flight season** Mainly two generations. May–Jun, and Aug. In the northern half of Scotland the second generation is smaller or absent. Regular at light, otherwise rarely seen. **Life cycle** Overwinters as a pupa, in loose earth. Larva Jun–Jul and Sep–Oct. **Larval foodplants** Second-generation larvae are readily found on ragworts and Goldenrod. First generation stated to feed on Hawthorn. One such larva has been found on Grey Willow. Fresh young leaves of Hawthorn are accepted in captivity. **Habitat** A wide range, from roadside verges and derelict open ground, to farmland, and rides and cleared areas in woodland. **Status and distribution** Resident. Local. Widespread (and in some places locally frequent) in south-west England, Wales, parts of the Midlands, northern England, mainland Scotland, the Hebrides and Ireland. Scarce or absent from much of central southern England, the south Midlands and East Anglia, with few genuine records, others proving to be misidentified Grey Pug. Formerly frequent in coppiced woodland in Kent. Local and rarely recorded on Man. In the Channel Islands, recorded from Jersey and Guernsey.

Dwarf Pug

plate 22

Eupithecia tantillaria Boisd.

Common 70.162 (1857)



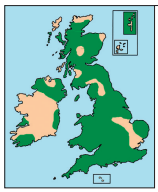
Field characters FW 9–11mm. A medium-sized, mottled brownish-grey pug. Forewing rather rounded, with large, obvious, rather elongated central spot and dark grey cross-lines and bands, most noticeably near the centre. Outer area sometimes darkened, with wavy pale cross-line near outer margin. Blackish band near base of abdomen. **Similar species** Grey Pug and Golden-rod Pug have a smaller central spot on forewing and are less banded and mottled. See also Oak-tree Pug, Cloaked Pug and Marbled Pug. Of all these species, only Marbled Pug may have a blackish band near base of abdomen. **Flight season** One generation. May–Jun. Readily found by day by tapping branches of foodplants. Flies from dusk. Comes to light, sometimes in large numbers. **Life cycle** Overwinters as a pupa, in loose earth. Larva late Jun–late Aug. **Larval foodplants** Particularly Norway Spruce, Sitka Spruce and Douglas Fir, but also recorded from Lawson's Cypress, Western Red-cedar, Western Hemlock-spruce, Giant Fir and other introduced conifers. **Habitat** Mainly plantations of introduced conifers. Also shelterbelts, parks and gardens. **Status and distribution** Resident. Common. Well distributed and often abundant where large-scale conifer plantations have been established. More local elsewhere. Increasing in distribution and found throughout England, Wales, mainland Scotland and some of the Inner Hebrides. Widespread but local in Ireland. Resident on Man, but few records. Occasional in the Channel Islands.

Larch Pug

plate 22

Eupithecia lariciata (Freyer)

Common 70.163 (1856)



Field characters and similar species FW 10–12mm. White spot or crest on back of thorax. Forewing grey-brown, cross-lines generally well marked and sharply angled near leading edge. Dark central spot quite prominent, often with a small yellowish-brown patch along veins near it. Golden-rod Pug (may have whitish spot on thorax), Grey Pug and Fletcher's Pug/Pauper Pug (both with no white spot on thorax) all have generally weaker and less sharply angled cross-lines and lack the yellowish-brown patch. Fletcher's Pug/Pauper Pug is plainer than all of these and cold grey. See also White-spotted Pug. In some areas, such as London, the melanic f. *nigra* Prout comprises up to half the population. It is blackish, with slightly paler hindwing and a conspicuous central spot on forewing, and is very difficult to distinguish with certainty from Grey Pug, Golden-rod Pug and White-spotted Pug melanics without examination of abdominal plates or genitalia (see also under those species). See also Jasione Pug. **Flight season** One generation. May–Jul. Occasional individuals to late Sep, probably of a second generation. Sometimes disturbed from branches of foodplant. Comes readily to light. **Life cycle** Overwinters as a pupa, in loose earth. Larva mid-Jun–early Aug. **Larval foodplants** Mature Larches. Accepts other larch species. **Habitat** Conifer plantations, mixed woodland, shelterbelts, gardens and parks. **Status and distribution** Resident.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

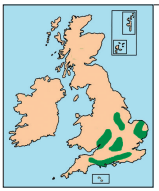
Common. Fairly well distributed and frequent in mainland Britain wherever there are mature stands of the foodplant. Recorded from Cornwall to Caithness, on Man, and in the Hebrides and Shetland. Local in Ireland, in the south-west, east and north. One record from the Channel Islands, on Jersey, in 1999.

Fletcher's Pug/Pauper Pug

plate 22

Eupithecia egenaria H.-S.

RDB 70.164 (1824)



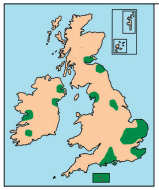
Field characters FW 11–13mm. A fairly easily recognised, rather large, pale, cold grey pug. Forewing rounded, tapered, with mainly rather weak cross-lines and a narrow, obliquely elongated black central spot. **Similar species** Grey Pug and grey form of Tawny-speckled Pug have more rounded, less elongated central spot on forewing and are usually more coarsely and heavily marked. See also Larch Pug. **Flight season** One generation. May–Jun. Occasionally disturbed by day from the trunks and branches of lime trees. Lives in the canopy but at night comes readily to light-traps placed on the ground nearby, the male often in large numbers. **Life cycle** Overwinters as a pupa, in a cocoon among fallen leaves or in loose earth. Larva late Jun–Jul, often fully grown by mid-Jul. **Larval foodplants** The flowers of Small-leaved Lime, Large-leaved Lime and the hybrid Common Lime, feeding mainly on the stamens and styles. **Habitat** Ancient woodland with Small-leaved Lime, parkland, planted avenues (including open roadside) and urbanised situations. **Status and distribution** Resident. Red Data Book species. Very local, and either formerly overlooked or recently spreading. First discovered in Britain in the Wye Valley in Monmouthshire and Gloucestershire, in 1962. The first Norfolk specimen was captured in 1953 but not identified for nearly 20 years. Now known from the Thetford area of south-west Norfolk/north Suffolk and Hockering Wood to the north-east (from 1984 onwards), and several sites in Suffolk, where it was first found in King's Forest (adults and larvae in 1993). Since the 1990s, found more widely in a number of counties, including Lincolnshire (Bardney Limewoods NNR, 1995), Nottinghamshire (several sites), Somerset (Orchard Wood, Taunton, first in 2001), Dorset, Hampshire, Surrey (first in 1994), Sussex, Berkshire, Oxfordshire (two sites, with numbers trapped in an arboretum in 2011), Buckinghamshire, Northamptonshire and Worcestershire.

Pimpinel Pug

plate 23

Eupithecia pimpinellata (Hb.)

Local 70.165 (1845)



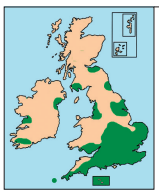
Field characters and similar species FW 11–12mm. Easily confused with Wormwood Pug, which is similar in size and shape, and both have dark band on abdomen, but forewing characteristically soft, light grey-brown and less plain. See also Yarrow Pug, which can be similar in colour but has a straighter leading edge, generally more evident cross-lines, and less evident central and leading-edge spots. See also Campanula Pug. **Flight season** One generation. Jun–Jul. Occasional at light, and reported flying by day near the foodplant. **Life cycle** Overwinters as a pupa, in a cocoon in loose earth. Larva late Jul–mid-Oct. **Larval foodplants** Ripening seed capsules of Burnet-saxifrage. **Habitat** Mainly calcareous grassland on light soils, including downland, derelict limestone quarries, roadside verges and woodland rides, occasionally on heavier soils. **Status and distribution** Resident. Local. Greatly under-recorded, probably in part due to the apparently rather sedentary habits of the adult and its resemblance to more widespread and frequent species. Targeted searches for the larvae in Essex found them in most 10km squares with the foodplant, often previously overlooked. Elsewhere, recent records are rather thinly scattered in the southern half of Britain, mainly from Dorset, Wiltshire and Hampshire, Kent, the south Midlands, East Anglia and Yorkshire. Scattered older records from south-west England, Wales, north-west England and southern Scotland, where it has also been recorded in 2014, in Berwickshire (several) and Fife (one), and in Cumbria in 2011. In Ireland, very local on the Burren limestone of Cos. Clare and Galway, and only very scattered records elsewhere, in the south, east and north. Discovered in the Channel Islands in 2006, on Alderney.

Plain Pug

plate 23

Eupithecia simpliciata (Haw.)

Local 70.166 (1842)



Field characters FW 11–13mm. A fairly large, light sandy-brown pug with broad, rounded forewing. Sometimes tinged with grey, and with a distinct, gently curved, narrow white cross-band beyond dark central dot, which is small, usually conspicuous but sometimes weak. **Similar species** See Yarrow Pug. **Flight season** One generation. Mid-Jun–early Aug. Flies from dusk. Visits flowers such as ragworts and Marram. Sometimes seen at rest on or near foodplant after dark. Comes

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

to light. **Life cycle** Overwinters as a pupa in loose earth. Larva Aug–Sep. **Larval foodplants** Ripening seedheads of goosefoots and oraches, preferring the prostrate kinds. **Habitat** Edges of saltmarshes, banks of estuaries and tidal rivers, coastal cliffs, derelict and disturbed open ground, often in urban situations, regularly inland away from rivers. Favours lighter soils, especially calcareous formations. **Status and distribution** Resident. Local. Most frequent on the coast and scarcer and more local inland, but quite well distributed in England north to the south Midlands, and more locally in northern England to Northumberland. Rare in southern Scotland, north to Stirlingshire. Very local in Wales. Local and rare on Man. Very local on the east, south and west coasts of Ireland (except the north-west). Widespread in the Channel Islands.

Goosefoot Pug

plate 23

Eupithecia sinuosaria (Eversm.)

Suspected immigrant 70.167 (1842a)

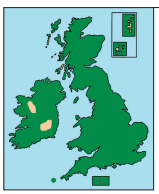
Field characters FW 10–12mm. An unmistakable greyish-brown pug. Diagnostic feature is irregular, narrow, dark-edged brown central cross-band on forewing, the inner edge of which is strongly angled in leading half, and outer edge often incorporating an elongated central spot. Usually dark blotches or dashes near forewing tip. Varies relatively little. **Flight season** One generation. Jun–Aug in mainland Europe. **Life cycle** Overwinters as a pupa in loose earth. Larva Jul–Sep in mainland Europe. **Larval foodplants** Goosefoots and oraches. **Habitat** Open, disturbed ground. **Status and distribution** Suspected rare immigrant. Three records, all males at light. One at Berrow, Somerset, on 13 Jun 1992; one at Harpenden, Hertfordshire, on 18–21 Jun 1992; and one at Pegwell Bay, Kent, on 11 Jul 2005. Extending its distribution westwards from eastern Europe and Scandinavia in recent decades, and now established in the Netherlands.

Narrow-winged Pug

plate 23

Eupithecia nanata (Hb.)

Common 70.168 (1846)



Field characters FW 9–12mm. The very narrow, elongated forewing, with complex marbling of tightly packed, strongly angled, light and dark grey-brown cross-lines with white edging, is a diagnostic feature of this small to medium-sized pug. Ground colour varies from whitish to the brown f. *oliveri* Prout, often on the same site. A pale cross-band with a conspicuous angle beyond central spot on forewing is generally apparent, as is a small pale spot in trailing corner. Blackish central spot is constant, but not very conspicuous, often with a distinctive white patch just before it. Hindwing is lighter and plainer than forewing. **Similar species** See the Shetland f. *curzoni* of Satyr Pug, which has a shorter forewing with a more rounded outer edge. Angle-barred Pug is similar in shape, but much plainer. The superficially similar Scarce Pug is much larger, has a broader forewing with straight leading edge, and is confined to coastal saltmarshes. **Flight season** Late Apr–Sep in one or two, often overlapping, generations. Usually two (and increasingly so) in southernmost counties of England. Only one in the northern half of Scotland, late May–Aug. Sometimes seen on, or disturbed among, foodplant by day. Flies from dusk. Comes to light, sometimes in large numbers. **Life cycle** Overwinters as a pupa, in a cocoon in loose earth. Larva mid-Jun–late Sep. **Larval foodplants** Flowers of Heather. **Habitat** Heathland and moorland. Occasionally elsewhere, including gardens, probably as a vagrant. **Status and distribution** Resident. Common. Well distributed on heaths and moors throughout Britain and Ireland. Widespread but local in the Channel Islands.

Explanatory note to Angle-barred Pug/Ash Pug/Tamarisk Pug

Authorities have differed in their opinion regarding the status of these three supposed taxa for over 100 years. Angle-barred Pug *Eupithecia innotata* was first recorded in Britain in 1831 and has been recorded from most of Europe. Later, Ash Pug *E. fraxinata* (larvae reared from Ash) and Tamarisk Pug *E. tamarisciata* (larvae reared from Tamarisk) were described in Britain as separate species. However, research since the 1960s has led to the conclusion that only one species is present in the British Isles. Under this scheme, it was originally proposed that all the British populations should be called Ash Pug *E. fraxinata*, as distinct from the Continental Angle-barred Pug *E. innotata* (based mainly on knowledge of apparent differences in foodplant preference between the British and Continental moths). However, European authorities recognise only one species, *E. innotata*, and do not believe that the British populations are distinct.

Therefore, Agassiz *et al.* (2013) follow the view that there is one species, *E. innotata*, the Angle-barred Pug, which exploits a number of plants that are not closely related and happen to be toxic to most moth larvae. One of these is Ash. It is possible that the moths on Ash and on Tamarisk in the British Isles never meet and breed with those on other foodplants, and constitute distinct lineages separated by foodplant and habitat (an ecotype), but this is not proven and these moths do not appear to have developed distinct physical differences from those on other foodplants. Nevertheless, these are both treated as subspecies, retaining their vernacular names (although some would argue that the distinction is dubious). Moths indistinguishable from those feeding on Ash are also found regularly, and in numbers, as larvae on Sea-buckthorn, and occasionally as larvae on hawthorns, Blackthorn and Elder, and supposedly on Mugwort and Sea Wormwood (and also reared in captivity on Mugwort). It is sensible to keep the vernacular name

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Angle-barred Pug as it was originally linked to the scientific name *E. innotata*, and is descriptive and fits all the various populations. This also keeps the names Ash Pug *E. fraxinata* and Tamarisk Pug *E. tamarisciata* available should the Ash- or Tamarisk-feeding populations be found to be a distinct species in the future. Some authorities may still take the view that only large Continental-type moths are Angle-barred Pug, and these have never been recorded in Britain.

Angle-barred Pug

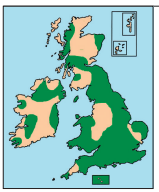
plate 23

Eupithecia innotata (Hufn.)

Common 70.169 (1848)

Ash Pug ssp. *fraxinata* Crewe plate 23
Common (1849)

Tamarisk Pug ssp. *tamarisciata* (Freyer)
Uncommon on alien foodplant (1850)



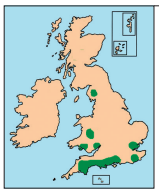
Field characters FW 10–12mm. A large, rather plain brown or grey-brown pug. Forewing narrow, elongated, with small, often narrow, elongated black central spot. Cross-lines, when evident, sharply angled near leading edge, the most noticeable beyond central spot. Usually has a light outer line, widened in trailing corner and more or less forming a corner spot. The often smaller, all-brown melanic f. *unicolor* Prout is easily distinguished from melanic forms of other species by wing shape. It is frequent in northern England and occasional to rare elsewhere. **Similar species** Narrow-winged Pug. **Flight season** Two generations. Late May–mid-Jun, and Aug. Regular at light, usually in small numbers. **Life cycle** Overwinters as a pupa, under moss or bark on or at the base of the foodplant, or in loose earth. Larva mid-Jun–late Jul and late Aug–Sep. **Larval foodplants** Ash, Sea-buckthorn, Tamarisk, hawthorns, Blackthorn and Elder. Reportedly Mugwort and Sea Wormwood, but these have not been confirmed in the wild in the British Isles. **Habitat** Ash Pug: woodland, hedgerows, parks and gardens, including free-standing trees. Tamarisk Pug: a range of coastal habitats, including gardens. Other populations of the Angle-barred Pug: coastal sand-dunes on Sea-buckthorn. Various other open habitats, including woodland rides. **Status and distribution** Resident. Angle-barred Pug: has been reared from Sea-buckthorn locally in Kent, Essex, Lincolnshire, Yorkshire and possibly elsewhere. Ash Pug: fairly widespread but rather local, throughout most of mainland Britain, Man and Ireland. Recorded from Orkney, where it was thought to have been introduced with Ash. Rare in the Channel Islands. Tamarisk Pug: Cornwall, Hampshire (Hayling Island), Isle of Wight.

Marbled Pug

plate 23

Eupithecia irriguata (Hb.)

Nb 70.170 (1818)



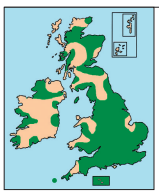
Field characters FW 9–11mm. Forewing rather pointed, narrow and whitish, with discrete dark blocks on leading edge. Outer area brown, marked with black, and with a wavy whitish cross-line near outer edge. Central spot large, black and usually quite elongated. Conspicuous dark central spot on hindwing. **Similar species** Lime-speck Pug is whiter, with conspicuous black blotch near leading edge beyond central spot. Dwarf Pug is more brownish, with dark central cross-lines. Bordered Pug is much larger, with continuous dark forewing borders, and flies later in the year. **Flight season** One generation. Late Apr–May. Occasionally found at rest by day on trunks and branches of mature oaks. Comes to light, sometimes in numbers. **Life cycle** Overwinters as a pupa, in loose earth. Larva late May–early Jul, feeding on the leaves. **Larval foodplants** Pedunculate Oak. Confirmation required for Sessile Oak. **Habitat** Oak woodland and large oaks in hedgerows in well-wooded areas. Strongly associated with concentrations of mature oaks. **Status and distribution** Resident. Nationally Scarce B. Best known from the New Forest, Hampshire, where it remains frequent. Increasingly being discovered elsewhere as more mature oak woodlands are investigated. Recorded from Oxfordshire and Northamptonshire, but most records are from further south, extending to Dorset, South Devon, East Cornwall and Sussex. Also recorded from Gloucestershire, Herefordshire, and in south and mid-Wales. Discovered near Morland, Cumbria, in 2010. Now rare in the eastern counties. Two relatively recent records from Norfolk (Hockwold, 1995) and East Tuddenham (1999). One at Danbury Ridge, Essex (1985), the first in Essex since the 19th century, when it was reported from Epping Forest.

Ochreous Pug

plate 23

Eupithecia indigata (Hb.)

Common 70.171 (1844)



Field characters FW 8–10mm. A rather small and fairly distinctive pug. Narrow, pointed grey or pale sandy-grey forewing is rather plain, apart from conspicuous elongated black central spot, and dark spots (often weak) along leading edge. Hindwing weakly marked. Rests with forewings drawn further back than most pugs, with leading edges in a shallow 'V'. **Similar species** See Thyme Pug. **Flight season** One generation. Apr–May. Sometimes beaten from foodplant by day. Flies from dusk. Comes to light, sometimes in large numbers.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Life cycle Overwinters as a pupa, in a flimsy cocoon among needles on or below the foodplant. Larva mid-Jun–mid-Sep. **Larval foodplants** Mainly Scots Pine, preferring the buds and young needles. Also reported from Lodgepole Pine and larch. Accepts cypresses and Common Juniper in captivity. Also observed feeding on aphids. **Habitat** Long established in Caledonian pine forest. Also in pine plantations and in gardens, especially in areas where pine is abundant. **Status and distribution** Resident. Common. Widespread and locally frequent throughout Britain north to Caithness and including the Inner Hebrides. Found on Man and very locally in many parts of Ireland. In the Channel Islands, recorded from Jersey and Guernsey.

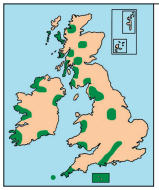
Thyme Pug

plate 23

Eupithecia distinctaria H.-S.

ssp. *constrictata* Guen.

Nb 70.172 (1843)



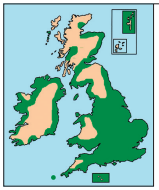
Field characters FW 8–10mm. Bold black linear central and leading edge spots on often rather pointed forewing, grey colour and small size are a diagnostic combination. Two fine black central cross-lines are normally present, along with other light and dark cross-lines. Hindwing usually well marked. **Similar species** See Ochreous Pug, which can be quite grey but has narrower, more pointed, usually plainer forewing and weakly marked hindwing, and flies earlier in the year. See also Channel Islands Pug. **Flight season** One generation. Jun–Jul. Sometimes disturbed from foodplant by day in hot weather. Flies from dusk. Comes to light fairly regularly. **Life cycle** Overwinters as a pupa in loose earth. Larva Aug–Sep. **Larval foodplants** Flowers of Wild Thyme. **Habitat** The steep, hot faces of rocky coastal cliffs, limestone quarries and broken chalk; also partly vegetated sand-dunes. **Status and distribution** Resident. Nationally Scarce B. Very local throughout its range. Largely coastal and western. Found at coastal sites in south-west England, including Scilly, Lundy Island and the Lizard, Cornwall, and Devon; also Dorset (Portland and Swanage) and the south coast of the Isle of Wight (the latter not recently). Inland in north Hampshire, Wiltshire and Buckinghamshire. Recent records from the south and west coast of Wales, and from north-west England. Scattered older records from inland in Wales and the Midlands. Found in the Derbyshire and Yorkshire Dales (frequent at Austwick in the 1990s), and also in Staffordshire. In Scotland, mainly on the west coast from Kirkcudbrightshire to West Ross and the Inner and Outer Hebrides. Also inland in the south, Central Belt and central Highlands. Recorded once in Aberdeenshire, at Crathie, in 1970. Local and rare on Man. In Ireland, widespread but very local, mainly around the coast and inland in Cos. Clare and Fermanagh. In the Channel Islands, one on Guernsey in 2014.

Lime-speck Pug

plate 23

Eupithecia centaureata ([D. and S.])

Common 70.173 (1825)



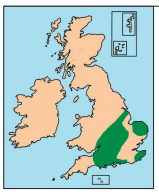
Field characters FW 10–12mm. The only white pug with a single conspicuous bluish-grey or black blotch on leading edge beyond central spot. Sometimes this is very faint. Rarely, ground colour is grey rather than white. **Similar species** See Marbled Pug and Pretty Pinion. **Flight season** Two protracted and overlapping generations in the south, the second being only partial in some areas, late Apr–Oct, with a reduction in numbers in Jul north to about Yorkshire. One extended generation further north in Britain and in northern parts of Ireland, May–Aug. Often seen at rest by day on vertical surfaces such as posts, sheds, walls and windows. Usually hides under leaves if disturbed. Frequent at light. **Life cycle** Overwinters as a pupa, in loose earth or among plant debris. Larva any time from late May–late Oct. **Larval foodplants** The flowers of many, mainly herbaceous plants, including ragworts, Mugwort, Sea Wormwood, Burnet-saxifrage, Common Knapweed, Field Scabious, Hemp-agrimony, Yarrow, Wild Angelica, Traveller's-joy, Goldenrod, Canadian Goldenrod and Michaelmas-daisy in gardens. **Habitat** Many open habitats, including urban gardens, roadsides, hedgerows, scrub, open areas in woodland, and coastal saltmarsh and dunes. **Status and distribution** Resident. Common. Well distributed and frequent in most of England north to Lancashire and Co. Durham, and in the Channel Islands. Widespread but chiefly coastal in Devon, Cornwall, Wales, Cumbria, Man, Northumberland, Scotland (recorded north to the Outer Hebrides, East Sutherland and as a vagrant on Shetland) and in Ireland.

Pinion-spotted Pug

plate 23

Eupithecia insigniata (Hb.)

Nb 70.174 (1820)



Field characters FW 10–12mm. The delicate, narrow mauvish-grey forewing with dark brown blocks along leading edge, fine, sinuous dark cross-lines and prominent elongated black central spot are diagnostic and constant features of this pug. Shows some variation in the shade of grey ground colour and extent of black markings. Cross-lines often faint on worn examples but blocks on leading edge remain. **Similar species** See Netted Pug. **Flight season** One generation. Late Apr–May, occasionally early Jun. In most areas appears to fly for about a fortnight only, usually just after the main Apple blossom is over. Seldom seen, except in very small numbers at light, usually after 1.30am.

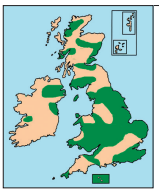
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Life cycle Overwinters as a pupa, in a light cocoon in cracks and crevices of bark, among plant debris or in loose earth. Larva mid-Jun–early Aug. **Larval foodplants** Mainly Hawthorn. Midland Hawthorn has been beaten extensively in occupied areas, without success. Will accept Crab Apple and cultivated Apple, and is sometimes beaten from these. Unusually for moths associated with hawthorns, larvae supplied with Blackthorn did not thrive, but it has been reported on it, and uses it in mainland Europe. **Habitat** Larvae are found in various situations but most frequent in hedgerows along open, ancient lanes, and less so on woodland edges and in more shaded locations. Occasionally found as an adult in gardens and orchards with large, well-established but not necessarily very old Apple trees, but hawthorns are seldom absent and difficult to rule out. **Status and distribution** Resident. Nationally Scarce B. Local throughout its range and seldom seen in numbers. Found south-east of a line roughly from the Severn Estuary to the Humber, but apparently very scarce or absent in some areas, for example Cornwall, Devon, Surrey, West Kent, Middlesex, Hertfordshire and Essex. Formerly found in the Scarborough area, Yorkshire, but not seen there since 1986.

Triple-spotted Pug plate 23

Eupithecia trisignaria H.-S.

Local 70.175 (1826)



Field characters and similar species FW 10–11mm. The name refers to the two strong brown spots on leading edge of forewing, either side of central spot, making a group of three. Forewing is rather rounded, compact and broad, and rather uniform in colour, nearly always lacking a trailing white corner spot, which helps to distinguish it from Currant and Common pugs. Form *angelicata* Prout is a darker brown form, common in many places, usually still with an obvious group of three spot markings. Grey Pug may have triple spots, but has stronger cross-lines and a whitish spot in trailing corner. Melanics require examination of abdominal plates or genitalia for confirmation. **Flight season** One generation. Late Jun–Jul. Occasional at light, otherwise rarely seen. **Life cycle** Overwinters as a pupa, probably among plant debris. Larva early Aug–early Oct. **Larval foodplants** Ripening fruits of Wild Angelica and Hogweed. **Habitat** Fens, marshy fields, roadside verges and damp woodland rides. **Status and distribution** Resident. Local. Widespread but very local (although probably overlooked). Best found by searching or shaking flower-heads for the green larvae and rearing them to adult. In the southern half of Britain, apparently more widespread in Wales, the south Midlands, East Anglia, Lincolnshire and Yorkshire than elsewhere. Generally local and infrequent further north (including Man), but recorded north to West Sutherland and on some of the Inner Hebrides. Local and scarce in Ireland, mainly in Northern Ireland, and not recorded recently south of Cos. Clare in the west and Dublin in the east.

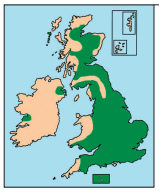
Edinburgh Pug/Freyer's Pug plate 23

Eupithecia intricata intricata (Zett.)

Common 70.176 (1827)

Mere's Pug ssp. *hibernica* Mere plate 23

Ireland



Field characters FW 12–13mm. Edinburgh Pug and Freyer's Pug were formerly regarded as distinct subspecies. In spite of them now being lumped, it seems reasonable to use either English name. These are quite large pugs, the forewing broad and with a fairly straight leading edge; soft grey-brown with numerous, rather faint, irregular light and dark cross-lines, angled near leading edge, most strongly near prominent, elongated central spot. Veins chequered dark brown and white, mainly in central area. Dark brown or blackish band near base of abdomen. Those formerly known as Edinburgh Pug (from north-west England and Scotland) are smaller, sandy grey-brown and often darker, with weaker markings. Mere's Pug has strong cross-lines and has a greyish-white tint, especially in central part of forewing. **Similar species** Most similar species lack the dark band on abdomen. Fletcher's Pug/Pauper Pug may have a narrow dark band, but has a more rounded forewing, without brownish tint, and veins not chequered. Worn northern forms may require examination of genitalia, as northern forms of Common Pug can look quite similar (but with more curved leading edge to forewing). **Flight season** One generation. All three subspecies fly May–Jun, from dusk onwards, and come to light. **Life cycle** All three subspecies overwinter as pupae, in cocoons among the foodplant. Larva Aug–Sep. **Larval foodplants** Mainly junipers. In most places, usually associated with exotic junipers, cypresses (*Cupressus* spp. and *Chaemaecyparis* spp.) and other introduced conifers, as well as Common Juniper. In the north, also feeds on Common Juniper, and Mere's Pug on Prostrate Juniper. **Habitat** Gardens, parks, plantations, moorland, pine woodland and coastal habitats. Mere's Pug is found on exposed limestone pavement. **Status and distribution** Widespread and frequent in much of southern Britain, extending north through central Scotland to Sutherland. The northern form (Edinburgh Pug) is found in Scotland, but in southern Scotland has interbred with the southern populations (Freyer's Pug) as they have spread north. The species has not been recorded on Man but is likely to be present and has recently been recorded from Co. Antrim, Northern Ireland. Reported on Jersey and Guernsey, but few records, and resident on Alderney at low density. Mere's Pug has only been found on the Burren, Co. Clare, western Ireland.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

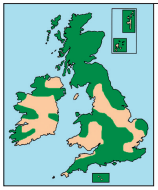
Satyr Pug

plate 23

Eupithecia satyrata satyrata (Hb.)

Local 70.177 (1828)

ssp. *curzoni* Gregs.
Shetland



Field characters FW 9–13mm. In lowland habitats, ssp. *satyrata* is a pale, delicately marked, soft grey-brown pug. Leading edge of forewing is usually quite straight, and veins are chequered black and white, although this may not be clear if moth is worn. Whitish spots near outer edge, the largest in trailing corner. Central spot small or absent. Abdomen grey-brown, without distinct banding. Form *callunaria* Doubl. is smaller, darker brown and often more banded. Ssp. *curzoni* has bold, dark brown and white cross-lines and bands. **Similar species** Edinburgh Pug/Freyer's Pug has chequered veins, but a dark band near base of abdomen. Golden-rod Pug may also have chequered veins, but has a larger central spot and arched leading edge. Common Pug, which can be greyer and strongly banded in the north, also has an arched leading edge but lacks chequering on the veins. Ssp. *curzoni* could be mistaken for Narrow-winged Pug, which has a more pointed forewing. **Flight season** One generation. May–Jun. In upland habitats sometimes flies in abundance in late afternoon on warm, still days, and can be frequent at light. Elsewhere, usually comes to light in small numbers. **Life cycle** Overwinters as a pupa, probably in loose earth. Larva late Jun–Sep. **Larval foodplants** Flowers of many plants, including Meadowsweet, ragworts, Devil's-bit Scabious, knapweeds, hawkweeds, Heather and Cross-leaved Heath. Reported feeding on the soft young shoots of newly planted Sitka Spruce and Lodgepole Pine, but cannot eat the hardened needles. **Habitat** Most abundant on moorland and upland grassland, but found in most upland habitats. Apparently very local and scarce in the lowlands, occurring mainly on chalk downland, heathland, fens, flowery open woodland and derelict rough ground, where it is best sought as a larva. **Status and distribution** Resident. Local. Ssp. *satyrata* is widespread but local in the southern half of Britain, north to Yorkshire and Cumbria, and most frequent on calcareous soils. Well distributed and locally frequent in Northumberland, mainland Scotland, the Hebrides and Orkney. Apparently rather local and scarce on Man. Widespread but local in Ireland, predominantly in the west and north. In the Channel Islands, rare on Guernsey. Form *callunaria* is predominant in the uplands of Wales, northern England and in Scotland and Ireland. Ssp. *curzoni* is widespread and frequent in Shetland, and some moths on Orkney are similar.

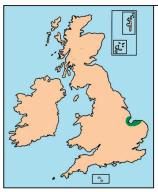
Scarce Pug

plate 23

Eupithecia extensaria (Freyer)

ssp. *occidua* Prout

RDB 70.178 (1847)



Field characters FW 11–13mm. An unmistakable, fairly large pug, the forewing with a straight leading edge. Forewing crossed by three light brown oblique bands on a silvery-white ground colour. Hindwing light grey with a narrow whitish central cross-band. Looks very elongated as it rests, wings spread to maximum extent along the length of the plant stems. **Similar species** See Narrow-winged Pug. **Flight season** One generation. Jun–Jul. Sometimes disturbed among foodplant by day. Comes to light fairly readily. **Life cycle** Overwinters as a pupa in a cocoon among plant debris or in soft earth. Larva Aug–Sep. **Larval foodplants** Flowers and leaves of Sea Wormwood. **Habitat** The fringes and higher ground of saltmarshes and sea banks. **Status and distribution** Resident. Red Data Book species. Limited to the east coast of England, mainly in the vicinity of the Wash, where it occurs in a few restricted sites in north Norfolk and Lincolnshire. Also formerly around the mouth of the Humber in Yorkshire, and in a single saltmarsh system in Essex (last recorded in 1983). The larval foodplant was examined much more widely in Essex and Kent during searches for Essex Emerald in the 1980s and 1990s, and no further colonies of Scarce Pug were found.

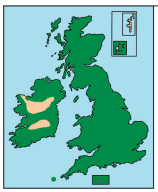
Wormwood Pug

plate 23

Eupithecia absinthiata (Cl.)

Ling Pug ssp. *goossensiata* Mab.

Common 70.179 (1830)



Field characters FW 11–13mm. Wormwood Pug is the most frequent of the rather plain reddish-brown pugs with conspicuous dark spots on leading edge of forewing, large dark central and whitish trailing corner spots, and a black band on abdomen. Forewing quite broad and quite long. On heathland and moorland, smaller and greyer but otherwise similar moths are found, sometimes with a mauvish tint when fresh. These are Ling Pug, the status of which is controversial. Elsewhere it is treated as a distinct species or a form. Indeed, the abdominal plates and genitalia of Wormwood Pug and Ling Pug are identical, and experiments have shown that the appearance of larvae and adults depends on what the larvae were fed. Thus, larvae from a Wormwood Pug-like female fed on Heather will produce pink Ling Pug-like larvae and smaller, greyer adults. Conversely, those from a Ling Pug-like female fed on ragworts are not pink and

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Scarce Pug.

Larva of Wormwood Pug.

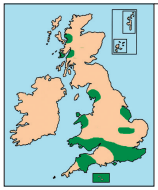
produce Wormwood Pug-like adults. **Similar species** Currant Pug is very similar, but smaller, with relatively broad, more rounded forewing and usually a larger, more prominent, often double, white trailing corner spot, and often with weaker dark markings on leading edge. Bleached Pug is paler, with fuller, more rounded forewing, a weaker trailing corner spot and a more elongate, usually larger, dark central spot. See also Campanula Pug, White-spotted Pug and Pimpinel Pug. **Flight season** One generation. Jun–Jul. Often seen at dusk. Comes regularly to light in small numbers. **Life cycle** Overwinters as a pupa, in loose earth. Larva late Jul–Oct. **Larval foodplants** The flowers of many Asteraceae (composites), including Mugwort, Yarrow, ragworts, Wormwood, Sea Wormwood, Sea Aster, Michaelmas-daisy, Goldenrod and Canadian Goldenrod. Ling Pug feeds on the flowers of Heather. **Habitat** A familiar pug in gardens, particularly in urban and suburban areas, but occurs in many habitats, from saltmarshes and other coastal habitats to grasslands and open woodland, and heathland and moorland, in lowlands and uplands. **Status and distribution** Resident. Common. Well distributed throughout England and Wales, Man, mainland Scotland, the Hebrides, Orkney, Ireland and in the Channel Islands. Ling Pug predominates on heathland and moorland throughout the range.

Bleached Pug

plate 23

Eupithecia expallidata Doubl.

Nb 70.180 (1833)



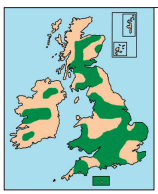
Field characters FW 12–13mm. A large, pale, rather plain, soft grey-brown pug and, when compared to similar species, with a bleached look. Forewing broad and rounded. Several black marks on leading edge. Central spot elongated, with finely dotted black cross-lines either side. Whitish corner spot weak or absent. Has a black band on abdomen. **Similar species** In Wormwood Pug (often confused with Bleached Pug), forewing is darker, more reddish and narrower (especially in male), leading edge is less arched and usually has less striking black spots (including central spot), and trailing corner spot is generally bolder. **Flight season** One generation. Late Jun–Aug. Sometimes disturbed among foodplant by day, flies at dusk and later occasionally comes to light. **Life cycle** Overwinters as a pupa, in a cocoon in loose earth. Larva late Aug–mid-Oct. **Larval foodplants** Flowers of Goldenrod. **Habitat** Woodland rides and clearings, especially open or recently coppiced areas, and reported from coastal scrub. **Status and distribution** Resident. Nationally Scarce B. Very local. In southern Britain, most widespread in south-west England, from Hampshire to Kent and from Gloucestershire through south Wales to Pembrokeshire. Scattered records ranging north through Wales and the Midlands to mid-Lincolnshire and Cumbria. In Scotland, very scarce and local in the south-west and the western Highlands. Some records may be misidentifications. No confirmed records from Ireland. One record from Man, on the Calf of Man, on 24 Aug 1998.

Valerian Pug

plate 23

Eupithecia valerianata (Hb.)

Nb 70.181 (1821)



Field characters FW 8–10mm. The zigzagged whitish outer cross-line, sometimes reduced to a row of spots, and distinct white spot at trailing corner distinguish this from other small, weakly marked grey-brown pugs. Forewing rather pointed with central spot elongated, although usually faint or absent. Hindwing has whitish spot in trailing corner. **Similar species** In Common Pug forewing has curved leading edge, a rougher texture, and is usually browner and larger, with a round central spot, if present. See also Lead-coloured Pug. **Flight season** One generation. Jun–early Jul, sometimes later in Scotland. Flies at dusk and rests on the flowers of the foodplant and on adjacent plants. **Life cycle** Overwinters as a pupa, on the ground

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Valerian Pug.

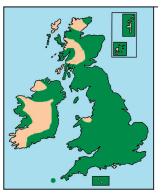
among plant debris. Larva Jul–mid-Aug. **Larval foodplants** Common Valerian, feeding on the flowers and ripening seeds. **Habitat** Most often found in fens, broads and in other wet open ground, but also occurs in damp woodlands and in much drier habitats, such as the limestone quarries at Portland, Dorset. **Status and distribution** Resident. Nationally Scarce B. Very localised and scattered, but found in most parts of England, Wales and Scotland, north to East Inverness-shire and Banffshire. Appears to have declined, but is easily overlooked and less frequently sought as larvae than in the past. However, the habitats are also vulnerable to loss and damage. Local and rare on Man. In Ireland, local in Cos. Clare and Galway, and elsewhere very scattered records from Co. Cork north to Co. Londonderry. One record from the Channel Islands, one on Alderney in 2008.

Currant Pug

plate 23

Eupithecia assimilata Doubl.

Common 70.182 (1832)



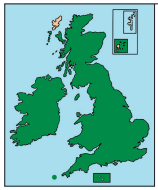
Field characters and similar species FW 9–12mm. Forewing warm, plain brown (when fresh) and shorter, rounder and more compact than the otherwise very similar Wormwood Pug, usually with conspicuous, often double, large cream corner spot and other cream markings near outer edge, and dark central and leading edge spots. Usually, the cream marking in the trailing corner is larger in Currant Pug, but examples with reduced markings occur, as do moths with more greyish ground colour. The latter are reportedly more frequent later in the year. See also Triple-spotted Pug and White-spotted Pug. **Flight season** Mainly two generations, May–Jun and Aug. One generation in the north of its range, Jun–Jul. Sometimes disturbed among foodplants by day. Comes to light. **Life cycle** Overwinters as a pupa, in loose earth. Larva early Jun–late Jul and late Aug–Sep. **Larval foodplants** Wild Hop, Black Currant and Red Currant. **Habitat** Often seen in gardens and allotments, but also frequent on Wild Hop in hedgerows and open woodland. **Status and distribution** Resident. Common. Well distributed and fairly frequent in England and Wales. Also in Scotland, although more local in the north-west, but reaches the Outer Hebrides, Orkney and Shetland. Local in Ireland, but more widespread in the eastern half. Found on Man and widespread in the Channel Islands.

Common Pug

plate 24

Eupithecia vulgata (Haw.)

Common 70.183 (1834)



Field characters FW 10–12mm. This very common pug is worth learning at an early stage. Forewing somewhat narrow, with curved leading edge and a rather rough, grainy appearance. Small central spot (sometimes absent), whitish outermost cross-line and trailing corner spot, and subtle patterns of grey and warm, tawny brown or reddish brown, darker along leading edge. Cross-lines very variable in strength, always angled near leading edge. A series of black dashes along side of abdomen. The dark melanics f. *atropicta* Dietze and f. *unicolor* Lempke are widespread alongside the typical form. The rather narrow forewing shape aids recognition. Form *scotica* Cock. is often greyer, with stronger cross-lines. Form *clarensis* Huggins is a whitish-brown form associated with limestone, with chalky, whitish hindwing. **Similar species** Smaller and more weakly marked than other common brown garden pugs such as Wormwood and Tawny Speckled pugs. See also Grey Pug (lacks warm brown colour), Edinburgh Pug/Freyer's Pug, Maple Pug, Triple-spotted Pug, Satyr Pug, Shaded Pug and Valerian Pug. **Flight season** One generation. May–Jul. Sometimes a small second generation has been recorded in Aug in southern Britain. Often netted at dusk. Comes to light, sometimes in fair numbers. **Life cycle** Overwinters as a pupa, on the ground or in loose earth. Larva Jun–Jul and late Aug–early Oct. **Larval foodplants** The leaves of various trees, including Hawthorn and sallows; also Bramble, and the flowers and leaves of various low-growing plants, including ragworts, Yarrow and Hogweed. **Habitat** Many situations, including urban and rural gardens, hedgerows, and most open scrubby habitats from fens to heathland, and woodland. **Status and distribution** Resident. Common. Well distributed and frequent throughout England, Wales, Man, Scotland (except Shetland), Ireland and the Channel Islands. Form *scotica* predominates in northern Britain. Form *clarensis* is restricted to the Burren, Co. Clare, where it is locally frequent.

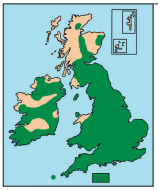
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Mottled Pug

plate 24

Eupithecia exiguata (Hb.)

Common 70.184 (1819)



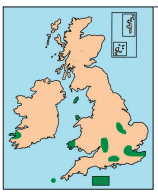
Field characters FW 11–12mm. Forewing warm grey, leading edge curved. Central spot conspicuous, rather elongated, with a series of small black wedges beyond it. Has a narrow, pale outer central cross-band, angled near leading edge, with two straw-coloured smears extending towards outer edge. This combination of features is diagnostic. Form *muricolor* Prout was described from specimens collected in east Aberdeenshire. It is more heavily marked and has been variously described as pale grey or darker. Similar moths occur elsewhere. **Similar species** Brindled Pug is similar in shape, size and general pattern, but forewing is brownish and mottled, with narrower, slit-like central spot. It starts flying earlier in the year, but the flight periods often overlap in May. **Flight season** One generation. May–Jun. Comes to light, sometimes in numbers. **Life cycle** Overwinters as a pupa, in loose earth. Larva late Jun–early Oct. **Larval foodplants** Hawthorn, Midland Hawthorn, Blackthorn and Dogwood. Regularly found on Barberry in rural hedgerows. Also reported from Sycamore. In upland areas on Rowan. **Habitat** Woodland, scrub and hedgerows. Often in rural and suburban gardens. **Status and distribution** Resident. Common. Widespread, well distributed and often abundant throughout England and Wales. Few records from Man. Widespread in southern Scotland and the Central Belt, and more local north to Aberdeenshire and East Ross. Widespread and locally frequent in Ireland. Local in the Channel Islands.

Campanula Pug

plate 24

Eupithecia denotata (Hb.)

Na 70.185 (1836)



Field characters and similar species FW 11–13mm. Campanula Pug is a rather plain, brownish pug. Leading edge of quite broad forewing is slightly curved, central spot is oval, quite large and conspicuous. Markings on leading edge, cross-lines and trailing corner spot are all weak. No dark band on abdomen. Sometimes has a weak chequering effect on veins. This combination distinguishes it from Wormwood Pug. Pimpinel Pug has a greyer, narrower, more tapering forewing and is more strongly marked with a dark band on abdomen. Jasione Pug f. *jasioneata* Crewe is smaller and grey, with narrower forewing and stronger markings than Campanula Pug. Golden-rod Pug is very similar, but leading edge of forewing is more curved, chequered veins usually noticeable and cross-lines

Larva of Mottled Pug.

weaker. In cases of doubt, examination of abdominal plates or genitalia is advisable. Could also be mistaken for Larch Pug, which has a white spot on thorax. **Flight season** One generation. Jul. Occasional at light, otherwise seldom seen as adults. **Life cycle** Overwinters as a pupa in loose earth. Larva Aug–Sep. **Larval foodplants** Campanula Pug feeds on the ripening seed capsules of Nettle-leaved Bellflower and Giant Bellflower. Also found on garden campanulas. Recent searches of Clustered Bellflower on the chalk in Surrey have been unproductive. Jasione Pug feeds on the seed-heads of Sheep's-bit (*Jasione montana*), usually as the heads are maturing and drying out. **Habitat** Campanula Pug is found in woodland rides and edges, hedgerows and scrubby grassland, usually in calcareous, often slightly damp situations; sometimes in gardens. Jasione Pug, like its foodplant, is mainly western, favours dry grassy places, heaths and cliffs, usually near the sea, and avoids calcareous situations. Hedge banks and overgrown stone walls have proved productive for its larvae. **Status and distribution** Campanula Pug: Nationally Scarce A; probably under-recorded. Very local, mainly on the chalk in Hampshire and Wiltshire, the North Downs of Surrey and Kent, more locally north to Lincolnshire, in Gloucestershire and on the Silurian limestone of Herefordshire. There are old records from south Wales. Jasione Pug: Reported locally, usually on the coast, in south-west England, including Scilly, from scattered sites in west Wales, in the south of Man. Rare in Ireland, recorded from a handful of coastal sites in the south-west, in Cos. Cork, Kerry, West Galway and West Mayo, most recently in Co. Kerry, in 2006. Two reported as accidental introductions on Orkney on 2 Aug 1970, with plants from Co. Clare. In the Channel Islands, found since 2006 as larvae on Alderney, and old records from Guernsey, in 1913 and 1932, and Jersey.

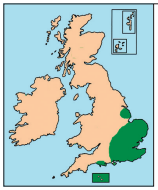
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Yarrow Pug

plate 24

Eupithecia millefoliata Rössler

Nb 70.186 (1841)



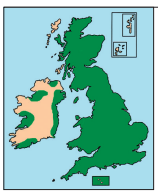
Field characters FW 12–13mm. Quite a large greyish pug. Forewing rather pointed and leading edge straight. Sometimes tinged with brown, and lightly patterned with numerous slightly wavy cross-lines and bands, kinked near leading edge. Pale broken line usually runs near outer edge, widening in trailing corner. Dark central spot is oval, often slightly blurred and with whitish outer 'halo'. **Similar species** Fletcher's Pug/Pauper Pug lacks any brownish tint and has a more arched leading edge. Plain Pug is sometimes greyish, but the fuller, more rounded forewing, with arched leading edge and gently curved white outer band, is diagnostic. Grey Pug has a less pointed, more rounded forewing, and is usually smaller. See also Pimpinel Pug, with a larger central spot and stronger dark marks on leading edge. All have a generally clearer central spot, without a white halo. If in doubt, abdominal plates or genitalia should be checked, especially if the moth is worn. **Flight season** One generation. Jun–Jul. Comes to light. **Life cycle** Overwinters as a pupa among plant debris. Larva Aug–late Oct. **Larval foodplants** Flowers and ripening seedheads of Yarrow, preferring ripe seedheads when large. **Habitat** Open, derelict coastal ground, especially sand-dunes and shingle beaches, uncut roadside verges, and rough or scrubby grassland. **Status and distribution** Resident and suspected immigrant. Nationally Scarce B. First found in the British Isles in Ham Street Woods, East Kent, in 1933. Has spread and is now found locally from Dorset to Kent, in the London area and throughout East Anglia. Extends to Oxfordshire, Northamptonshire, Bedfordshire, Huntingdonshire and Lincolnshire. Local in the Channel Islands.

Tawny Speckled Pug

plate 24

Eupithecia icterata (Vill.)

Common 70.187 (1838)



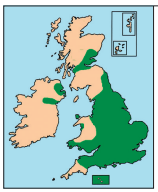
Field characters FW 11–13mm. A large pug, variable in colour. A number of forms have been named, but essentially there are two main types. Form *subfulvata* Haw. is distinctive, with a large orange-brown central patch on forewing, which contrasts sharply with dark grey-brown leading and outer edges. This is the most frequent form in most areas. In parts of Scotland and Ireland, moths with the central tawny-orange coloration much reduced or absent predominate, also with bolder cross-lines, and sometimes extensively marked with white, including cross-lines and thorax. Most of these conform to f. *cognata* Steph., which is sometimes regarded as a distinct subspecies or race, and occurs at lower frequency in northern England, Wales and south-west England. Form *flavescens* is an uncommon yellowish-brown form. **Similar species** Northern forms can be puzzling at first. Some are superficially similar to Grey Pug, which is smaller, flies earlier in the year and lacks any hint of tawny colour. See also Fletcher's Pug/Pauper Pug. **Flight season** One generation. Jul–Aug. Flies from dusk, and visits flowers such as ragworts and buddleias. Regular at light in small numbers. **Life cycle** Overwinters as a pupa in loose earth. Larva Sep–Oct. **Larval foodplants** Flowers and leaves of Yarrow and Sneezewort. Recorded from Southernwood in gardens. **Habitat** Many situations, from suburban and rural gardens, hedgerows and roadside verges to calcareous, neutral and acid grassland, fens, open woodland and coastal habitats. **Status and distribution** Resident. Common. Well distributed throughout mainland Britain, on Man and on some of the Inner Hebrides. Very local and scattered in Ireland, and mainly coastal. Local in the Channel Islands.

Bordered Pug

plate 24

Eupithecia succenturiata (L.)

Common 70.188 (1839)



Field characters FW 12–13mm. A large, easily recognisable pug, with forewing borders marked with brown, and a white central patch. Thorax and abdomen base are white and (in male) abdomen tip is also white. In f. *obscurata* Hb., much of the white is replaced by grey, but central black spot remains large and conspicuous. **Similar species** Shaded Pug is also marked with white, but is smaller, with paler wing borders, weaker markings and a smaller central spot. Thorax and abdomen are not strikingly marked with white. **Flight season** One generation. Jul–Aug. Rarely seen except regularly at light, in small numbers. **Life cycle** Overwinters as a pupa in loose earth. Larva mid-Aug–mid-Oct, feeding by night and hiding near the base of the plant by day when large. **Larval foodplants** Mugwort, Wormwood, Southernwood and Yarrow. **Habitat** Disturbed open ground, roadside verges and other rough places, including gardens. **Status and distribution** Resident. Common. Well distributed and fairly frequent in most parts of England as far north as South Northumberland in the east and Lancashire in the west, but much more local in the south-west and in Wales. Very local and infrequent in central Scotland. Local in Northern Ireland and rare in the Irish Republic. Local in the Channel Islands.

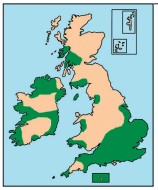
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Shaded Pug

plate 24

Eupithecia subumbrata ([D. and S.])

Local 70.189 (1840)



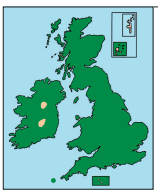
Field characters FW 10–12mm. Forewing somewhat narrow, its leading edge straight or slightly curved, with a small central spot (may be absent). Ground colour chalky white. Leading and outer edges usually darker, and numerous angulated dark cross-lines. Light brown streak along three main radial veins. The strength of the dark markings varies. In f. *obscurata* Lempke, they are so extensive that the white ground colour is highly obscured. Thorax and abdomen rather plain grey-brown. **Similar species** Dark, atypical examples can be puzzling and are easily mistaken for Grey Pug or the smaller Common Pug (especially in northern Britain), but look for wing shape and whitish ground colour. See also Bordered Pug. **Flight season** One generation. Jun–early Jul. Readily disturbed by day from sward, flies from dusk. Comes to light, sometimes in large numbers. **Life cycle** Overwinters as a pupa in loose earth. Larva Jul–Sep. **Larval foodplants** Flowers of many herbaceous plants, including hawk's-beards, ragworts, Field Scabious, St John's-worts, Wild Marjoram, Spanish Catchfly, Dark Mullein and Flixweed. **Habitat** Chalk downland, breckland, flowery field margins and roadside verges, wide rides in plantations and woodland, saltmarshes, soft-rock cliffs and other coastal habitats. **Status and distribution** Resident. Local. Mainly south-eastern England, and quite well distributed and frequent on calcareous soils, roughly south-east of a line from Dorset to South Lincolnshire. Elsewhere, very local on mainly coastal or inland limestone exposures, in south-west England and Wales, Man, south Cumbria, Yorkshire and the western side of Scotland north to Mull. Widespread but local in Ireland, though sometimes frequent, for example in the Burren, Co. Clare. Local in the Channel Islands.

Grey Pug

plate 24

Eupithecia subfuscata (Haw.)

Common 70.190 (1837)



Field characters FW 10–12mm. A frequently encountered brownish-grey pug, easily mistaken for several other species and therefore worth learning. Forewing has a conspicuous black central spot. Ground colour darkest at wing base, leading edge and outer border, with various wavy cross-lines. Melanic f. *obscurissima* Prout and intermediates are widespread and frequent. Hindwing paler than forewing in both forms. **Similar species** Larch Pug has a white thoracic spot or crest, and more oblique cross-lines on forewing, which is generally more tapered. Grey Pug can be impossible to distinguish with certainty from Golden-rod Pug on wing markings, especially as some Grey Pug have chequering on the forewing veins. However, plate on eighth abdominal segment on male is quite different: in Grey Pug it is dark, with two long pincers, while in Golden-rod Pug it is paler, broader, without long extensions, and with an indentation at the end, slightly to one side. White-spotted Pug with reduced white spots (or worn) can also look very similar. Melanics and borderline cases of these three species, along with Larch Pug, should be confirmed by examination of abdominal plates or genitalia. See melanic Green Pug, also Common Pug, Fletcher's Pug, Triple-spotted Pug, Dwarf Pug, Yarrow Pug, Shaded Pug and Tawny-speckled Pug. **Flight season** Mainly one generation. May–Jun. In some years a partial second generation in Aug has been recorded in some places. Fairly frequent at light. **Life cycle** Overwinters as a pupa in loose earth, plant debris, or occasionally behind loose bark. Larva late Jun–Oct. **Larval foodplants** The flowers and leaves of many herbaceous and woody broadleaved plants. Frequent on Blackthorn, Hawthorn, regular on Barberry in many counties, sallows and Aspen. Also ragworts, Mugwort, knapweeds, Yarrow, Burnet-saxifrage and Betony. **Habitat** Gardens, hedgerows, scrub, heathland, downland, woodland and wetland in many situations, from coastal to uplands. **Status and distribution** Resident. Common. Well distributed throughout England, Wales, Man, Scotland (reaching Caithness, the Hebrides and Orkney), Ireland and the Channel Islands.

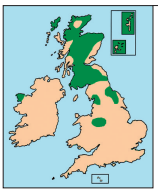
Manchester Treble-bar

plate 24

Carsia sororiata (Hb.)

ssp. *anglica* Prout

Nb 70.191 (1866)



Field characters FW 11–15mm. Distinctive. The cold grey ground colour of forewing, jagged leading half of dark outer cross-band, and reddish flush on its outer edge are diagnostic. Undersides are pinkish brown, and fringes boldly chequered. Cross-bands are quite variable in shape, and are often joined in trailing half. **Similar species** Treble-bar and Lesser Treble-bar are much larger, with less jagged outer cross-band, and brown streak near forewing tip instead of reddish flush. **Flight season** One generation. Jul–Sep. Flies readily if disturbed on warm days, even in overcast weather. Active from dusk and visits flowers. Comes regularly to light. **Life cycle** Overwinters as an egg. Larva late Apr–Jun. Pupates in a cocoon among plant debris. **Larval foodplants** Bilberry, Cowberry and Cranberry, feeding on the flowers and leaves. **Habitat** The open, wetter parts of damp moorland, heathland and raised mosses. **Status and distribution** Resident. Nationally Scarce B. Widespread, quite well

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

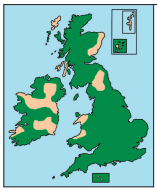
distributed, locally frequent and probably under-recorded in northern and central Scotland, including the Hebrides, Orkney and Shetland. More local in the Central Belt and southern Scotland, and in northern England and the north Midlands on remnant bogs and mosses south to mid-West Yorkshire, Staffordshire (Chartley Moss and formerly Chorlton Moss) and Shropshire (Whixall, Fenn's and Bettisfield Moss NNR). Considered vagrant on Man, with one record, in 1939. Rare in Ireland; recorded from Co. Mayo in 2007, with historical records from central counties and a single locality in Co. Tyrone, Northern Ireland.

Treble-bar plate 24

Aplocera plagiata plagiata (L.)

Common 70.192 (1867)

ssp. *scotica* (Rich.)
Common



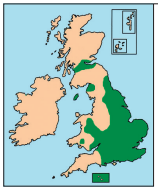
Field characters FW 19–22mm. On the grey, boldly banded ssp. *plagiata*, the narrow basal cross-band on forewing is angled slightly obtusely or at 90° near leading edge, and this angle is usually rounded. Also, tip of abdomen is pointed in male, due to the shape of the claspers. In ssp. *scotica*, ground colour of forewing is bluish grey. **Similar species** See Lesser Treble-bar (very similar) and Purple Treble-bar, also Manchester Treble-bar. **Flight season** Two generations in the southern half of Britain, May–Jun and late Jul–Sep. One generation in northernmost counties of England and in Scotland, Jun–early Sep. Easily disturbed by day. Flies from dusk and comes to light, usually in small numbers. **Life cycle** Overwinters as a larva. Larva Sep–May and late Jun–early Aug in the south, Aug–Jun in the north. Pupates underground. **Larval foodplants** St John's-worts. **Habitat** A wide range, including calcareous grassland, heathland, moorland, woodland rides, field margins, disused quarries, sand-dunes, soft-rock sea-cliffs and gardens. Especially frequent in hot, dry, well-drained open habitats. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout mainland Britain, also on Man, in Ireland, the Hebrides and Orkney. Rare in the Channel Islands.

Detail of *Aplocera* abdomens.

Lesser Treble-bar plate 24

Aplocera efformata (Guen.)

Common 70.193 (1868)



Field characters and similar species FW 16–19mm. Very similar to Treble-bar, but on average slightly smaller and generally with less intense dark cross-bands, and tip of abdomen is blunt in both sexes. Claspers of male, viewed from below, are short and bent inwards. Usually, angle of narrow basal cross-band is slightly acute and angle is quite sharp. However, on some the angle is very close to 90°, when other features must be taken into consideration. Sometimes the two central cross-bands are broadly merged, or less often faint. Single examples of the rare f. *fimbriata* Cock., lacking bold cross-bands, have been found in Hampshire, Hertfordshire and Buckinghamshire, and most recently in Northamptonshire (1991) and Oxfordshire (1993 and 1999). **Flight season** Two generations. May–Jun and Aug–Sep. Easily disturbed by day. Flies from dusk and comes to light in small numbers. **Life cycle** Overwinters as a larva. Larva Sep–May and late Jun–early Aug. Pupates underground. **Larval foodplants** St John's-worts. **Habitat** A wide range, including calcareous grassland, woodland rides, sand-dunes, sea-cliffs, disused quarries, field margins and gardens. **Status and distribution** Resident. Common. Largely restricted to the southern half of Britain. Well distributed in central southern and south-eastern England (except on the Wealden clays), most of the Midlands, through Yorkshire to Northumberland. Very local in Wales, Man and west of the Pennines to Cumbria. In Scotland, locally frequent around the Firth of Forth (especially on bings) and found locally further west, and north to Angus. Rare on Jersey and Alderney.

Purple Treble-bar plate 24

Aplocera praeformata (Hb.)

Suspected rare immigrant 70.194 (1869)

Field characters and similar species FW 20–25mm. Larger than Treble-bar and Lesser Treble-bar, and forewing more heavily marked, with inner and outer central cross-band often conspicuously blackish in leading half, a short brown bar before inner central cross-band and a larger brown mark near wing tip. Angle of basal cross-band is pointed and acute. **Flight season** In mainland Europe, one or two generations, Jun–Sep or Oct. **Larval foodplants** St John's-worts. **Habitat** A wide range of open, usually fairly dry places. **Status and distribution** Suspected rare immigrant. Two recognised British records, one from Chinnor on the Oxfordshire–Buckinghamshire border, in 1919, the other from Lawrenny Park, Pembrokeshire, in 1946. In mainland Europe, widespread, from Spain and Portugal to Sweden, including parts of France and Belgium.

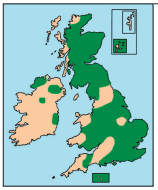
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Streak

plate 24

Chesias legatella ([D. and S.])

Common 70.195 (1864)



Field characters FW 17–19mm. Long, pale streak in leading half of rounded, tapering forewing, roughly triangular or elliptical central mark, and tented resting posture are all diagnostic. Ground colour of forewing varies from dark brownish grey to lighter grey. **Similar species** See Broom-tip, which is similar in shape and resting posture, but lacks the pale streak and flies earlier in the year. **Flight season** One generation. Sep–early Nov. Flies at dusk and later comes to light, often a considerable distance from the nearest known foodplant. **Life cycle** Overwinters as an egg on the foodplant. Larva May–Jun. Pupates underground. **Larval foodplants** Broom. Also found recently on Tree Lupin. Use of other related plants may explain some records of the adult. **Habitat** Most frequent on heathland, moorland and in open woodland. Also hedgerows, scrubby embankments, suburban gardens and dune systems. **Status and distribution** Resident. Common. Widely but patchily distributed in mainland Britain. Well distributed and locally frequent on sandy or heathy ground from south-east Dorset eastwards to south-east England, the south-east Midlands and in East Anglia. Very local or absent from large areas of chalk and clay (although sometimes occurring locally in gardens and roadsides in these areas), and notably from south-west England, through Wiltshire, Gloucestershire and Oxfordshire. More widespread further north in most of the Midlands, eastern and mid-Wales, northern England and in mainland Scotland, reaching Caithness and Orkney but not the extreme west or most of the Western Isles. Local on Man. Recorded from a number of sites in the eastern part of Northern Ireland, also Cos. Donegal, Louth and Wicklow. Local in the Channel Islands.

Broom-tip

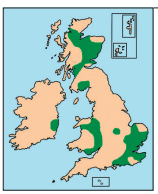
plate 25

Chesias rufata rufata (Fabr.)

Nb 70.196 (1865)

ssp. *scotica* (Rich.)

Nb



Field characters FW 14–16mm. Diagnostic features of ssp. *rufata* are a large black comma-mark, which forms leading half of a narrow dark central cross-band, and a pale reddish-brown band beyond it. Forewing rather rounded and tapering, grey, diffusely banded with pale brown. Markings vary little, and ground colour varies slightly. Ssp. *scotica* has a bluish-grey forewing ground colour and markings are somewhat stronger. **Similar species** See Streak. **Flight season** One generation, often protracted. Apr–Jul. Sometimes found at rest by day on posts and after dark on the foodplant. Comes to light. **Life cycle** Overwinters as a pupa underground, often for two winters in captivity. Larva Jul–Sep. **Larval foodplants** Broom. **Habitat** Heathland, breckland, heathy commons, open woodland, scrub, moorland and rocky stream-sides. Occasionally where Broom is planted to stabilise embankments, such as on roadsides and railway lines, but usually associated with large and long-established stands, and by no means found wherever the plant grows. No evidence yet of colonisation of gardens and suburban habitats, unlike the closely related Streak. **Status and distribution** Resident. Nationally Scarce B but under-recorded, especially in Scotland. Ssp. *rufata* occurs very locally in southern and south-east England, from Hampshire (New Forest), a few sites in Surrey, formerly in Sussex, and more extensively in Kent and the coastal belt of Essex and Suffolk. Also in Norfolk (mainly in the Brecks), and recorded from a few sites in Bedfordshire (e.g. Sandy) and elsewhere in the south-east Midlands. Recorded very locally in Glamorgan and Monmouthshire, Gloucestershire near the Severn, and in the west Midlands from Gloucestershire to Cheshire. Also from scattered localities from Devon and Cornwall, Wales, Cumbria and Beltingham Gravels, Northumberland (1983). Formerly from an isolated site in Nottinghamshire (until 1987). Rare in Ireland and known (since 2003) only from Cos. Wicklow and Wexford. Occasional on Jersey. Rare on Guernsey. Ssp. *scotica* is local in Scotland, in the south-west, central areas and more extensively further north, mainly in the north-east and central Highlands.

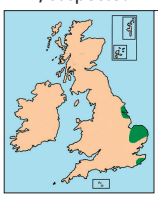
Larva of Broom-tip.

Grey Carpet

plate 25

Lithostege griseata ([D. and S.])

RDB; suspected immigrant 70.197 (1871)



Field characters FW 14–16mm. Unmistakable. The almost plain, pale grey, rather pointed forewing has a very fine blackish line on outer edge, white fringes and sometimes a faint, narrow outer cross-band. Shows little variation. **Flight season** One

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

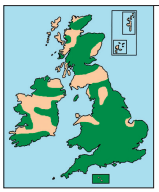
generation. Late May–early Jul. Occasionally disturbed by day. Comes to light from dusk onwards, sometimes in numbers, and can be seen on the wing around the foodplant as darkness falls. Often disperses from suitable habitat. **Life cycle** Overwinters as a pupa, in a cocoon usually in sandy soil, sometimes for two winters. Larva late Jun–Aug, usually fully grown by early Aug. Easily swept by day. **Larval foodplants** The seedpods of Flixweed. A report from Treacle-mustard is probably the result of plant misidentification; larvae found on Flixweed are not inclined to feed on Treacle-mustard if offered it. **Habitat** Field margins, agricultural set-aside and fallow fields, roadside verges, disturbed ground on breckland heaths and in newly established breckland conifer plantations. The foodplant requires frequent soil disturbance to persist. **Status and distribution** Resident and suspected immigrant. Red Data Book species. Breeds very locally in the Breckland of East Anglia; currently breeding in good numbers in at least five localities and recorded elsewhere in Norfolk, as either strays or immigrants. Recorded seven times outside Breckland, all at east coast locations, as suspected immigrants or internal migrants, including singletons at light-traps at Bradwell-on-Sea, Essex, in 1995; Skidbrooke, Lincolnshire, on 31 May 2002; Spurn, Yorkshire (18km to the north), on 7 Jun 2002; and at Holme-next-the-Sea, Norfolk, on 8 Jun 2002.

Seraphim

plate 25

Lobophora halterata (Hufn.)

Local 70.198 (1879)



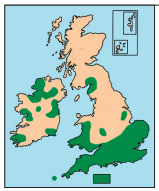
Field characters FW 12–15mm. Diagnostic feature is a dark grey cross-band near base of broad, rounded forewing, present on even the most obscurely marked examples. Shows considerable variation, and plain forms are sometimes tinged with creamy buff. A peculiarity of this species and also Small Seraphim is that in the male, the rather small hindwing is divided, so that there is a long, doubly folded lobe along trailing edge, attached only to wing near base, almost like an extra, rudimentary wing, and looking somewhat like the haltere of the Diptera to the naked eye. Its function is unclear, but it is present in other closely related species. **Similar species** Early Tooth-striped is usually larger, with less rounded, more tapering forewing (in male), and any dark basal cross-bands are either very narrow or inconspicuous. **Flight season** One generation. May–Jun. Rests by day on tree trunks, from where it can sometimes be disturbed. Flies from dusk. Comes to light, sometimes in fair numbers. **Life cycle** Overwinters as a pupa, in a cocoon formed just beneath the ground. Larva late Jun–Jul. **Larval foodplants** Aspen, Black-poplar and occasionally cultivated poplars. **Habitat** Broadleaved woodland and poplar plantations. **Status and distribution** Resident. Local. Fairly well distributed in England north to Lancashire and Yorkshire. Widespread but generally rather local in the remainder of mainland Britain, to Caithness and Sutherland, on Man and in Ireland. Local in the Channel Islands.

Small Seraphim

plate 25

Pterapherapteryx sexalata (Retz.)

Local 70.199 (1882)



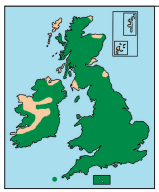
Field characters FW 9–12mm. Diagnostic feature of this delicately banded grey and white moth is the broad grey central cross-band on broad forewing, paler in trailing half, with a small but conspicuous black central spot situated close to its inner edge. Like related species, hindwing is small in male, with a lobe along trailing edge (see also comments under Seraphim). Shows little variation, but sometimes with brownish basal, inner and outer central cross-lines. **Flight season** Two generations in the southern half of England, May–Jun and Jul–early Aug. One generation north of the Midlands and in Ireland, Jun–Jul. Flies over the foodplant at dusk and later comes to light. Usually seen in small numbers, but sometimes quite plentiful. **Life cycle** Overwinters as a pupa, in plant debris or moss. Larva mid-Jun–mid-Jul and mid-Aug–mid-Sep. Early Jul–mid-Aug in the north. **Larval foodplants** Sallows. Also recorded on White Willow. **Habitat** Damp broadleaved woodland, scrub, fens and other marshy places. **Status and distribution** Resident. Local. Quite well distributed in most of England north to a line roughly from the Severn Estuary to the Wash, and in most of Wales. Very local in the west Midlands and Lincolnshire. Apparently only historical records from most of northern England, but very local and scarce in Cumbria and in south-west Scotland. Widespread but local in Ireland. Local in the Channel Islands.

Yellow-barred Brindle

plate 25

Acasis viretata (Hb.)

Local 70.200 (1883)



Field characters FW 10–14mm. Quite distinctive. Although green when freshly emerged, this moth rapidly fades to yellowish green. Most examples have a distinct broad, blackish-grey central cross-band, usually with a green component. On some, this is reduced to a number of fine, wavy cross-lines, with short dashes on veins. Male has a small lobe on hindwing. **Similar species** See the much rarer Barred Carpet, which has a dark forewing base and thorax. **Flight season** Two generations from the Isle of Wight north to Co. Durham and in Ireland. May–Jun and late Jul–early Sep, the second generally more numerous. Further north, the second generation is much smaller or absent. Rests on tree trunks by day. Flies from dusk and comes to light quite regularly, but in small numbers. **Life cycle** Overwinters as a pupa. Larva Jun–

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

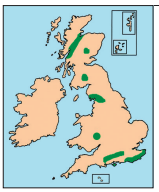
Jul, and again in Sep–Oct in the south. **Larval foodplants** The leaves, flowers and buds of Holly, Ivy, Wild Privet, Dogwood, Guelder-rose and Hawthorn. **Habitat** Broadleaved woodland, hedgerows, parkland and gardens. **Status and distribution** Resident. Local. Well distributed in England, Wales, Ireland and the Channel Islands. Formerly very local in northern England, Man and western Scotland, but has increased and spread north and east since the 1990s, and is now widespread and recorded north to Caithness and Sutherland, including the Inner Hebrides.

Barred Tooth-striped

plate 25

Trichopteryx polycommata ([D. and S.])

Na 70.201 (1880)



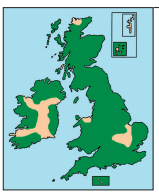
Field characters FW 14–17mm. Forewing light to dark grey-brown. Diagnostic feature is brown and blackish central cross-band, elbowed and divided in two in leading half of rounded, tapering forewing. This pattern shows little variation, but cross-band varies in intensity and width. Male has a small lobe on hindwing. **Flight season** One generation. Mar–Apr in the southern half of England, Apr–May in northern England and Scotland. Elusive, but can be found at rest on foodplants and flitting about after dark. Comes to light in small numbers. **Life cycle** Overwinters as a pupa, in an underground cocoon. Larva mid-Apr–early Jun. **Larval foodplants** Wild Privet and Ash. Accepts Garden Privet, Lilac and Honeysuckle in captivity. **Habitat** Open scrub, especially on chalk downs. Also hedgerows, open woodland, and rides and edges of woods. **Status and distribution** Resident. Nationally Scarce A. Very local, even within stronghold areas. In England, these are on the chalk of Dorset, northern Hampshire, Wiltshire, the South Downs in the southern half of Sussex and Kent, in Breckland in East Anglia, and on limestone in south Cumbria. Recorded from two sites on the Isle of Wight, and there are older records from scattered sites through the southern half of the Midlands. Found at single sites in Herefordshire and in west Yorkshire, at Grass Wood, Malham. In Scotland, centred on the Great Glen, Inverness-shire, extending from near Beauly, near Inverness, to Mull and Argyll. Isolated colonies known in Perthshire and Dumfriesshire.

Early Tooth-striped

plate 25

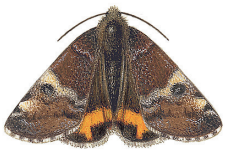
Trichopteryx carpinata (Borkh.)

Common 70.202 (1881)



Field characters FW 13–18mm. Quite variable, but usually distinctive among moths flying in spring. Broad, somewhat rounded forewing (more tapering in male) is most often pale grey, but can be darker, or brownish grey, or greenish grey, sometimes with a delicate pink flush along leading edge when freshly emerged. Central cross-bands are usually faint and pale, but in f. *fasciata* Prout they are bold and dark, and sometimes broadly merged. This form is frequent in Wales and Scotland. Male has a small lobe on hindwing. **Similar species** See Seraphim. See also Mottled Grey. **Flight season** One generation. Late Mar–early May. Can be found at rest on tree trunks and posts by day. Flies from dusk. Visits sallow catkins. Comes to light, sometimes plentifully. **Life cycle** Overwinters as a pupa. Larva May–Jul. **Larval foodplants** Sallows, birches, Honeysuckle and Alder. **Habitat** Broadleaved woodland, scrubby heathland and fens. **Status and distribution** Resident. Common. Quite well distributed and fairly frequent and found throughout most of Britain, including the Hebrides and Orkney, Man, Ireland and the Channel Islands.

Archiearinae
Orange underwings



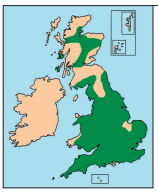
Orange Underwing

Orange Underwing

plate 25

Archiearis parthenias (L.)

Local 70.203 (1661)



Field characters and similar species FW 16–19mm. A day-flying moth that appears orange-brown in flight, and which should be netted for examination to distinguish it from the very similar Light Orange Underwing, particularly if mature Aspen is present. Those netted are usually males, but both species fly high, often out of reach. Antennae of male Orange Underwing are finely serrated, whereas those of Light Orange Underwing are slightly feathered. On underside of hindwing, Light Orange Underwing has an unbroken dark band around the margin, not or only slightly indented at middle. On Orange Underwing, dark outer band is strongly indented or broken centrally by orange. Forewing of Orange Underwing is generally longer, usually with a stronger white central cross-band (especially male). Their flight periods vary slightly with each season, but Orange Underwing starts flying two weeks earlier. Male Vapourer is another small orange-brown moth that flies in sunshine

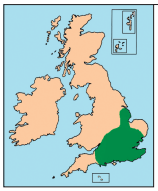
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

around birch trees, but not until they are well into leaf. **Flight season** One generation. Mar–Apr. Usually seen flying in sunshine high around the tops of birch trees before they come into leaf. They fly lower as the afternoon progresses, and bask on the ground and drink at puddles. Copulating pairs can be knocked out of trees in late afternoon. **Life cycle** Overwinters as a pupa. Larva Apr–Jun. The eggs are laid on twigs and hatch in time for the larvae to begin feeding on the catkins in Apr, before completing development on the young leaves by night, making a spinning between them by day. Pupates in the surface of soft bark. **Larval foodplants** Downy Birch and Silver Birch. Also reportedly on Rowan. **Habitat** Open woodland and birch scrub on heathland, embankments and other rough, open ground. **Status and distribution** Resident. Local. Widespread and locally frequent over much of England and Wales, and in Scotland mainly in the Highlands from Aberdeenshire and Perthshire to the west coast and north to East Ross, in the Central Belt and locally in the south-west.

Light Orange Underwing plate 25

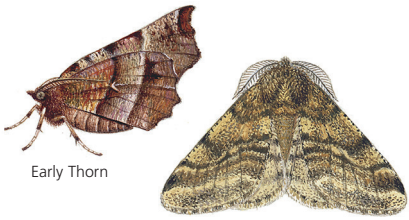
Boudinotiana notha (Hb.)

Nb 70.204 (1662)



Field characters and similar species FW 15–17mm. Very similar in appearance and habits to Orange Underwing. See under that species for differences. **Flight season** One generation. Late Mar–Apr, occasionally early May. Flies high around Aspen in sunshine, or up from puddles on paths in open woodland. **Life cycle** Overwinters as a pupa, in a cocoon spun into soft bark, sometimes for two or three years. Larva Apr–Jun. Feeds at night and spins a shelter among the leaves by day. It is not clear if they start feeding on young catkins, but the moths are associated with mature or over-mature catkin-bearing trees, rather than low and shaded Aspen growth. **Larval foodplants** Aspen. Probably not other poplars, which often produce catkins at slightly different times. **Habitat** Open woodland in which mature catkin-bearing Aspen are frequent; usually ancient woods. **Status and distribution** Resident. Nationally Scarce B. Largely restricted to England south of the Wash and east of the Severn Estuary, where it is widespread but local and seldom as numerous as the Orange Underwing. There are some strong populations at its northernmost limits in Lincolnshire, but it is apparently absent from most of East Anglia, the north Midlands, Yorkshire and the Wye Valley, Monmouthshire, with only very old records from these areas.

Ennominae
Thorns, beauties, umbers and allies



Early Thorn

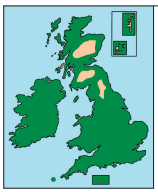
Brindled Beauty

Engrailed

Magpie plate 25

Abraxas grossulariata (L.)

Common 70.205 (1884)



Field characters and similar species FW 18–25mm. The large size of this species separates it from all other black and white geometrid moths except Clouded Magpie, which lacks heavy black spots around borders of wings and black central band across forewing. Extent of black and yellow markings can vary from almost all black to almost all white wings, but such extreme forms are rare in the wild. See also Small Magpie (pages 16–17). **Flight season** One generation. Late Jun–Aug. Comes to light, usually in small numbers in southern Britain. Sometimes found at rest flat on Bramble and other low foliage. In the Hebrides, large numbers fly up from roosting in heathers by day. Plays 'dead' if captured and handled. **Life cycle** Overwinters as a small larva on the foodplant. Larva late Aug–mid-Jun. Pupates in a flimsy cocoon on the plant, with the yellow and black pupa easily visible through it. **Larval foodplants** Blackthorn, Hawthorn, Midland Hawthorn, Hazel, Garden Privet, Black Currant, Red Currant, Gooseberry, Spindle, Evergreen Spindle, Bramble and cultivated *Sedum*. Also Heather in northern Scotland. **Habitat** Most abundant on northern heather moorland. Fairly frequent in gardens and allotments, hedgerows and woodland. **Status and distribution** Resident. Common. Throughout England, Wales, Man, the Channel Islands and Ireland. Well distributed in most

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

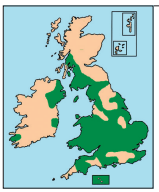
of Scotland, including the Western and Northern Isles, but apparently absent from a large area of the central Highlands. Undergoes short-term cycles of local abundance and rarity. In England and Wales often occurs at rather low density and is probably less frequent than 30 years ago. In north-west and northern Scotland, where it is most abundant, large increases in population density and range expansion have been reported in recent years. This includes a mass daytime migration into north-east Scotland over two hours on 12 Jul 2007, when an estimated swarm of 20,000 flew ashore from the Moray Firth, at the Lein SWT NR, Morayshire, which resulted in local colonisation. It has also colonised Orkney extensively and is now regular over a wide area in Shetland.

Clouded Magpie

plate 26

Abraxas sylvata (Scop.)

Local 70.206 (1885)



Field characters FW 18–22mm. Rests with wings partly spread, exposing blurred black and yellow blotches on hindwing as well as those on forewing near thorax and at trailing corner. Grey markings along leading edge are limited, and forewing tip is white. **Similar species** See Magpie. **Flight season** One generation. Late May–Aug, occasionally seen in the autumn. Sometimes seen by day resting flat on the upper side of low foliage. Comes well to light, sometimes in numbers, usually settling around light-traps rather than inside them. **Life cycle** Overwinters as a pupa underground. Larva mid-Jul–early Oct. **Larval foodplants** Confirmed from Wych Elm, English Elm and the cultivated Japanese Golden Elm. **Habitat** Mainly woodland. Sometimes parkland and scrub. **Status and distribution** Resident. Local. Widespread but generally local in England, Wales and Man, and in south-west Scotland north to Argyll. Scarce in some of the southernmost English counties, such as Dorset and Sussex, and here it is suspected that some records are of immigrants. However, the apparent patchiness of the distribution may reflect upon the cumulative effect of Dutch elm disease and records of single individuals may indicate the presence of small, very localised colonies. Local in Ireland, and mainly found in the eastern half of Northern Ireland and south to Cos. Meath, Wicklow, Wexford and Kerry. Rare in the Channel Islands. One on Guernsey in 1983 and one in 2006.

Clouded Border

plate 26

Lomaspilis marginata (L.)

Common 70.207 (1887)

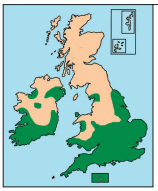
Field characters FW 11–14mm. Distinguished by combination of its small size and the irregular brownish-black borders on both hindwing and forewing. Extent of these markings varies, sometimes extending with extra spots or a band into centre of wings. Rests with wings fully spread. **Flight season** One generation. From mid-May, but mainly Jun–early Aug. Occasional second-generation individuals, from Aug onwards, have been reported as far north as southern Scotland. Often disturbed from foodplant by day. Flies from dusk. Comes to light, sometimes in large numbers. **Life cycle** Overwinters as a pupa underground. Larva Jul–Sep. **Larval foodplants** Aspen, poplars, sallows and willows. Also reported from Hazel. Larvae have been obtained from mature trees, low sucker growth and coppice regrowth. **Habitat** Woodland, carr, wetlands, heathland and poplar plantations. **Status and distribution** Resident. Common. Very well distributed and often abundant throughout England, Wales, Man, Ireland, the Channel Islands and much of Scotland, reaching the Outer Hebrides and Orkney.

Scorched Carpet

plate 26

Ligdia adustata ([D. and S.])

Local 70.208 (1888)



Field characters FW 12–14mm. The blackish basal patch and broad black outer cross-band, both with blue-grey scales when freshly emerged, giving a burnt or scorched effect on creamy-white forewing, make this moth unmistakable. Shows very little variation. **Flight season** Apr–early Sep, probably in two overlapping generations. May be disturbed from bushes by day. Flies from dusk and comes to light, usually in small numbers. **Life cycle** Overwinters as a pupa. Larva Jun–Jul and again late Aug–Sep in the south, early Jul–Aug in the north. Often seen at night, hanging from foodplant on a short silk thread. **Larval foodplants** Spindle. **Habitat** Broadleaved woodland, scrub and hedgerows on chalk, limestone, clays and occasionally more heathy places; also in gardens. **Status and distribution** Resident. Local. Well distributed and fairly frequent in England north to the Wash and the west Midlands. Local in Wales and further north to Lancashire and Yorkshire. Local in Ireland and in the Channel Islands.

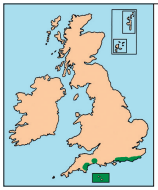
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Ringed Border

plate 26

Stegania cararia (Hb.)

Immigrant 70.209 (1888b)



Field characters FW 10–12mm. Wings straw yellow, extensively speckled with brown, and with brown markings. Fore- and hindwing have an elongated dark central spot and an undulating dark outer cross-line, with the points or extensions reaching, or almost reaching, outer edge. Area beyond this line is often less heavily speckled. **Flight season** One generation in mainland Europe, Jun–Jul. **Larval foodplants** Aspen and Alder. **Habitat** Damp woodland. **Status and distribution** Rare immigrant. Several recorded in the Channel Islands, on Jersey: one in a Rothamsted Insect Survey light-trap at Trinity on 1–3 Aug 1981, one at light at Vallée des Vaux on 9 Jun 2006 and one at Mont au Prêtre on 27 Jul 2006. One on Alderney on 26 Jul 2008, one on Jersey in 2009 and one on Guernsey in 2011. One at Merriot, Somerset, on 1 Jul 2009 and one at Southsea, Hampshire, on 1 Jul 2010. In 2014, singles at Winchelsea Beach and Ringmer, both East Sussex, on 7 Aug, and near Bovey Tracey, Devon, on 25 Jul. In 2015, one on 3 Jul at Brede Valley, East Sussex. Widespread in central Europe, extending to northern France.

Dorset Cream Wave

plate 26

Stegania trimaculata (Vill.)

Immigrant 70.210 (1888a)

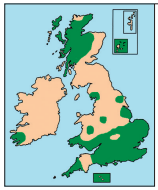
Field characters FW 10–13mm. Fairly unmistakable. Forewing rather angular, with two fine, dark cross-lines, both angled near leading edge, where they are thickened to form spots, with a further dark spot closer to wing tip. One regular form is rather plain with creamy-white ground colour. Form *cognataria* Led., also frequent, is straw yellow with extensive brown blotching and speckling. Hindwing has a single curved outer central cross-line. Antennae are feathered in male. **Flight season** Two generations in mainland Europe, Apr–Jun and Jul–Aug. **Larval foodplants** Poplars, in Jun and Sep. **Status and distribution** Rare immigrant. Three British records. One at light at Stowborough, Dorset, on 13 Jun 1978, one at Woodford Green, Essex, on 2 Jul 2006 and one at Southwell, Portland, Dorset, on 11 May 2008. Mainly southern European but recorded from Belgium and the Netherlands.

Peacock Moth

plate 26

Macaria notata (L.)

Local 70.211 (1889)



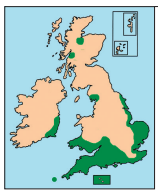
Field characters and similar species FW 14–16mm. The black paw-print mark beyond centre, dark-edged concavity in leading half of outer edge of whitish, grey-brown speckled forewing, and strongly pointed hindwing readily distinguish this moth from all but the very similar Sharp-angled Peacock (for differences see under that species). **Flight season** Two generations in southern Britain, late May–early Jul and late Jul–Aug. One generation in Scotland, late May–Jul. May be disturbed from bushes by day. Flies from dusk and comes to light in small numbers. **Life cycle** Overwinters as a pupa among plant debris. Larva late Jun–early Aug and again in Sep in southern England. **Larval foodplants** Birch. Also reported from sallow. **Habitat** Open broadleaved woodland with birch scrub, often on chalk, and wooded heathland. **Status and distribution** Resident. Local. In Britain, established in two widely separated areas. Very well distributed in southern and south-east England (especially in areas with extensive heathland), from Dorset to Essex, and especially in Kent. Widespread in East Anglia, the south-east Midlands, Gloucestershire and southernmost parts of Wales. Very local in the rest of Wales and the west Midlands (but still frequent at one site in Staffordshire), north to Roudsea Wood, south Cumbria and Yorkshire. In Scotland, well distributed in the Highlands and expanding. Absent from the south and most of the north-east. One on Orkney, in 2014. In Ireland, local in the south-west, in Cos. Kerry and Cork. Local in the Channel Islands.

Sharp-angled Peacock

plate 26

Macaria alternata ([D. and S.])

Local 70.212 (1890)



Field characters and similar species FW 13–15mm. Very similar to Peacock Moth, and often confused with it. Forewing usually has a distinct grey cross-band running through paw-print mark, continuing across hindwing (although some moths are extensively grey, obscuring this band). Concavity, including fringes, on outer edge of forewing is usually very dark, blackish (lighter and brownish in Peacock). Paw-print mark is often smaller and less well formed, and brown blotch on leading edge is often narrower and more tapered (roughly rectangular on Peacock). This is often clearer on the underside. On hindwing, fine dark line around edges is usually well broken or consists of dots (usually continuous in Peacock). For worn or atypical moths,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

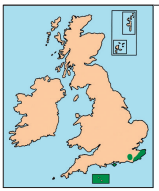
it may be necessary to examine genitalia to be certain of their identity. Rarely, the paw-print mark is absent (f. *immacularia* Dannehl). **Flight season** Two generations. Late May–mid-Jul and Aug. Flies from dusk and comes to light, sometimes in fair numbers. **Life cycle** Overwinters as a pupa, in a cocoon formed just beneath the ground. Larva Jul and Sep. **Larval foodplants** Sallows, willows, Blackthorn, Sea-buckthorn and Alder. **Habitat** Open broadleaved woodland, scrubby heathland and well-vegetated coastal sand-dunes. **Status and distribution** Resident. Local. Well distributed and fairly frequent in south-west and southern England, from Cornwall to Hampshire and the Isle of Wight, more locally north through Wiltshire to North Somerset, Gloucestershire and Worcestershire, and more extensively in south-west and south Wales. Extends, chiefly on or near the coast, through Sussex and Kent, East Anglia, Lincolnshire and into Yorkshire, where it increased greatly in the 1990s and reached Flamborough Head but has reportedly declined since 2004 and retreated to Spurn. Resident very locally in northern Britain, in south Cumbria at Roudsea Wood, Witherslack and Lyth Valley, and in the Scottish Highlands, in Inverness-shire and Argyll. In Ireland, found in Cos. Wicklow, Wexford and Waterford. Widespread in the Channel Islands.

Dusky Peacock

plate 26

Macaria signaria (Hb.)

Resident; Immigrant 70.213 (1891)



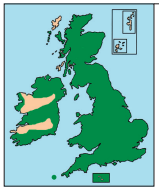
Field characters and similar species FW 13–14mm. Not dissimilar to Peacock and Sharp-angled Peacock, but often heavily speckled with dark scales. Has only very slight concavity in leading half of outer edge of forewing, and hindwing is less pointed. Dark mark on forewing is rather square or irregular, but sometimes vaguely resembles a paw-print. See also Tawny-barred Angle. **Flight season** One generation. Has been recorded in Britain late May–end Jul. In mainland Europe can be disturbed from branches of the foodplant by day. Flies from dusk and comes to light. **Life cycle** Overwinters as a pupa. Larva Aug–Sep. **Larval foodplants** The needles of various coniferous trees, including Norway Spruce and Scots Pine. **Habitat** Coniferous woodland and plantations. **Status and distribution** Resident (recent colonist) and immigrant. Uncommon, mainly on non-native foodplants. At least 19 (13 up to 2000) presumed immigrant examples have been recorded, all at light, from southern and south-eastern England and East Anglia (Isle of Wight, Sussex, Kent, Hertfordshire and Norfolk), since the first in Essex, in 1970, and one recently in Surrey (2010). In 2005, a resident population was discovered (>100 seen) in Covert Wood, near Canterbury, Kent. Also resident locally in south-east Kent. Recorded once in the Channel Islands, one on Alderney in 2006.

Tawny-barred Angle

plate 26

Macaria liturata (Cl.)

Common 70.214 (1893)



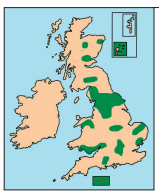
Field characters and similar species FW 14–17mm. A fairly distinctive, usually greyish-brown moth. Diagnostic features are light orange-brown outer cross-band on both fore- and hindwing, slight concavity in leading half of outer edge of forewing, and slightly pointed hindwing. Lacks the dark blotch or paw-print mark beyond centre of forewing present in Dusky Peacock, Sharp-angled Peacock and Peacock. Form *nigrofulvata* Collins is dark brownish grey, apart from the orange-brown cross-bands. **Flight season** Two distinct generations in some parts of southern Britain, mid-May–mid-Jun and Aug–Sep, elsewhere probably one protracted generation. In Scotland, late Apr–mid-Sep, with a peak in early Jul. Sometimes seen at rest on leaves of Hazel and other understorey plants. Readily disturbed by tapping conifer branches. Comes to light, sometimes in very large numbers. **Life cycle** Overwinters as a pupa, among fallen conifer needles or below ground. Larva late Jun–early Aug and Sep–early Oct in southern Britain, mainly Jul–Aug in the north. **Larval foodplants** Mainly Scots Pine and Norway Spruce, but also reported from Corsican Pine, Sitka Spruce, Japanese Red-cedar and Western Hemlock-spruce. **Habitat** Most abundant in conifer plantations, but occurs in most places where suitable conifers are native or planted, including urban situations. **Status and distribution** Resident. Common. Well distributed and often abundant throughout England, Wales, Man, mainland Scotland and some of the Hebrides. Widespread and locally frequent in Ireland. Local in the Channel Islands.

V-Moth

plate 26

Macaria wauaria (L.)

Local 70.215 (1897)



Field characters FW 14–17mm. Bold black 'V' on pale grey forewing is diagnostic. Three black markings are also conspicuous on leading edge, the middle one sometimes extending into a faint cross-band running through the 'V', and a brown smudge toward tip. Intensity of ground colour and markings varies, sometimes with a violet tinge. Rarely the wings are smoky grey (f. *vau-nigraria* Hatchett) or blackish brown (f. *fuscaria* Thunb.). **Flight season** One generation. Jul–Aug. Occasionally disturbed from the foodplant or seen on the wing at dusk. Comes to light, almost always in small numbers. **Life cycle** Overwinters as an egg on the foodplant. Larva mid-Apr–mid-Jun, pupating in a cocoon among the leaves of the foodplant.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

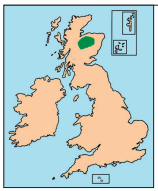
Larval foodplants Black Currant, Red Currant and Gooseberry, preferring the young shoots. **Habitat** Mainly gardens and allotments where the foodplants are grown. The extent to which 'pick-your-own' farms and other commercial crops are exploited needs investigation, but insecticidal sprays are sometimes used. **Status and distribution** Resident. Local. In steep decline, possibly because the foodplants are less frequently grown in gardens, and the use of insecticides by non-commercial growers has increased. However, in Yorkshire recent colonisation northwards and to higher altitudes, and loss from southern parts of the county suggests that climate change could be a major cause of the decline. Numbers in the Rothamsted Insect Survey light-trap network declined by 99% between 1968 and 2007. Formerly well distributed in most of England and Wales, and widespread in southern and eastern Scotland, and found on Orkney, but post-2000 records are very thin and scattered. It remains more widespread in the north Midlands and northern England, but even here is decreasing. Currently, the range still extends from southern England to Orkney. In Ireland, historical records are scattered very thinly but widely, from Co. Tyrone to Co. Kerry, but not seen since 1959. Rare in the Channel Islands.

Netted Mountain Moth

plate 26

Macaria carbonaria (Cl.)

RDB 70.216 (1895)



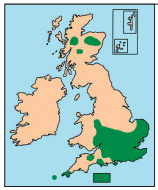
Field characters FW 10–11mm. Wings patterned with wavy, contoured blackish-brown cross-bands, running from leading to trailing edge, and dark speckling and dark veins, giving a somewhat netted effect. Varies from forms with substantial whitish frosting to smoky, almost completely black individuals. **Similar species** On small upland forms of the highly variable Common Heath (especially female), central bands on forewing converge or unite in trailing half, and male (usually larger) has more strongly feathered antennae. Black Mountain Moth is superficially similar, but stockier and slightly larger, with large hindwing. **Flight season** One generation. Late Apr–early Jun, varying with altitude and season. Active by day. Males are often seen flying in numbers on calm, sunny afternoons. In windy weather, walks or makes short hopping flights just above the vegetation. Visits flowers, including those of the larval foodplant. **Life cycle** Overwinters as a pupa, in a cocoon among mosses, lichens or plant debris on the ground. Larva late May–early Jul. **Larval foodplants** Bearberry. The small larvae eat only the young shoots. Appears not to accept the alternative foodplants stated in some previous works (Grey Willow and birches). **Habitat** Mountains and moorlands. **Status and distribution** Resident. Red Data Book species. Could prove to merit only Nationally Scarce A if systematically surveyed. Local, but probably under-recorded in the Scottish Highlands, mainly in Aberdeenshire, Inverness-shire and Moray, also Perthshire and old records from East Ross and West Sutherland. Occurs on several national nature reserves, including Morrone Birkwood and the Muir of Dinnet, Aberdeenshire.

Rannoch Looper

plate 26

Macaria brunneata (Thunb.)

Na; Immigrant 70.217 (1896)



Field characters FW 11–13mm. A distinctive small orange-brown moth, with deep wings and rather rounded forewing tips. Female is more strongly marked than male, with slightly narrower, more pointed wings. Both sexes have four darker red-brown cross-lines on forewing, although outermost is often incomplete and male often has a central dot. Intensity of colour varies and worn male can be pale, with weak markings. **Flight season** One generation. Late Jun–Jul. Male flies over the foodplant by day from just before noon until late afternoon. Easily disturbed from vegetation, even on dull days. Comes to light, sometimes in numbers. **Life cycle** Overwinters normally as an egg, not as a larva as stated in some previous works. Possibly pupae sometimes also overwinter, based on observations in captivity, where pupae have remained dormant for up to four years. Larva late Apr–late May, pupating just beneath the ground. **Larval foodplants** Bilberry. Possibly also Cowberry. **Habitat** Long-established native pine and birch woodland, with Bilberry ground cover. Also among birch regeneration and in more open areas. Prefers substantial growth of Bilberry and is vulnerable to overgrazing. **Status and distribution** Resident and immigrant. Nationally Scarce A. Quite widely and well distributed, and locally numerous, in central Scotland, from East Ross to Perthshire, Kincardineshire and Aberdeenshire. About 2,000 have been recorded as immigrants elsewhere in Britain, mostly singletons at light and mainly in south-east and southern England and East Anglia, but also west to Scilly, in the Channel Islands and north to south-east Scotland. The vast majority arrived in four successive seasons from 2008, culminating in the record of over 1,400 in 2011. These influxes coincided with population explosions of the moth on the Continent.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

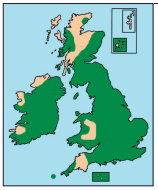
Latticed Heath

plate 26

Chiasmia clathrata clathrata (L.)

Common 70.218 (1894)

ssp. *hugginsi* (Baynes)
Ireland



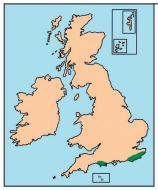
Field characters FW 11–15mm. Often lands and perches with wings partly raised, like a butterfly. Ssp. *clathrata* Crisp network effect, created by dark cross-lines and veins on upper- and undersides of wings, together with boldly chequered veins, is characteristic of the normal form. Width of bands varies greatly. In the infrequent f. *alboguttata* Fettig, most of wing area is dark brown. Other extreme variation is unusual but includes the rare f. *obsoletissima* Cock., which is creamy yellow and lacks dark cross-bands. Ssp. *hugginsi* has a striking, pure white ground colour. **Similar species** On Common Heath markings are less crisp, and it lacks dark veins. Also, male has strongly feathered antennae and the wings tend to be held flat. **Flight season** In southern Britain, probably two overlapping generations, May–Jun and Jul–Sep. One generation further north and in Ireland, late May or early Jun–Jul or early Aug. Active by day and often disturbed from low vegetation. Comes to light, occasionally in large numbers, especially near Lucerne fields or near the coast. **Life cycle** Overwinters as a pupa underground. Larva Jun–Jul and mid-Aug–Sep, or Jul–Aug where there is one generation. **Larval foodplants** Clovers, trefoils and Lucerne. **Habitat** Most abundant around Lucerne crops. Generally occurs in smaller numbers in open ground, including gardens, and ranging from calcareous grassland, sand-dunes and fens to acid heathland and moorland. Sometimes open woodland and derelict or unkempt urban sites. **Status and distribution** Resident and suspected immigrant. Common. Well distributed throughout most of southern Britain (although much more local in south-west England and Wales) and on Man. In Scotland, widespread in the south and Central Belt, and more local north to the Inner Hebrides, Argyll, Perthshire and Kincardineshire. Recently increased and spreading north, widely into the north-east and recorded very locally north to Caithness and Orkney. Locally frequent in the Channel Islands. Sudden light-trap catches of 100–200 per night near the east coast of England in late summer/autumn, especially in 2003 and 2004, suggesting large-scale local dispersal or immigration. Ssp. *hugginsi* is widespread in Ireland.

Tamarisk Peacock

plate 26

Chiasmia aestimaria (Hb.)

Immigrant 70.219 (1894a)



Field characters FW 11–14mm. Quite distinctive. Ground colour grey-brown. Distinguished by oblique blackish outer central cross-line, strongly angled in leading half, doubled or with dark band beyond it (sometimes diffuse), and continuing across centre of hindwing. Roughly triangular mark on leading edge at three-quarters from base. Dark central spots on both wings, and often a further one in outer half. Forewing very slightly hooked and outer edge with slight central bulge. Hindwing with scalloped margin and central point. Overall pattern varies little, but markings vary in strength. **Similar species** Other Peacock Moths (*Macaria* spp.) are similar in colour and wing shape, but have quite different markings. **Flight season** Two generations in mainland Europe, Apr–Jun and Aug–Sep. **Larval foodplants** Tamarisk. **Status and distribution** Rare immigrant and potential colonist. Ten British records. The first four were all on the coast of East Kent. Two in 2004, one on 16 Aug at Sholden, near Deal, and a female on 28 Sep at New Romney. One at light on 7 Aug 2006 at Greatstone, and one on 10 Sep 2008 at Folkestone. Subsequently recorded from East Kent (one in 2009), East Sussex (singles in 2008, 2010, 2012 and 2014) and once from Dorset (2013), all Aug–early Sep. In mainland Europe, mainly found in the south.

Frosted Yellow

plate 26

Isturgia limbaria (Fabr.)

Former resident, presumed extinct 70.220 (1899)

Field characters FW 13–15mm. Unmistakable. Wings rather rounded, orange-yellow with chocolate-brown borders, less pronounced in female. Extent of brown frosting varies, f. *fumata* Mathew being mostly smoky brown with an orange tinge. At rest, wings are brought together over back, like a butterfly, with hindwing showing strong speckling and white streaks, and sometimes appearing greenish. Male has feathered antennae. **Similar species** Bordered White is superficially similar on the underside, but is larger and shows dark cross-lines on hindwing. **Flight season** Two generations in southern Britain, May–early Jun and late Jul–Aug. Probably one generation in Scotland, from where the few surviving set specimens appear all to have been captured in Jun. Flies in sunshine. Readily disturbed from foodplant. **Life cycle** Overwinters as a pupa underground, sometimes for more than one year. Larva Jun and Sep. **Larval foodplants** Broom. **Habitat** Well-drained bushy places in sunny situations. Formerly quite numerous along a railway embankment near Colchester, Essex. Reported from Kent as 'not uncommon among high broom', suggesting that mature stands are favoured. **Status**

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

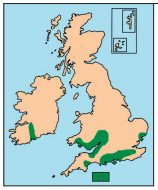
and distribution Former resident, presumed extinct. Always very local, in East Anglia and north and central Scotland. Last seen at Kelvedon, near Chelmsford, Essex, in 1914. Most records are from Suffolk during the 19th century, when it was seen in numbers at Stowmarket and reported around Needham, Barham and Ipswich. Also occurred very locally in north Kent but lost during the 1860s. A few were collected in Perthshire and Ross-shire, but these were little known and not mentioned in most of the standard works of the 19th and early 20th centuries.

Little Thorn

plate 26

Cepphis advenaria (Hb.)

Nb 70.221 (1901)



Field characters FW 14–17mm. Rests with wings held partly open up over back, somewhat like Purple Thorn. The small size, distinctive whitish and golden patterning, double-pointed hindwing, and greyish clouding and speckling are also diagnostic. Occasionally more reddish. A uniformly dark brown form with white fringes has been recorded (f. *fulva* Gillmer). **Flight season** One generation. Late May–Jun. Sometimes disturbed from foodplants by day. Female occasionally seen flying among Bramble in late afternoon. Comes to light in small numbers, often settling outside the trap. **Life cycle** Overwinters as a pupa underground. Larva late Jun–early Aug. **Larval foodplants** Recorded on Bilberry, but must have alternative foodplants because it occurs on sites without this plant. Bramble is accepted in captivity, and wild roses, Dogwood, Ash and sallows have also been proposed. **Habitat** Sunny, open woodland and low vegetation along the verges of rides. Sometimes in long-established scrub. Often on heavy, damp clay, sometimes lighter, heathy soils. **Status and distribution** Resident. Nationally Scarce B. Two main centres of distribution. One is centred on Hampshire, extending into east Dorset, Isle of Wight, south Wiltshire, Berkshire, West Sussex, extensively into Surrey and very locally in West Kent. It is known to have occurred more widely in Sussex and northwards into Kent in the past, but disappeared from East Sussex early in the last century, the last record being from Hastings in 1939. The other main centre is the area bordering the Bristol Channel, Severn and Wye, from north Somerset through Gloucestershire and Monmouthshire into Herefordshire. Scattered records, mainly of singletons, for example from Shropshire (1969), Bedfordshire (1981), Derbyshire (1922), Yorkshire (1958) and Essex (19th century) may indicate the former existence of isolated colonies. Singletons in mid-Jun 2006, at Ipswich, Suffolk, and at Maenporth, Cornwall, are first county records, possibly immigrants. Rare in Ireland, found very locally in Cos. Clare and Cork, with historical records from Limerick and Tipperary. Local in the Channel Islands.

Brown Silver-line

plate 26

Petrophora chlorosata (Scop.)

Common 70.222 (1902)

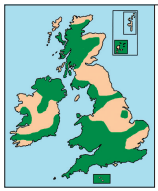
Field characters FW 15–18mm. Fairly unmistakable. Holds forewings flat, covering hindwings when at rest, like a noctuid. The two fairly straight silvery central cross-lines on forewing, edged with brown, and the dark central spot are constant features. Hindwing paler, with a single, similar cross-line. Varies slightly in size and colour (sometimes browner than illustration), and in prominence of cross-lines. **Flight season** One generation. May–Jun, from mid-Apr in the south. Frequently disturbed by day from among Bracken, often in numbers. Comes to light, sometimes in abundance. **Life cycle** Overwinters as a pupa underground. Larva mid-Jun–early Sep. **Larval foodplants** Bracken. **Habitat** Most places where the foodplant occurs, particularly woodland, heathland and moorland. **Status and distribution** Resident. Common. Widely and well distributed, and abundant in many places throughout England, Wales, the Channel Islands, Man and Ireland, and Scotland north to Caithness and the Outer Hebrides, and recorded on Orkney.

Barred Umber

plate 27

Plagodis pulveraria (L.)

Local 70.223 (1903)



Field characters FW 17–19mm. Jagged outer edge of dark brown central cross-band on the broad, dark-speckled, soft brown forewing is the most striking and diagnostic feature. Less obvious is uniquely red and gold freckled underside. Central cross-band contrasts more distinctly with ground colour in some individuals, varies slightly in shape and sometimes its outer edge is blurred. Some individuals have a pinkish or purplish tinge, while others are more greyish brown. **Similar species** See Barred Red. **Flight season** One generation. May–Jun. Possibly a very occasional second generation, including a small male at Monymusk, Aberdeenshire, on 9 Sep 2003. Comes to light, mainly male but occasionally female. **Life cycle** Overwinters as a pupa underground. Larva mid-Jun–mid-Aug. **Larval foodplants** Particularly Hazel, also Downy Birch, Silver Birch, some sallows and Hawthorn. **Habitat** Mainly ancient broadleaved woodland, including low Hazel growth in cracks in limestone pavement. **Status and distribution** Resident. Local. Well distributed, but not numerous, in south-west, south-east and southern England and in Wales. More thinly distributed in the Midlands, East Anglia and throughout northern England. Widespread in Scotland, but more so on the western

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

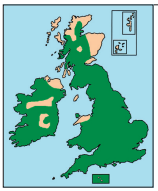
side and largely absent from the east. Reaches the Inner Hebrides, and recorded north to Caithness and Orkney. Widespread but local in Ireland. Local in the Channel Islands.

Scorched Wing

plate 27

Plagodis dolabraria (L.)

Local 70.224 (1904)



Field characters FW 16–19mm. Unmistakable. Trailing corners of both fore- and hindwing are darkened, as if scorched, and these marks are brought together at rest. The many fine, curved brown lines on forewing almost make wings look like they are in motion, and forewing shape, with slight cutaways at trailing corner and crumpled appearance, is distinctive. Shows little variation. Tip of male's abdomen is curled up at rest. **Flight season** One generation. Mid-May–late Jun or early Jul. Seldom seen by day, so possibly roosts in the tree canopy. Male is frequent at light. Female is rarely seen, but has been reported at sugar. **Life cycle** Overwinters as a pupa, in a cocoon on the ground. Larva late Jun–mid-Sep. **Larval foodplants** Mainly oaks, Downy Birch and Silver Birch. Also sallows. Sometimes Beech, Sweet Chestnut and probably Turkey Oak. **Habitat** Broadleaved woodland and scrub. Sometimes in parks and gardens if stands of large trees are present. **Status and distribution** Resident. Local. Well distributed and sometimes frequent throughout most of England and Wales. In Scotland, formerly local in the south, central and western areas north to West Inverness-shire, but has recently increased and expanded north through the central Highlands as far as East Sutherland. Widespread in Ireland and in the Channel Islands.

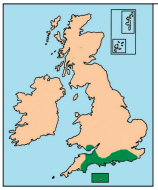
Larva of Scorched Wing.

Horse Chestnut

plate 27

Pachycnemia hippocastanaria (Hb.)

Nb 70.225 (1905)



Field characters FW 14–16mm. The narrow, rounded forewing is distinctive, but hardly that expected of a geometrid moth. Rests with forewings overlapping. Two dark cross-lines are usually conspicuous, the inner sharply angled, the outer curved. The area between them is sometimes darker, particularly in female. Ground colour greyish brown, sometimes with a purplish tinge. Hindwing paler, off-white. **Similar species** None among the macro-moths. Could be mistaken for a large micro-moth, but no British species really resembles it. **Flight season** Two generations. Mar–May and Jul–Aug, the second generation being much larger. Possibly a small third generation in Sep and Oct, and occasionally seen during the winter months. Occasionally disturbed from foodplant by day. Flies from dusk and comes to light, often abundantly. **Life cycle** Overwinters as a pupa underground. Larva late May–early Jul, with a partial second generation in Sep. Larva may also overwinter. **Larval foodplants** Heather, Cross-leaved Heath. **Habitat** Closely associated with lowland heathland. Regularly recorded up to 1950 in the Itchen Valley, Hampshire, an area of watermeadows and chalk woodland through which the moth was presumably prone to travel. **Status and distribution** Resident. Nationally Scarce B. Abundant throughout the surviving lowland heaths of Dorset, Hampshire, Isle of Wight and Surrey, with colonies in Berkshire and Sussex, South Devon and the north coast of Somerset. Has been found very locally in Lincolnshire and occasional examples are reported, sometimes in unlikely habitat, in other English counties south of the Humber, south Wales (Glamorgan) and Cumbria. Locally frequent on Jersey and Alderney. Recorded once from Guernsey, in 1972.

Brimstone Moth

plate 27

Opisthograptis luteolata (L.)

Common 70.226 (1906)

Field characters FW 14–21mm. An unmistakable yellow moth, with chestnut-brown markings on forewing tip and along leading edge. Forewing also has small white central crescent or dash near leading edge, with dark reddish-brown outline. Varies only slightly. White forms are known, but are rare. Female is generally larger and later-generation moths are usually smaller. **Flight season** Usually two or three generations. Apr–Oct, with the emergence time of spring individuals and their progeny dependent on the stage at which they overwintered.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

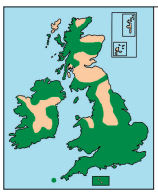
In southern Britain, often most abundant in Aug–Sep. Some authors consider there is a consistent pattern of three generations over two years. Usually one generation in northern mainland Scotland and Orkney, late May–Jul, but sometimes a small second generation, as in Aberdeenshire and Banffshire in Aug–Sep 2003. Sometimes disturbed on or near foodplant by day. Frequently seen on the wing from just before dusk and comes regularly to light, sometimes in fair numbers. **Life cycle** Some overwinter as part-grown larvae on the foodplant, others as pupae in cocoons on the plant, in debris below it, or in a crack in a wall. **Larval foodplants** Blackthorn, Hawthorn, Midland Hawthorn, sometimes plums, Bullace and related species. Rowan is the main foodplant on Orkney, and Wayfaringtree has been reported elsewhere. **Habitat** Hedgerows, gardens, woodland and scrub. **Status and distribution** Resident. Common. Very well distributed and usually frequent throughout Britain, Man, Ireland and the Channel Islands, north to Orkney.

Bordered Beauty

plate 27

Epione repandaria (Hufn.)

Common 70.227 (1907)



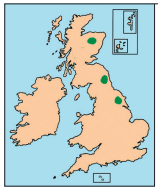
Field characters FW 13–16mm. The broad pinkish or fawnish-brown border of the orange forewing tapers to a point at forewing tip. Intensity of orange and colour of border vary. **Similar species** See Dark Bordered Beauty. **Flight season** One generation. Jul–Sep. Readily disturbed from foodplant from dusk. More often seen on the wing just after dark, but also comes to light, usually in small numbers. Female sometimes found after dark, flying gently among willow foliage, laying eggs. **Life cycle** Overwinters as an egg on the foodplant. Larva early May–mid-Jul. Pupates among leaves, not necessarily of the foodplant when in mixed stands. **Larval foodplants** Sallows, certainly Grey Willow. Also Black-poplar, Alder and Hazel. **Habitat** Mainly carr woodland and rides and clearings in damp woods, but also occasionally scrub, hedgerows and gardens away from woodland. **Status and distribution** Resident. Common. Widespread and quite well distributed, but seldom seen in numbers, in England and Wales north to the Humber, and in Yorkshire. Much more local in north-east England, Cumbria and on Man. Widespread in the lowlands and river valleys throughout much of mainland Scotland (and the Hebrides), but apparently absent from the south-east. Widespread in Ireland and the Channel Islands.

Dark Bordered Beauty

plate 27

Epione vespertaria (L.)

RDB 70.228 (1908)



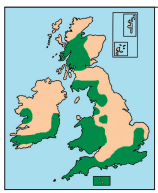
Field characters FW 12–14mm. Forewing in male is orange, freckled orange-brown, with wavy, darker brown border broad throughout and extending to leading edge. Female with lemon-yellow ground colour, only lightly freckled, with a deeper indentation in middle of reddish-brown border on forewing, approaching more closely to tip than in male. **Similar species** See Bordered Beauty. **Flight season** One generation. Mid-Jul–late Aug (from late Jun to late Jul in the hot summer of 2003). Male active by day and both sexes often disturbed from foodplant, especially in the afternoon. Comes to light, mainly the male, and usually well after midnight or just before dawn. Also flies at dawn and just after, sometimes in numbers. **Life cycle** Overwinters as an egg on the foodplant. Larva May–early Jul. Pupates on the foodplant or in debris below it. **Larval foodplants** Aspen less than 50cm tall at the three Scottish sites. Creeping Willow at the Yorkshire site and probably at the site in Northumberland, although possibly other willows may be used. **Habitat** Open and damp scrubby grassland and heathy grassland, usually near taller trees. **Status and distribution** Resident. Red Data Book species. Recently recorded from three widely separated areas, with colonies in Scotland in Aberdeenshire and Inverness-shire, and in England at Strensall Common, Yorkshire (where it appears to be in sharp decline), and Newham Bog, Northumberland (but not seen in surveys since 2006). Individuals recorded at Aviemore, Inverness-shire, on 10 Aug 1975 and at Middleton-in-Teesdale, Co. Durham, on 13 Aug 1976, suggest that there may be more populations awaiting discovery. Reported from Adderstonlee Moss, Roxburghshire, but not for many years despite searches.

Speckled Yellow

plate 27

Pseudopanthera macularia (L.)

Common 70.229 (1909)



Field characters FW 13–15mm. Bold brownish blotches on yellow fore- and hindwing are diagnostic. Slight variation in intensity of yellow and dark patterning. **Flight season** One generation. Mid-May–late Jun. On the wing by day, particularly in sunshine, and often seen in numbers. **Life cycle** Overwinters as a pupa underground or in plant debris. Larva mid-Jun–early Aug. **Larval foodplants** Wood Sage. Also reported from White Dead-nettle, woundworts and Yellow Archangel. **Habitat** Mainly open woodland. Also open scrub

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

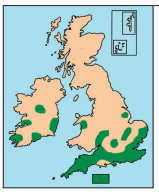
and bushy grassland. **Status and distribution** Resident. Common. Well distributed and locally frequent throughout south-west, central southern and south-east England and in Wales. More local in Berkshire, south Hertfordshire, East Anglia, west Midlands, Cumbria and west Yorkshire. Widespread in Scotland, mainly in the south-west, Central Belt, and central and western Highlands, north to East Ross. Local in southern Ireland, mainly in coastal counties from Co. Mayo to Co. Wicklow. Local in the Channel Islands.

Orange Moth

plate 27

Angerona prunaria (L.)

Local 70.230 (1924)



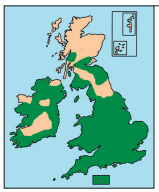
Field characters FW 20–30mm. Unmistakable, but with two main forms. In one, male is truly orange, with variable brown flecking, sometimes forming curved streaks, and normally a brown central dash or crescent on both fore- and hindwing; antennae feathered. Female similar, but pale yellow and with unfeathered antennae. In f. *corylaria* Thunb., ground colour is largely restricted to central bands, or panels of variable size, being otherwise uniformly dark brown. This form occurs in all populations, but is usually the less frequent one. Fringes chequered, except in extreme panelled forms. **Flight season** One generation. Jun–Jul. Male is often seen flying along woodland rides, particularly just before dusk. Both sexes come to light but males greatly predominate. Female is sometimes found or disturbed among vegetation, and flies late in the night. **Life cycle** Overwinters as a small larva on the foodplant. Larva Aug–late May. Pupates between spun leaves. **Larval foodplants** Many woody broadleaved plants, including Blackthorn, Hawthorn, birches, Heather, Broom, Honeysuckle and Traveller's-joy, and apparently herbaceous garden plants such as mints. **Habitat** Broadleaved woodland, generally long-established and particularly on clay. Also wooded heathland, scrub and large ancient hedgerows. **Status and distribution** Resident. Local. Quite well distributed and sometimes frequent in woodland in southern and south-east England, from Hampshire to Suffolk. Also locally in south-west England from Cornwall to Gloucestershire. In Wales, in the eastern half of Monmouthshire, particularly the Wye Valley woodlands and very locally near Maentwrog, Merionethshire, with several recent records after a 120-year gap. Very local in central England north to the Wyre Forest, Shropshire, and the ancient Bardney limewoods in Lincolnshire. One record from Man, 15 Jul 1937, presumed vagrant. Very local in southern and central Ireland. Rare in the Channel Islands.

Lilac Beauty

plate 27

Apeira syringaria (L.)

Local 70.231 (1910)



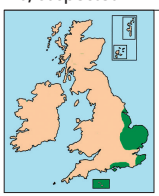
Field characters FW 19–22mm. Resting posture, with forewings slightly raised and with leading edge broadly creased, is diagnostic, as are the invariable lilac markings and bold brown line running obliquely across forewing. Male is smaller and more brightly coloured than female, with more orange. Female is greyer. Second-generation moths are smaller. **Flight season** Mainly one generation. Late Jun–Jul. In some recent years, occasional second-generation moths from late Aug–mid-Sep in southern Britain north to Cheshire and Yorkshire. Sometimes seen on the wing at dusk. Comes to light in small numbers. **Life cycle** Overwinters as a small larva on the foodplant. Larva normally Aug–end May. Larvae producing individuals in late Aug must hatch in early Jul. **Larval foodplants** Honeysuckle, Ash and Wild Privet. Recorded on cultivated varieties of honeysuckles and Garden Privet. **Habitat** Broadleaved woodland, scrub and some gardens, occurring both in more open areas and in narrow woodland rides or under the tree canopy. **Status and distribution** Resident. Local. Well distributed and fairly frequent throughout most of England and Wales, although more local in the north. In Scotland, formerly very local in the south-west and Central Belt, but recently increasing and recorded north to Argyll and Perthshire. Local on Man, throughout Ireland and in the Channel Islands.

Large Thorn

plate 27

Ennomos autumnaria (Werneb.)

Nb; suspected immigrant 70.232 (1911)



Field characters and similar species FW 21–28mm. Rests with wings half-raised, like most other *Ennomos* thorns, but quite distinct (August Thorn holds its wings much flatter). Female is much larger than other female thorns (all with unfeathered antennae). Male (feathered antennae) can be the same size as females of other species. Amount of dark speckling is highly variable, but rarely absent. **Flight season** One generation. Mid-Aug–late Sep. Comes to light, otherwise seldom seen. **Life cycle** Overwinters as an egg on the foodplant. Larva late Apr–early Aug. Pupates under a leaf or on the ground. **Larval foodplants** A wide range of broadleaved trees and shrubs, including birches, Alder, Hazel, hawthorns, Blackthorn, plums, cherries, Apple, oaks, Sycamore and poplars. **Habitat** Broadleaved woodland and scrub. Has been recorded in suburban gardens. **Status and distribution** Resident and suspected immigrant. Nationally Scarce B. Somewhat unpredictable in its

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

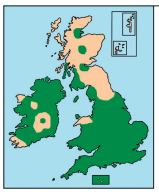
appearance, especially in the northern part of the range, and may be reinforced by immigration, but has extended its range since the 19th century. Often recorded from a site for several years and then disappears, suggesting establishment of temporary colonies. Regularly recorded and assumed to be breeding locally in south-east Hampshire, Sussex and Kent. Also in East Anglia and extending to Hertfordshire, Bedfordshire, increasingly in Northamptonshire, and locally in Lincolnshire and at Spurn, South-east Yorkshire. Wanderers or suspected immigrants have been recorded from a few scattered localities west of the main distribution, north to Shipley, Derbyshire. In Ireland, one in Co. Wexford in 1931. Widespread and sometimes frequent in the Channel Islands.

August Thorn

plate 28

Ennomos quercinaria (Hufn.)

Local 70.233 (1912)



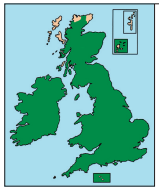
Field characters and similar species FW 18–22mm. August Thorn and September Thorn cannot be distinguished on the basis of flight season, as they may both appear in Jul! August Thorn is slimmer than related thorns, with a generally broader forewing, especially in male (except the much larger Large Thorn), and holds wings at a lower angle when at rest. These are probably the best diagnostic features. On forewing, outer cross-line is usually kinked near leading edge, turning towards and then usually away from base as it meets edge. Inner cross-line usually has a longer, more pronounced angle at leading edge. Male is quite orange, female is much paler and straw-coloured. Forewing in both sexes is usually speckled, but not infrequently plain, and may have extensive brown outer shading. Usually at least a trace of central spot or crescent on forewing. See also Canary-shouldered Thorn, September Thorn and Dusky Thorn. **Flight season** One generation. Late Jul–late Sep. Comes to light, sometimes in fair numbers. Occasionally found at rest on vegetation by day. **Life cycle** Overwinters as an egg on the foodplant. Larva early May–mid-Jul. Pupates among leaves of foodplant. **Larval foodplants** Pedunculate Oak and probably Sessile Oak. Also limes, Small-leaved Elm and probably other elms. Also reported from Beech, birches, Hawthorn and Blackthorn. **Habitat** Woodland, parkland, hedgerows (in west), scrubby downland and sometimes gardens. **Status and distribution** Resident. Local. Widespread but fairly local in England and Wales, north to Yorkshire and north-west England, and on Man. More numerous in the west of its range. In Scotland, local in the extreme south-west and very scattered and local elsewhere in the west and in Perthshire, with a single record from East Ross. Widespread and locally frequent in Ireland and in the Channel Islands.

Canary-shouldered Thorn

plate 28

Ennomos alniaria (L.)

Common 70.234 (1913)



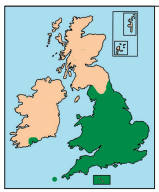
Field characters and similar species FW 16–20mm. The almost invariably bright canary-yellow thorax distinguishes this thorn. Outer cross-line on forewing is quite steeply angled, sweeping in a gentle arc to leading edge (usually kinked in August Thorn, straighter and less angled in Dusky and September thorns), meeting it between three-quarters to four-fifths distance from wing base to tip (about two-thirds on September Thorn). Central crescent or dash normally present (absent or faint in September Thorn). Ground colour orange-yellow (sometimes darker), with variable dark speckling. A form with a buff thorax has been reported from Kent, mainly towards the end of the flight period. A very rare form has dark grey wings, but the thorax remains yellow. **Flight season** One generation. Late Jul–mid-Oct. Comes to light, sometimes in numbers. Otherwise seldom seen. **Life cycle** Overwinters as an egg on the foodplant. Larva early May–Jul. Pupates among plant debris or occasionally spun to small plants. **Larval foodplants** Downy Birch, Silver Birch, Alder, limes and elms. Also reported from Goat Willow and Hornbeam. **Habitat** Woodland, scrub, parks and gardens, but less frequent in densely urban areas. **Status and distribution** Resident. Common. Widespread, generally well distributed and frequent throughout England, Wales, mainland Scotland (and recorded from some of the Western Isles and Orkney), Man, Ireland and the Channel Islands.

Dusky Thorn

plate 28

Ennomos fuscantaria (Haw.)

Common 70.235 (1914)



Field characters and similar species FW 17–21mm. Generally distinguished by the dark mauvish-grey or grey-brown shading (varying in extent) between outer cross-line and outer edge of wing. Shape of cross-lines on forewing is slightly variable, closest to Canary-shouldered Thorn, but usually less curved. The rarer but widespread darker f. *perfuscata* Rebel has uniform dark shading over all four wings. See also August Thorn, September Thorn, Large Thorn and buff form of Canary-shouldered Thorn. **Flight season** One generation. Late Jul–early Oct. Comes to light, often in numbers. Otherwise seldom seen. **Life cycle** Overwinters as an egg on the foodplant. Larva early May–mid-Jul. Pupates among spun leaves of foodplant. **Larval foodplants** Ash. Probably also privets, which are accepted in captivity. **Habitat** Most places where Ash

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

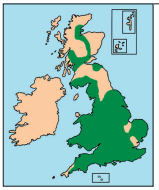
occurs, including woods, hedgerows, rural and suburban gardens and urban centres. **Status and distribution** Resident. Common. Numbers declined in the Rothamsted Insect Survey national light-trap network by 98% between 1968 and 2007. Remains well distributed in England and Wales north to Co. Durham (and occasional in south Northumberland) and Cumbria, but prone to fluctuations in numbers. One record from Ireland, one in Sep 2009 at Cobh, Co. Cork. Widespread in the Channel Islands.

September Thorn

plate 28

Ennomos erosaria ([D. and S.])

Common 70.236 (1915)



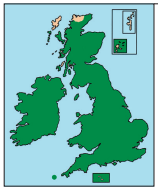
Field characters FW 17–21mm. Distinguished by plain or very slightly speckled orange-brown or fawn wings, and almost always absence of central crescent. Cross-lines slightly variable, but generally converging closely to trailing edge. Moths emerging early in the flight period are distinctly paler. **Similar species** Stouter than plain form of August Thorn, without a kink in the outer cross-line, which usually points to forewing tip at leading edge or widens there. Also holds wings at a steeper angle. See also Canary-shouldered Thorn and Dusky Thorn. **Clouded August Thorn** *Ennomos quercaria* (Hb.) (plate 28) was reported in the 19th century and again in Essex in 1992, but in both cases without details. It is similar to September Thorn, but smaller and a duller orange-yellow. Also, the forewing cross-lines are often weaker and run more parallel, with the inner one less bent inwards at leading edge. **Flight season** One generation. Jul–early Oct. Comes to light, sometimes in numbers. Otherwise seldom seen. **Life cycle** Overwinters as an egg on the foodplant. Larva late Apr–early Jul. Pupates between spun leaves. **Larval foodplants** Oaks, birches, limes and Beech. **Habitat** Woodland, parkland and gardens. **Status and distribution** Resident. Common. Numbers declined in the Rothamsted Insect Survey national light-trap network by over 87% between 1968 and 2007. Appears more thinly distributed in southern Britain since 2000, but remains fairly widespread and frequent in most parts of England and Wales, north to Yorkshire and Cumbria. Much more local and uncommon further north, but in mainland Scotland recorded north to East Sutherland. Recent but unconfirmed records from Ireland. Very few confirmed records, including Cos. Dublin and Kildare, the most recent in 1940. Recorded from the Channel Islands.

Early Thorn

plate 28

Selenia dentaria (Fabr.)

Common 70.237 (1917)



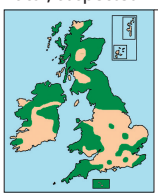
Field characters and similar species FW 14–23mm. Resting position distinguishes Early Thorn from all other British thorns, with wings held up over back and pressed together, like a butterfly. Summer-generation moths are smaller and paler, usually with larger tawny-orange patches on undersides. The scarce f. *harrisoni* Wagner is rather uniform dark brown, with pale cross-lines. Less extreme brownish and greyish forms are more frequent. **Flight season** Two distinct generations in most of England and Wales and in south-west Scotland, Mar–May and Jul–Sep. Elsewhere in Scotland, one generation, late Apr–early Jun. In Northumberland, Mar–Aug probably in two overlapping generations, with a peak in May. Sometimes seen on the wing from dusk onwards. Often comes to lighted windows and is frequent at light-traps. **Life cycle** Overwinters as a pupa, spun between leaves or among plant debris. Larva May–Jun and Aug–early Oct. Where there is one generation, Jun–Aug. **Larval foodplants** Blackthorn, Hawthorn, Hazel, Downy Birch, Silver Birch, Alder, sallows, Honeysuckle, Bog-myrtle and other woody broadleaved plants. **Habitat** Woodland, scrub, hedgerows, parks and gardens, including urban areas. **Status and distribution** Resident. Common. Well distributed and frequent throughout England, Wales, mainland Scotland (and found in the Inner Hebrides and Orkney), Man, Ireland and the Channel Islands.

Lunar Thorn

plate 28

Selenia lunularia (Hb.)

Local; suspected immigrant 70.238 (1918)



Field characters and similar species FW 16–22mm. Resting posture is like that of similar Purple Thorn. Often extensively speckled, sometimes very darkly, but not infrequently plain. On upperside of forewing, cross-line beyond small silver central crescent is either virtually straight or slightly bent. No dark central spot near outer edge of hindwing upperside, which is distinctly scalloped, usually with a deeper central indentation than in Purple Thorn. Very variable in colour, from pale straw to reddish or purplish brown, the latter especially in Scotland. Second-generation moths are much smaller, often more richly coloured and more strongly marked, sometimes pinkish. See also under Purple Thorn. **Flight season** Mainly one generation. May–Jun. A second and probably partial generation sometimes occurs in southern England, in Jul–Aug, and is annual in the Channel Islands. Seldom seen except at light, arriving late at night. **Life cycle** Overwinters as

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

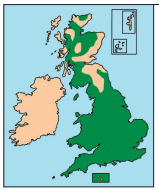
a pupa, just below ground. Larva late Jun–late Aug. **Larval foodplants** Ash, Blackthorn, Dog-rose, birches, elms, oaks, and probably other broadleaved trees and shrubs. **Habitat** Open woodland and scrub. **Status and distribution** Resident and suspected immigrant. Local. Formerly widespread (although in many areas recorded very locally, often as singletons) throughout mainland Britain, Ireland and some of the Hebrides, north to Caithness and on Man. It has long been scarce or absent in much of central southern England, Norfolk, Lincolnshire and the east Midlands. However, it is also now very scarce throughout the Midlands, and into Lancashire and southern Yorkshire (but still frequent in the uplands in the north of the county). Remains widespread in south-west England, Wales, most of northern England, in mainland Scotland, some of the Hebrides and in the northern half of Ireland, and very locally further south, mainly in Cos. Clare and Wicklow. Also regular in south-east England, in East Sussex and Kent, and probably reinforced by immigration in this area. Local and sporadic in the Channel Islands, where it is possibly an immigrant.

Purple Thorn

plate 29

Selenia tetralunaria (Hufn.)

Common 70.239 (1919)



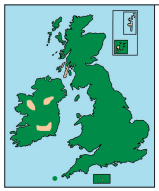
Field characters and similar species FW 17–23mm. Rests with wings open and half-raised, and forewings slightly curled. Distinguished from Lunar Thorn by dark central spot towards outer edge of hindwing upperside. Silver central crescent on purplish-brown forewing is larger than in Lunar Thorn, and cross-line beyond it is distinctly bowed in leading half, and often in trailing half. Hindwing usually less deeply scalloped than in Lunar Thorn, especially in male. First-generation moths are larger than those of the second brood, with dark purplish-brown ground colour and extensive white frosting. Second-generation moths are paler, often tawny on underside with pink on upperside. **Flight season** Two generations in England, Wales and southern Scotland, Apr–May or Jun and Jul–Aug, with occasional individuals of a partial third generation, late Sep–Oct. One generation in the northern half of Scotland, May–Jun. Fairly frequent at light, otherwise seldom seen. **Life cycle** Overwinters as a pupa, just below ground. Larva late May–early Jul and Aug–Sep in southern Britain, Jun–Jul in northern Scotland. **Larval foodplants** Hazel, birches, Alder, hawthorns, oaks and many other broadleaves. **Habitat** Woodland and scrub, from calcareous substrates to acid heathland and wet clay. Often in rural and suburban gardens. **Status and distribution** Resident. Common. Fairly well distributed and sometimes frequent in England and Wales, formerly north to the Humber, but also in Yorkshire since the 1980s, and has also spread into Cumbria and Northumberland. Widespread but generally very local in Scotland, but more widespread and frequent in east Inverness-shire and East Ross, and reaches the north coast. Local and infrequent on Man (only one old record until the 1990s) and in the Channel Islands.

Scalloped Hazel

plate 29

Odontopera bidentata (Cl.)

Common 70.240 (1920)



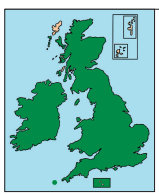
Field characters FW 20–24mm. Rests with wings flat. Very triangular in appearance, forewing with strongly and irregularly scalloped outer edge. Little variation in pattern. All forms have two cross-lines on forewing and central ring on fore- and hindwing. Ground colour usually rather uniform, from whitish brown to deep chocolate brown (f. *nigra* Prout), often tawny or grey-brown, with white edging on cross-lines. Dark forms, including f. *nigra*, are widely recorded in small numbers, such as in London and the Midlands, but are more frequent in north-west England and western Scotland. Moths from Orkney are smaller than normal and rather greyish brown. **Similar species** See Scalloped Oak and Dusky Scalloped Oak, which are superficially similar, but with smoother forewing outer edge. **Flight season** One generation. May–Jun. Sometimes found at rest on walls, fences and in the bases of hedges. Often seen flying along hedgerows after dark. Comes to light, sometimes in fair numbers. **Life cycle** Overwinters as a pupa. Larva early Jun–Sep, feeding slowly. Pupates on the ground among plant debris or mosses. **Larval foodplants** A very wide range of woody plants, including Hazel, Downy Birch, Silver Birch, Hawthorn, Midland Hawthorn, Blackthorn, oaks, willows, limes, privets, Barberry and conifers, including pines, spruces, Monterey Cypress, Lawson Cypress, Common Juniper and Larches. **Habitat** Woodland, scrub and hedgerows, on both calcareous and acid soils. Conifer plantations, parks and gardens, including those in urban centres. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout England and Wales, Man, Ireland, mainland Scotland, some of the Hebrides and Orkney, and the Channel Islands.

Scalloped Oak

plate 29

Crocallis elinguaria (L.)

Common 70.241 (1921)



Field characters and similar species FW 18–22mm. Like Scalloped Hazel, triangular when at rest with wings held flat, but smaller, with more rounded, only slightly scalloped outer edge to forewing, and flies later in the year. Most familiar form is a yellowish moth with a brown central band and conspicuous single blackish central spot on forewing,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

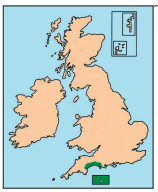
and slightly paler, more uniform hindwing. Some forms are uniformly orange-brown (f. *unicolor* Prout), deep brown or even blackish (f. *fusca* Reutti), although pale cross-lines tend to be visible. Darker forms are more frequent in north-west England, Scotland and Ireland. See also Dusky Scalloped Oak and Feathered Thorn. **Flight season** One generation. Jul–Aug, from late Jun in the south. Comes to light, sometimes in fair numbers. **Life cycle** Overwinters as an egg on the foodplant. Larva late Mar–Jun. **Larval foodplants** Hawthorn, Blackthorn, Downy Birch, Silver Birch, oaks, Honeysuckle, Bilberry and Heather. Also reported from many other broadleaved woody plants, including garden shrubs such as cotoneasters. **Habitat** Woodland, scrub, hedgerows, parks and gardens, including urban centres. **Status and distribution** Resident. Common. Well distributed and generally frequent throughout mainland Britain, the Hebrides, Man, Ireland and the Channel Islands.

Dusky Scalloped Oak

plate 29

Crocallis dardoinaria Donzel

Immigrant; resident 70.242 (1921a)



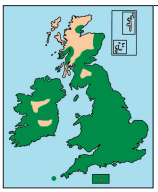
Field characters and similar species FW 18–24mm. Very similar to Scalloped Oak. Forewing less yellowish, straw-coloured, or dull reddish brown or greyish brown rather than orange-brown, and with central mark composed of four small black spots (usually one solid spot in Scalloped Oak). Some examples are relatively plain but others, especially female, are darkened by heavy, rough freckling. See also Scalloped Hazel and Feathered Thorn. **Flight season** One generation. Jun or Jul–Sep. **Larval foodplants and habitat** Not known on Guernsey. Larva reported from Gorse, Broom, Common Juniper and *Cistus* in mainland Europe. **Status and distribution** Rare immigrant to mainland Britain. Two recorded: Exmouth, Devon, on 19 Sep 2006 and West Bexington, Dorset, on 22 Aug 2009. Resident on Guernsey, first recorded in 1990 as single adults at light at Petit Bot and Icart, with others from these coastal localities in 1999 (three), 2000 (four) and subsequently. Breeding confirmed on Alderney, with adults to light and larvae since 2004. Recorded once on Jersey. In the rest of Europe, resident in France, Spain, Portugal, Corsica, Sardinia and Sicily.

Swallow-tailed Moth

plate 29

Ourapteryx sambucaria (L.)

Common 70.243 (1922)



Field characters FW 22–30mm. Unmistakable, with diagnostic pointed tail on hindwing, and two dark brown spots at its base. Pale lemon yellow when fresh, becoming whiter with age. Two darker cross-lines and a central dash on forewing, one cross-line on hindwing. Little variation. Female is generally larger. **Flight season** One generation. Late Jun–mid-Aug. Occasional individuals of a partial second generation in late Sep–Oct (occasionally Nov), becoming more frequent, north to at least Lancashire. Sometimes disturbed by day. Flies rapidly at dusk and frequently comes to lighted windows soon after dark. Comes to light-traps, sometimes in fair numbers. **Life cycle** Overwinters as a larva in a bark crevice. Larva late Aug–early Jun. Forms a loose cocoon on the foodplant. **Larval foodplants** Woody broadleaves such as Blackthorn, Hawthorn, Goat Willow and Black Currant. Also plants often avoided by generalist feeders, such as Elder, Horse-chestnut, Garden Privet and Ivy. Several larvae have been found on cultivated Canadian Goldenrod. **Habitat** Woodland, scrub, hedgerows, parks and gardens. Frequent in urban centres, including Ivy-shrouded cemeteries. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout England and Wales, Man, Ireland and the Channel Islands. In Scotland, formerly widespread only in the south, but the range has recently expanded and it has colonised the north-east, and has also been recorded north to West Inverness-shire and East Ross.

Feathered Thorn

plate 29

Colotois pennaria (L.)

Common 70.244 (1923)

Field characters FW 19–23mm. Unlike any other moth likely to be flying very late in the year. Rests with wings flat. Male has broadly feathered antennae, more so than in similar species. Both sexes have a slightly hooked tip to forewing, with slightly scalloped outer edge, and often a unique and diagnostic whitish spot near tip. Two cross-lines are usually conspicuous but can be blurred or incomplete. Male is usually orange-brown, sometimes fawn-brown or brick red. Female similar but with unfeathered antennae, narrower fore- and hindwing, and ground colour paler or grey-brown. **Similar species** Scalloped Oak and Dusky Scalloped Oak may be superficially similar. **Flight season** One

Larva of Feathered Thorn.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

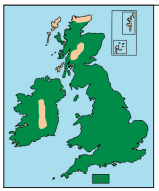
generation. Mid-Sep–early Dec. Occasionally found at rest below trees and bushes or low on trunks. Male is often seen on the wing after dark and comes readily to light, often in numbers, usually several hours after dusk. Female is much less frequent at light. **Life cycle** Overwinters as an egg on the foodplant. Larva Apr–Jun. Pupates just below ground. **Larval foodplants** A wide range of broadleaved trees, including Pedunculate Oak, Hawthorn, Midland Hawthorn, Blackthorn, Crab Apple, Dog-rose, Downy Birch, Silver Birch, Hazel, Goat Willow, Black-poplar, elms and Wild Service-tree. Also reported from Larches. **Habitat** Most numerous in broadleaved woodland. Frequent in most situations with trees, including parks and gardens, but less so in urban areas. **Status and distribution** Resident. Common. Quite well distributed, and usually fairly frequent throughout England, Wales, Man, Ireland and mainland Scotland, and recorded from the Hebrides, Orkney and Shetland. Widespread in the Channel Islands.

March Moth

plate 30

Alsophila aescularia ([D. and S.])

Common 70.245 (1663)



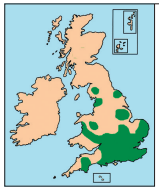
Field characters and similar species FW 16–19mm. The rather triangular, grey-brown forewing of male, overlapped when at rest and with two jagged, dark-edged whitish cross-bands, distinguishes this slightly built moth from all others flying in early spring. Usually shows only slight variation, but rarely there is a dark grey central cross-band. Female is completely wingless and barrel-shaped, with a conspicuous tuft of brown hair on tail end, which distinguishes it from female Winter Moth, Spring Usher and Pale Brindled Beauty. Flightless females of all other winter species have very obvious vestigial wings or much fatter, furrier bodies. Male Spring Usher has wavy dark cross-lines, (usually) a distinct paler central cross-band and rests with forewings not overlapping. **Flight season** One generation. Late Jan–Apr. Male flies after dark and can be frequent in light-traps. Female can be found on tree trunks, either climbing at night or at rest in early morning. **Life cycle** Overwinters as a pupa. Larva late Apr–Jun. Pupates underground below the larval foodplant, in a fragile cocoon. **Larval foodplants** Oaks, Hawthorn, Blackthorn, Crab Apple, willows, Field Maple, birches and many other broadleaved trees and shrubs. **Habitat** Most numerous in open woodland but occurs in most places where the foodplants grow, including urban parks and gardens. **Status and distribution** Resident. Common. Well distributed and often abundant throughout most of mainland Britain and Ireland, except on high ground, and recorded north to Sutherland and the Inner Hebrides. Local on Man and in the Channel Islands.

Small Brindled Beauty

plate 30

Apocheima hispidaria ([D. and S.])

Local 70.246 (1925)



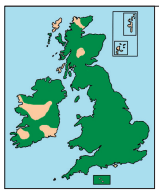
Field characters FW 15–17mm. Male is much smaller than related species found in woodland, with rather narrow, tapering forewing, rounded at tip, and a massively hairy thorax. On forewing, two wavy, dark brown cross-lines are usually conspicuous, the outer one somewhat jagged, and outermost area is noticeably paler. However, dark forms with these markings obscure or absent are quite frequent. Hindwing paler than forewing. Wingless female is generally dark or blackish brown, rather furry, and rather more squat and stocky at front end than other wingless female moths in woodland and lowland habitats. **Similar species** Female Pale Brindled Beauty is noticeably tapered at head and thorax, less furry and generally paler. Brindled Beauty flies later in the spring, is much larger, with much broader wings, and has a winged female. **Flight season** One generation. Feb–Mar. Female regularly found by searching near base of tree trunks, after dawn. Male comes to light, sometimes in large numbers in woodland. **Life cycle** Overwinters as a pupa underground. Larva late Apr–mid-Jun. **Larval foodplants** Pedunculate Oak. Probably Sessile Oak. Also reported from Hawthorn, Silver Birch, Hazel, English Elm, Hornbeam and Sweet Chestnut. **Habitat** Mature oak woodland and hedgerows containing large oaks in well-wooded areas. Seldom wanders far from oaks. **Status and distribution** Resident. Local. Widespread and locally frequent in central southern and south-east England, East Anglia and the south Midlands. Local in south-west England, Wales, the north Midlands and Lincolnshire. Scarce and local in northern England.

Pale Brindled Beauty

plate 30

Phigalia pilosaria ([D. and S.])

Common 70.247 (1926)



Field characters and similar species FW 19–24mm. Male superficially similar to Brindled Beauty, but slighter in build, generally paler, without the heavy black cross-lines and dusting, and flies earlier in the year. The dark brindle markings vary in extent. Some have almost plain pale greyish or greenish-grey forewing, others grade through to the practically all dark brown f. *monacharia* Stdgr. Fresh examples have a pinkish abdomen. The dark form comprises some 60% of catches in central London, but is much less frequent towards the outskirts. It also predominates in parts of north-west Britain, and occurs at lower frequency elsewhere. The wingless female is brownish and rather smooth-

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Pale Brindled Beauty.

Larva of Brindled Beauty.

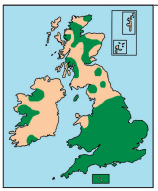
looking. See also female March Moth. **Flight season** One generation. Jan–Mar. Occasionally in late Nov and Dec. Female regularly found near base of tree trunks, just after dawn, sometimes later. Male comes readily to light, often in large numbers in woodland. **Life cycle** Overwinters as a pupa, in an underground cocoon. Larva mid-Apr–mid-Jun. **Larval foodplants** Many broadleaved trees and shrubs, including oaks, Hawthorn, Midland Hawthorn, Blackthorn, Apple, Downy Birch, Silver Birch, Alder, Hazel, Goat Willow, poplars, limes, elms, Ash, Buckthorn and Alder Buckthorn. Also reported from Larches. **Habitat** Broadleaved woodland and many other situations with trees or scrub, on many soil types, including urban gardens. **Status and distribution** Resident. Common. Quite well distributed and frequent throughout most of England, Wales, Man and Scotland north to Caithness, including the Hebrides. Widespread and locally frequent in Ireland. Local in the Channel Islands.

Brindled Beauty

plate 30

Lycia hirtaria (Cl.)

Common 70.248 (1927)



Field characters and similar species FW 19–23mm. A fairly distinctive, furry moth. Larger than male Pale Brindled Beauty, with a thicker thorax and abdomen, and broader wings. Wing pattern variable but all forms have some heavy blackish cross-lines and/or banding, especially conspicuous at leading edge of forewing. Most examples have a golden-yellow component, while others are predominantly grey. Female is rather thinly scaled, with forewing leading edge more arched. The rare, almost uniformly blackish f. *nigra* Cock. is recorded from London and elsewhere in southern England. Scottish examples are larger and brightly marked. **Flight season** One generation. Mar–late May. Sometimes found on tree trunks and fences by day. Male comes to light late at night, sometimes in large numbers if lights are operated all night. Female seldom seen at light. **Life cycle** Overwinters as a pupa underground. Larva early May–early Jul. **Larval foodplants** Many broadleaved trees and shrubs, including Downy Birch, Silver Birch, Hawthorn, Midland Hawthorn, limes, elms, Alder, sallows, Pedunculate Oak and Evergreen Oak. **Habitat** Broadleaved woodland, scrub, hedgerows, parks and gardens, including those in urban centres. **Status and distribution** Resident. Common. Well distributed and often frequent to abundant in England north to the Midlands and Yorkshire (where it was formerly very rare, but has greatly increased its range and numbers since 1974), and in the southern half of Wales. Very scarce in the remainder of Wales, northern England and southern Scotland, but well distributed in central and northern Scotland, from Perthshire and Aberdeenshire to East Inverness-shire and East Ross, mainly in the major river valleys. Local and western in Ireland, centred mainly around Cos. Clare, Galway, Sligo and Leitrim. First found on Man in 2007. Local in the Channel Islands.

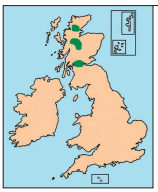
Rannoch Brindled Beauty

plate 30

Lycia lapponaria (Boisd.)

ssp. *scotica* (Harr.)

Na 70.249 (1929)



Field characters FW 14–16mm. Both male and the wingless, furry black female have a row of orange-red spots, forming a mid-line along the back, which makes them easier both to find and identify. Male has several narrow, dark cross-bands on forewing, which is grey and semi-transparent. These markings vary greatly in extent but a central crescent and a curved dark outer cross-line are usually conspicuous. A brown form of the male has been taken regularly at Dalwhinnie quarry, Morayshire. **Similar species** See Belted Beauty, but note difference in range and habitat. **Flight season** One generation. Late Mar–early May, depending on altitude and season. Both sexes can be found by day resting on plant stems, rocks and fence posts. Male presumably flies at night and would come to light, but traps are seldom operated in the breeding areas at this time. Female has been seen laying eggs at night. **Life cycle** Overwinters as a pupa underground, sometimes remaining dormant for up

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Rannoch Brindled Beauty.

Larva of Belted Beauty.

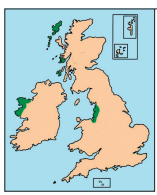
to four years in captivity. Larva mid-May–early Aug. **Larval foodplants** Most frequently Bog-myrtle, but reported in abundance on Bilberry, also Eared Willow, Heather, Bell Heather and Cross-leaved Heath. **Habitat** From boggy acid moorland, especially by streams, to mixed, dry, rather basic heathland that does not include Bog-myrtle but in which Bilberry and various heathers are common. Tolerates a wide range of climatic conditions. **Status and distribution** Resident. Nationally Scarce A. Restricted to Highlands of Scotland, where it has been regularly recorded in the Rannoch and upper Speyside areas since its discovery there in 1871. Now known to be much more widespread. Recent records from west of the Great Glen in East Inverness-shire, in East Ross and East Sutherland to the north, and from Flanders Moss, Stirlingshire, to the south. Also known from other sites in Perthshire, Morayshire, the Dee River system in Aberdeenshire, the moors around Fort William and the Ardnamurchan peninsula, West Inverness-shire, and also West Ross. Discovered on Mull in 2015. Much suitable ground remains unsurveyed within the range.

Belted Beauty

plate 30

Lycia zonaria ([D. and S.]) 70.250 (1928)
ssp. *britannica* (Harr.)
RDB

ssp. *atlantica* (Harr.)
Na



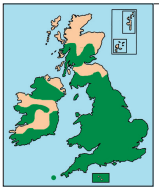
Field characters FW 13–16mm. Ssp. *britannica* male is easily recognised by the silvery-grey and brown stripes on forewing. Amount of brown varies greatly, even within same population. Female is wingless, and black with a thin covering of whitish fur-like scales. In both sexes abdomen is black with orange rings. Ssp. *atlantica*, of questionable validity, was described from the Isle of Baleshare on the basis that male is slightly smaller than mainland specimens. This is not a general feature of Belted Beauty on the other Hebridean islands, and some are larger than mainland individuals. **Similar species** On somewhat similar Rannoch Brindled Beauty, abdomen is black with mid-line of orange-red spots along the back. **Flight season** One generation. Mar–May. Male sometimes flies on sunny afternoons. Can be found at rest low down on vertical plant stems after dark, also flying late at night and coming to light. Female often basks in sunshine on posts and dry plant stems, and after dark can be found climbing plant stems to lay eggs. **Life cycle** Overwinters as a pupa, just below ground. Larva May–Jul. **Larval foodplants** Mainly Common Bird's-foot-trefoil and Kidney Vetch, but clovers, Yarrow, Creeping Willow, Burnet Rose and plantains have been reported and, surprisingly, Yellow Iris. Larvae can be locally abundant. **Habitat** Coastal. Machair (vegetated with herb-rich shell-sand grassland) on the Hebrides. Elsewhere on sand-dunes only semi-stabilised by vegetation, and other open places with herbaceous vegetation, including golf links and coastal paths. Occurs below the strand-line at Morecambe Bay, on annually inundated sandy saltings. **Status and distribution** Resident. Red Data Book species. Highly restricted. In Scotland, widespread on machair in the Outer Hebrides, especially along the west coast, from Barra in the south to the northern part of the Isle of Harris; in the Inner Hebrides on Mull, Iona, Tiree, Coll, Colonsay, Canna, Rum and Islay; and at Sanna Point on the Ardnamurchan peninsula, West Inverness-shire. Formerly found on a number of coastal sand-dune sites in north-west England and north Wales. These include several on the Wirral, Cheshire, including Meols, but it has not been seen on the peninsula since 2010. Also formerly at Morfa Conwy and Deganwy Dunes in Caernarvonshire and Talacre Warren in Flintshire. Now thought to be confined, in this area, to annually inundated sandy saltmarsh at Sunderland Point near Lancaster, and there in reduced numbers. In Ireland, found locally (in abundance in places) in the west on both sand-dunes and machair, mainly in Cos. Mayo (e.g. Mullet peninsula), Galway (e.g. Dog's Bay) and Sligo, and in the 19th century from Co. Antrim in Northern Ireland. An extensive survey, including historical sites, in 2006 failed to find it in other sections of the west and north coasts.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Oak Beauty plate 30

Biston strataria (Hufn.)

Common 70.251 (1930)

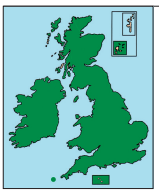


Field characters FW 17–27mm. Unmistakable in the early spring. The two broad brown bands across forewing are diagnostic. These vary in width and are edged with black. Ground colour varies from white to greenish grey. The banding is present, but less conspicuous, in the darker forms. Sexes similar but female often whiter. Male has feathered antennae. **Similar species** Peppered Moth never has light brown banding, no matter how dark the form. **Flight season** One generation. Late Feb–Apr. Sometimes found freshly emerged by day at base of tree trunks. Male comes readily to light, sometimes in numbers, female only very occasionally. **Life cycle** Overwinters as a pupa underground. Larva May–Jul. **Larval foodplants** Oaks, Hazel, Aspen, Alder, elms, sallows and other broadleaved trees and shrubs. **Habitat** Most numerous in mature oak woodland, but also occurs in other types of woodland, scrub and gardens. **Status and distribution** Resident. Common. Well distributed in England and Wales. First recorded from Man in 2000. Local in Scotland north to West Inverness-shire and Perthshire, and widespread but local in Ireland. Found in the Channel Islands.

Peppered Moth plate 30

Biston betularia (L.)

Common 70.252 (1931)



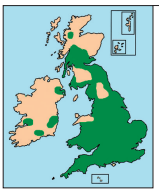
Field characters FW 22–28mm. The usual form in most rural areas is white, peppered with black on wings and body. The pattern of variation includes f. *carbonaria* Jord., sooty black except for white spots at base of forewing. Intermediates between the two occur as a result of cross-pairing. Forms known collectively as f. *insularia* Thierry-Mieg are variable and intermediate in appearance between the typical form and f. *carbonaria*. They are genetically distinct and not a result of crosses between the typical form and f. *carbonaria*, and occur in many areas. The frequency of f. *carbonaria* was 60–80% in the London area in the 1980s and has been higher in this and other industrial areas in the past, correlating with levels of atmospheric pollution. However, its frequency has been steadily declining in many areas in the last few decades. A rare aberration with black forewing and white hindwing has been recorded. **Similar species** Oak Beauty has an earlier flight season. **Flight season** One protracted generation. Early May–late Aug, but most frequent Jun–Jul. Unusual to find adults at rest. Comes to light, sometimes in numbers. **Life cycle** Overwinters as a pupa just below ground. Larva early Jul–late Sep. **Larval foodplants** A wide range of trees, shrubs and smaller plants, including Blackthorn, Hawthorn, Midland Hawthorn, Downy Birch, Silver Birch, limes, sallows, poplars, oaks, Sweet Chestnut, Beech, roses, Bramble, Broom, Black Currant, Hop, Mugwort, Michaelmas-daisy and Goldenrod. **Habitat** Woodland, scrub, hedgerows, parks and gardens, including urban centres. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout most of England, Wales, Man, mainland Scotland (reaching the Hebrides, Caithness and Orkney), Ireland and the Channel Islands.

Larva of Peppered Moth.

Spring Usher plate 31

Agriopis leucophaearia ([D. and S.])

Common 70.253 (1932)



Field characters and similar species FW 14–17mm. Male is distinguished from that of closely related species by its smaller size. Forewing is very triangular, but with a rounded tip and slightly concave leading edge. Variable, from whitish and highly variegated, to uniformly dark grey-brown, but wavy outer cross-line and curved inner one usually present, often with a paler central band. Male March Moth has a similar wing shape, but rests with forewings folded. Flightless female Spring Usher is usually brownish with dark spots along the back, and has only tiny wing stumps, generally smaller than those of Winter Moth, which is a similar size and colour (although usually plainer) and may also be found in Jan or early Feb. Other flightless female geometrids are larger or have larger wing stumps. **Flight season** One generation. Jan–Mar, depending on the pattern of mild nights. Occasionally late Dec. Male sometimes rests by day on tree trunks, but like female usually hides behind bark and in crevices. Female regularly found near base of tree trunks in early morning. Male flies soon after dark and comes to light, sometimes in large numbers. Occasionally flushed from understorey shrubs by day in mild weather. **Life cycle** Overwinters as a pupa underground. Larva early Apr–mid-Jun.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

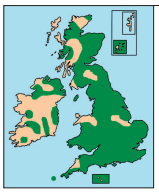
Larval foodplants Pedunculate Oak and Sessile Oak. Reported at least once from Apple but possibly misidentified, since the plain yellowish-green form of the larva is very similar to that of March Moth. **Habitat** Most abundant in mature and usually long-established oak woodland. Also mature oaks in hedgerows in well-wooded areas, parks, arboreta, cemeteries and gardens. **Status and distribution** Resident. Common. Likely to be under-recorded due to early flight season. Quite well distributed and locally abundant throughout most of England and Wales. Widespread but local in Scotland, north to West Ross, Argyll and Perthshire. Recorded twice from Man, in 1940 and 1959. Very local in Ireland, recorded mainly from the south-east in Cos. Wicklow, Carlow and Waterford, in the west in Co. Clare and in the north in Co. Down. Local and occasional on Jersey. Recorded as 'not uncommon' on Guernsey in the 19th century, but not seen recently.

Scarce Umber

plate 31

Agriopis aurantiaria (Hb.)

Common 70.254 (1933)



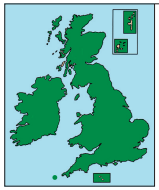
Field characters and similar species FW 17–21mm. Male has a warm, golden orange-yellow forewing with two usually distinct darker cross-lines, often a central spot and with variable greyish-brown edging, blotches and freckling. Less variable than Dotted Border (browner and flies in early spring) and Mottled Umber, which generally has a more tapered forewing and is highly variable but never golden. Flightless female is brown, often with pairs of black spots on back of abdomen. Wing stumps are small but obvious, also dark brown, usually with two black bands on each wing. Female Mottled Umber has minute wing stumps and is usually paler. **Flight season** One generation. Oct–Dec. Female found by trunk-hunting in the morning. Male comes to light, sometimes in large numbers. **Life cycle** Overwinters as an egg on the foodplant. Larva Apr–mid-Jun. **Larval foodplants** Broadleaved trees and shrubs, including Downy Birch, Silver Birch, Hazel, Blackthorn, Hawthorn, Midland Hawthorn, Pedunculate Oak, Dog-rose, English Elm, limes, sallows and Hornbeam. **Habitat** Most abundant in open broadleaved woodland with mature trees. Also long-established scrub and gardens in well-wooded districts. **Status and distribution** Resident. Common. Well distributed and locally abundant throughout most of Britain and recorded from the Inner Hebrides and Orkney (where it is thought to have been introduced with plant stock). Local on Man. Widespread but local in Ireland. Rare in the Channel Islands.

Dotted Border

plate 31

Agriopis marginaria (Fabr.)

Common 70.255 (1934)



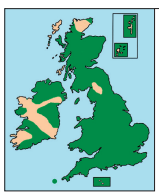
Field characters and similar species FW 16–20mm. Male has a brownish forewing and is quite variable, clouded to a greater or lesser extent by darker brown, outer cross-line elbowed, inner one almost straight. Distinguished by a conspicuous row of black dots along edges of both fore- and hindwing, not present in Mottled Umber (in which the fringes may be spotted) and usually much less conspicuous in the golden Scarce Umber. These dots are less obvious in worn individuals and the darkest forms, e.g. the uniformly dark brown f. *fuscata* Mosley, which is not rare and occurs in most populations. On Orkney, Dotted Border is small and rather dark greyish brown. Flightless female has substantial wing stumps, usually with dark cross-lines or bands, and varies from fawnish white to very dark brown. Flightless female of the micro-moth *Diurnea fagella* ([D. and S.]) is similar in size, also occurs in spring and also has relatively large wings, but these are very pointed and greyish. See also Scarce Umber. **Flight season** One generation. Feb–Apr. Occasional individuals from late Dec onwards. Male comes to light, sometimes in large numbers, particularly to actinic traps operated all night in woodland. Female found by trunk-hunting in the morning. **Life cycle** Overwinters as a pupa underground. Larva Apr–mid-Jun. **Larval foodplants** Many broadleaved trees and shrubs, including Pedunculate Oak, Sessile Oak, Hawthorn, Midland Hawthorn, Blackthorn, Downy Birch, Silver Birch, Hazel, Goat Willow, Grey Willow, elms, Field Maple, Sycamore, Apple and plums. Locally abundant on Heather in Orkney. **Habitat** Most abundant in woodland. Also in scrub, hedgerows, gardens, scrubby calcareous grassland, heathland and moorland. **Status and distribution** Resident. Common. Well distributed and often abundant, and found throughout the British Isles.

Mottled Umber

plate 31

Erannis defoliaria (Cl.)

Common 70.256 (1935)



Field characters FW 18–25mm. Male very variable, but with several easily recognisable elements. Forewing usually rather tapered, ground colour off-white to brown. Outer cross-band, when present, brown or blackish and rather irregular, almost always bowed in leading half. Often has a dark central spot. Outer edge plain, but fringes often chequered. Paler forms are more variegated, and speckled orange-brown forms often have reduced or

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Mottled Umber.

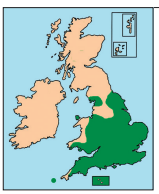
absent spots and banding. All forms are usually present. Dark brown forms suffused with blackish occur in some areas. Flightless female is usually yellowish white with black dots, and minute wing stumps. There is also a black form. **Similar species** See Scarce Umber and Dotted Border. **Flight season** One generation. Oct–Jan, occasional examples from early Sep (as in 2007 in Dorset and Berkshire). Male is sometimes seen on the wing in numbers at dusk, flying about 2m above ground among trees. Comes to light, sometimes in large numbers, from early evening until well after midnight. Female can be found by trunk-hunting after dark. **Life cycle** Overwinters as an egg on the foodplant. Larva early Apr–late Jun. **Larval foodplants** Many broadleaved trees and shrubs, including Pedunculate Oak, Sessile Oak, Downy Birch, Silver Birch, Hazel, Hawthorn, Midland Hawthorn, Blackthorn, Apple, Dog-rose, Goat Willow, Field Maple, Sycamore, Hornbeam, Sweet Chestnut and elms. Also reported from Sitka Spruce. **Habitat** Most abundant in woodland. Also in scrub, hedgerows, gardens, scrubby calcareous grassland, heathland, moorland and scrubby upland pasture. **Status and distribution** Resident. Common. Well distributed and often abundant, and found throughout most of the British Isles.

Waved Umber

plate 31

Menophra abruptaria (Thunb.)

Common 70.257 (1936)



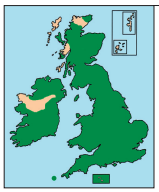
Field characters FW 18–21mm. Rests with wings flat and quite well spread, so that dark brown, rather straight-edged markings on fore- and hindwing line up like parallel fissures on a wooden surface. The diagonal, straight-edged banding across hindwing is unique among British moths. Hindwing edges are quite deeply scalloped. Ground colour of normal form varies from whitish brown, especially in female, to deep tawny brown. Form *fuscata* Tutt is almost entirely dark brown, with markings faintly represented. It is quite frequent in London and occurs throughout southern England. **Flight season** One generation. Apr–Jun. Very occasionally recorded in Jul and Aug in particularly hot summers. Sometimes found by day, at rest on trunks and fences. Comes to light regularly in small numbers. **Life cycle** Overwinters as a pupa, in a cocoon on the foodplant. Larva early Jun–mid-Sep. **Larval foodplants** Garden Privet, Lilac and Winter Jasmine in gardens. Occurs in many rural sites where even Wild Privet is not found, but no reports of other foodplants. Ash is likely to be used and is accepted in captivity, as are birches. **Habitat** Broadleaved woodland, scrub, hedgerows, parks and gardens. Frequently in many urban and suburban areas. **Status and distribution** Resident. Common. Well distributed and fairly frequent in most of southern Britain, north to Co. Durham and south Cumbria, but scarce in Cornwall and most of Wales. One record from Man, in 1893. Widespread in the Channel Islands.

Willow Beauty

plate 31

Peribatodes rhomboidaria ([D. and S.])

Common 70.258 (1937)



Field characters FW 17–24mm. This is one of several similar species, and one of the most widespread and numerous. The darker outer central cross-line on forewing is fine, oblique and strongly kinked near leading edge, and forms a dot on each vein. In trailing half, it is more or less straight, and is angled so that it converges with the central cross-line, the two in some cases meeting. On underside, forewing tip has a distinct square pale patch (absent in melanics). Hindwing edge is smooth or slightly scalloped, and on underside outer cross-line (when present) is angled centrally. Male antennae are feathered, with feathering tapered and ending 2mm from tip. Varies from light grey-brown, sometimes variegated with yellowish brown, through plainer grey forms (f. *perfumaria* Newm.) to blackish grey, and dark markings vary in intensity and extent. The almost uniformly black or dark brown f. *rebeli* Aigner is widespread, and sometimes numerous in industrial areas. Second-generation individuals are often smaller. **Similar species** See Feathered Beauty, Lydd Beauty, Satin Beauty, Mottled Beauty (outer central cross-line smooth, doubly bowed), Olive-tree Beauty, Great Oak Beauty and Pale Oak Beauty. **Flight season** Formerly, one generation Jun–Aug, with a small second generation in southern England in the autumn. More recently, two generations in the southern half of Britain, May–Oct. In the northern half of Britain and in Ireland, mainly one generation, Jun–Aug. Sometimes found at rest by day on tree trunks, more so in light woodland in the Highlands of Scotland than elsewhere. Comes readily to light in numbers, especially if traps are placed by the shady cover of conifers or in dense broadleaved woodland. Visits flowers after dark, such as Creeping Thistle and Common Ragwort. **Life cycle** Overwinters as a small larva on the foodplant. Larva Jul–Jun. In the south, some are fully grown by Aug. Cocoon is attached to

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

the foodplant or plant debris. **Larval foodplants** A wide range of broadleaved trees, shrubs and climbers, including Hawthorn, plums, Garden Privet, birches, Alder Buckthorn, Honeysuckle, Traveller's-joy and Ivy. Also conifers including Yew, Scots Pine, Norway Spruce and Monterey Cypress. **Habitat** Woodland, scrub, hedgerows, parks, gardens and other places where the foodplants grow, including central London and other urban centres. **Status and distribution** Resident. Common. Well distributed and often abundant in England, Wales, the Channel Islands and Man. Widespread in Scotland north to Caithness, including the Inner Hebrides, and in Ireland.

Olive-tree Beauty

plate 31

Peribatodes umbraria (Hb.)

Immigrant 70.259 (1937c)

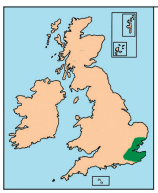
Field characters FW 20–25mm. Quite distinctive. Wings whitish, heavily flecked and blotched with brown, and with bold blackish cross-lines and blotches. Outer and inner central cross-lines are bold, converging in trailing half to form a large, conspicuous blackish blotch extending to middle of wing. Undersides of wings are pale yellow or yellowish-white, with a clear square pale patch at forewing tip and bold, dark brown markings, roughly reflecting those on upperside. Antennae in male are broadly feathered, the feathering tapering off and ending 2.5mm from tip. **Similar species** None with the above combination of features, but see Willow Beauty (usually duller, grey-brown), Feathered Beauty and Lydd Beauty (smaller and darker). Also the highly variable Mottled Beauty (outer central cross-line doubly bowed). **Flight season** In mainland Europe, two generations. May–Jun and Sep. **Larval foodplants** Evergreen Oak. **Habitat** Woodland. **Status and distribution** Rare immigrant. Channel Islands. A female at light at Grouville, Jersey, on 10 Oct 2006. Widespread in central and southern Europe.

Feathered Beauty

plate 32

Peribatodes secundaria ([D. & S.])

Suspected immigrant; recent colonist 70.260 (1937a)



Field characters and similar species FW 17–20mm. Similar to Willow Beauty, but outer central cross-line is less oblique, is distinctly bowed in trailing half, and usually less kinked near leading edge. In male, antennae are more broadly feathered, feathering ending abruptly 1mm from tip. On underside of forewing, pale square patch at tip may be present, but is rendered obscure by dark speckling, and is absent in melanics. Outer line on underside of hindwing is not angled centrally. Slightly smaller than Willow Beauty on average, and in most cases more heavily speckled with dark scales, including underside. The almost uniformly blackish f. *nigrata* von Sterneck occurs occasionally. See also Lydd Beauty. **Flight season** One generation. Jul–early Aug. Occasionally disturbed by day among conifers. Comes to light. **Life cycle** Overwinters as a small larva on the foodplant. Larva late Aug–early Jun. Pupates in a cocoon on the foodplant. **Larval foodplants** Norway Spruce, and recorded on other conifers in mainland Europe. **Habitat** Plantations of exotic conifers, largely growing on ancient woodland sites. **Status and distribution** Resident and suspected immigrant. First recorded in the British Isles in Jul 1981, when good numbers were seen in Orlestone Forest, Hamstreet, Kent, where it is still locally frequent. First recorded outside Kent in Jul 1982, in the Chiddingfold woodland complex near Plaistow, West Sussex, and in Tugley Wood, Surrey (in the same woodland complex), in Jul 1985. Also recorded from Bransland Wood in Surrey and a wood in East Sussex. A few singletons have been recorded elsewhere in south-east England, including Bradwell-on-Sea, Essex, in 1987; Greatstone, Kent, in 1994 and 2006; Kirby-le-Soken, Essex, in 1997; Bawdsey, Suffolk, in 2006; and Kingsdown, Kent, in 2007. These coastal locations suggest immigration, which probably led to the recent colonisation. Found throughout most of Europe, including Scandinavia.

Lydd Beauty

plate 32

Peribatodes ilicaria (Geyer)

Immigrant 70.261 (1937b)

Field characters and similar species FW 16–20mm. Similar to Feathered Beauty and Willow Beauty, but more heavily and coarsely speckled, especially female. As in Feathered Beauty, outer central cross-line is bowed in trailing half, and pale patch on underside of forewing tip may be present, but often obscure. A key feature is the strongly curved outer cross-line on upperside of hindwing, only partly visible when moth is at rest. In Willow Beauty and Feathered Beauty, this line is only gently curved. Male antennae are feathered, but less strongly than in the aforementioned species. See also Brussels Lace. **Flight season** One generation. Jul–Sep in France. **Life cycle** Overwinters as a small larva. Larva Sep–late Jun or Jul. Probably pupates in plant debris or loose earth. **Larval foodplants** A wide range of trees and shrubs in mainland Europe, including Pedunculate Oak, Evergreen Oak, Blackthorn, birches, Wild Privet and pines. **Habitat** Woodland, parks and gardens in mainland Europe. **Status and distribution** Rare immigrant. First recorded in the British Isles on 27 Aug 1990, a male at light at Lydd, Kent. A fertile female (from which larvae were reared) was caught at light on 4 Aug 1994 at New Romney, Kent. Two were trapped at Ninham, Isle of Wight, on 14 and 18 Aug 1996, and one on 3 Aug 2002 at Littlestone, Kent. Rather sparsely recorded from mainland Europe, but reported from Spain to Greece, and north to Denmark.

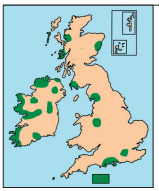
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Bordered Grey

plate 32

Selidosema brunnearia (Vill.)
ssp. *scandinaviaria* Stdgr.
Na 70.262 (1938)

ssp. *tyronensis* Cock.
Ireland (probably extinct)



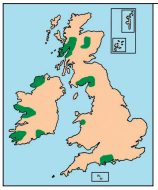
Field characters FW 16–22mm. A brownish-grey moth, tinged purplish when freshly emerged, with a thick, darker brown band around outer margin of fore- and hindwing. Has three very dark brown markings on leading edge of forewing, with a narrow, rather blurred, dark brown central cross-band. Male has feathered antennae. Female is smaller and browner, with simple antennae. A dull brown form (f. *atlantica* West) with reduced markings and no trace of grey, but sometimes with a purplish tinge, has been reported from the limestone of Co. Clare. Ssp. *tyronensis* was described on the basis that the moths were smaller, and the central and marginal banding on forewing was narrower and lighter. **Similar species** See Irish Annulet. **Flight season** One generation. Jul–Aug. Easily disturbed by day from among heathers or patches of bare ground, even in overcast weather. Flies from dusk onwards and comes to light, usually in small numbers. **Life cycle** Overwinters as a small larva on the foodplant. Larva Sep–Jun. Cocoon formed on or just below ground. **Larval foodplants** Heather on heathland and moorland. Common Bird's-foot-trefoil and possibly other legumes in calcareous and sand-dune habitats. Recently found on Common Restharrow in Kincardineshire. **Habitat** Heathland, acid bogs, calcareous grassland and coastal sand-dunes. **Status and distribution** Resident and suspected immigrant. Nationally Scarce A. Very scattered and localised in Britain. The major centres are the heathlands of the New Forest, Hampshire, south-east Dorset, north-east Hampshire (Aldershot area) and north-west Surrey. Occurs in small numbers along the Purbeck coast, Dorset, including Lulworth, and there is a colony on sand-dunes at Hayling Island, Hampshire. Historical records from Berkshire, Devon, west Wight, Sussex, Cheshire, South Wiltshire and Caernarvonshire. Occurs on the mosses of south Cumbria, such as Meathop Moss, in Shropshire at Whixall Moss (a large population) and at Bucknell. In Scotland, almost exclusively found in the west, in the Outer Hebrides on South Uist, in the Inner Hebrides on Mull, Coll and Rum (and older records from Canna and Skye), and on the Ardnamurchan peninsula, West Inverness-shire. Also recorded in West Ross, and in the south-west in Wigtownshire (one in 2012). In the east, a very isolated colony at St Cyrus NNR, Kincardineshire. Singletons, presumed immigrants, were recorded near Harrogate, Yorkshire, in 1992; at Gunwalloe, Cornwall, in the 1980s; and at Blackheath, London, in 1986. Reported from Man in 1946 and 1959, possibly vagrant. Very local in Ireland, mainly on the north and west coasts, from Cos. Donegal to Cork, and also inland (on acid bogs) in the midlands and north. Widespread but local in the Channel Islands. Ssp. *tyronensis* was described from a bog near Lough Neagh, Co. Tyrone, Ireland. However, the original site has been destroyed and no specimens conforming to this race have been reported recently.

Ringed Carpet

plate 32

Cleora cinctaria cinctaria ([D. and S.])
Na 70.263 (1939)

ssp. *bowesi* Rich.
Na



Field characters and similar species FW 16–20mm. Combination of rather narrow, angular forewing with almost straight leading edge, elongated dark 'ring' in centre of forewing and hindwing (sometimes obscured), and (usually) strong, dark basal cross-band is diagnostic. Ssp. *cinctaria* is rather brownish, especially male. In Scotland, ssp. *bowesi* has a silvery-white ground colour and better defined, blacker wing markings. In Square Spot and Engrailed (and Pale Oak Beauty, which is much larger, with hollow ring on hindwing only), forewing is broader with a more curved leading edge, and without dark central ring. **Flight season** One generation. Late Apr–May. Rests by day on trunks of young birches and pines (on the latter they are conspicuous), on fence posts and in heathers. Comes to light in small numbers. **Life cycle** Overwinters as a pupa, in plant debris or just below ground. Larva late May–early Aug. **Larval foodplants** Birches, Bilberry, Bell Heather and Cross-leaved Heath on the southern lowland heaths, and Bog-myrtle in Scotland. **Habitat** Damp heathland with stands of scrubby birch, often with small pines. Moorland with Bog-myrtle. **Status and distribution** Resident. Nationally Scarce A. Found in three widely separated regions. Ssp. *cinctaria* occurs on heathlands in the New Forest, Hampshire, and in Dorset, which are its traditional strongholds, with occasional records elsewhere. Formerly recorded from South Wiltshire, Berkshire (up to the 1980s), Sussex and Surrey, but not in recent decades. Ssp. *bowesi* is very local in Scotland, mainly in the central and western Highlands, with records extending from Moray and Perthshire to Argyll and Mull. Also in the south-west, and recorded across the border at Bowness-on-Solway (since 2008). Found very locally in north Wales, in Caernarvonshire, where adults and larvae were found from 1978 and during the late 1980s near Porthmadog, and recorded at Harlech in 2014. Moths from this area look more like ssp. *bowesi* than ssp. *cinctaria*. Last reported from Man in 1862. In Ireland, recorded from Cos. Donegal, Galway, Clare, Kerry, Cork and Waterford.

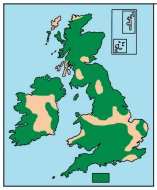
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Satin Beauty

plate 32

Deileptenia ribeata (Cl.)

Common 70.264 (1940)



Field characters and similar species FW 18–26mm. Distinguished from all similar species, notably Mottled Beauty, by the broader, more rounded forewing. Cross-lines, when evident, are closest to those of Willow Beauty, but outer central one is distinctly scalloped and less oblique, although it may merge with the inner one. Outer margins of fore- and hindwing are smooth or faintly scalloped. Antennae in male are feathered, more broadly than in Mottled Beauty (which has a doubly bowed outer central cross-line). Lightest forms have buff ground colour, but the predominant form in most places is the rather dark, obscurely marked f. *sericearia* Curt. (rather variable). The completely dark brown f. *nigra* Cock. is best known from Boxhill, Surrey. **Flight season** One generation. Late Jun–mid-Aug. Comes to light, more so if traps are placed in darker areas among trees. Sometimes found by beating the branches of conifers by day. **Life cycle** Overwinters as a small larva on the foodplant. Larva Aug–late May. Pupates in loose earth. **Larval foodplants** Most frequently conifers, including native Scots Pine and Yew, also exotic forestry species, including Norway Spruce, Larches and Douglas Fir. Reportedly able to feed also on birches, oaks and other broadleaved trees. **Habitat** Woodlands, most frequently in conifer plantations. Found on ancient Yew trees, usually on woodland edges and other sheltered situations, sometimes on downland. Other sites are often remnants of ancient broadleaved woodland. **Status and distribution** Resident. Common. Large-scale planting of conifers in both lowlands and uplands has enabled this moth to expand its range and distribution. Widespread in England and Wales, more so in the west. Formerly scattered and very local in Scotland, extending north to West Ross, but has undergone a dramatic expansion in range and numbers, and is now much more widespread and recorded north to Caithness and in the Hebrides. Local and infrequent on Man. Widespread but local in Ireland. Two records from the Channel Islands, on Guernsey in 1969 and 2002.

Mottled Beauty

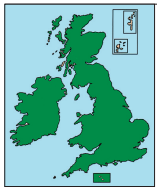
plate 33

Alcis repandata repandata (L.)

Common 70.265 (1941)

ssp. *muraria* Curt.
Common

ssp. *sodorensium* (Weir)
Outer Hebrides



Field characters FW 19–26mm. Ssp. *repandata* is very variable in both ground colour and markings, but one diagnostic feature in the vast majority of cases is a solid, smooth, wavy outer central cross-line on forewing, bowed outwards twice, most strongly in leading half. Outer edges of hindwing are wavy or scalloped. Ground colour varies from whitish brown to pale brown, through various shades of grey or brown to almost uniformly black (mainly in industrial areas). Pale forms sometimes have a very dark central band across both fore- and hindwing (f. *conversaria* Hb.). Ssp. *muraria* has a whitish ground colour, suffused to a varying extent with grey or grey-brown. Ssp. *sodorensium* is small and dark grey. **Similar species** In the equally abundant Willow Beauty, outer central cross-line on forewing is more or less straight in trailing half, and oblique, so that it converges with the central cross-line. Hindwing of Willow Beauty generally has a less deeply scalloped outer edge, and in male antennae are more broadly feathered. See also Satin Beauty. **Flight season** One generation. Early Jun–mid-Aug. Sometimes found at rest by day on tree trunks, from which it is easily disturbed. Visits flowers after dark, such as Wild Privet. Comes to light, especially if traps are placed in the shady cover of conifers or in dense broadleaved woodland. **Life cycle** Overwinters as a small larva on the foodplant, often pressed along a stem. Larva late Aug–May. **Larval foodplants** Many woody plants, including Blackthorn, Hawthorn, Midland Hawthorn, oaks, Downy Birch, Silver Birch, Ash, Barberry, Broom, Bilberry, Heather, Bramble, Honeysuckle, Traveller's-joy, Common Juniper, Norway Spruce, Lawson's Cypress, Japanese Red-cedar and Western Hemlock-spruce. Also herbaceous plants, including St John's-wort, Yarrow, Wild Angelica and docks. **Habitat** Most abundant in woodland, moorland and carr. Also in scrub, hedgerows, heathland and scrubby calcareous grassland, parks and gardens, but less frequent in urban centres. **Status and distribution** Resident. Common. The species is well distributed and often abundant and found throughout Britain (except Orkney and Shetland), Man and Ireland. Widespread in the Channel Islands. Ssp. *muraria* is mainly found in north-west Britain, although forms resembling it sometimes occur elsewhere. Ssp. *sodorensium* was described from Lewis, Outer Hebrides.

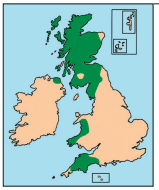
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Dotted Carpet

plate 33

Alcis jubata (Thunb.)

Local 70.266 (1942)



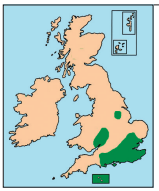
Field characters FW 13–16mm. The small size, broad forewing, white ground colour, large oval black central mark on forewing and fine, dark outer central cross-line, bowed outwards in leading and trailing halves (may be faint or broken), distinguish this species. The black markings are boldest at leading edge of forewing, and vary in intensity. Brownish individuals are occasionally recorded, usually with markings recognisable (f. *obscura* Fuchs). Male has slightly feathered antennae. **Similar species** See Brussels Lace, also Grey Birch, Cloaked Pug and Grey Scalloped Bar. **Flight season** One generation. Jul–Aug. Can be disturbed from foodplant on tree branches. Comes readily to light, sometimes in large numbers. **Life cycle** Overwinters as a larva among the foodplant. Larva late Aug–Jun. Pupates among the foodplant. **Larval foodplants** Beard lichens (*Usnea* spp.), eating the newest growth. Probably also other lichens. **Habitat** Mature woodland and scrub, both broadleaved and coniferous, including older plantations, with abundant lichen growth. In southern Britain, mainly in large ancient woodlands, presumably requiring humidity and clean air for lichen growth. **Status and distribution** Resident. Local. Well distributed and locally abundant in south-west England and parts of Wales. Formerly resident in the New Forest and Woolmer Forest, Hampshire, but not recorded since 1958 and believed extinct there. Occasional in Dorset and Gloucestershire, probably strays. Local in Cumbria and Northumberland, where it is abundant in Kielder Forest. Formerly local in Scotland, but now much more widespread and recorded north to Caithness and the Outer Hebrides. In Ireland, recorded regularly only in the northern part of Co. Antrim. Old single records from Cos. Down, Kerry (1941) and Cork.

Great Oak Beauty

plate 33

Hypomecis roboraria ([D. and S.])

Nb 70.267 (1943)



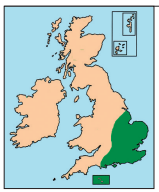
Field characters and similar species FW 23–32mm. The largest species in the group. Overlaps in size with Pale Oak Beauty, but has a broader thorax. Central dark cross-lines on forewing are noticeably thickened where they converge near trailing edge, sometimes merged and forming a dark blotch, usually apparent even on dark individuals. Central spots on fore- and hindwing are entirely dark. The dark grey f. *infuscata* Stdgr. is frequent in some areas. In Pale Oak Beauty, central forewing cross-lines may be thickened near trailing edge, but not noticeably so and no blotch is formed, and, crucially, small dark spot in centre of hindwing is pale-centred. It is generally a less strongly marked moth, and male has less broadly feathered antennae. Also, on underside of forewing, Great Oak Beauty has a distinct square pale patch at tip, surrounded to a varying degree by blackish clouding. In Pale Oak Beauty, underside of forewing is simply speckled in outer half and lacks pale patch (see plate). See also Willow Beauty (smaller, and usually more brownish). **Flight season** One generation. Mid-Jun–mid-Jul. Very rarely recorded in Aug–Sep as a small second generation. Roosts by day on trunks and branches of foodplant. Comes to light, sometimes in numbers, and occasionally to sugar. **Life cycle** Overwinters as a larva on a twig in the canopy of the foodplant. Larva early Aug–end May. Pupates just below ground. **Larval foodplants** Pedunculate Oak. **Habitat** Large, long-established oak woodlands with continuity of mature trees. **Status and distribution** Resident. Nationally Scarce B. Fairly well distributed in Hampshire, Sussex, Surrey and east Berkshire, extending into Buckinghamshire, Middlesex, Hertfordshire, Essex and Kent, and recorded very locally in the south-east Midlands. Also in South Wiltshire, Devon, in Wales in Monmouthshire (Wye Valley) and north to Wyre Forest, Shropshire and the Sherwood Forest area of Nottinghamshire.

Pale Oak Beauty

plate 33

Hypomecis punctinalis (Scop.)

Common 70.268 (1944)



Field characters FW 22–26mm. Somewhat plainer looking than similar species, and distinguished by the dark central spot on hindwing, which is pale-centred. Forewing grey or grey-brown, finely speckled. The most noticeable markings are a fine, scalloped, dark outer central cross-line and a thickened, often broken, wavy whitish cross-line near outer edge, sometimes dark-edged. The dark grey f. *humperti* Humpert is quite frequent. **Similar species** See Great Oak Beauty and Willow Beauty (outer central cross-line more oblique). **Flight season** One generation. Late May–mid-Jul. Rarely, individuals as early as late Apr. Probably a partial second generation in southern England, Sep–Oct. Sometimes found by day at rest on tree trunks. Comes readily to light, often in large numbers. **Life cycle** Overwinters as a pupa underground. Larva early Jul–late Aug. **Larval foodplants** Pedunculate Oak, Downy Birch, Silver Birch, Hazel, Hawthorn, Midland Hawthorn, Crab Apple and sallows. Also reported from Sycamore, Larches and Sweet Chestnut. **Habitat** Mainly broadleaved woodland and long-established scrub. Occurs in smaller numbers in parks and gardens in well-wooded areas. **Status and distribution** Resident. Common. Well

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

distributed and locally abundant in England, from Dorset to East Anglia and Kent. Local in the south-east Midlands and in Lincolnshire. Very local, with few records, in south-west England, Wales and the north Midlands, but recorded north to Castle Eden Dene and the Derwent Valley, Co. Durham. One record from Ireland, two in 1914 at Glengariff, Co. Cork. Local in the Channel Islands.

Speckled Beauty

plate 34

Fagivorina arenaria (Hufn.)

Former resident; extinct 70.269 (1946)

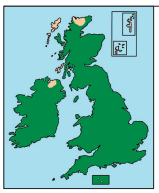
Field characters FW 15–17mm. A whitish moth with fine dark inner and outer central cross-lines on forewing, the latter bowed outwards in leading half and inwards in trailing half. There are various other black markings, sometimes including central clouding, and coarse, irregular brown and black speckling. Diagnostically, the white hindwing is thinly speckled and otherwise only faintly marked, save for small, dark marginal markings. Antennae are feathered in male. **Similar species** Brussels Lace is somewhat similar but has a well-marked hindwing (see also under that species). **Flight season** One generation. Jul–early Aug. Females were found resting on tree trunks. The moth was also collected by sweeping the upper branches of oak trees with a long pole. **Life cycle** Overwinters as a pupa in a cocoon among lichens. Larva Aug–Sep. **Larval foodplants** Lichens growing on Pedunculate Oak and Beech. **Habitat** Mature oak woodland. **Status and distribution** Extinct resident. Last seen in Britain in Jul 1898, between Brockenhurst and Lyndhurst in the New Forest, Hampshire, where it was discovered in about 1822. It was also found in Sussex at Tilgate Forest, Worth Forest, Henfield and near Brighton in the 19th century, but lost from the county by the 1880s.

Engrailed

plate 34

Ectropis crepuscularia ([D. and S.])

Common 70.270 (1947)



Field characters FW 15–22mm. Forewing broad, rather rounded. Ground colour brownish white, brown or grey-brown. Outer central cross-line forms a gentle curve and is shallowly scalloped with short, outward-pointing spikes, a central pair most noticeable with a 'W' beyond, often forming a diffuse blotch. These marking show some variability and may be obscured in darker forms. Sometimes a strong, dark band outside the central cross-line, especially in Scotland. Almost uniformly dark brown individuals are fairly frequent. Second- and third-generation moths are smaller. **Similar species** See Brindled White-spot, Ringed Carpet and Square Spot. **Flight season** Two main generations in the southern half of Britain, Mar–early Jun and late Jun–early Aug. Increasingly, a small third generation in Sep–Oct. In northern Britain and in Ireland, usually one generation, late Mar–Jun, sometimes with a small second one Jul–Oct. Sometimes found at rest by day on tree trunks. Comes readily to light, sometimes in large numbers. **Life cycle** Overwinters as a pupa underground. Larva late Apr–Jun and, where a second generation occurs, in late Jul–early Sep. **Larval foodplants** A wide range of woody plants, including oaks, Downy Birch, Silver Birch, Hazel, Hawthorn, Midland Hawthorn, sallows, Broom, Buckthorn, Spindle, Wild Privet and Hornbeam. Also reported from Yew, Larches and Sitka Spruce. **Habitat** Most abundant in broadleaved woodland. Also in scrub, hedgerows, parks and gardens. Less frequent in urban areas. **Status and distribution** Resident. Common. Well distributed and locally frequent throughout England, Wales and Scotland (north to Caithness and the Inner Hebrides), Man, Ireland and the Channel Islands.

Larva of Engrailed.

Note on the status of the Small Engrailed

It is now widely accepted that there is only one species of *Ectropis* in Europe. However, Agassiz *et al.* (2013) retain an entry for Small Engrailed, but since *crepuscularia* is the older name, it takes priority over *bistortata* (the former name for the Engrailed), and in fact has long been in use in mainland Europe. Unfortunately, this leaves the Small Engrailed without a valid scientific name. It is thought by some authorities that there are, mostly in the south, localised populations that appear slightly different to the Engrailed, and these have long been known as Small Engrailed. These moths fly slightly later in the spring (late Apr or early May–Jun), and have also reportedly been shown (in some cases) to produce only one generation per year, even in captivity, whereas Engrailed can produce up to three, even in the wild. However, since they cannot be reliably distinguished on external or other features, their status remains unclear.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Small Engrailed

plate 34

Taxon of uncertain status, currently unnamed

Local 70.271 (1948)

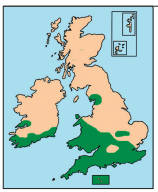
Field characters and similar species FW 16–19mm. Stated to be very similar to Engrailed, and difficult or even impossible to distinguish. Ground colour is whiter, sometimes predominantly white, with fine blackish cross-lines and other markings often edged with yellow, and sometimes coarsely freckling the whole of the wings to such an extent as to make them appear blackish. Forewing possibly slightly less rounded. See also Square Spot and Brindled White-spot. **Flight season** One generation. Mostly early May–mid-Jun, but recorded late Apr–late Jun. Sometimes found at rest by day on tree trunks. Comes to light, often in numbers. **Life cycle** Overwinters as a pupa underground. Larva mid-Jun–early Aug. **Larval foodplants** Downy Birch, Silver Birch, sallows, Beech and probably other broadleaved trees. Also reported from Larches. **Habitat** Broadleaved woodland. Also in scrub, hedgerows and gardens in well-wooded districts. Less frequent in urban areas. **Status and distribution** Resident. Local. More thinly distributed than Engrailed and less numerous, but reported widely throughout England and Wales, with a thin scatter of records from southern Scotland. Also recorded from scattered localities further north, to West Ross. First reported from Man in 1972, and recorded at various sites from the 1990s. Quite well distributed in Northern Ireland and recorded widely in the Republic, but particularly in the Burren, Co. Clare, and the south-west. Recorded in the Channel Islands as 'not common' in the 19th century, and seen recently in small numbers on Alderney.

Square Spot

plate 34

Paradarisa consonaria (Hb.)

Local 70.272 (1949)



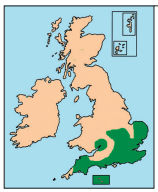
Field characters and similar species FW 18–20mm. The name refers to the roughly square-shaped, dark brown forewing blotch placed centrally on outside of middle cross-line. This is discernible in most forms and is diagnostic. Poorly marked individuals can be distinguished from Engrailed and Small Engrailed (which lack a distinct square spot) by outer central cross-band, which is rather bowed inwards in leading and trailing halves and lacks conspicuous outer projections. Also, central band is usually paler. The rarer, almost all-black forms retain white wing bases. See also Ringed Carpet. **Flight season** One generation. Late Apr–mid-Jun. Occasionally found by day on tree trunks or disturbed from scrub. Comes to light, sometimes in fair numbers. **Life cycle** Overwinters as a pupa underground. Larva mid-Jun–mid-Aug. **Larval foodplants** Oaks, birches, Beech, Hornbeam, pines, Yew and probably other woody plants. Recently found to be capable of reaching final instar on algae and lichens, which may help it survive en route from an egg in bark crevice to foliage of foodplant. **Habitat** Broadleaved and mixed woodland, dense scrub, also some parkland situations and large gardens, particularly in the west. **Status and distribution** Resident. Local. Widespread, but somewhat local, in south-west, central southern and south-east England, the south Midlands and Wales. Recorded very locally in south Cumbria, particularly Roudsea Wood, Witherslack Wood and Meathop Moss. In Ireland, very local in the south, mainly in Cos. Cork, Kerry and Waterford, also in Cos. Clare, Tipperary and Wexford. One record from the Channel Islands, on Alderney on 12 Apr 2007, possibly an immigrant.

Brindled White-spot

plate 34

Parectropis similaria (Hufn.)

Local 70.273 (1950)



Field characters and similar species FW 17–20mm. Fairly distinctive when in good condition. Dense dark brown flecking and speckling on straw-yellow wings sometimes suggests a slightly greenish tint. The large, rather square pale patch near outer edge of forewing is diagnostic. Rather obscure dark narrow cross-bands, the central one curved around the elongated central spot, further distinguishing it from Engrailed and Small Engrailed. The dark f. *variegata* is found locally in north-west Kent. See also Brussels Lace, with fine, scalloped and spiked outer central cross-line on forewing. **Flight season** One generation. Late May–Jun. Occasionally disturbed by day from tree trunks, understorey shrubs or conifer branches. Comes readily to light, sometimes in numbers. **Life cycle** Overwinters as a pupa underground. Larva late Jun–early Sep. **Larval foodplants** Pedunculate Oak, Hazel, Hawthorn, Midland Hawthorn, Downy Birch, Silver Birch, Sweet Chestnut and probably Sessile Oak. Also reported from unspecified lime. **Habitat** Broadleaved woodland, favouring ancient woodland in rural areas. Occasionally recorded in gardens several kilometres from woodland. **Status and distribution** Resident. Local. Quite well, although somewhat patchily, distributed, and locally frequent, in England north to Shropshire, Staffordshire, Leicestershire and Norfolk, and in Wales in Monmouthshire. A few widely scattered records from elsewhere in Wales. Recorded once from Man, in 1977. In the Channel Islands, recent records from Jersey and Alderney.

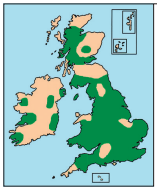
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Grey Birch

plate 34

Aethalura punctulata ([D. and S.])

Common 70.274 (1951)



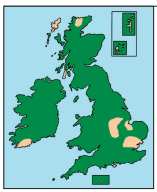
Field characters FW 13–16mm. A small grey moth with rounded wings and four conspicuous blackish marks on leading edge of forewing, sometimes the inner and outermost giving rise to weak, dark cross-lines, the second line sometimes connected to a small central dot. Ground colour varies from light to dark grey, never white and very rarely black. **Similar species** Dotted Carpet is superficially similar but whiter, with a larger and more conspicuous black central dot on forewing, and flies later in the summer, from late Jun. Brussels Lace has a very jagged outer central cross-line, and is usually greenish. Both have a more angular forewing. **Flight season** One generation. May–Jun. Sometimes disturbed by day from trunks in birch woodland. Comes well to light, sometimes in numbers. **Life cycle** Overwinters as a pupa, just below ground. Larva Jun–late Aug. **Larval foodplants** Downy Birch and Silver Birch. Sometimes Alder. Has been obtained from Hazel growing under birches but it is not known whether it can complete its growth on it. **Habitat** Birch woodland and birch scrub, mainly on well-established sites. Presumably also Alder groves. **Status and distribution** Resident. Common. Widespread and locally frequent in most of England and Wales. Local on Man (first found in 2004) and in Scotland, in the south-west, Central Belt and western Highlands north to Ross-shire. Very local in Ireland, in the west from Cos. Mayo to Cork and in the east from Cos. Down to Wexford.

Common Heath

plate 34

Ematurga atomaria (L.)

Common 70.275 (1952)



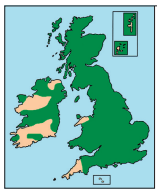
Field characters FW 12–15mm. Very variable, although the forms in southern England are less likely to be confused with any other species. Ground colour varies from white (especially in females) to warm light brown, yellowish brown or dark grey. Both fore- and hindwing often have several dark brown bands, variable in width. Two central bands may merge, particularly near trailing edge of forewing. Sometimes there are no bands, only dark freckles, or bands are very blurred. The uniformly blackish f. *unicoloraria* has occurred in northern England. Male has very feathery antennae, readily distinguishing it from Dingy Skipper butterfly *Erynnis tages* (L.), which may fly at the same time and in the same habitat. The small form found on northern moorlands has been named f. *minuta* Heydemann. **Similar species** Latticed Heath usually has crisper markings on a more uniform background, and two outermost dark bands normally merge in centre of forewing. It frequently settles with its wings raised, like a butterfly, while Common Heath holds them flat. In northern Britain, see Netted Mountain Moth. See also Lewes Wave. **Flight season** One generation. May–Jun, with a small second generation, more pronounced in southern Britain, in Aug. Active by day, and frequently disturbed from grass sward or heather. **Life cycle** Overwinters as a pupa, in a flimsy cocoon on or just below ground. Larva mid-Jun–mid-Sep. **Larval foodplants** Heather, Bell Heather and Cross-leaved Heath on heathland and moorland; trefoils, clovers and vetches elsewhere. **Habitat** Most abundant on acid heathland and moorland. Much more local on other grassland on chalk, limestone and neutral soils, including woodland rides and roadside verges. **Status and distribution** Resident. Common. Well distributed in England and Wales (although somewhat patchily, especially in parts of the Midlands and East Anglia). Well distributed throughout Scotland, on Man and in Ireland, especially in the west and north. Local in the Channel Islands.

Bordered White

plate 35

Bupalus piniaria (L.)

Common 70.276 (1954)



Field characters FW 17–19mm. Rests with wings above the body and pressed flat together, like a butterfly, showing a conspicuous whitish streak and dark cross-lines on underside of hindwing. Male has feathery antennae, with upper wing surfaces dark blackish brown. Pale patches yellow in southern Britain, frequently white in northern Britain. Female has thin antennae and brown wings, slightly darker in northern Britain, with pale patches lighter brown or buff. **Similar species** See Frosted Yellow. **Flight season** One generation. May–Jul. On warm days male flies around conifers, particularly mature pines. Both sexes are sometimes beaten from conifer branches. Comes to light, male sometimes in large numbers. **Life cycle** Overwinters as a pupa, among conifer needles on the ground, or just below ground. Larva late Jun–Oct or later. **Larval foodplants** Mainly mature Scots Pine, often as a pest, but recorded from many other conifers, including Corsican Pine (several pest outbreaks), Lodgepole Pine, Norway Spruce and Larches. **Habitat** Native pine woodland and plantations, and shelterbelts of conifers (often planted on heathland). Prefers mature trees. **Status and distribution** Resident. Common. Quite well distributed, sometimes in abundance, throughout most of Britain (reaching the Outer Hebrides and Orkney, but vagrant on Shetland) and on Man. Found locally throughout Ireland. In the Channel Islands, occasional on Jersey.

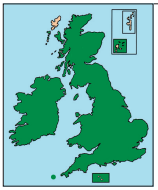
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Common White Wave

plate 35

Cabera pusaria (L.)

Common 70.277 (1955)



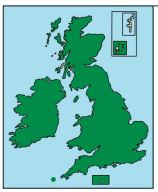
Field characters FW 15–17mm. A white moth variably peppered with grey scales, and with three distinct silver-grey cross-lines on forewing, the inner one curved, especially at leading edge, and the outer two fairly straight, and two lines across hindwing. Occasionally one or more lines may be missing. In the very rare f. *heveraria* H.-S., ground colour is grey; in less extreme forms it may be pinkish. **Similar species** See Common Wave. Larger than other waves, and with a characteristic, rather rounded forewing shape. **Flight season** One protracted or two overlapping generations, late May–early Sep. Often found at rest or disturbed from foliage by day. Flies mainly at dusk, near foodplant, often in numbers. Regular at light but relatively few are captured in light-traps compared with numbers present in the habitat. **Life cycle** Overwinters as a pupa, among plant debris or in the surface of the soil. Larva late Jun–Oct, often found in a wide range of sizes. **Larval foodplants** Downy Birch, Silver Birch, Alder, Sweet Chestnut and sallows. **Habitat** Woodland and scrub on calcareous, neutral and acidic ground. **Status and distribution** Resident. Common. Well distributed and often abundant throughout Britain, except at high altitudes, reaching the Outer Hebrides and Orkney, and on Man, in Ireland and in the Channel Islands.

Common Wave

plate 35

Cabera exanthemata (Scop.)

Common 70.278 (1956)



Field characters and similar species FW 14–16mm. Similar to Common White Wave, but cross-lines are brown and curved, notably the outer two, and often rather indistinct. Brownish-grey freckling on wings varies in intensity, usually heavier in female. Second-generation moths are often smaller and darker, and more likely to have reduced bands. See also Grass Wave. **Flight season** Two generations north at least to Lancashire, May–early Jul and early Jul–early Sep. In Scotland, recorded continuously May–Sep, peaking mid-Jun–early Jul, but some of the later individuals almost certainly represent a partial second generation. Roosts among the foliage of the foodplant by day, and is easily disturbed. Flies mainly at dusk. Visits flowers such as Wild Privet. Comes to light, sometimes in fair numbers, but more numerous at dusk. **Life cycle** Overwinters as a pupa, among plant debris or in the surface of the soil. Larva late Jun–Oct, often found in a range of sizes. **Larval foodplants** Goat Willow, Grey Willow and other sallows, Aspen and other poplars. **Habitat** Woodland and carr, often on very wet sites. **Status and distribution** Resident. Common. Well distributed and often numerous in Britain, reaching the Outer Hebrides and Orkney, and on Man, in Ireland and in the Channel Islands.

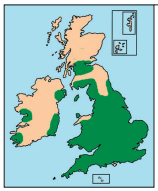
Larva of Common White Wave.

White-pinion Spotted

plate 35

Lomographa bimaculata (Fabr.)

Common 70.279 (1957)



Field characters and similar species FW 13–14mm. White, similar in shape to Clouded Silver, but with two blackish spots on leading edge of forewing, each extending into a row of dark dots. Hindwing is largely white with a weak cross-line. Shows little variation. The two species look very similar when alighting with wings closed, but diagnostic leading edge spots of White-pinion Spotted are usually visible. **Flight season** One generation. May–early Jul. Some individuals are present from the end of Apr in southern England. Sometimes disturbed by day from foodplant. Flies from dusk and comes to light, sometimes in fair numbers. **Life cycle** Overwinters as a pupa, just below ground or among plant debris. Larva late Jun–late Aug. **Larval foodplants** Blackthorn, Hawthorn and Midland Hawthorn. Probably also on other members of the rose family. **Habitat** Woodland, scrub, hedgerows and gardens in rural and suburban situations. **Status and distribution** Resident. Common. Well distributed in most of England and Wales. Its range has been expanding since the 1980s, when it increased in Derbyshire and Nottinghamshire. Formerly local in northern England, but more recently has expanded in Yorkshire and Lancashire. Long established locally in south Cumbria. Locally frequent on Man since 2004. First recorded in Scotland in 1997, in Kirkcudbrightshire, and has since spread north to Dunbartonshire and Fife. Very local in Ireland, in the west from Cos. Clare to Cork, and on the eastern side from Cos. Waterford to Wicklow, Down, Armagh and Tyrone.

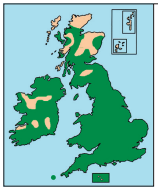
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Clouded Silver

plate 35

Lomographa temerata ([D. and S.])

Common 70.280 (1958)



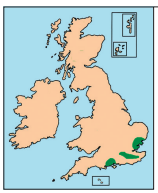
Field characters FW 13–15mm. White, with blackish clouding in outer part of forewing. Extent and intensity of clouding varies; female is generally more weakly marked. Clouding is cut in two by at least one wavy white line. Usually has a dark central forewing spot and a mark near centre of trailing edge. **Similar species** See White-pinion Spotted. **Flight season** One generation. May–early Jul. Sometimes disturbed from rest by day. Often seen on the wing at dusk, particularly along hedgerows. Comes to light, sometimes in fair numbers. **Life cycle** Overwinters as a pupa on the ground among plant debris. Larva late Jun–late Aug. **Larval foodplants** Hawthorn, Midland Hawthorn, Blackthorn, plums, cherries, Crab Apple and cultivated relatives. Also reported from Aspen and Wych Elm. **Habitat** Woodland, scrub, hedgerows, parks and gardens, including those in urban areas. **Status and distribution** Resident and suspected immigrant. Common. Well distributed and frequent throughout England and Wales, including northern England (where it has expanded greatly since the 1970s), on Man, and in Ireland and the Channel Islands. In Scotland, formerly local in the west and Central Belt, and locally north to Argyll, but recently expanded and now much more widespread in the east, and found in the north-east and north to Rossshire and Skye. Occasionally reported from the south coast of England in the autumn with known immigrant species, and one on 12 Feb 2004 at Maenporth, Cornwall, was possibly part of an early spring immigration.

Sloe Carpet

plate 35

Aleucis distinctata (H.-S.)

Nb 70.281 (1959)



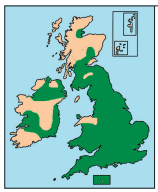
Field characters and similar species FW 13–14mm. Similar to male Early Moth, but slightly smaller and with jagged and irregular outer central cross-line on forewing, pointed forewing tip, faint or absent central dot on hindwing, conspicuous white spots on abdomen and antennae not feathered. Male Early Moth has slightly feathery antennae, and an earlier flight season. **Flight season** One generation. Mar–Apr. Occurs when Blackthorn is in blossom. Can be found at rest on the outer leafless twigs after dark, is sometimes seen on the wing at dusk and comes to light. **Life cycle** Overwinters as a pupa underground. Larva mid-May–early Jul. Feeds mostly at night but remains among the foliage by day, when it is sometimes beaten in good numbers. **Larval foodplants** Blackthorn. **Habitat** In Essex and Suffolk, in scrubby hedgerows on farmland. In Surrey, on isolated bushes rather than large thickets, on clay. In Hampshire, associated mainly with small Blackthorn bushes, only 30–60cm high, on damp heaths. Being in a warmer, more sheltered microclimate near the ground when further west may be important to a species with such a marked eastern distribution. **Status and distribution** Resident. Nationally Scarce B. Probably under-recorded due to early flight season. Found annually at some sites but may be present at others at such low density that it is recorded only every few years. Essex and Suffolk are the strongholds, in the eastern parts of which it is fairly frequent. Surrey (the Weald and around Effingham and Bookham on London Clay), south Hampshire (New Forest) and West Sussex continue to support a few colonies, with one in West Kent. Scattered, mainly older records from South Wiltshire, Berkshire and Buckinghamshire.

Early Moth

plate 35

Theria primaria (Haw.)

Common 70.282 (1960)



Field characters FW 14–17mm. Forewing in male is sometimes tinged pinkish, with a rounded tip and a curved, slightly wavy cross-line either side of a central spot. Hindwing is pale brownish white, with a distinctive dark central spot. Antennae are slightly feathered. Flightless female has stumpy, square-ended brown wings, crossed by a darker brown band. **Similar species** See Sloe Carpet. Female Spring Usher and March Moth are completely wingless. In female Winter Moth wing stumps are rounded, and in female Dotted Border they are much larger. The flightless females of other early-season geometrids are generally larger, furrier and almost or completely wingless. **Flight season** One generation. Jan–Mar. Male flies from dusk, and after dark is easily seen at rest on bare twigs of foodplant, sometimes mating with female. Male comes to light in small numbers. **Life cycle** Overwinters as a pupa just below ground. Larva early Apr–late May. **Larval foodplants** Blackthorn, Hawthorn and Midland Hawthorn. **Habitat** Open woodland, woodland

Larva of Early Moth.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

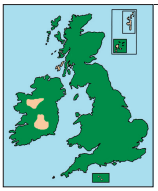
margins, long-established scrub and hedgerows. **Status and distribution** Resident. Common. Probably under-recorded as an adult due to winter flight season, but larvae are often present in large numbers. Quite well distributed throughout England and Wales. Fairly widespread in the southern half of Scotland and recorded very locally north to Rossshire. Local in Ireland and in the Channel Islands.

Light Emerald

plate 35

Campaea margaritaria (L.)

Common 70.283 (1961)



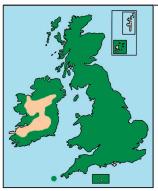
Field characters FW 18–26mm. Unmistakably greenish white when fresh, but fades to whitish a few days after emergence. Hooked reddish forewing tip and largely straight, dark-edged white cross-lines readily distinguish this from other green geometrid moths. Second-generation moths are smaller and darker. **Similar species** See Small Emerald and Barred Red (green form). **Flight season** Two generations in the southern half of Britain, late May–early Aug, and early Aug–early Oct, the second formerly partial, but numerous since the 1990s. Usually one generation in northern England, Scotland and Ireland, but recorded to Oct. Often disturbed from rest on the undersides of leaves of trees and shrubs. Comes readily to light, sometimes in fair numbers. **Life cycle** Overwinters as a small larva lying flat along stems of the foodplant. Larva mid-Aug–late May or Jun. **Larval foodplants** A wide range of broadleaved trees and shrubs, including Pedunculate Oak, Hawthorn, Midland Hawthorn, Blackthorn, Hazel, Downy Birch, Silver Birch, elms, sallows, Horse-chestnut, Sweet Chestnut and Beech. **Habitat** Most abundant in broadleaved woodland. Also found in most other situations with trees and shrubs, including scrub, hedgerows, parks and gardens, even in urban centres. **Status and distribution** Resident. Common. Well distributed and generally frequent, and found throughout the British Isles, except Shetland.

Barred Red

plate 35

Hylaea fasciaria (L.)

Common 70.284 (1962)



Field characters FW 17–21mm. The red forms are quite distinctive. Other frequent and widespread forms range from reddish brown to dull grey. The dull green f. *prasinaria* [D. and S.], frequent in mainland Europe, has been recorded in Kent and Suffolk but is rare. All forms have two gently curving, roughly contoured (or bent towards one another) cross-lines on forewing, sometimes edged with white or creamy yellow. Inner cross-line in particular may be weak or absent, especially in dark forms. Hindwing is slightly lighter in colour, with a single cross-line. Outer edges of all wings are smoothly curved. **Similar species** Barred Umber is similar in size, shape and colour, but is speckled and has jagged outer edge to central forewing cross-band. See also Light Emerald (cf. form *prasinaria*), with distinct red mark at slightly hooked forewing tip, pointed hindwing and much straighter cross-lines. **Flight season** Usually one generation. Jun–Aug. Occasionally a small second generation in Sep–Oct. Sometimes seen by day at rest on foliage of plants under conifers, and can be beaten from conifer branches. Comes to light, sometimes in large numbers. **Life cycle** Overwinters as a small larva on the foodplant. Larva early Sep–late May. Pupates on the ground among conifer needles and other plant debris. **Larval foodplants** Mainly Scots Pine and Norway Spruce, but has also been recorded from other conifers, including Larches and Western Hemlock-spruce. **Habitat** Native pine forest, conifer plantations, shelterbelts, parks, gardens and cemeteries with conifers. **Status and distribution** Resident. Common. Well distributed throughout Britain (recorded north to the Inner Hebrides and Orkney), on Man and in the Channel Islands. Widespread in Ireland.

Banded Pine Carpet

plate 35

Pungeleria capreolaria ([D. and S.])

Immigrant 70.2841 (–)

Field characters FW 16–18mm. Wings broad and rounded. Yellowish brown, densely covered with short brown streaks and flecks. Central forewing cross-band is often darker, its edges finely or rather boldly outlined blackish, the outer edge toothed and S-shaped. Distinct dark, often slightly elongated central spot and short dark diagonal streak or triangular blotch at tip. Antennae are strongly feathered in male. The uncommon f. *valesiaria* Vorbrodt and Rutz is almost uniformly grey. **Similar species** Quite distinctive. In shape, most like Barred Umber, which is also flecked but is larger and more reddish, and forewing lacks central spot and streak at tip. See also Brindled White-spot and Brussels Lace, which are somewhat similar but both lack streak at tip of forewing. **Flight season** One generation. In mainland Europe May–Jun, but Jul–Sep at higher elevations. Comes to light and is active at dusk and during the day in shady areas. **Life cycle** Overwinters as a larva. Larva autumn to spring. **Larval foodplants** Norway Spruce and European Silver-fir. **Habitat** In mainland Europe, montane forests, but increasingly associated with conifer plantations at lower altitudes. **Status and distribution** Immigrant. Six records, all in light-traps. Two on Guernsey, at St Sampson on 27 Sep 2013 and at Icart Point on 19 May 2014. Four in mainland Britain, all in 2014, at Bracklesham, West Sussex, on 18 May (female); Dymchurch, Kent, on 20 May; Freshwater, Isle of Wight, on 7 Jun; and Greatstone, Kent, on 8 Jun. Found rather locally in central and southern Europe; at higher altitudes in the south.

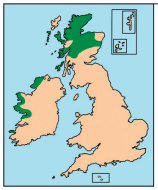
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Scotch Annulet

plate 35

Gnophos obfuscata ([D. and S.])

Nb 70.285 (1963)



Field characters and similar species FW 17–21mm. A rather obscurely marked geometrid. Normally freckled rather than uniformly coloured. Ground colour varies from light grey to dark brown or black. Forewing is rather pointed, with slightly concave leading edge. Has an oval dark central ring or spot and zigzag lines, often obscured. Annulet has a shorter, less pointed forewing, the leading edge not concave, and hindwing is scalloped. See also Irish Annulet. **Flight season** One generation. Jul–Aug. Sometimes found by day at rest in fissures on rocks and stone walls or disturbed from rest. Flies from dusk and comes to light, generally in small numbers. **Life cycle** Overwinters as a larva. Larva Sep–Jun. Pupates in a cocoon in plant debris or loose earth. **Larval foodplants** Yellow Saxifrage, other saxifrages and stonecrops, Heather, Bell Heather, Cross-leaved Heath and Petty Whin. Probably also other small plants. Has been reared on Dyer's Greenweed, but occurs only north of its natural distribution. **Habitat** Mountains and moorlands, especially with exposed rock such as in gullies, stream-sides and quarries. **Status and distribution** Resident. Nationally Scarce B. Widespread but patchy distribution in northern and central mainland Scotland, and the west coast, Arran and the Hebrides. Older records from the Central Belt and Arran. In Ireland, found only along the west coast, most extensively in Clare, West Galway, West Mayo and West Donegal, and very locally in North Kerry.

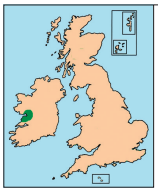
Irish Annulet

plate 35

Gnophos dumetata (Treit.)

ssp. *hibernica* Forder

Ireland 70.286 (1962a)



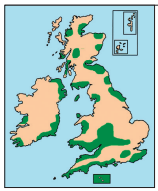
Field characters FW 18–20mm. A fairly large, distinctive, rather cold grey geometrid, its wings finely dusted with darker scales. Outer edge is scalloped on both wings, more strongly on hindwing. Forewing is broad, with a straight leading edge and slightly hooked tip. Has fine, fairly straight blackish cross-lines, sometimes broken, but forming spots on leading edge, the inner central one sharply angled near leading edge. No central spot. Ssp. *hibernica* is distinct from ssp. *dumetata*, from mainland Europe, which is much browner. **Similar species** Scotch Annulet and Annulet are both smaller, with a different wing shape, scalloped cross-lines and central spot. See also Bordered Grey, browner and with forewing tip not hooked, and antennae strongly feathered in male. **Flight season** One generation. Aug. Reported visiting flowers of scabious and Greater Knapweed, and flying around the larval foodplant after dark. Comes to light. **Life cycle** Overwinters as an egg on the foodplant. Larva Apr–early Jul. **Larval foodplants** Buckthorn. Will not eat Alder Buckthorn. **Habitat** Scrubby limestone pavement, mainly breeding on low, prostrate or isolated bushes in the more sparsely vegetated areas. **Status and distribution** Ssp. *hibernica* is resident very locally in western Ireland only, where it is apparently endemic. Discovered in Aug 1991, when two adults were captured at light in the Burren, Co. Clare. Many adults have since been seen and it appears to be well established in the eastern Burren. Searches have failed to find it outside Cos. Clare and Galway. Ssp. *dumetata* has a localised central and southern distribution in Europe, including parts of southern France and Germany.

Annulet

plate 36

Charissa obscurata ([D. and S.])

Local 70.287 (1964)



Field characters FW 15–18mm. Very variable in colour, but markings are rather constant. Ground colour matches to some degree colour of soil or rocks in habitat. Those from chalk and limestone are lightest, sometimes almost white, while those from heaths, bogs and dark rocky coastlines range from various shades of brown to black. Forewing has two scalloped cross-lines and a dark central ring, but these markings may be obscured, especially in dark forms. Likewise the cross-line and central ring on hindwing, which has a distinctly scalloped outer edge. **Similar species** See Scotch Annulet and Irish Annulet. **Flight season** One generation. Jul–early Sep. Easily flushed by day from rest on bare chalk, baked earth or hidden among rocks, in small recesses and behind overhanging vegetation on cliffs. Flies at dusk. Visits flowers such as thistles. Comes to light. **Life cycle** Overwinters as a small larva near base of foodplant. Larva Sep–late May. Pupates on the ground among plant debris or in earth. **Larval foodplants** Sea Campion, Thrift,

Larva of Annulet.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

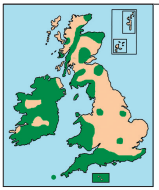
Common Rock-rose. Also Common Bird's-foot-trefoil, Kidney Vetch, Creeping Cinquefoil, Wild Strawberry, Wild Thyme, Salad Burnet, Shining Crane's-bill and Heather. **Habitat** Many coastal situations, from rocky coastlines to limestone cliffs, grassy banks and sandy places by the sea. Heathland, moorland, chalk and limestone grassland and quarries inland. **Status and distribution** Resident. Local. On the south coast of England, very local from Kent to Dorset (including the Isle of Wight), quite widespread in south-west England and Wales, found locally in Cumbria, Man and south-west Scotland, and recorded north to Skye. On the east coast, very local from Banffshire to Flamborough Head, Yorkshire. Inland, very scattered, from chalk downland and lowland heaths in southern England such as the New Forest and in Surrey (where it appears to be in decline), to mainly calcareous sites in the Midlands, northern England and in Scotland, where it is recorded north to West Ross and East Sutherland. In Ireland, found very locally on the coast from Co. Londonderry in the north to North Kerry in the south-west. Also at very few inland sites in Cos. Wicklow and Wexford in the south-east. Local in the Channel Islands.

Brussels Lace

plate 36

Cleorodes lichenaria (Hufn.)

Local; suspected immigrant 70.288 (1945)



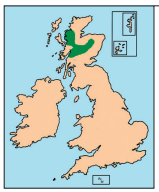
Field characters FW 14–18mm. Distinguished by olive-green component of speckling and blotching, and the fine, deeply and irregularly scalloped black outer cross-line on forewing (and also usually on hindwing), with spikes pointing to outer edge. **Similar species** In Dotted Carpet, Grey Birch, Lydd Beauty, Brindled White-spot and Speckled Beauty, outer central cross-line is not deeply scalloped and spiked. **Flight season** One generation. Jun–mid-Aug. Occasionally a partial second generation, Sep–Oct. Comes to light, sometimes in fair numbers in the west. Otherwise seldom seen. **Life cycle** Overwinters as a larva. Larva late Aug–end May. Pupates in a cocoon among lichens. **Larval foodplants** Lichens on branches and stems of woody plants, and sometimes on rocks and walls. **Habitat** Dense scrub such as mature Blackthorn and hawthorn thickets, sometimes in otherwise open ground, as well as in the tree canopy in woodland, plantations and shelterbelts. Also on rocky coastlines. **Status and distribution** Resident and suspected immigrant. Local. Well distributed and locally frequent in south-west England, also in Dorset, Hampshire and the Isle of Wight (where it has increased dramatically in recent years, notably in the New Forest), into Wiltshire and in Wales. Formerly well established in Surrey, Sussex and Kent, but declined almost to extinction by the 1950s, but still occurs very locally in Sussex. Historical (and some more recent) records from a number of counties, mainly in the southern half of England, may indicate past establishment or perhaps are of vagrants. However, singletons on the Kent coast in 2002 at Dymchurch and Greatstone, in 2003 at Kingsgate, and in 2006 at Littlestone, suggest immigration. Local in north-west England and on Man. In Scotland, quite widespread but patchy, mainly found in the south, along the west coast to Argyll, in the Great Glen and around the Moray Firth, and in Perthshire and the north-east. Widespread and locally frequent in Ireland, and widespread in the Channel Islands.

Black Mountain Moth

plate 36

Glacies coracina (Esp.)

Na 70.289 (1965)



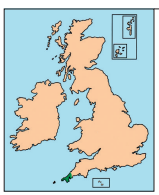
Field characters FW 10–13mm. This moth is unusual in shape, in that forewing and hindwing are roughly the same length. Both sexes have a brownish-black ground colour, absorbing heat from the sun more effectively than pale moths. There is whitish frosting, extensive in female. Forewing has two scalloped cross-lines and a dark central spot. **Similar species** Netted Mountain Moth is slimmer and slightly smaller, with smoother cross-lines and shorter hindwing. **Flight season** One generation. Jun–Jul, depending on altitude and season. Male flies in sunshine. Female found crawling over rocks and lichens. Both sexes frequently crawl because it is often too cold or windy to fly in their high-altitude habitats. **Life cycle** Incompletely known. Almost certainly has a two-year life cycle, because on some sites the adults appear to be more numerous every other year, generally in odd-numbered years. The first winter is spent as a larva, and the second as a larva and possibly in some cases as a pupa. Larvae, pupating larvae and pupae have been found during late May under Reindeer-moss lichen. **Larval foodplants** Crowberry. Has been reared on Heather and partially reared on Cross-leaved Heath. **Habitat** High-altitude moorland and mountainsides, generally above 600m. **Status and distribution** Resident. Nationally Scarce A. Widespread and quite well distributed in the central and north-west Highlands of Scotland, occurring throughout the Cairngorms, south to Perthshire and west to Argyll, in the Monadhliaths and north to West Sutherland.

Common Forest Looper

plate 36

Pseudocoremia suavis Butler

Adventive 70.290 (1965a)



Field characters FW 14–15mm. Highly variable but fairly distinctive. Forewing is light brown with darker blotches, medium brown and more uniform, or grey-brown. Two or three sinuous, dark central cross-lines (usually smooth, but may be scalloped) converge at trailing edge, where they are

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

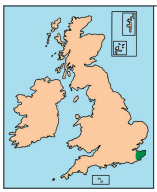
bolder, often with a white spot just beyond. Sometimes the lines are part of a darker central band. Has an elongated dark central spot, with a small tuft of raised grey scales. Antennae in male are feathered, tapering off well before tip. Hindwing is yellowish white with darker shading near outer margin, and a thin, broken, dark marginal line. Abdomen has a narrow black band at tip. Forewing is slightly longer and narrower in female. **Similar species** None with the above combination, but could be mistaken at a glance for Spruce or Grey Pine Carpet or one of the highflyers (all with un-feathered antennae). **Flight season** In New Zealand, throughout the year in continuous unsynchronised generations, but most abundant in summer. In Cornwall, recorded in Apr, Jun–Oct and once in Feb. **Life cycle** In New Zealand, all life stages can be found at any time of year. Eggs are laid on bark. Pupates on the ground. **Larval foodplants** In New Zealand, a wide range of trees and shrubs, including Southern Beech, yews, Kanuka and Gorse. Has caused serious localised defoliation in plantations of introduced Douglas Pine and Douglas Fir. Early stages not yet found in Britain. **Habitat** Woodland. In Britain, found in a rural garden close to farmland and moorland. **Status and distribution** Adventive. Probably established in one small area. Five at light in 2007, on 15 Apr, 14 Jul, 9 Sep, and 1 and 12 Oct, at a single site at Greatwork, West Cornwall. Continued records of small numbers at Greatwork and also Helston, Cornwall, indicate that there is a small established population. Native to New Zealand, where it is numerous throughout. Probably accidentally imported by the forestry or horticulture industry.

Black-veined Moth

plate 36

Siona lineata (Scop.)

RDB (protected species) 70.291 (1966)



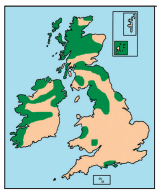
Field characters FW 19–22mm. Quite distinctive. There is no other white or cream geometrid moth in the British Isles with black veins and blackish banding on undersides of wings. Fades from slightly cream, especially near thorax, to white, and the dark veins become more obvious on the upperside with age, as scales are lost. When fully at rest, wings are held flat, but it often alights, rests and feeds at flowers with them closed or partly closed up over its back, like a butterfly. Abdomen white with black stripes along sides, long and slender in male and turned up at tip. Female is slightly smaller, with more angular wings and a stiff abdomen, broad at front and tapering to tip. **Similar species** The quite large micro-moth *Sitochroa palealis* ([D. and S.]) (Pyralidae), FW 14–16mm, can appear whitish when faded (very pale green or yellowish when fresh) and has a rather similar underside pattern. It is also active by day in rough grassy places (usually in the south), and sometimes sits on flowers. However, it has a much narrower forewing and never rests with its wings held up. **Flight season** One generation. Late May–early Jul, depending on site and season. Readily flushed from rough grass by day, and nectars in sunshine. Female is often seen egg-laying by day, particularly on blades of Tor-grass. Male patrols breeding grounds at dusk, searching for females. Both sexes come to light. **Life cycle** Overwinters as a part-grown larva. Larva late Jul–May. The cocoon is attached to blades or stems of grass within the main sward or on the edges of tussocks. **Larval foodplants** Recorded on Wild Marjoram, Common Knapweed and Common Bird's-foot-trefoil, but probably not restricted to these. Accepts the usual standbys, such as Knotgrass, in captivity, but difficult to rear. It does not feed on grasses, as is sometimes reported. **Habitat** Current sites are unshaded, rough but fairly herb-rich chalk grassland slopes of varying aspect. Formerly occurred in open woodland and also on clay, including sea-cliffs. **Status and distribution** Resident. Red Data Book species. By 2003, restricted to four British sites, all in Kent, but has since naturally recolonised at least two more nearby, after these were brought into favourable condition, and has been re-established on a seventh by translocation of adults. Numbers fluctuate depending on grazing and other management. Positive records from six sites in 2015. Occurred in various other sites in Kent prior to 1980, and there are old records from Essex, Sussex, Somerset, Dorset, Gloucestershire and Hertfordshire.

Grey Scalloped Bar

plate 36

Dyscia fagaria (Thunb.)

Local 70.292 (1969)



Field characters FW 15–21mm. Quite distinctive. Whitish or grey, speckled to a varying degree with darker grey. Consistent features are the two curved, slightly irregular dark cross-lines on forewing and the bold, dark central spot between them. Outer cross-line continues on hindwing, which may also have a central spot. Male is larger than female, has a slightly concave leading edge to forewing and more rounded wing tip. Female is much smaller, generally darker, with a straighter leading edge and more pointed tip to forewing. Her wings are relatively small for her body size, suggesting she flies much less than male. Ground colour very variable. Upland forms are often white, lowland and heathland forms tend to be grey, and some forms are very dark grey or brownish. **Similar species** Scotch Annulet (cf. dark forms of male Grey Scalloped Bar) is similar size and shape, but is more obscurely marked, with a less prominent central forewing spot. See also Dotted Carpet, which is smaller with an oval central spot, more irregular cross-lines and a slightly curved leading edge. **Flight season** One generation. Late May–early Aug. Male basks on stones and broken or bare ground, and is easily disturbed by day. Both sexes

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

can be found at rest on Heather after dark. Comes to light in small numbers. **Life cycle** Overwinters as a small larva. Larva Jul–May. Cocoon is formed on the foodplant or in fallen debris. **Larval foodplants** Heather, Bell Heather and Cross-leaved Heath. **Habitat** Heathland, moorland, bogs and raised mosses, probably favouring shorter swards. Often seen at rest in burned areas. **Status and distribution** Resident. Local. Local and uncommon on the now fragmented heathlands of south-east Dorset and more widespread and frequent in the New Forest, Hampshire. Formerly found on heathland elsewhere in Hampshire and west Surrey, but apparently no post-2000 records. One recorded on the Isle of Wight in 2001. Found on a single site in Monmouthshire and very locally in west Wales. Mainly older records from north Wales and the north-west Midlands. Local in northern England from Derbyshire northwards (although in Yorkshire not recorded recently from lowland heaths), on Man (but last recorded in 1989), throughout most of Scotland, including the Hebrides and Orkney, and in western, central and northern parts of Ireland. One recorded in the Channel Islands, on Jersey in 1977.

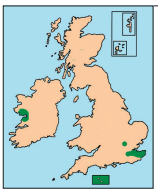
Straw Belle

plate 36

Aspitates gilvaria gilvaria ([D. and S.])

RDB; possible immigrant. 70.293 (1967)

ssp. *burrenensis* Cock.
Ireland



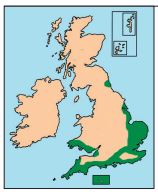
Field characters and similar species FW 15–18mm. Distinguished from all other moths, except the much more widely found Vestal, by its pale straw-yellow forewing, with an oblique red or reddish-brown stripe running across wing from tip. Vestal is often reported as Straw Belle, but is a smaller, slighter moth, is not speckled and rests with its wings held closer to the body, at a steep angle. Straw Belle has a dark band and central spot on underside of hindwing, which may be visible from upperside, while hindwing of Vestal is unmarked. Female is more freckled than male, with thin antennae. Ssp. *burrenensis* is darker, forewing markings are more brownish and heavier, and grey stripe on hindwing nearly reaches trailing edge. See also Yellow Belle. **Flight season** One generation. From mid-Jun in Kent but Jul–early Sep in Surrey. Easily disturbed from among grass by day. Flies from dusk and comes to light. **Life cycle** Overwinters as a small larva. Larva Sep–end May or Jun. Pupates in a flimsy spinning in the sward. **Larval foodplants** Recently found on Common Bird's-foot-trefoil and Fairy Flax. Also reported from Black Medick, Wild Thyme, Creeping Cinquefoil, Wild Parsnip and Yarrow. **Habitat** Rough chalk grassland and quarries, with the larvae feeding on herbs but using dead grass stems for cover throughout the long larval period. **Status and distribution** Resident. Red Data Book species. Restricted to the North Downs of Surrey and Kent. Now possibly confined to two sites in Surrey, of which Box Hill is the best known, and several in Kent, most famously around Folkestone and Dover. Formerly recorded from Devon, Somerset, Gloucestershire, Hampshire, Isle of Wight, Sussex, Middlesex, Essex, Suffolk and apparently Cheshire, mainly in the 19th century. One at light at Bricketwood, Hertfordshire, on 21 Oct 2006, the very late date suggesting it may have been an immigrant. Two on Guernsey in 1989 and recorded more recently. In Ireland, ssp. *burrenensis* is found fairly extensively and in moderate numbers in the Burren, Co. Clare. Also reported from Cos. Kerry, Galway, Dublin and Wicklow.

Yellow Belle

plate 36

Aspitates ochrearia (Rossi)

Local 70.294 (1968)



Field characters and similar species FW 12–16mm. The two slightly irregular grey-brown cross-lines on yellowish forewing and curved, rather wavy grey line on upperside of whitish hindwing are diagnostic. Straw Belle and Vestal (the latter with plain hindwing) have a single, oblique, fairly straight brown or reddish-brown cross-line on forewing, extending very close to tip; in Yellow Belle it usually reaches leading edge. Male has feathered antennae. Female is generally less yellow, slightly smaller and more speckled than male, sometimes almost fawnish white, and has thin antennae. Fringes are usually chequered, especially in female. Varies greatly in size. **Flight season** Two generations. May–Jun and Aug–Sep. Often flushed from ground vegetation by day, and flies in hot weather. Found at rest on stems after dark. Comes to light, usually in small numbers. **Life cycle** Overwinters as a larva on the foodplant or on other vegetation in the sward. Larva Sep–May and late Jun–Aug. **Larval foodplants** A wide range of small plants, including Sea Wormwood, Hare's-foot Clover, Smooth Tare, Common Bird's-foot-trefoil, Common Restharrow, Wild Carrot, Beaked Hawk's-beard, Buck's-horn Plantain and Spanish Catchfly. **Habitat** Mainly found on or near the coast. Sand-

Larva of Yellow Belle.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

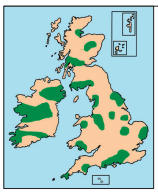
dunes, shingle, the upper parts of beaches and saltmarshes, and grassy or heathy areas inland, including golf courses and grazing levels. **Status and distribution** Resident. Local. Quite well distributed and sometimes frequent along the south coast of England, including the Isle of Wight, the north coast of Cornwall, Devon, Somerset and Gloucestershire along the Severn Estuary, and the south coast of Wales to Pembrokeshire. On the east coast, from Kent to Lincolnshire and Spurn, south Yorkshire. Inland, widespread in East Anglia, particularly in the Brecks, along the Thames estuary, very locally on chalk in Dorset and Hampshire. Elsewhere, notably at Greenham Common, Berkshire. Widespread and frequent in the Channel Islands.

Grass Wave

plate 36

Perconia strigillaria (Hb.)

Local 70.295 (1970)



Field characters FW 15–20mm. Silvery grey, heavily marked with diffuse brown, and mainly fairly straight cross-lines (on forewing) and fine speckling, and with rather pointed forewing. Male has quite broadly feathered antennae. Strength of markings is quite variable, even on the same site. Normally four bands across forewing and three across hindwing, but one or more on either wing may be reduced or absent, or central lines may be merged. Also varies considerably in size. **Similar species** Somewhat larger and with more cross-lines than Common Wave, which has a more rounded forewing and curved cross-lines. **Flight season** One generation. May–Jul. Readily disturbed and sometimes active by day. Also flies from dusk and comes to light in small to moderate numbers. **Life cycle** Overwinters as a small larva. Larva Aug–late May. Cocoon attached to the foodplant. **Larval foodplants** Heather, Bell Heather, Broom and Petty Whin. Reported from the flowers of Gorse and on Blackthorn. **Habitat** Most abundant on lowland heathland, the heathy commons of Surrey, and in open woodland where the ride verges and open areas have a heathy character. Also on moorland and bogs. **Status and distribution** Resident. Local. Highly localised in Britain and absent from many areas, but not uncommon in relatively small areas or single sites. Well distributed and locally fairly frequent on the heaths of south-east Dorset, the New Forest and north-east Hampshire, and Berkshire. On heathland and in large woodland clearings in Surrey and very locally in Sussex, and on coastal heathland in Suffolk. Scattered through the Midlands and northern England (notably in Staffordshire, Worcestershire, Northamptonshire, Nottinghamshire, Lincolnshire and North-east Yorkshire), and in western Wales. Similarly clustered in Scotland mainly in the south, Central Belt and north to Argyll, Aberdeenshire and Ross-shire. Widespread but very local in Ireland, from the extreme south-west to Northern Ireland.

Geometrinae
Emeralds

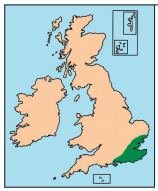
Small Emerald

Rest Harrow

plate 37

Aplasta ononaria (Fuessl.)

RDB 70.296 (1664)



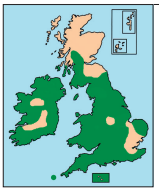
Field characters FW 13–14mm. At rest, this delta-shaped orange-brown moth hangs from stems in an open grassy sward, rather than spreading out flat against a leaf or the ground. Reddish banding and freckling, heaviest on male, and lack of central spots or other sharp markings is a distinctive combination. **Flight season** One generation. Late Jun–Jul. A partial second generation in late Aug–Sep. As an immigrant, mid-Jul–early Oct. Nocturnal and comes to light, but flies up from the sward if disturbed by day. **Life cycle** Overwinters as a small larva on the foodplant, near the ground. Larva Aug–late May or early Jun. Pupates in a light cocoon under foodplant. **Larval foodplants** Common Restharrow. Will eat Spiny Restharrow in captivity. **Habitat** At both main sites the larvae occur on Common Restharrow growing in a calcareous, short-grass sward, in open but sheltered sun-trap locations. **Status and distribution** Resident, and also a suspected immigrant. Red Data Book species. Only two long-term breeding colonies are known, both in Kent, at Folkestone Warren and on the coastal sand-dunes between Sandwich and Deal. A small colony was reported to exist between Dungeness and New Romney in 1948–49 and a colony was found at Dungeness in 2013. Single examples, presumed immigrants, have occurred away from the resident populations on at least 60 occasions, the vast majority near the coast in south-east England, from Hampshire to Essex. Recorded on Jersey in 1994 and Guernsey in 1998.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Grass Emerald

plate 37

Pseudoterpna pruinata (Hufn.)
ssp. *atropunctaria* (Walk.)
Common 70.297 (1665)

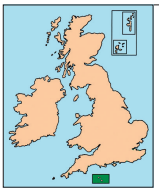


Field characters and similar species FW 14–19mm. Bluish-green colour (often fading to greyish white) and rather jagged, dark green or blackish central cross-lines of forewing distinguish this from most other emeralds, which have white cross-lines, except the recently discovered Jersey Emerald (see under that species for differences). **Flight season** Mainly one generation. Mid-Jun–Aug. Occasional individuals in Sep and Oct, of a possible second generation. Often disturbed by day from among or near its foodplant. Active after dark and comes to light, usually in small numbers. **Life cycle** Overwinters as a tiny larva among the foodplant. Larva Jul–early Jun. Pupates in plant debris. **Larval foodplants** Gorse, Broom and Petty Whin. **Habitat** Heathland, moorland, open woodland and scrub, and shingle beaches. Also gravel pits and roadside embankments where Gorse and Broom are planted to stabilise the banks. Seldom on Broom in gardens unless the larval foodplants are abundant nearby. **Status and distribution** Resident. Common. Widespread in most of England and Wales, although recent records are thin in the eastern half of the Midlands and in counties north of London. Local in south-west Scotland, the Central Belt and north to Argyll. Fairly well distributed and frequent on Man and in Ireland. Two on Alderney in 2006 are the only confirmed records from the Channel Islands (records from Jersey prior to 2001 may refer to Jersey Emerald).

Jersey Emerald

plate 37

Pseudoterpna coronillaria (Hb.)
Channel Islands 70.298 (1665a)



Field characters and similar species FW 16–20mm. In shape and markings, quite like Grass Emerald, but grey, thickly dusted with darker scales and with dark brown central forewing cross-lines, that beyond middle usually more jagged (but this varies in Grass Emerald). **Flight season** Jun–Jul. **Life cycle** Not fully known in the Channel Islands. Large larvae are found Apr–May in mainland Europe. **Larval foodplants** Recorded on Prostrate Broom on Alderney. Recorded from Broom and Gorse in mainland Europe. **Habitat** Open areas with Broom and Gorse, including Grouville golf course, Jersey. **Status and distribution** Resident in the Channel Islands, on Jersey and Alderney. Overlooked on Jersey until 2001, and previously misidentified as Grass Emerald. Old specimens labelled as that species indicate that it has been present for many years. Discovered on Alderney in 2006. Mainly found in southern and south-west Europe, but extends north along the western coast of France.

Large Emerald

plate 37

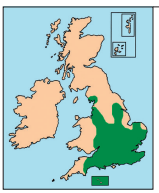
Geometra papilionaria (L.)
Common 70.299 (1666)

Field characters FW 24–29mm. This large, distinctive green moth is further distinguished by its butterfly-like resting posture, with wings spread and raised at an angle from the horizontal, as if it had just settled briefly and was about to fly off again. Edges of wings are wavy. The green colour is more stable than for most other emeralds. Shows little variation, but one or more of the whitish cross-lines may be absent. **Flight season** One generation. Late Jun–Aug. Comes readily to light, sometimes several per trap, usually after midnight, often landing a metre or more from the light and failing to enter the trap. Occasionally flies high in the canopy on warm, sunny days. **Life cycle** Overwinters as a small larva, on a silk pad on a twig or stem of the foodplant. Larva Jul–Jun. Pupates in leaf litter. **Larval foodplants** Downy Birch, Silver Birch, Hazel, Alder and reported from Beech. **Habitat** Woodland, scrubby heathland and grassland, substantial hedgerows and some well-established gardens and parks. **Status and distribution** Resident. Common. Well distributed, and often frequent, throughout most of mainland Britain and the Hebrides. Local on Man. Widespread and locally frequent throughout Ireland. Local in the Channel Islands.

Blotched Emerald

plate 37

Comibaena bajularia ([D. and S.])
Local 70.300 (1667)



Field characters FW 14–17mm. Peculiar cream and fawn blotches in trailing corner of forewing and hindwing are diagnostic. Ground colour often fades from green to buffish or pinkish white. A very fine, dark line extends around outer edge of hindwing and trailing half of forewing. Fringes are chequered. **Flight season** One generation. Jun–Jul. Male comes readily to light, sometimes in large numbers, female much less so, but is sometimes disturbed by day from oak foliage. **Life cycle** Overwinters as a small larva. Larva late Jul–early Jun. Pupates in a flimsy cocoon among oak leaves. **Larval foodplants** Pedunculate Oak and probably Sessile Oak. **Habitat** Established woodland with mature oaks. Also breeds on hedgerow oaks in well-wooded areas. **Status and distribution** Resident. Local. Most densely distributed in central southern and south-east England, where it is often abundant.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

More local west to South Devon, into East Anglia, and north through the Midlands to south Cumbria, the southern half of Yorkshire and the extreme north-east of Wales. One recorded from Jersey, since 2003.

Essex Emerald

plate 37

Thetidia smaragdaria (Fabr.)
ssp. *maritima* (Prout)
Formerly RDB, presumed extinct 70.301 (1668)

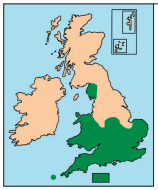
Field characters and similar species FW 14–17mm. The only emerald likely to be seen on open saltmarsh, although Small Emerald or Common Emerald might be seen on the shrubby edges. The combination of gold leading edge and normally prominent white central spot on forewing, plain fringes and, when fresh, rich velvety green colour is diagnostic. Shows little variation, but cross-lines on forewing are sometimes very weak. See Small Emerald. **Flight season** One generation. Mid-Jun–mid-Jul. Nocturnal and comes to light. May fly up if disturbed by day but usually reluctant to move from rest among vegetation. Never roosts flat on leaves, but hangs below them. The female sometimes begins moving and laying eggs in late afternoon. **Life cycle** Overwinters as a larva low down on foodplant. Larva Aug–May. Pupates head upwards in a very flimsy cocoon attached to a vertical stem, usually of the foodplant. **Larval foodplants** Sea Wormwood. **Habitat** Upper saltmarsh zones, including the belt of foodplant sometimes found at the base of old sea walls, provided it is not scoured by the tide. **Status and distribution** Very localised resident, now presumed extinct. An endemic British subspecies. Only ever recorded from the coastlines of Essex and Kent, where larvae were formerly collected by the hundreds at some sites. Recorded from at least ten 10km squares in the late 19th and early 20th centuries. The last Essex colony died out in 1985. In major surveys of Essex and Kent in 1987 and 1988, larvae were found in only one saltmarsh system, in Kent. This was monitored pre- and post-hibernation annually up to 1993, with another search in Sep 1999, but wild larvae were last seen in Britain in Apr 1991. One report from the Channel Islands, one on Guernsey in 1965. The species occurs widely across Europe, in a variety of warm, dry, open places but not apparently on saltmarshes.

Larva of Essex Emerald.

Small Emerald

plate 37

Hemistola chrysoprasaria (Esp.)
Local 70.302 (1673)

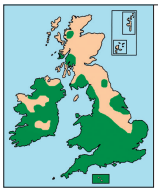


Field characters and similar species FW 17–20mm. The rather rounded wings, rich blue-green colour (when newly emerged) and sweeping curves of white cross-lines distinguish this from other emeralds, including Light Emerald. Absence of both a central spot and a gold leading edge on forewing, and presence of a curved white line on hindwing, further distinguish it from Essex Emerald. May fade to white while still alive, but cross-lines remain visible. **Flight season** One generation. Late Jun–early Aug. Very occasional second-generation individuals in late Sep in southern England after hot summers. Comes to light, usually in small numbers. Less often seen at dusk, and occasionally disturbed from the larval foodplant. **Life cycle** Overwinters as a small larva on foodplant. Larva Jul or Aug–Jun. Pupates among foodplant. **Larval foodplants** Traveller's-joy and cultivated species of *Clematis*. **Habitat** Most situations where the native foodplant grows, which tend to be on chalk or limestone, including hedgerows and scrub on downland, open woodland and gardens. **Status and distribution** Resident. Local. Well distributed in the southern half of England and in most of Wales, except on high ground, acid soils and heavy clays. Local in Lincolnshire, the north Midlands and on the limestone of southern Cumbria. Occasional individuals have been recorded in Scotland and Ireland, possibly the result of accidental transport on garden varieties of *Clematis*. Locally frequent in the Channel Islands.

Little Emerald

plate 37

Jodis lactearia (L.)
Common 70.303 (1674)



Field characters FW 11–13mm. Has a delicate greenish-white colour when newly emerged, but this rapidly fades to white in the wild, although cross-lines catch the light and remain visible. Male has finely feathered antennae, and there are usually two white cross-lines on hindwing, the inner one often faint. **Similar species** Small Grass Emerald, even when faded, is duller, with only one cross-line on hindwing, and antennae of male are not feathered. Small whitish wave moths have darker cross-lines. **Flight season** One generation. May–Jun. In the Channel Islands there is a large second generation in Aug. Mostly seen on the wing as dusk falls, particularly around low birch scrub or along hedgerows, sometimes in numbers. Comes to light in much smaller numbers. **Life cycle** Overwinters as a

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

slender green pupa among leaves. Larva late Jun–early Oct. **Larval foodplants** Downy Birch, Silver Birch, Hazel, Hawthorn, Blackthorn; also reported from oaks, Sweet Chestnut, Hornbeam, Bilberry, Dogwood, sallows and Broom. **Habitat** Open woodland, mature hedgerows, scrubby heathland, moorland and grassland, including ride-side birch in conifer plantations. Infrequent in gardens away from its major habitats. **Status and distribution** Resident. Common. Quite well distributed, and locally numerous in England north to the Humber and Mersey, and in Wales. Local in northern England, and very local and scattered in Scotland, mainly in the west, north to West Ross. One record from Man (in 1891). Widely recorded in Ireland. Local in the Channel Islands.

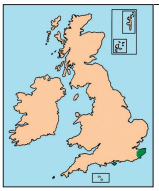
Sussex Emerald

plate 37

Thalera fimbrialis (Scop.)

RDB (protected species); suspected immigrant

70.304 (1672)



Field characters FW 15–16mm. Similar to Common Emerald, but slightly larger, with two projections on hindwing, straight forewing leading edge, chequered cream and red fringes, and reddish legs. **Similar species** See Common Emerald. **Flight season** One generation. Jul–early Aug. Mainly active at dusk and dawn, coming to light. Roosts low down among plants. **Life cycle** Overwinters as a part-grown larva, probably at rest on a plant stem. Larva Aug–early Jun. Pupa not yet found in the wild but among plant debris in captivity. **Larval foodplants** Mainly Wild Carrot, very occasionally Common Ragwort and Hoary Ragwort. Reports from Yarrow may be erroneous. Usually found on foodplants in the shelter of slightly taller herbs or grasses. **Habitat** Coastal shingle at Dungeness, but the foodplant and larvae are almost exclusively confined to disturbed areas where finer-grained material has been added. **Status and distribution** Resident and suspected immigrant. Red Data Book species. One established breeding colony only in the British Isles, at Dungeness, Kent, discovered in 1950. Adults are fairly frequent in light-traps (c. 100 records per year at Dungeness Bird Observatory). Probably resident near Eastbourne, Sussex, in 1950–56, when a number of adults were reported. Probably breeding near Hythe and Kingsdown, Kent, where the moth and a single larva have recently been recorded. Single examples very occasionally from 1902 onwards along the south coast of England, from Dorset to Kent, including Binstead, Isle of Wight, on 24 Jun 2001; Folkestone, Kent, on 26 Jul 2008; and two at Kingsdown, Kent, in Jul 2009. Also, one at Bradwell-on-Sea, Essex, in 1946.

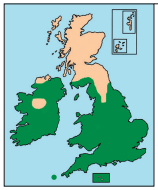
Common Emerald

plate 37

Hemithea aestivaria (Hb.)

Common

70.305 (1669)



Field characters FW 14–17mm. Combination of pointed forewing with arched leading edge, wavy cross-lines, single projection on hindwing, and chequered cream and brown fringes is diagnostic. **Similar species** See Sussex Emerald. **Flight season** One generation. Late Jun–late Jul. Flies from dusk and comes to light, though not usually in numbers. Visits flowers after dark, such as Wild Privet and Creeping Thistle. **Life cycle** Overwinters as a small larva. Larva Jul–early Jun. Pupates among leaves of the foodplant. **Larval foodplants** Hawthorn, Midland Hawthorn, Blackthorn, Hazel, oaks, willows, birches, wild and cultivated barberries, and many other native and exotic woody plants. Also reportedly some herbaceous plants before hibernation, such as Mugwort. **Habitat** Woodland, hedgerows, scrub on heathland and downland. In gardens, parks and urban amenity plantings such as roadside Thunberg's Barberry. **Status and distribution** Resident. Common. The larvae are much more numerous than the adults appear to be. Well distributed, and often frequent, over most of England and Wales, except on high ground, north to Yorkshire and locally into Co. Durham in the east. In the west, extends locally into Cumbria and Man, and very locally into the extreme south-west of Scotland. Widespread and locally frequent over most of Ireland. Widespread and frequent in the Channel Islands.

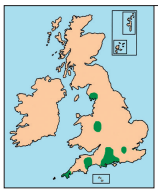
Small Grass Emerald

plate 37

Chlorissa viridata (L.)

Na

70.306 (1670)



Field characters and similar species FW 11–13mm. Readily distinguishable from most other emeralds in the British Isles by its size, bright green colour (when fresh), and rather angular, pointed forewing with no central spot and no chequering on fringes. Leading edge of forewing is whitish or pale sandy. See Southern Grass Emerald and Little Emerald. **Flight season** One generation. Jun–early Jul. Easily disturbed by day from foodplant and flies from dusk, sometimes coming to light. **Life cycle** Overwinters as a pupa, suspended by flimsy threads among the foodplant or in leaf litter. Larva late Jul–Aug. **Larval foodplants** Woody plants, including Heather, Cross-leaved Heath, birches, Creeping Willow and Gorse. **Habitat** Damp heaths and mosses. **Status and distribution** Resident. Nationally Scarce A and probably declining. Still fairly frequent in Hampshire, mainly in the New Forest.

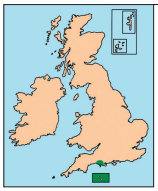
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Very local and usually in small numbers in Cornwall, Devon, Somerset, Shropshire, the heaths of south-east Dorset and Surrey. Still present at one site in Cumbria, but no longer found on the mosses of Lancashire and Westmorland. A scattering of old records from central and southern counties, including Wiltshire, Gloucestershire and Worcestershire, and occasional presumed vagrants or immigrants have been reported in the south (Isle of Wight) and east (Kent, Lincolnshire and Norfolk). However, the literature is plagued with misidentifications and unconfirmed records. No confirmed records from the Channel Islands, due to confusion with Southern Grass Emerald.

Southern Grass Emerald plate 37

Chlorissa cloraria (Hb.)

Resident; suspected immigrant 70.307 (1670a)



Field characters and similar species FW 11–13mm. Very similar to Small Grass Emerald and see also under that species. External differences are slight and not entirely reliable. Duller green in colour (this fades in both species). Leading edge of forewing is usually darker, dusted to a variable degree with dark brown, black or grey scales (the most reliable feature). On forewing, outer cross-line is slightly more convex. On hindwing, cross-line usually has a distinct inward kink in trailing half (may be a slight kink in Small Grass Emerald, especially in female). Habitat may provide a helpful indicator, but moths caught away from known sites, especially if worn, should always be retained for verification. Only males can be separated by genitalia characters (see Sterling and Costen 2011). **Flight season** One generation in the Channel Islands, late May–early Jul. In mainland Europe, one or two generations, depending on altitude. Easily disturbed by day, especially from Gorse bushes, and comes to light. **Life cycle** In mainland Europe, stated to overwinter as a pupa; larva Jun–Sep. In the Channels Islands, larva probably late Jun–Aug/Sep. **Larval foodplants** Early stages are little known in the wild, partly due to identification difficulties, and larvae are difficult to rear in captivity for unknown reasons. Heather, Bramble, Hazel, Hawthorn and Alder are recorded. Attempts at rearing larvae from the Channel Islands on these plants, and also Gorse, Bell Heather and Common Bird's-foot-trefoil, were unsuccessful, although a few fed on Sweet Broom, a non-European species. **Habitat** A variety of open, dry and sometimes rocky or sparsely vegetated places. In the Channel Islands, a mosaic of maritime grassland and scattered low Gorse scrub on cliff-tops. **Status and distribution** Resident in the Channel Islands, but until recently misidentified as Small Grass Emerald. On Guernsey present since at least 1862 and currently found on the south coast, and on Jersey on the north coast (since 1903). First recorded on the British mainland in 2014, one in a light-trap at Portland Bill, Dorset, on 18 Jul, the date suggesting a mainland Europe origin. Locally widespread in southern and some central parts of Europe, but apparently not known to be resident in the northern half of France.

Notodontidae Prominent, kitten and processionary moths

This family comprises over 2,500 species, with representatives throughout the world. Twenty-nine have been recorded in the British Isles, from six sub-families. Of these, 21 are established native residents, one is an established adventive, one is a transitory resident, currently known from a single site, and six are rare immigrants, one of which has also occurred as an adventive. The family now includes the processionary moths (Thaumetopoeinae), previously regarded as a separate family, the Thaumetopoidae. One species, Figure of Eight, has been moved to the Noctuidae.

The Thaumetopoeinae has about 100 species worldwide, with five in Europe, two of which have been recorded in the British Isles. The adults are stout and furry, and somewhat resemble the

Oak Processionary Moth

Buff-tip

Alder Kitten

Chocolate-tip

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Lasiocampidae in shape and build. The hairy larvae often live in groups in dense silken nests. They possess minute, deciduous, spiny hairs on their backs, which easily attach to the skin. These possess an urticating protein, thaumetopoein, which causes irritation and other very unpleasant allergic symptoms in humans and animals, in some cases severe. The rather dense nests are filled with frass and cast skins and are loaded with toxic hairs, and are also a health hazard. The hairs are carried on local air currents, and the larvae can occur in great profusion, so that direct contact is not necessary for a reaction to occur. They leave their nest in procession to feed, most often at night, following silk trails, which may be visible on branches and trunks of the host trees. Pupation occurs within the nest or in the ground. The adults lack the toxin, but may become contaminated with hairs as they push their way out of the nest after emergence. Oak and Pine Processionaries are pests of forest and amenity trees in mainland Europe, causing major defoliation in outbreak years, and control measures are often necessary to protect both trees and the public. This has proved necessary for Oak Processionary in south-east England in recent years, and is likely to happen more frequently as the moth continues to increase and spread.

The Cerurinae, Dicranurinae, Notodontinae, Phalerinae and Pygaerinae are also furry, thick-bodied moths, in many cases with rather long, tapering forewings, which are normally held quite close to the body when at rest. The trailing edge of the forewings of some species has prominent projections that are raised over the back when the moth is resting with its wings closed, hence the common name for the group. The adults are unable to feed, and are seldom seen by day, but both sexes (the males especially) come readily to light-traps. The antennae are relatively long and obvious in both sexes, and in most species are feathered in the male. The wing markings are subtle and cryptic, with a preponderance of brown, grey and white, often in beautifully textured patterns, which help them blend with bark and dead leaves. Variation within each species is not usually great, and is largely confined to the ground colour or the intensity of the dark markings. Some of the Phalerinae and Pygaerinae also have hairy larvae but they are harmless.

The larvae of the Notodontidae are often striking, and raise both the head and tail end when they feel threatened. Some have prominent lobe-like projections on their backs, or two extended ‘tails’. In the case of the Puss Moth, a red whip-like structure is produced from each tail, as an extra deterrent to would-be predators. The Puss Moth and the kittens are probably so named because the young larvae have two ear-like projections just behind the head, making them appear rather cat-like from behind (although the adults are particularly furry also). The larvae feed on the foliage of trees and shrubs, resting on the foodplant when not feeding. The majority leave the foodplant to pupate below it, usually in the earth or among leaf litter, or in a hard cocoon on the trunk. The largest species have one generation a year. Some of the smaller species fit two generations into the year in the south, but in northern Britain they grow more slowly and complete only one.

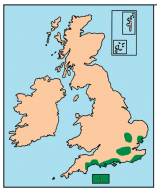
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Thaumetopoeinae Processionary moths

Oak Processionary Moth plate 38

Thaumetopoea processionea (L.)

Immigrant; naturalized adventive; resident in Channel Islands 71.001 (2022)



Field characters and similar species FW M 14–16mm F 16–17mm. Similar to Pine Processionary Moth, but browner and generally smaller. Distinguished by pale basal area of forewing, and central crescent mark, which is small and usually rather faint. Also, male Pine Processionary has a hard comb between the eyes, with an upwards protrusion, whereas male Oak Processionary has a simple low dome on the front of the head. Cross-lines are smooth rather than jagged. See also Pale Eggar. **Flight season** One generation. Late Jul–mid-Sep, peaking early–mid-Aug. Nocturnal. Comes to light. The male is migratory, but the female is much more sedentary. **Life cycle** Overwinters as an egg, in solid, single-layer masses known as plaques, on twigs. Larva late Apr–late Jun. When half-grown, the communal, domed, tent-like silk nest is formed, on a trunk or branch, in the crown or lower down, sometimes at the base, but not among terminal foliage. Pupation usually occurs in the nest, or in the ground when numbers are very high. **Larval foodplants** In south-east England, usually Pedunculate Oak or Turkey Oak, and a great variety of ornamental oaks, including North American and Asiatic species. Rarely on Evergreen Oak. Prefers large trees, but can be found on bushes 2–3m high. During severely defoliating plagues, other broadleaved trees are used, but with the exception of Beech, these are not viable hosts. **Habitat** Broadleaved woodland, parkland and other open spaces. **Status and distribution** Immigrant and naturalised adventive (accidentally introduced in the egg stage). Over 40 immigrant males recorded in mainland Britain since the first on 19 Aug 1983, at light at Mawnan Smith, Cornwall, mainly on southern coasts but also inland in Cambridgeshire and Northamptonshire. The highest annual total was 12, in 1995 (coinciding with a peak of abundance in the Netherlands). In Jul 2006, a large number of larvae were found at a site in Richmond Borough, west London, imported in 2003–04, and small numbers at two sites in Ealing. Both were on imported Cypress Oaks (a narrow-growing cultivar of Pedunculate Oak). Surveys revealed larval nests at other sites in both areas. In spite of attempts at eradication and control, it has expanded across large parts of west and south London and into Surrey, and a large, apparently separate colony was found in Beckenham, south-east London, in 2012. A small population in Pangbourne, west Berkshire, resulting from a single oak imported in 2008, has been almost eliminated. Single nests on small planted trees were destroyed before establishment in Leeds in 2009 and in Sheffield in 2010. Resident locally on Jersey, where it was first reported in 1984. On Guernsey, first recorded on 18 Aug 1983, with several subsequently, as suspected immigrants. Also recorded on Alderney. Widespread in central and southern Europe and has spread north over the last 20 years or so, occurring in huge numbers in peak years. **Pest status** The UK currently has protected zone status within the EU for Oak Processionary Moth, a serious pest. Measures include a requirement for potentially infested material to be certified free of it before importation. This helps prevent other parts of Britain from acquiring it. Possible occurrences can be reported to the Forestry Commission (for further information, see their website).

Pine Processionary Moth plate 38

Thaumetopoea pityocampa ([D. and S.])

Immigrant; Adventive 71.002 (2021)

Field characters and similar species FW M 16–17mm F 18–22mm. See Oak Processionary Moth. Diagnostic feature is bold, dark comma mark in centre of grey forewing. The two wavy dark cross-lines vary in intensity. Eastern Pine Processionary Moth *Thaumetopoea pinivora* (Treit.) (mainly eastern Europe) is very similar and could occur, perhaps most likely as an adventive. There are several slight but variable differences. Most reliably, in the males, the hard cone on the front of the head protrudes more strongly upwards in Pine Processionary than in Eastern Processionary. Possible males of either species should be retained for confirmation. Pale Eggar lacks a central crescent mark on forewing and cross-lines are much wavier. **Flight season** One generation in Continental Europe, Jun–Aug. Comes to light, especially the male. **Life cycle** Overwinters as an egg, attached to the foodplant. Larva autumn–spring, living in a silk nest formed among needles on the tree, leaving it in mild weather to feed. In spring, they form processions to the ground, where pupation occurs. **Larval foodplants** Pines. **Habitat** In mainland Europe, in pine forests. **Status and distribution** Rare immigrant and adventive. Originally added to the British list after a report (now regarded as highly dubious) of larvae near Southborough, Kent, in 1874. Larvae were found on potted pine saplings at a plant nursery in Buckinghamshire in 1995, having been imported from Italy with the trees in 1994. Single males came to light in Jul 1966 at Burghfield Common, Berkshire, and on 16 Aug 2013 at Orford Ness, Suffolk. The origin of these individuals is uncertain, although the Suffolk moth was most likely to have been an immigrant. Two recorded in the Channel Islands, both in 2007, one on Jersey on 13 Jul and one on Guernsey on 22 Jul. Resident in central and southern Europe. **Pest status** Currently spreading northwards in Europe (including France), increasing the

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

probability of accidental introduction to Britain. For further information, including how to report possible sightings, see the Forestry Commission website.

Cerurinae

Puss Moth

plate 38

Cerura vinula (L.)

Common 71.003 (1995)

Field characters FW 29–38mm. A large white or greyish-white furry moth, with several small black spots on thorax and near base of forewing, and steeply contoured grey lines on outer part of forewing. Female is generally larger and also differs in having a grey hindwing and sometimes forewing. **Similar species** See The Feline. Leopard Moth is superficially similar, but has only black spots on forewing and has distinctive short antennae, those of the male feathered in basal half only. Both species may pretend to be dead when handled. **Flight season** One generation. May–Jul. Comes to light in small numbers. **Life cycle** Overwinters as a pupa. Larva Jul–Sep. Eggs are laid singly, or in twos and threes on the uppersides of the leaves. Larvae often strip entire stems of leaves. Pupates in a very hard cocoon spun on a tree trunk or post, incorporating wood macerated by the larva. **Larval foodplants** Poplars and willows, particularly low regrowth or suckers of Aspen and Goat Willow in sunny places. **Habitat** Gardens, hedgerows, open woodland, moorland, scrub and carr. **Status and distribution** Resident. Common. Fairly frequent throughout most of the British Isles, but not recorded from Shetland. Less frequent in upland areas. Local and rare in the Channel Islands.

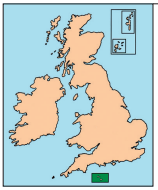
Larva of Puss Moth.

The Feline

plate 38

Cerura erminea (Esp.)

Probably overlooked resident 71.004 (1995a)



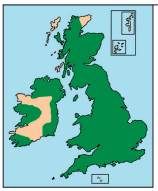
Field characters and similar species FW 27–33mm. Very similar to Puss Moth, but on average slightly smaller and both sexes with white fore- and hindwings. Dark 'V' marks joined in basal half to form a rough semi-circle on leading edge, an adjacent circle and two rounded 'V' marks in trailing half. The equivalent marks in Puss Moth form a grey band, broken by the veins into irregular blocks. Abdomen with two broad black longitudinal stripes above (banded on Puss Moth), and tail segments white with four black longitudinal central stripes and a broader one each side (two central stripes in Puss Moth). **Flight season** One generation. Apr–Jul in mainland Europe. **Life cycle** Overwinters as a pupa. Larva Jun–Aug. **Larval foodplants** In mainland Europe, willows, poplars, birches and other broadleaved trees. **Status and distribution** Probably overlooked resident. First recorded in the British Isles, a female on 7 Jun 2008, at light at St Lawrence, Jersey. Subsequent examination of the collection of the Société Jersiaise revealed a further example from Gorey, Jersey, caught on 19 Jul 1995 and misidentified as a Puss Moth. Another was also identified, from Jersey at Grouville Common (3 Jun 2007), with two trapped at that site on 1 Jul 2009, and two at St Peter, Guernsey (30 Jun 2000 and 8 Jun 2007). Puss Moths should be examined closely, especially in the Channel Islands and the southern extremities of the British mainland. A widespread species in southern and eastern Europe. In France, well distributed but not numerous.

Sallow Kitten

plate 38

Furcula furcula (Cl.)

Common 71.005 (1997)



Field characters and similar species FW 14–18mm. Like Poplar Kitten, the central cross-band is grey, and its inner edge is usually more or less straight. However, its outer edge is usually rather irregular and usually only finely (sometimes faintly) outlined in black in the leading half. Antennae feathered in male. See also Alder Kitten. **Flight season** Two generations in England and Wales, May–Jun and Jul–Aug. One generation in Scotland and Ireland, Jun–early Jul. Comes regularly to light. **Life cycle** Overwinters as a pupa. Larva Jun–mid-Jul and Aug–Sep, or Jul–Sep where there is one generation. Pupates in a hard cocoon formed on the bark of the foodplant or on a post. **Larval foodplants** Usually willows, including Grey Willow, Goat Willow and White Willow; also Aspen and

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

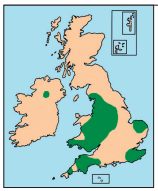
poplars. Can be found on large trees or small plants, usually in open, sunny places. **Habitat** Most frequent in open parts of woodland, scrub and carr; also hedgerows, parkland, moorland, heathland and sometimes gardens. **Status and distribution** Resident. Common. Well distributed and fairly frequent in England, especially in the south, and in Wales. Somewhat more thinly distributed in mainland Scotland, but extends to the Hebrides. Also recorded from Orkney, and on Man (2000) and widespread in Ireland. Old records from Jersey.

Alder Kitten

plate 38

Furcula bicuspis (Borkh.)

Local 71.006 (1996)



Field characters and similar species FW 16–19mm. Easily distinguished from Poplar Kitten and Sallow Kitten by central cross-band and lines on forewing, which are intense blackish grey. Central band is also generally more irregular, more deeply pinched in leading half and spreads more widely along trailing edge, often reaching trailing corner. **Flight season** One generation. Mid-May–early Jul. Comes regularly to light. **Life cycle** Overwinters as a pupa. Larva late Jun–early Sep. Pupates in a hard cocoon formed on the bark of the foodplant. **Larval foodplants** Alder and birches. **Habitat** Woodland, copses and sometimes gardens. **Status and distribution** Resident. Local. Found in several discrete areas, but locally widespread within them, namely south-east and south-west England, Norfolk, Wales, the west and north Midlands, Lancashire, South-west Yorkshire and Nottinghamshire (since 1990). Formerly found in Co. Durham. One Irish record, a single adult in Fermanagh in 2001.

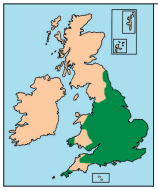
Larva of Alder Kitten.

Poplar Kitten

plate 38

Furcula bifida (Brahm)

Local 71.007 (1998)



Field characters and similar species FW 16–22mm. Very similar to Sallow Kitten, but generally larger (female of both species being generally larger than male, and with unfeathered antennae). Outer edge of central cross-band on forewing is obtusely angled or gently curved, but not irregular, and quite thickly outlined with black in the leading half. See also Alder Kitten. **Flight season** One generation. Late May–Jul. Comes to light, usually in small numbers. **Life cycle** Overwinters as a pupa. Larva late Jun–mid-Sep. Pupates in a hard cocoon on the bark of the foodplant. **Larval foodplants** Usually poplars or Aspen, but also reported from willows. **Habitat** Most frequent in poplar plantations, but found in woodland and sometimes gardens. **Status and distribution** Resident. Local. Widely distributed and fairly frequent in England and eastern Wales, but much less frequent in the rest of Wales and northern England. No confirmed records from Ireland.

Dicranurinae

Tawny Prominent

plate 38

Harpyia milhauseri (Fabr.)

Immigrant 71.008 (2004)

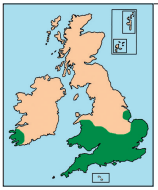
Field characters FW 21–24mm. Quite distinctive. Forewing pale grey, obscurely marked and streaked with dark grey. Two thick parallel blackish streaks in trailing half near base, and a thick, dark outer cross-line is evident in trailing half. Also has a light brown outer central cross-band, sometimes faint. Hindwing whitish, with a very noticeable blackish blotch at trailing corner. Shoulders distinctly pale. Basal three-quarters of antennae feathered, quite strongly in male. **Flight season** In central Europe, two generations, Apr–May and Jul–Aug. One generation in the north of its range, May–Jun. Comes to light. **Life cycle** Overwinters as a pupa, in a hard cocoon behind bark or in leaf litter. Larva Jun–Sep. **Larval foodplants** Oaks, including Holm Oak, also Beech, Hornbeam and birches. **Habitat** Woodland and also lightly wooded places. **Status and distribution** Rare immigrant. Three records, all at light. One at Aldwick Bay, West Sussex, on 11 Jun 1966, and one at Dungeness, Kent, on 24 May 1993. One at St Mary, Jersey, on 7 Jun 2014. Found across much of Europe, including southern Scandinavia.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Lobster Moth plate 38

Stauropus fagi (L.)

Common 71.009 (1999)



Field characters FW 24–33mm. Unmistakable. Forewing and hindwing grey-brown, dusted with grey (especially near base) and yellowish. Has a russet-brown smear along trailing edge of forewing, yellowish cross-lines and a series of blackish spots near outer edge. The darker f. *obscura* Rebel is widespread, but most frequent near London. Particularly large, pale forms are found in Ireland. Rests with hindwings protruding from under leading edge of forewings, resembling a bunch of dead leaves. Male has feathery brown antennae. **Flight season** One generation. Mid-May–Jul. Comes to light, male frequently but female rarely. **Life cycle** Overwinters as a pupa, in a cocoon spun among leaves or in the soil. Larva late Jun–Sep. **Larval foodplants** Birches, Hazel, oaks and Beech. Has also been reported on hawthorns, Alder, Blackthorn, Apple, Dog-rose and limes. Will accept willows and Aspen in captivity. **Habitat** Mainly long-established woodland, and absent from some woods and plantations within its range. **Status and distribution** Resident. Common. Well distributed and sometimes frequent in southern England, East Anglia and Wales. More local in the southern half of the Midlands. In Ireland, recorded only from the south-west, in Cos. Cork and Kerry, where it is quite widespread. One record from Guernsey, in 1999.

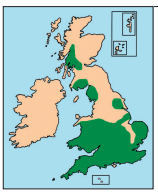
Larva of Lobster Moth.

Notodontinae

Marbled Brown plate 38

Drymonia dodonaea ([D. and S.])

Local 71.010 (2014)

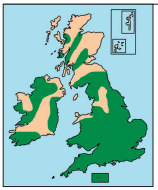


Field characters FW 17–20mm. Quite variable, from mainly whitish to grey, with rather blurred cross-lines and bands on forewing. The rare f. *nigrescens* Lempke has a mainly blackish forewing, and is most often found in East Anglia. **Similar species** Lunar Marbled Brown has a distinct central black comma or crescent on forewing and clear black cross-lines, and outer area is always grey. **Flight season** One generation. Late May–early Jul. Male comes regularly to light, female rarely. Sometimes found at rest on oak trunks. **Life cycle** Overwinters as a pupa in an underground cocoon. Larva late Jun–early Sep. **Larval foodplants** Oak, both Pedunculate and Sessile. **Habitat** Long-established woodland in which mature oaks remain plentiful. **Status and distribution** Resident. Local. Widely distributed and locally frequent in England and Wales, north to Cumbria and North-east Yorkshire. In Scotland, local in the south-west and west, north to West Inverness-shire. Rare in Ireland, with two records only, from Cos. Kerry and Cork, and last recorded 1965. One on Jersey, in 1997.

Lunar Marbled Brown plate 38

Drymonia ruficornis (Hufn.)

Common 71.011 (2015)



Field characters FW 16–20mm. This grey and white moth has a prominent black comma in the pale, usually whitish central cross-band on forewing. Basal and outer areas vary from light to dark grey. Occasionally central band is entirely grey, and there is a rare, almost entirely blackish form. **Similar species** See Marbled Brown, which mainly flies from late May. **Flight season** One generation. Apr–May. Comes regularly to light. **Life cycle** Overwinters as a pupa just below ground, often near the surface roots of the foodplant. Larva late May–late Jul. **Larval foodplants** Oaks, both Pedunculate and Sessile; also probably Turkey Oak. **Habitat** A wider range of habitats than Marbled Brown, including oaks in hedgerows, parks and gardens, as well as woodlands. **Status and distribution** Resident. Common. Well distributed in England south of the Humber, and in Wales. Rather more local in northern England. Local in southern, central and western parts of mainland Scotland, north to Ross-shire. Widespread in Ireland.

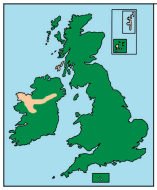
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Iron Prominent

plate 38

Notodonta dromedarius (L.)

Common 71.012 (2000)



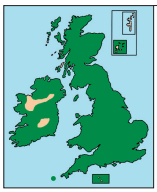
Field characters FW 18–24mm. Quite distinctive. Dark grey-brown forewing has a straw-yellow blotch at base and reddish-brown streaks near base and in outer half, where there is also a narrow, broken rusty-brown cross-band. Central cross-lines are variably edged with straw yellow, and central area may be lightly dusted with pale grey. In northern England and Scotland, ground colour is darker and sometimes markings are rather faint. Hindwing greyish. **Similar species** See Large Dark Prominent and Three-humped Prominent. **Flight season** Two generations in southern and central Britain and in Ireland. May–Sep. Usually one generation in northern Britain, Jun–Jul. Comes to light, usually in small numbers. **Life cycle** Overwinters as a pupa in a slight cocoon underground. Larva mid-Jun–late Jul and Sep–early Oct, but in the north mainly in Aug. **Larval foodplants** Mainly birches and Alder, sometimes Hazel; also reported on oaks. **Habitat** Broadleaved woodland, heathland, carr, riverbanks and sometimes gardens. **Status and distribution** Resident. Common. Well distributed and frequent throughout most of Britain and Ireland, with records north to Caithness and Orkney, but more restricted to the lowlands in the north. Widespread in the Channel Islands.

Pebble Prominent

plate 38

Notodonta ziczac (L.)

Common 71.013 (2003)



Field characters FW 17–24mm. Darker outer pebble-like blotch of forewing usually contrasts with yellowish-brown ground colour and central whitish area in leading half. The demarcation is emphasised by the very large, curved, thick black central crescent mark. Hindwing grey-brown with a large central crescent mark. Varies little, but sometimes, especially in Scotland, cross-lines are stronger, white area is brighter, pebble mark is paler and less well defined, and occasionally ground colour is reddish brown. **Similar species** See Three-humped Prominent. **Flight season** Two generations in southern and central Britain and Ireland, Apr–Jun and Jul–Aug. Usually one generation in the far north and in upland areas, Jun–Jul. Comes regularly to light. **Life cycle** Overwinters as a pupa underground. Larva Jun–Jul and Aug–late Sep in the south, and Jul–Aug in northern Britain. Can be found on small plants in open situations, even on cliff faces, as well as on larger trees. **Larval foodplants** Sallows, willows, Aspen and poplars, including cultivated varieties. **Habitat** Wherever the foodplants grow. **Status and distribution** Resident. Common. Frequent throughout most of Britain and Ireland, although less so at higher altitudes, north to the Outer Hebrides and Orkney. Widespread and frequent in the Channel Islands.

Larva of Pebble Prominent.

Large Dark Prominent

plate 39

Notodonta torva (Hb.)

Immigrant 71.014 (2001)

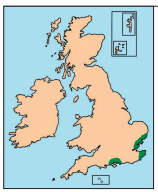
Field characters and similar species FW 19–25mm. Similar in size and general pattern to Iron Prominent, but lacking yellowish or reddish markings, and in colour rather like a small, dark, unusually plain Great Prominent. Forewing greenish grey or full grey, with a rather coarse texture and a dusting of yellowish scales. Has two slightly darker, sometimes yellowish-edged wavy cross-lines and an elongated pale, dark-centred central spot. Hindwing grey. There is also a blackish form with pale cross-lines. **Flight season** Usually two generations in central Europe, May and Aug. Comes to light. **Life cycle** Overwinters as a pupa on or below the ground. Larva Jul and late Aug–Sep. **Larval foodplants** Aspen, other poplars and apparently birches. **Habitat** In mainland Europe, found in damp woodlands and peat bogs. **Status and distribution** Rare immigrant, recorded twice in Britain. The first was reared from either an egg or larva found in north Norfolk in 1882, and initially identified as a Great Prominent. The second at a light-trap at Eastbourne, Sussex, on 29 May 1979. Widespread in central and northern Europe.

Three-humped Prominent

plate 39

Notodonta tritophus ([D. and S.])

Immigrant 71.015 (2002)



Field characters FW 22–27mm. Quite distinctive. Forewing broad and rounded, with a strongly arched leading edge. Large blackish-grey outer blotch extends from leading edge and most of basal third is blackish grey. Light, sometimes yellowish brown at base, centrally and along outer edge, often forming central and outer bands. Has a pale central

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

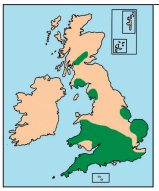
dash or crescent mark, often with dark internal line, and fine, wavy dark cross-lines before and after middle. Hindwing whitish with a dark smudge at trailing corner. **Similar species** Iron Prominent is smaller, darker and more uniform in colour, lacking light brown banding. Pebble Prominent has a long, curved black central mark at edge of outer 'pebble' patch. **Flight season** Two generations in much of mainland Europe, Apr–Jun and late Jul–Aug, but only one in northern parts. In Britain, recorded May–Aug. **Life cycle** Overwinters as a pupa underground. Larva Jun–Jul and late Aug–Sep, or Jul–Aug where there is one generation. **Larval foodplants** Aspen and other poplars. **Habitat** In mainland Europe, found in woodland, river valleys, poplar plantations, parks and gardens. **Status and distribution** Immigrant. Several records from the 19th century, the first in 1842, at St Osyth, Essex, reared from a larva beaten from Aspen; two in Suffolk, an adult at a gas-lamp in Ipswich in about 1867, and one at a lighted shop window in Southwold in 1884. Nineteen records of adults since 1900, mainly from near south-eastern coasts. Recorded in Bedfordshire (Bedford, 1907), Hampshire (Havant and Waterlooville, 1920), Isle of Wight (Freshwater, 1956; Cranmore, 1960), Suffolk (Walberswick, 1992), Essex (Jaywick, 1998) and Kent (Folkestone, 1955; Dymchurch, 1998). Since 2000, single males at light in Kent (Lydd, 2002; New Romney, 2004; Kingsdown, 2006; Dungeness and Dymchurch 2011; Sandwich, 2013), and others from Hampshire to Suffolk, with four individuals in 2012. Found throughout most of mainland Europe.

Great Prominent

plate 39

Peridea anceps (Goeze)

Local 71.016 (2005)



Field characters FW 23–32mm. The complex grey, dull yellow and brown marbling and streaking on forewing results in a rather greenish tint, and makes this moth distinctive. Hindwing yellowish white, but dark along the leading edge, which protrudes from under leading edge of forewings when at rest. The uncommon f. *fusca* Cock. is much darker, almost black in some cases, and is found in the Lake District, occasionally in Surrey and elsewhere. **Similar species** See Large Dark Prominent. **Flight season** One generation. Late Apr–Jun. Male comes regularly to light, female less frequently. **Life cycle** Overwinters as a pupa well underground. Larva late May–early Aug. **Larval foodplants** Mature Pedunculate Oak and Sessile Oak. **Habitat** Broadleaved woodland, hedgerows and gardens in well-wooded districts. **Status and distribution** Resident. Local. Widely distributed in the well-wooded parts of southern England, East Anglia, the south Midlands and Wales. More local in central and eastern England, and extending locally up the west coast to Cumbria, south-west Scotland, the Central Belt and West Perthshire.

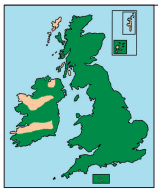
Larva of Great Prominent.

Swallow Prominent

plate 39

Pheosia tremula (Cl.)

Common 71.017 (2007)



Field characters and similar species FW 22–28mm. Very similar to Lesser Swallow Prominent, but often larger (although variable in size), with a longer, narrower, rather indistinct greyish-white wedge extending from trailing corner of forewing, reaching at least halfway to wing base. In Lesser Swallow Prominent, this wedge is clean white and shorter. On hindwing, a fine whitish line runs through dark blotch at trailing corner. Variation is mainly in extent of brownish tint, which may be very faint, especially in examples from Scotland. **Flight season** Mainly two generations. Late Apr–Jun and Aug. Usually one generation in far northern and upland Britain, Jun–Aug. Comes to light. **Life cycle** Overwinters as a pupa underground. Larva Jun–Jul and late Aug–Sep, and Jul–Sep in northern Britain. **Larval foodplants** Aspen, other poplars, willows and sallows. **Habitat** Wherever the foodplants grow. **Status and distribution** Resident. Common. Well distributed and fairly frequent in most parts of Britain and the Channel Islands. More local in Scotland, but extends to the Inner Hebrides and Caithness. Widespread but local in Ireland.

Lesser Swallow Prominent

plate 39

Pheosia gnoma (Fabr.)

Common 71.018 (2006)

Field characters FW 20–26mm. Silvery-white forewing is strongly tapered, with bold black and brown markings along edges. Diagnostic feature is the distinct, clean white wedge extending from trailing corner, reaching less than halfway to wing base. Also, dark blotch at trailing corner of hindwing lacks

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

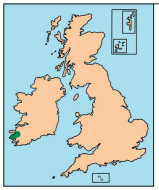
a pale internal line. Variation is slight. The thorax may be light or dark grey or brown. In northern Britain, the forewing is clearer white. **Similar species** See Swallow Prominent. **Flight season** Mainly two generations. Late Apr–Jun and Jul–Aug. Usually one generation in northern Scotland, late May–early Aug. Comes to light. **Life cycle** Overwinters as a pupa, in a strong cocoon underground. Larva Jun–Jul and late Aug–Sep, and Jul–Sep in northern Scotland. **Larval foodplants** Silver Birch and Downy Birch. **Habitat** Wherever the foodplants grow. **Status and distribution** Resident. Common. Widely distributed and fairly frequent throughout most of mainland Britain, Ireland and the Channel Islands. In Scotland, extends to Orkney and the Hebrides.

White Prominent

plate 39

Leucodonta bicoloria ([D. and S.])

Resident 71.019 (2012)



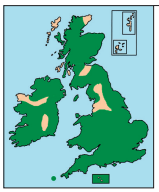
Field characters FW 16–19mm. An utterly distinctive white moth, with unique orange markings edged with black on forewing. **Flight season** One generation. Jun. Comes to light. **Life cycle** Overwinters as a pupa in a slight cocoon among leaf litter or just below ground. Larva Jun–Aug. Has been beaten from lower branches. **Larval foodplants** Birches. **Habitat** Long-established woodland with mature birches. **Status and distribution** Resident. Seven males were attracted to light traps at a site in Co. Kerry in Jun 2008 and it has since been found to be established there locally. Until this time, there had been no records of this moth anywhere in the British Isles since 1938, despite many searches of previously known sites. It was first found near Killarney and other sites in Co. Kerry, for a few years from 1859. Also reported from Burnt Wood, Staffordshire (one in 1861, six in 1865), near Exeter, Devon (one in 1880, possibly an immigrant), and Jersey (one in 1905).

Pale Prominent

plate 39

Pterostoma palpina (Cl.)

Common 71.020 (2011)



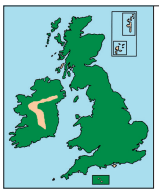
Field characters FW 18–25mm. Very distinctive. Apart from a general resemblance to a fragment of broken wood, the most diagnostic characters are the large upturned palps at the front and divided tail tufts on the long abdomen of male. Forewing greyish straw with dark veins and dots, sometimes with a rather blurred, dark brownish central cross-band, or less often generally darker. Has a prominent dark scale tuft on trailing edge, and sometimes fringes are distinctly scalloped. Antennae feathered, quite strongly in male, only slightly in female. **Flight season** Two generations, May–Jun and Jul–Aug, north to Yorkshire. Further north and in Ireland, one main generation, May–Jun, and any second is usually small. Male comes regularly to light, female does so very infrequently. **Life cycle** Overwinters as a pupa, in a cocoon on or just below the soil surface. Larva Jul and late Aug–Sep, and Jul–Aug in the north. **Larval foodplants** Aspen, other poplars, and willows, including low regrowth. **Habitat** Most situations where the foodplants grow. Regular in gardens. **Status and distribution** Resident. Common. Well distributed and frequent throughout southern Britain, north to Yorkshire, where it is expanding its range. Locally widespread in the remainder of northern England and throughout most of mainland Scotland north to East Inverness-shire and East Ross, and very local north to Caithness and Sutherland. Widespread in Ireland and in the Channel Islands.

Coxcomb Prominent

plate 39

Ptilodon capucina (L.)

Common 71.021 (2008)



Field characters FW 17–22mm. The rather uniform, pale to dark, warm brown ground colour of forewing, scalloped outer edge and pointed tip are diagnostic. Trailing edge has a distinct dark scale tuft and a large, forward-pointing, quiff-like cream-centred crest on thorax. The markings vary little. **Similar species** See Maple Prominent and Scarce Prominent. **Flight season** Two generations in the southern half of Britain, late Apr–Jun and Aug–early Sep. One (or sometimes two) generations in the northern half of Britain and in Ireland, Jun–Aug. Comes fairly regularly to light, usually in small numbers. **Life cycle** Overwinters as a pupa, in a cocoon underground. Larva Jun–Jul and mid-Aug–Sep, and Jun–Aug where there is one generation. Can be found on low growth and larger trees. **Larval foodplants** A wide variety of broadleaved trees, including birches, Hazel, Alder, Aspen, sallows, hawthorns, limes, oaks, Beech, Rowan and roses. **Habitat** Woodland and scrub in most situations, including parks and gardens. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout most of the British Isles, reaching the Hebrides and the north coast of Scotland. Widespread in the Channel Islands.

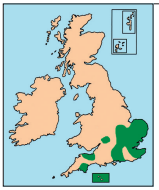
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Maple Prominent

plate 39

Ptilodon cucullina ([D. and S.])

Local 71.022 (2009)



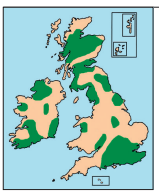
Field characters and similar species FW 15–20mm. Similar to Coxcomb Prominent, with a thoracic crest and dark scale tuft, but forewing is more rounded, not scalloped, with large whitish blotch along outer margin and pale brown extending from base in leading half. There is very little variation. **Flight season** One generation. Mid-May–Aug, occasionally later. Male comes regularly to light, female less often. **Life cycle** Overwinters as a pupa. Larva late Jun–late Aug. Pupates in a strong cocoon in moss on the trunk of the foodplant, in leaf litter or underground. **Larval foodplants** Field Maple, occasionally Sycamore and cultivated maples. **Habitat** Broadleaved woodland and scrub; also hedgerows and gardens, preferring calcareous soils. May have benefited from the extensive planting of Field Maple in parks and other amenity areas. **Status and distribution** Resident. Local. Formerly Nationally Scarce but appears to be increasing. Well distributed in most of the south-eastern quarter of England (but very scarce or absent from most of Sussex and Surrey), extending northwards from North Hampshire to Oxfordshire, and from Buckinghamshire to the Peterborough area. Very local in Gloucestershire, western Somerset and Devon. In the Channel Islands, regular on Alderney since 2012 and increasing.

Scarce Prominent

plate 39

Odontosia carmelita (Esp.)

Local 71.023 (2010)



Field characters FW 18–21mm. Quite distinctive. The creamy-white comma mark in outer part of leading edge of forewing is constant and diagnostic. Forewing reddish brown or purplish brown, heavily dusted with silvery grey, especially in trailing half. Fringes are chequered creamy white and dark brown. There is little variation, but Scottish examples are darker. **Similar species** Coxcomb Prominent is superficially similar but lacks the white comma mark. **Flight season** One generation. Apr–May. Male comes regularly to light, female only occasionally. **Life cycle** Overwinters as a pupa, in a cocoon on or just below ground. Larva May–Jul. Mature trees are preferred, and larvae are seldom found on low growth. **Larval foodplants** Silver Birch and Downy Birch. **Habitat** Mainly long-established birch woodland. **Status and distribution** Resident. Local. Somewhat overlooked until the advent of portable ultra-violet light-traps. Locally widespread in central southern and south-east England. Very local in the Midlands, and north and south-east Wales. Widespread but local in north-east England and Cumbria. In Scotland, most often recorded in the Highlands. Widespread but local in Ireland.

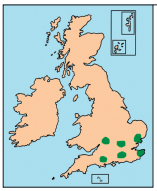
Larva of Maple Prominent.

Plumed Prominent

plate 39

Ptilophora plumigera ([D. and S.])

Na 71.024 (2013)



Field characters FW 16–19mm. The very broadly feathered antennae of male, rather narrow, thinly scaled wings with smooth outer margins and late flight season are diagnostic. Forewing in male varies from straw yellow with reddish blotches and a darker central cross-band, to largely reddish brown with yellow cross-lines. Female is duller and even more thinly scaled, and has unfeathered antennae. **Flight season** One generation. Mainly Nov, but also into Dec. Male comes to light from early in the night, often in numbers, female in smaller numbers, usually much later. **Life cycle** Overwinters as an egg, laid on a twig of the foodplant. Larva late Apr–Jul. Pupates in a brittle cocoon among leaf litter. **Larval foodplants** Field Maple. Occasionally Sycamore. **Habitat** Woodland, shelterbelts and hedgerows on calcareous soils, with mature Field Maple. **Status and distribution** Resident. Nationally Scarce A. Found very locally in southern and south-east England, in Dorset, Gloucestershire (Cotswolds), West Sussex, Surrey, Kent, the Buckinghamshire and Oxfordshire Chilterns, and Suffolk.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Phalerinae

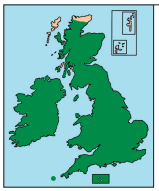
Buff-tip

plate 39

Phalera bucephala (L.)

Common

71.025 (1994)



Field characters FW M 22–26mm F 26–34mm. Unmistakable. When at rest, with wings held almost vertically against the body, this large moth closely resembles a broken birch twig. This is due to the buff blotches on the tip of the forewing and front of thorax, both of which are emphasised by dark edging. There is little variation. **Flight season** One generation. Late May–Jul, sometimes later. Occasionally found at rest by day, either on a twig or on the ground. Comes to light, usually after midnight. **Life cycle** Overwinters as a pupa underground in an earthen cell. Larva Jul–early Oct. Larvae hatch from large batches of eggs and feed initially in groups by day and night, and later singly. **Larval foodplants** Most frequently sallows, birches, oaks and Hazel, but recorded from many other broadleaved trees and shrubs, such as Alder, limes, elms, Beech, Rowan, Hornbeam and Sycamore. Often on bushes and small trees in sunny locations. **Habitat** Open woodland, scrub, hedgerows and gardens. **Status and distribution** Resident. Common. Well distributed and frequent throughout England, Wales, Man, Ireland and the Channel Islands. More local in mainland Scotland, but more frequent in the west, including the Inner Hebrides.

Pygaerinae

Dusky Marbled Brown

plate 39

Gluphisia crenata (Esp.)

ssp. *vertunea* Bray

Immigrant; possible former resident

71.026 (2016)

Field characters and similar species FW 14–15mm. Not unlike one of the darkest forms of Marbled Brown or Lunar Marbled Brown, but smaller, with a small but distinct pale central comma mark and a brownish central cross-band. **Flight season** Two generations in central and southern Europe. Apr–Jun and Jul–Sep. Only one generation in northern Europe. Comes to light. **Life cycle** Overwinters as a pupa in a loose cocoon in leaf litter **Larval foodplants** Aspen and other poplars. **Habitat** In mainland Europe, a wide range of habitats in which poplars grow. **Status and distribution** Rare immigrant and possible former resident. A few 19th-century reports, which may be authentic: two females at Ongar Park Wood, Essex (Jun 1839 and Jun 1841); a larva on poplar at Halton, Buckinghamshire (Aug 1853); and three 'among aspens' on Man (1870). Subsequently, three in Kent: 17 Jun 2003 at New Romney, 26 Jun 2011 at Dungeness and 6 Aug 2014 at Saltwood. A male at light at Gorey, Jersey, on 28 Jul 1995. Recorded from Scandinavia to the Mediterranean.

Larva of Buff-tip.

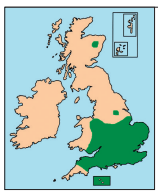
Chocolate-tip

plate 39

Clostera curtula (L.)

Local

71.027 (2019)



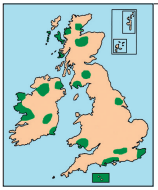
Field characters and similar species FW 13–18mm. Quite distinctive. The well-defined chocolate-brown blotch at tip of forewing stops abruptly at outermost white cross-line, in contrast to that of Scarce Chocolate-tip, which extends beyond it. Shows little variation. See also Small Chocolate-tip. **Flight season** Two generations. Apr–May and Aug–Sep. In Scotland, one generation, in Jun. Comes to light, usually late at night. **Life cycle** Overwinters as a pupa, in a cocoon formed between leaves of the foodplant, falling with them to the ground in the autumn. Larva May–Jun and Aug–Sep in England, and Jul–Aug in Scotland. Hides by day between spun leaves, emerging to feed at night. **Larval foodplants** Aspen, other poplars and willows. **Habitat** Woodland, scrub, carr, poplar plantations, shelterbelts, hedgerows and other situations in which the foodplants grow, including gardens. **Status and distribution** Resident. Local. Well distributed in southern England, East Anglia and the southern half of the Midlands, extending more locally into eastern Wales, the north-west and east Midlands, and Lincolnshire. Also found very locally in Scotland, in Aberdeenshire and formerly in Inverness-shire. Widespread in the Channel Islands.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Small Chocolate-tip plate 39

Clostera pigra (Hufn.)

Nb 71.028 (2017)

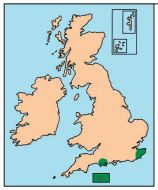


Field characters and similar species FW 11–14mm. Distinguished from Chocolate-tip and Scarce Chocolate-tip by its smaller size and poorly defined chocolate-brown blotch near tip of forewing. Forewing varies from mid- to dark brown. **Flight season** Two generations in southern Britain and parts of Ireland, Apr–May and late Jun–Aug, with occasional individuals to Oct. One generation in northern Britain and Northern Ireland, May–Jul. Comes to light, usually late in the night; has also been reported flying by day. **Life cycle** Overwinters as a pupa, in a cocoon among spun leaves of the foodplant. Larva late May–mid-Jul and Sep–early Oct in the south, and Aug–mid-Sep in the north. Hides by day between spun leaves, emerging to feed at night. **Larval foodplants** Creeping Willow and other low-growing willows such as Eared Willow, and low growth of Aspen. **Habitat** Open, damp places, including fens, marshes, broads, damp heathland, dune-slacks, open woodland (but apparently decreased in this habitat) and moorland. **Status and distribution** Resident. Nationally Scarce B. Probably overlooked, but possibly in decline as habitats become overgrown, shaded or overgrazed. Most easily recorded as a larva. Formerly, thinly scattered throughout much of southern Britain and more locally further north. Now appears virtually confined to parts of central southern England, Kent, Yorkshire, south Wales and in Scotland, where records extend from the south-west to Sutherland and the Hebrides. Very local in Ireland, but more widespread in the north and west. One reported from Jersey, in 1925, and one on Guernsey, in 2004.

Scarce Chocolate-tip plate 39

Clostera anachoreta ([D. and S.])

RDB; immigrant 71.029 (2018)



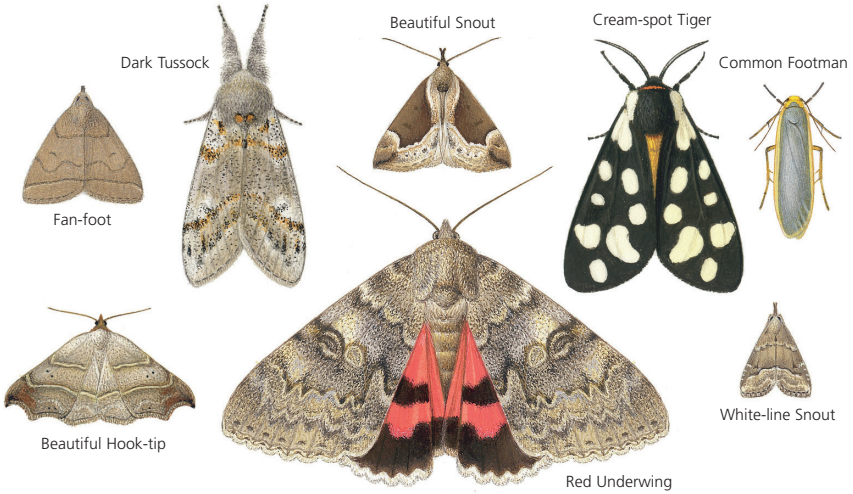
Field characters and similar species FW 14–19mm. Similar to Chocolate-tip, but well-defined chocolate-brown blotch at tip of forewing extends both sides of outermost white cross-line, and there is a prominent black spot and a second smaller one near trailing corner. See also Small Chocolate-tip. **Flight season** Two generations. Apr–May and late Jul–Aug, occasionally Oct. **Life cycle** Overwinters as a pupa spun between leaves of the foodplant, the autumn generation falling with them to the ground. Larva Jun–Jul and Aug–Sep. Hides by day between spun leaves, emerging to feed at night. **Larval foodplants** Sallow scrub, mainly Grey Willow. Eggs and larvae have also been found in Britain on other sallows, Aspen and poplars. **Habitat** The single known breeding population is on coastal shingle colonised by scrub. **Status and distribution** Nationally rare (transitory) resident and suspected immigrant. Red Data Book species. Recorded as a confirmed or possible resident at Dungeness, Kent, at intervals from 1858 until 1912, and again since the 1950s, with adults and larvae almost annual from 1978 to 2000. Since 2000, fairly regular single records from Kent and Sussex, but it may no longer be resident. Elsewhere, adults have been recorded (mainly at light) at Ipswich, Suffolk (1898); Clacton, Essex (1908); Waldringfield, Suffolk (1956); Southwold, Suffolk (1976); Bradwell-on-Sea, Essex (1976, 1981, 1997); and Studland, Dorset (2003). Immature stages have been found at St Leonards, Sussex, in 1893 (eggs); Dovercourt, Essex, in 1907 (larvae); and Canford Cliffs, Dorset, in 1909 (eggs). Recorded widely from the Channel Islands, where it is resident.

Erebidae Tussocks, ermines, tigers, footman moths, snouts, fan-foots, marbleds, blacknecks and underwings

The Erebidae is composed of seemingly diverse groups, varying greatly in size, form and habits. Two, the Lymantriinae and Arctiinae, were formerly regarded as distinct families and have larvae covered in hairs. The remainder were formerly sub-families of the Noctuidae. Their larvae are not covered in hairs but have a variable number of prolegs. Ten of the currently recognised sub-families occur in the British Isles:

Scoliopteryginae Herald (the only European species), with strongly hooked forewings, held horizontally when at rest. Sometimes included in the Calpinae and formerly in the Ophiderinae.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025



Rivulinae Straw Dot. A rather small, slender species.

Hypeninae Snouts. Six species. Head with a 'snout' composed of long palps. Body slender, wings forming a delta shape when at rest. The larvae feed on herbaceous or shrubby plants.

Lymantriinae Tussocks. Eleven species. Formerly the Lymantriidae. Medium-sized or fairly large moths with broad wings. Characteristic brush-like tufts of hair on the backs of the larvae, which are incorporated into their silken cocoons, formed above ground. Adults of some species rest with the forelegs outstretched, the habit most noticeable in the Pale and Dark tussocks and the vapourers. Males have strongly feathered antennae, whereas those of the females are at most slightly feathered. Females of some species cover the eggs with hair from substantial furry tufts on the hind end of their abdomen, and those of two species have highly reduced wings and are flightless. Most are strictly nocturnal. They come regularly to light, but do not feed. The larvae of all but one species feed on woody plants. Their hairs cause skin irritation to varying degrees.

Arctiinae Tigers, ermines and footman moths. Thirty-two species. Formerly the Arctiidae. Tiger moths are boldly striped and banded, a reminder to predators that they are poisonous. Despite their size and bright colours, the patterns are often highly cryptic, making the moths hard to see when at rest in vegetation. Ermine moths are so called because their wings are usually whitish, with black flecks or spots, reminiscent of the ermine robes of dignitaries. Footman moths are mostly much slimmer, and often rather plain. Some of the smaller species could initially be mistaken for micro-moths, but they show relatively little variation and once known are easily recognised. They are named footman moths because many have long, narrow forewings and rest

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

with them held over their back or wrapped around the body, bearing a resemblance to the long, stiff coats worn by the eponymous Victorian servants.

Many of the Arctiinae do not feed, but most come to light-traps and some fly by day. The hairs of the larvae do not normally cause skin irritation. Larvae of tigers and ermines generally feed on herbaceous plants. They can be conspicuous by day, especially when walking rapidly over open ground searching for a pupation site, or basking in sunshine. Those of footman moths feed mainly on lichens and algae growing on trees, rocks and walls, in dense low vegetation or on the ground. Pupation usually occurs in a cocoon formed above ground, either in a crevice, under bark or among low vegetation.

Herminiinae Fan-foots. Nine species. Similar in shape to snouts and, like them, possessing prominent, elongated palps. In addition, males have eversible fan-like sensory brushes on the forelegs, hence the name. The larvae generally feed on the dead or dying leaves of woody or herbaceous plants.

Hypenodinae three species. Similar in form to fan-foots, but smaller and without sensory brushes on the forelegs. The larval habits are poorly known.

Toxocampinae Blacknecks. Three species. Their wings are rather elongated but quite broad. The larvae are associated with legumes.

Boletobiinae Marbleds and allies. Nine species. Includes migratory species of the genus *Eublemma*. Generally rather small moths. The larvae feed variously on herbaceous or woody plants, in one case on lichens and in another on fungi.

Erebinae Underwings and allies. Fourteen species. Large or medium-sized moths, with broad forewings, in many cases intricately patterned and brightly coloured, and with banded hindwings and often prominent spines on the legs. The larvae of most feed on leaves of broadleaved trees, but some feed on herbaceous plants.

Scoliopteryginae

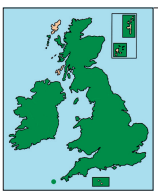
Herald

plate 40

Scoliopteryx libatrix (L.)

Common

72.001 (2469)



Field characters FW 19–23mm. Unmistakable. Forewing broad, strongly hooked, light to dark greyish brown with orange-red blotches in basal half. Shows little variation. Male has feathered antennae. **Flight season** One generation in most places, Aug–October and Mar–Jun after hibernation. Emerges from Jul in southern England, with a second generation from Aug or Sep. Most often found feeding after dark, often for long periods night after night, at flowers (including those of Ivy), overripe berries and sugar. Comes to light in small numbers. **Life cycle** Overwinters as an adult, in a sheltered location such as an outbuilding or cave, sometimes in numbers. Larva May–Aug. Pupates in a cocoon spun between two leaves, often near the end of a twig. **Larval foodplants** Willows, Aspen and other poplars. **Habitat** Open broadleaved woodland, hedgerows, scrub, fens, heathland, parkland, gardens and other places where the foodplants occur. **Status and distribution** Resident. Common. Throughout most of the British Isles, but somewhat more local in Scotland.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

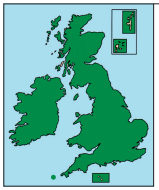
Rivulinae

Straw Dot

plate 40

Rivula sericealis (Scop.)

Common; suspected immigrant 72.002 (2474)



Field characters FW 13–15mm. Unmistakable. Dark kidney mark appears brown, but under a lens is purple and black. Forewing usually straw yellow, fading to pale straw when worn, with outer edge and fringe brown. Less often yellowish brown or entirely light brown, most frequently in second generation. Variation in pattern is slight. **Flight season** Two generations north to Yorkshire, Jun–Jul and Aug–Oct, the second often larger. Mainly one generation further north, Jun–Aug. Easily disturbed during the day; flies from dusk and comes to light. **Life cycle** Overwinters as a small larva. Larva Aug–May and again in Jul in the south. Pupates in a cocoon formed between grass blades. **Larval foodplants** Grasses, including False Brome, Tor-grass and Purple Moor-grass. **Habitat** Mainly tall, usually damp grassland (including woodland rides), marshes, fens, heathland and moorland. **Status and distribution** Resident and suspected immigrant. Common. Well distributed and frequent in most of Britain north to Cumbria, on Man, in Ireland and in the Channel Islands. Appears to be increasing, probably as a result of higher rainfall. Formerly local and predominantly western in northern England and Scotland, but since 2000 has expanded into eastern and northern Scotland, and recently recorded from Orkney and Shetland, where it may only be an immigrant.

Hypeninae Snouts

Beautiful Snout

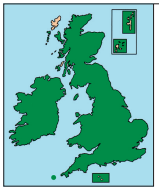
Snout

Snout

plate 40

Hypena proboscidalis (L.)

Common 72.003 (2477)



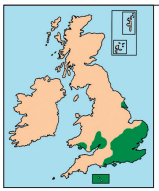
Field characters FW 15–19mm. Easily recognised. Slender, with a broad, normally distinctly hooked forewing with clear, dark brown cross-lines, and very long, upturned palps or 'snout'. Outer central cross-line is smooth and slightly curved. Forewing brown or dull greyish brown, tinged purplish when fresh. Second-generation moths are considerably smaller and often darker. **Similar species** See Bloxworth Snout and Paignton Snout, with irregular outer central cross-line, and Buttoned Snout, with much narrower forewing and curved leading edge. See also Shaded Broad-bar. **Flight season** Two generations in southern Britain, and increasingly in northern Britain and in Ireland, Jun–early Aug and late Aug–Oct. Rests by day among the foodplant or other vegetation and is easily disturbed. Flies at dusk over the foodplant, feeds at flowers and occasionally sugar, and frequent at light. **Life cycle** Overwinters as a larva. Larva Aug–May and Jul–Aug. Feeds at night and hides between spun leaves of the foodplant by day. Pupates in a cocoon formed among leaves of the foodplant. **Larval foodplants** Common Nettle. **Habitat** Wherever the foodplant grows. **Status and distribution** Resident. Common. Well distributed and frequent to abundant throughout most of the British Isles, north to the Outer Hebrides and Shetland.

Buttoned Snout

plate 40

Hypena rostralis (L.)

Nb 72.004 (2480)



Field characters FW 13–15mm. Very variable but distinctive. Forewing rather narrow, leading edge slightly curved, light to dark grey-brown, tip slightly hooked. The small oval and kidney mark have raised scales, and well-marked individuals have a dark bar between them, creating a diagnostic marking resembling a button-hole. Outer central cross-line is more or less straight, sometimes with a whitish band and whitish edging elsewhere. Often has a broad, pale band along leading edge and pale streaks towards outer edge, or plainer. Form *unicolor* Tutt is almost uniform brown, apart from faint oval and kidney mark. **Similar species** Forewing shape and 'buttoned' marks separate Buttoned Snout from other snouts. **Flight season** One generation. Aug–early Oct and, after hibernation, late Apr–mid-Jun. Comes to light sources, including house lights, but not frequent at light-traps. Also recorded at Ivy flowers, overripe blackberries and sugar. **Life cycle** Overwinters as an adult, in unheated

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Buttoned Snout.

outbuildings, cellars, caves and hollow trees. Larva early Jun–mid-Aug, but mainly found in Jul. Pupates in a cocoon under a leaf of the foodplant, usually from mid-Jul onwards. **Larval foodplants** Hop, including the garden cultivar Golden Hop. **Habitat** Favours large, dense stands of Hop, often in sunny locations, and in proximity to suitable overwintering sites. Hops sprawling over outbuildings and across the ground are ideal, but larvae also occur in hedgerows, along ditches, in scrub and in woodland margins and clearings, frequently in river valleys. **Status and distribution** Resident. Nationally Scarce B. Formerly thought to be in decline, but recent records, including surveys of larvae, have shown it to be quite well distributed from Dorset to Oxfordshire and Northamptonshire, East Anglia and south-east England (although scarce in Sussex and Kent). There is another population in south Wales and in the south-west Midlands, centred on Monmouthshire. One was recorded at Spurn, south Yorkshire, in 2007. In the 19th century it was reported from Yorkshire and southern Scotland, and in 1902 from Man. Recorded on Jersey and Alderney.

Paignton Snout

plate 40

Hypena obesalis (Treit.)

Immigrant 72.005 (2479)

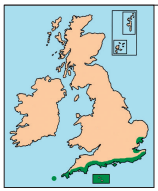
Field characters and similar species FW 18–22mm. Similar to Bloxworth Snout, but larger and forewing relatively narrow. Dark blotch on leading edge extends to base and outer central cross-line is obscured near trailing edge. Wings are lighter, and more brownish on undersides. Darker, more obscurely marked forms are known. See also Snout. **Flight season** One generation in central Europe, Aug–Jun. British records Aug–Oct. Comes to Ivy flowers, sugar and light. **Life cycle** In central Europe, overwinters as an adult. Larva Jun–Jul. No evidence of breeding in the British Isles. **Larval foodplants** Common Nettle. **Status and distribution** Immigrant. Six records, the first, a male at Paignton, Devon, on 5 Oct 1908, initially misidentified as Bloxworth Snout and not recognised until 1946. Also a male at Chobham, Surrey, on 14 Sep 1969; a female at Charlecote, Warwickshire, on 26 Aug 1973; a male at Timsbury, Somerset, on 21 Sep 2002; one at Tynemouth, Northumberland, on 19 Oct 2005; and one at Dunwich, Suffolk, on 14 Sep 2015. Resident in central, eastern and southern Europe.

Bloxworth Snout

plate 40

Hypena obsitalis (Hb.)

RDB; recent colonist; immigrant 72.006 (2478)



Field characters FW 15–17mm. There are two frequent forms of this moth. In one, forewing is light brown with a roughly triangular dark central blotch in leading half but not extending to base. Has an irregular outer central cross-line, edged with white extending to trailing edge. Outer area is variegated white, with dark streaks near outer edge. The other form is darker and more uniform, but with dark flecking. Intermediates occur. Forewing slightly pointed, but not hooked. Wings grey on undersides. **Similar species** Paignton Snout and Snout. **Flight season** Two generations, the first flying in Sep–Oct and again after hibernation in May–Jun, and another late Jul–mid-Aug. Flies around the larval foodplant after dark; recorded visiting the flowers of Ivy and Traveller's-joy, and occasionally comes to sugar and light. **Life cycle** Overwinters as an adult (first generation only), when it is sometimes found in unheated outbuildings, occasionally in numbers. For example, in March 2016, 105 were found in a damp, derelict garage in Southsea, Hampshire. Larva Jun–Jul and Aug–Sep. Pupates in a cocoon among the foodplant. **Larval foodplants** Pellitory-of-the-wall. **Habitat** South-facing coastal cliffs and slopes, and rough ground where the foodplants are sheltered. **Status and distribution** Resident (recent colonist) and immigrant. Red Data Book species. First recorded as a single adult at Bloxworth, Dorset, on 21 Sep 1884. A further ten were recorded, from Scilly to Kent, before it was found breeding in Devon in 1990. Records increased in the 1990s and it is now resident locally in Devon, Dorset, Hampshire, the Isle of Wight and probably Sussex. Some recent records refer to immigrants, such as one in Essex in 2001. Established since the 1960s in the Channel Islands, where it is widespread and frequent. Recorded once in Ireland, at Ummera, Co. Cork, on 5 Oct 1936.

Chevron Snout

plate 40

Hypena lividalis (Hb.)

Immigrant 72.0061 (–)

Field characters FW 10–13mm. Quite distinctive. Inner half of forewing olive brown, plain except for small black dot near leading edge. Fairly straight diagonal white line demarcates grey-brown, often white-dusted outer half. Hindwing grey. When fully at rest, holds wings at a very steep angle. **Flight season** In southern Europe, occurs in most months of the year in several generations. Easily disturbed by day and comes to light. **Larval foodplants** Pellitory-of-the-wall and occasionally Common Nettle.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

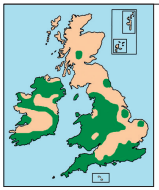
Habitat Dry, low scrub and also damp woodland. **Status and distribution** One record, a male at light on 9 Nov 2015 in a garden in Abbey Wood, south-east London, during a period of sustained favourable conditions for migration from the Continent, when many other immigrant species were recorded. In Europe, mainly found around the Mediterranean and on Iberian coasts, but is spreading north and has been found several times in Denmark.

Beautiful Snout

plate 40

Hypena crassalis (Fabr.)

Local 72.007 (2476)



Field characters FW 14–16mm. Large dark blotch covering most of broad, sharp-tipped forewing is diagnostic. In male, blotch is dark chocolate brown, and outer third and trailing edge of forewing are predominantly grey, with variable brown and white markings. In female, blotch is paler, and outer third and trailing edge are predominantly whitish, except along outer margin and at tip. **Flight season** One generation. Late May–early Aug, depending on altitude. Flies from dusk and comes to light and occasionally to sugar. Rests by day on tree trunks or among the foodplant and is easily disturbed. **Life cycle** Overwinters as a pupa, formed among plant debris or just under the ground. Larva mid-Jul–late Sep. **Larval foodplants** Bilberry. At some known localities, for example in Kent, Bilberry is absent and the foodplant there is unknown, but recently confirmed on Heather in Co. Mayo, Ireland. **Habitat** Usually open woodland, also moorland and heathland. Singletons are occasionally recorded a long way from known breeding areas and seemingly from suitable habitat. **Status and distribution** Resident. Local. South-west England, Dorset, Hampshire (but only occasional on the Isle of Wight), Sussex, Kent, Berkshire and Surrey. Also in the west Midlands, Wales, Derbyshire, Nottinghamshire (one site, found in 2009), Yorkshire (several, first found in 2001), north-west England (including Whinfell Forest, Cumbria) and Man. In Scotland, very local in West Perthshire (discovered near Aberfoyle in 2012). Widespread but local in Ireland. In the Channel Islands, recorded once on Guernsey, in 1983. Appears to be spreading, and small numbers at coastal sites widely scattered across Britain in recent years suggest immigration.

Lymantriinae

Black V Moth

plate 40

Arctornis l-nigrum (Müll.)

Immigrant; transitory resident 72.008 (2032)

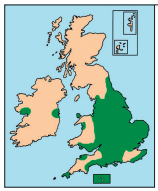
Field characters FW 19–27mm. Wings with slight silky sheen, greenish white when freshly emerged, soon fading to white, with diagnostic thin black central shallow 'V' or crescent mark. **Similar species** White Satin Moth lacks the 'V' mark. **Flight season** One generation. Late Jun–Jul. Comes to light, particularly male. Moths fly to the tree-tops when released, suggesting that this is the normal roosting site. **Life cycle** Overwinters as a small larva. Larva Jul–late May or Jun. Pupates in a cocoon formed among the leaves of the foodplant. **Larval foodplants** Recorded only on elm in the wild in Britain, but reared successfully on lime. Mainly on limes, elms, willows and poplars in mainland Europe. **Habitat** The only recorded breeding to date was in a tall elm hedgerow and shelterbelt. **Status and distribution** Suspected immigrant and transitory resident. First reported in the early 19th century, with several adults in Kent and Yorkshire. Then one in 1904 in Chelmsford, Essex, and single males at light-traps on 7 Jul 1946 at Arundel, Sussex, and on 9 Jul 2006 at Fordcombe, Kent. Between 27 Jun and 1 Jul 1947, six males came to a light-trap at Bradwell-on-Sea, Essex, and it was then seen annually at this locality until 1960, a period of hot, dry summers, with 102 in total trapped and released. One larva was found, on 22 Jun 1953, on an elm hedge. One was recorded at Totland, Isle of Wight, on 4 Jul 2015. Probably immigrant on Jersey, with singletons in 1982, 1986, 2003 and 2005.

White Satin Moth

plate 40

Leucoma salicis (L.)

Local; suspected immigrant 72.009 (2031)



Field characters FW 18–27mm. Readily distinguished from other large, plain white moths by the strong silky sheen, black and white ringed legs, and entirely white-scaled abdomen. Sometimes has a very pale buff streak along leading edge. Female is larger. **Similar species** See Black V Moth and Yellow-tail. Female Reed Tussock has a less rounded forewing and light brown legs. **Flight season** One generation. Jul–Aug. Comes to light, sometimes in numbers. **Life cycle** Overwinters as a small larva, in a communal silk web on the foodplant. Larva late Aug–late Jun. Pupates in a hairy cocoon, usually in a bark crevice or among foliage on the foodplant. **Larval foodplants** Aspen and other poplars, sallows and willows. **Habitat** Sometimes abundant in poplar plantations and willow beds. Also found in hedgerows, scrub, woodland, parks and gardens, particularly in river valleys and floodplains. **Status and distribution** Resident and immigrant. Local. Occurs in large numbers in some years, probably as a result of immigration. Found in most of the southern half of Britain north to Northumberland and Cumbria, but scarce or absent (and may only be immigrant) in south-west England and most of Wales. Rare immigrant in north-east England and in Scotland, including Orkney and Shetland. In Ireland, resident very locally in the east

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

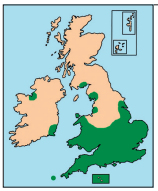
in Cos. Dublin and Meath, and formerly in Co. Wicklow. Very occasional in the west, with two in Galway in 2003 and one in Mayo in 1959. Widely recorded from the Channel Islands.

Black Arches

plate 40

Lymantria monacha (L.)

Local 72.010 (2033)



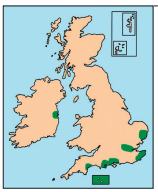
Field characters FW M 18–20mm F 20–28mm. Generally distinctive. Forewing usually whitish with a central V-shaped mark and numerous jagged black cross-lines, sometimes merged into a broad central band, or wing more extensively darkened. In female, abdomen distinctly pointed and strongly marked with pink. In male, pink may be faint. Form *eremita* Ochs. (parts of south-east England) is almost or entirely black, including abdomen. **Similar species** Form *eremita* could be confused with male Gypsy Moth, which is usually distinctly brown (occasionally blackish) with more regular cross-lines, if present. Female Gypsy Moth is thickset and relatively plain with a blunt abdomen. **Flight season** One generation. Late Jul–early Sep. Nocturnal. Comes to light, the male frequently. Can be found at rest by day on tree trunks and posts. **Life cycle** Overwinters as an egg, usually laid singly or in pairs in a bark crevice on the foodplant. Larva Apr–Jun. Pupates in a flimsy cocoon in a bark crevice or among foliage. **Larval foodplants** Mainly Pedunculate Oak and Sessile Oak, but also recorded on a wide range of other trees, including Midland Hawthorn, birches, elms, Hornbeam, Aspen, Scots Pine and Norway Spruce. **Habitat** Woodland and parkland, especially with mature oaks. **Status and distribution** Resident. Local. Well distributed in southern Britain, including the southern half of the Midlands and most of Wales. Local in Lincolnshire and north Wales, and recorded from Man. Possibly spreading north, with a few recent records from Yorkshire and Lancashire, and recorded at Roudsea, Cumbria, in 2013. In Ireland, probably resident very locally in Cos. Sligo and Wexford (recent records in suitable habitat) and formerly recorded from Co. Cork. Widespread and frequent in the Channel Islands.

Gypsy Moth

plate 40

Lymantria dispar (L.)

Immigrant; Adventive, locally naturalised; former resident 72.011 (2034)



Field characters FW M 20–24mm F 31–35mm. Male has a broad, deep brown forewing, sometimes with diffuse paler cross-bands. There are wavy cross-lines, a diffuse dark central band and a roughly V-shaped dark central mark. Abdomen brown. Obscurely marked blackish males are known from mainland Europe. Creamy-white female is similarly marked, but thickset and much larger, with blunt abdomen dark brown towards tip. **Similar species** See Black Arches. **Flight season** One generation. Jul–Aug. Male comes to light, and also flies by day. Female of the extinct British population was flightless, but some European female moths are apparently capable of flight. **Life cycle** Overwinters as an egg, laid in large scale-covered, spongy yellow masses on a trunk or other part of the foodplant, and sometimes on solid man-made objects including vehicles. Larva Apr–late Jun. The young larvae are wind-dispersed and can be carried for several kilometres. Pupates in a flimsy cocoon behind bark or among leaf litter or foliage. **Larval foodplants** The endemic populations fed on Bog-myrtle and Creeping Willow. In mainland Europe, on oak and many other broadleaved trees and bushes. In London, egg masses have been found on broadleaved trees. **Habitat** The endemic populations were found in the more acidic, open parts of fens. The introduced populations occur in a wide variety of places such as woodland, scrub, plantations, parks and gardens, as in mainland Europe. **Status and distribution** Immigrant, former resident and accidental introduction. Well established, probably as a distinct subspecies, in the fens of Huntingdonshire, Cambridgeshire and Norfolk in the first half of the 19th century, but declined from the 1850s due to draining and clearance of the habitat, and last recorded from Wennington Wood near Huntingdon, in 1907. Large migrations of males of the Continental populations occur, and over 80 have been recorded in light-traps in southern England, mainly near the coast (and once in Cheshire), since the 1950s. Breeding populations have been found at Woodford, north-east London (1995), Aylesbury (2005), Hengistbury Head, South Hampshire (modern Dorset) (2007) and more widely across the London area since 2006, including females at light. The origin of all of these is unknown, but accidental transportation is likely. Egg masses have been found in numbers in France on the undersides of lorries. Recorded once in Ireland, a male in Co. Wicklow in

Larva of Gypsy Moth.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

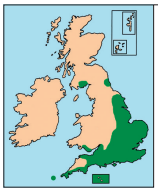
2004. Found breeding on Jersey from 2002 and has persisted in spite of control measures. Also occurs on Guernsey and Alderney. **Pest status** In mainland Europe the moth is frequently a serious pest, defoliating timber plantations and ornamental trees, as in North America, where it was accidentally introduced in about 1868.

Brown-tail

plate 40

Euproctis chrysorrhoea (L.)

Local 72.012 (2029)



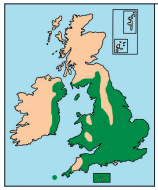
Field characters FW M 16–20mm F 18–19mm. Upperside of wings silky and pure white, usually unmarked but sometimes with tiny black dots near trailing corner of forewing. In male, upperside of abdomen very furry towards tip, deep chocolate brown or rusty brown above, but white at base, and antennae strongly feathered. Female with slightly feathered antennae, upperside of abdomen dark brownish grey above, and with a bulbous, dark brown furry tip. The moth often raises or curls the abdomen into view if disturbed, as does Yellow-tail. **Similar species** See Yellow-tail. **Flight season** One generation. Jul–Aug, sometimes a partial second generation in Oct. Comes to light. **Life cycle** Overwinters as a small larva in a tough communal web on a foodplant stem. Larva late Aug–May. The eggs are laid in batches, covered with hair from the female's abdomen. The larval webs are usually on low growth exposed to full sun. Pupates in a cocoon formed among foliage or leaf litter, sometimes communally. **Larval foodplants** Bushes and small trees, including Bramble, Hawthorn, Blackthorn, Dog-rose, sallows, fruit trees, oaks and Sea-buckthorn. **Habitat** Open places such as among coastal scrub, hedgerows, parks and gardens. **Status and distribution** Resident. Local. Historically, mainly restricted to south-east England. Now increased and most numerous on and near southern and eastern coasts, but also established in the London area and spreading inland in southern England, East Anglia and the south Midlands. Since 2004, widespread in Yorkshire (including a major outbreak of larvae at Spurn, in 2008), and recent records in Northumberland. Very occasionally recorded in Scotland. Abundant in the Channel Islands. **Pest status** The larval hairs cause severe skin irritation, and in urban areas they can reach pest proportions, such that windblown hairs cause skin rashes on people in the vicinity. For this reason, for centuries this species has been subject to local pest control measures.

Yellow-tail

plate 40

Euproctis similis (Fuessl.)

Common 72.013 (2030)



Field characters and similar species FW M 16–22mm F 17–23mm. Not dissimilar to Brown-tail, but slightly slimmer, with more rounded forewing that in male has one or more dark grey or blackish spots near trailing corner. Abdomen white with golden-yellow or orange-brown tip, larger (but not bulbous) in female. Female larger, with slightly feathered antennae, and usually plain white. See also White Satin Moth. **Flight season** Usually one generation. Jul–Aug. Recently, a small second generation north to Cumbria, usually in Oct. Comes to light, sometimes in numbers, and may be found at rest by day among leaves of the foodplant, or beaten from low branches. **Life cycle** Overwinters as a small larva, in a thin silk hibernaculum behind loose bark or among dead leaves. Larva Aug–Jun. Sits openly by day. Pupates in a cocoon formed on or below the foodplant. **Larval foodplants** Many broadleaved trees and shrubs. Particularly frequent on hawthorns and Blackthorn, but also often on birches, Hazel, oaks, sallows, elms and Barberry. Recently found and reared on Japanese Knotweed, an unusual example of moth larvae on this invasive introduced plant. **Habitat** Hedgerows, woodland edges, other open scrubby places and gardens. **Status and distribution** Resident. Common. Frequent throughout most of the southern half of Britain, except on high ground, extending to the northernmost counties of England, southern Scotland and on Man. In Ireland, well established in the eastern coastal counties, and historical records from Cos. Galway and Mayo. Abundant in the Channel Islands.

Reed Tussock

plate 41

Laelia coenosa (Hb.)

Extinct 72.014 (2024)

Field characters FW 16–21mm. In male, antennae very strongly feathered, and forewing pale buff with diffuse brown streaks and shading, sometimes with scattered black dots in outer half, roughly forming a curved line. Female has plain whitish wings and unfeathered antennae. Legs light brown. **Similar species** See White Satin. **Flight season** One generation. Jul–Aug. Nocturnal. Male comes to light. **Life cycle** Overwinters as a part-grown larva in vegetation near the foodplant. Larva Aug–Jun. **Larval foodplants** Common Reed, Great Fen-sedge and Branched Bur-reed were reported in Britain. **Habitat** Fens. **Status and distribution** Extinct resident. Discovered in Britain in 1819 at Whittlesea Mere, Huntingdonshire, and later found in nearby Yaxley Fen, and at Wicken and Burwell fens in Cambridgeshire. Larvae and adults were quite

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Yellow-tail.

frequent and were sold to collectors by reed-cutters. By 1855, all the known sites had been drained and ploughed up, except Wicken Fen, where larvae had become scarcer by 1865. Numbers of males came to lights from 1871 to 1873, but they then dwindled rapidly and the last was seen in 1879.

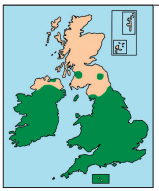
Pale Tussock

plate 41

Calliteara pudibunda (L.)

Common

72.015 (2028)



Field characters FW M 21–22mm F 27–31mm. Rests with forelegs outstretched. Usually a light grey moth, with darker grey cross-lines and bands. Antennae brownish in male. Female larger, usually without dark central shading of male. The melanic f. *concolor* Cock., with plain blackish-grey forewing and dark grey hindwing, is now frequent in parts of southern England. **Similar species** See Dark Tussock. **Flight season** One generation. May–Jun. Both sexes come to light, males more frequently. Sometimes found at rest by day, particularly as mating pairs, on secluded stems of foodplant, blending with stems and resembling silken webbing. **Life cycle** Overwinters as a pupa. Larva late Jun–early Oct, growing slowly. The thin silken cocoon is formed on the foodplant or among fallen debris below it. **Larval foodplants** A wide variety of broadleaved trees and shrubs, including hawthorns, Blackthorn, Crab Apple, cultivated fruit trees, oaks, birches, Hazel, limes, elms, Hop and Barberry. Abundant in Hop fields prior to the use of insecticides, where it was known as the 'Hop-dog'. **Habitat** Woodland, hedgerows, gardens and other wooded or scrubby places, mainly in lowlands, but also in sheltered spots in the uplands. **Status and distribution** Resident. Common. Well distributed and frequent in England and Wales, north to Cumbria. Rare in Scotland, and only in the south. Local on Man. In Ireland, well distributed except for the north-west. Widespread and frequent in the Channel Islands.

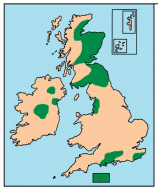
Dark Tussock

plate 41

Dicallomera fascelina (L.)

Local

72.016 (2027)



Field characters and similar species FW 18–28mm. Similar in size, resting posture and shape to Pale Tussock, but forewing generally darker, finely peppered with black scales, and with a pale kidney mark and black cross-lines, often marked with orange-brown. Antennae grey. Darkest forms are normally found in northern England and Scotland, and the palest in southern England. On shingle at Dungeness, Kent, the moths are unusually large. **Flight season** One generation. Jul–Aug. Nocturnal and comes to light. Occasionally found at rest by day in Heather. **Life cycle** Overwinters as a small larva (sometimes twice in Scotland), in a silk hibernaculum. Larva late Aug–May or early Jun. **Larval foodplants** Mainly Heather on heathland and moorland, Broom (at Dungeness), Creeping Willow and other willows, Bramble, hawthorns and low birch regrowth. **Habitat** Heathland, moorland, coastal sand-dunes and shingle. **Status and distribution** Resident. Local. Well distributed on the heaths of south-east Dorset, the New Forest, Hampshire and Surrey, and on coastal shingle in East Sussex and at Dungeness, Kent. There are a handful of other, very scattered, mainly old records from southern Britain, some possibly indicating extinct colonies. Widespread on coastal sand-dunes in Cheshire and Lancashire, on moorland in Northumberland and on heathland in Co. Durham. Found in south-east and south-west Scotland, and widespread on the moors of central, north-east and northern Scotland, especially the valleys of the Spey and Dee. Also on coastal moorland in Aberdeenshire and on sand-dunes on the Moray Firth coast. Very local on low moorland in Ireland. Rare on Jersey and Guernsey.

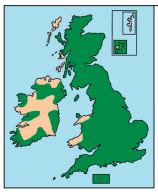
Vapourer

plate 41

Orgyia antiqua (L.)

Common

72.017 (2026)



Field characters FW M 12–17mm. Male has rather plain orange-brown wings, occasionally darker, with indistinct darker cross-lines and a conspicuous white spot near trailing corner. Female has rudimentary wings and is flightless, light grey-brown and with a swollen abdomen. **Similar species** See Scarce Vapourer. **Flight season** Probably one protracted generation, Jul–Oct, in the south. Usually Sep–Oct in the north. Male flies by day with an irregular, fluttering flight, often quite high, searching for the scent of the female, and has been mistaken for Brown Hairstreak

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Vapourer.

butterfly *Thecla betulae* (L.). Male also flies at night, occasionally coming to light. Wingless female is sedentary, remaining on her cocoon. **Life cycle** Overwinters as an egg, in a batch of several hundred on the outside of the empty cocoon of the female, attached to some part of the foodplant, or to a nearby fence, wall or other structure. Larva May–early Sep, sometimes with staggered hatching from egg batches. **Larval foodplants** Most native broadleaved trees and shrubs, including birches, Hazel, sallows, hawthorns, Blackthorn, elms, limes, oaks and Bog-myrtle, and many cultivated bushes such as cotoneasters and fire-thorns, occasionally causing localised defoliation. Also Bracken. **Habitat** Fairly ubiquitous, from parks and gardens to moorland and other scrubby places. **Status and distribution** Resident. Common. Well distributed throughout England, most of Wales, Man, mainland Scotland (except on high ground in the north) and Orkney. Widespread but somewhat local in Ireland. Resident on Alderney; rare on Jersey, with one recorded in 1992 and one in 2008.

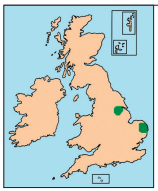
Scarce Vapourer

plate 41

Orgyia recens (Hb.)

RDB

72.018 (2025)



Field characters and similar species FW M 13–17mm. The orange-brown and white marks near forewing tip, along with dark chocolate-brown colour, easily distinguish male from that of Vapourer. In female, wings are reduced to tiny stumps and abdomen is swollen like Vapourer, but body is dark grey and furrier. **Flight season** One main generation, Jun–Jul, with a partial second generation Aug–Oct. Male flies by day with a fluttering, swooping flight. Sedentary female remains on her cocoon. **Life cycle** Overwinters as a larva among the leaves of the foodplant. Larva Aug–Jun. Eggs are laid on the cocoon of the female, formed on the foodplant. **Larval foodplants** Mainly hawthorns, oaks and sallows, but also reported on birches, Blackthorn, roses, Bramble, Hazel, Heather, Alder Buckthorn, Meadowsweet, Common Sorrel and Rosebay Willowherb. **Habitat** Lowland heath, wet woodland, fens and bogs. Also hedgerows. **Status and distribution** Resident. Red Data Book species. Restricted to a small number of sites in south Yorkshire, north Lincolnshire, Nottinghamshire and East Norfolk. Formerly widespread in central and southern England and parts of Wales. In decline in Yorkshire, where only nine of 26 known breeding sites have produced records since 1980. **Conservation** Since either the early stages or the adult female are always on the foodplant, this species is threatened by the removal or over-zealous cutting of hedgerows and other vegetation, and by the draining of its habitats. Efforts are being made to establish new colonies with captive-bred livestock.

Arctiinae Tigers and ermine moths

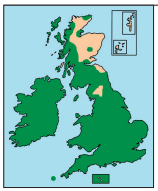
Buff Ermine

plate 41

Spilosoma lutea (Hufn.)

Common

72.019 (2061)



Field characters FW 17–22mm. Usually quite distinctive, with very broad yellowish-buff to whitish-buff forewing and slightly paler hindwing. The row of rather elongated spots on forewing running diagonally from wing tip to trailing edge, present on underside of plain examples, is diagnostic. Number and size of black spots on forewing varies considerably, and they may form streaks (f. *intermedia* Standfuss). The extreme f. *zatima* Stoll, with mainly black wings, is very rare in the wild. **Similar species** White Ermine and Irish male Muslin Moth lack the diagonal line of spots. **Flight season** One generation. Mid-May–Jul. Comes regularly to light, sometimes in numbers. **Life cycle** Overwinters as a pupa, in a cocoon formed among plant debris. Larva Jul–Oct. **Larval foodplants** Many herbaceous plants, especially Common Nettle, and woody species including Honeysuckle, Hop, plums, Barberry and birches. **Habitat** Most habitats, including gardens,

Larva of Buff Ermine.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

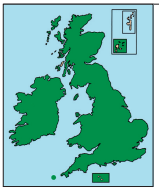
hedgerows, parks and woodland. **Status and distribution** Resident. Common. Very well distributed and frequent throughout England, Wales, Man, Ireland and the Channel Islands. Widespread in southern and western Scotland, including the Western Isles, north to Caithness.

White Ermine

plate 41

Spilosoma lubricipeda (L.)

Common 72.020 (2060)



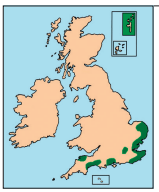
Field characters FW 18–23mm. The pattern of black dots on forewing and the presence of at least one central black spot on hindwing are diagnostic in most cases. Forewing spots are very variable in number. They may form a curved row or streaks, or may be highly reduced. In the southern half of Britain, forewing is usually whitish with a creamy tint and hindwing is white, but in Scotland and Ireland forewing is often creamy buff or brown, and hindwing creamy white. Buff examples are occasionally found further south. **Similar species** See Water Ermine, Buff Ermine, Autumn Webworm and Muslin Moth. **Flight season** Mainly one generation. Mid-May–late Jul. A smaller, partial (and recently increasing) second generation in southern Britain, in Sep–Oct. Comes to light, usually late in the night. **Life cycle** Overwinters as a pupa, in a cocoon formed among plant debris. Larva Jul–Sep. **Larval foodplants** A wide range of herbaceous plants, including Common Nettle and docks. **Habitat** Ubiquitous, from gardens and hedgerows to woodland, moorland and coastal habitats. **Status and distribution** Resident. Common. Very well distributed and frequent, and found throughout most of the British Isles, apart from Shetland.

Water Ermine

plate 41

Spilosoma urticae (Esp.)

Nb; suspected immigrant 72.021 (2062)



Field characters and similar species FW 18–21mm. Very like a plain example of White Ermine, but distinguished by pure white ground colour of forewing and absence of a central black spot on hindwing. Forewing usually has one or two central black dots, and sometimes a short row near wing tip, but may be entirely plain. See also Autumn Webworm and Muslin Moth. **Flight season** One generation. Jun–Jul. Comes to light. **Life cycle** Overwinters as a pupa, in a cocoon formed among plant debris. Larva late Jun–early Sep. **Larval foodplants** Herbaceous plants, including Water Mint, Water Dock, Yellow Loosestrife, Lousewort and Yellow Iris. **Habitat** Fens, wet meadows, marshes, ditches and other waterside places, dune-slacks, vegetated shingle and saltmarshes. **Status and distribution** Resident. Nationally Scarce B. Now largely confined to coastal areas in south-east England, from Sussex to Norfolk (and here also inland in fens), with possibly a few scattered inland sites elsewhere in southern England. Well established at Exminster Marshes, Devon. Occasional elsewhere, including singles at Spurn Head, Yorkshire (1992), and Fair Isle, Shetland (2002), probably Continental immigrants, and a larva (reared) from near Darlington, Co. Durham (1968).

Autumn Webworm/ Mulberry Moth

plate 41

Hyphantria cunea (Drury)

Suspected immigrant or adventive 72.0211 (–)

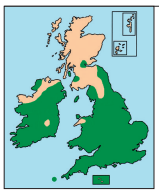
Field characters and similar species FW M 14–15mm F 18mm. Not unlike White or Water ermines, but more slender and male is much smaller. Also, forewing slightly narrower and more pointed, head more rough-scaled, palps shorter and spurs on underside of hind-leg tibia are absent. Abdomen yellowish or white on back, sometimes with dark spots (yellow with row of black spots on back and sides in White and Water ermines). Hindwing white with no spots. Forms with the forewing almost pure white, sparsely spotted, and with numerous larger spots formed into bands or blotches all occur. **Flight season** Two generations. May and Aug–Sep. Comes to light. **Life cycle** Overwinters as a pupa. Larvae live in large communal webs spun among leaves and branches. Many webs may occur on one tree so that it becomes draped in silk. The larvae are hairy but do not cause skin irritation. **Larval foodplants** A wide range of broadleaved trees, especially mulberries, plums, apples, cherries and maples. Also some woody and herbaceous plants. **Habitat** Woodland, orchards and gardens. **Status and distribution** Two records. One in Trumpington, Cambridgeshire, on 13 May 2014 and one in a light-trap at Great Ashby, near Stevenage, Hertfordshire, on 28 Sep 2014. A North American species introduced to Hungary in the 1940s, which has since become widespread in south-east and central Europe and continues to spread. Immigration or accidental introduction with plant stocks are both possible. **Pest status** A pest of orchards and amenity trees due to defoliation and the webs it creates.

Muslin Moth

plate 42

Diaphora mendica (Cl.)

Common 72.022 (2063)



Field characters FW M 14–17mm F 17–19mm. Generally smaller than similar species. Forewing broad, with a variable pattern of black spots. In England, Wales and Scotland, male is grey-brown or sooty grey with a grey-brown abdomen and

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

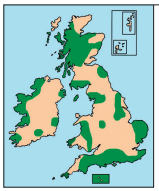
is unmistakable. In Ireland, male is usually creamy white or creamy brown, but can be clouded with grey. Female has slightly translucent white wings and a whitish abdomen. **Similar species** White, Water and Buff ermines are larger, with opaque wings, and abdomen is largely yellow above. **Flight season** One generation. Apr–early Jun. Male is nocturnal, and comes regularly to light. Female is active by day and flies in sunshine, and may also be found crawling on low vegetation. **Life cycle** Overwinters as a pupa, in a cocoon formed among plant debris. Larva mid-Jun–early Sep. **Larval foodplants** Many herbaceous plants, including docks, plantains and Red Dead-nettle. Eggs have been found and reared on Aspen and Apple. **Habitat** Many open habitats, including open woodland, downland, sand-dunes, gardens and hedgerows. **Status and distribution** Resident. Common. Well distributed throughout England and Wales, and in the Channels Islands, and found on Man. In Scotland, locally widespread in the south, but not reliably recorded in the north. Widespread in Ireland.

Clouded Buff

plate 42

Diacrisia sannio (L.)

Local 72.023 (2059)



Field characters FW M 19–22mm F 17–20mm. Unmistakable. Forewing in male yellow with a pink fringe and pink streak along trailing edge. Hindwing whitish with variable blackish shading. Forewing orange in female with orange-red veins. Hindwing orange, variably clouded with blackish. **Flight season** Usually one generation, Jun–Jul. Rarely, small numbers in southern England in late Aug–Sep as a possible second generation. Male is easily disturbed by day and flies in sunshine. Both sexes are active at night, and male comes to light. Female appears to fly little, but can sometimes be found at rest on vegetation. **Life cycle** Overwinters as a small larva. Larva Jul–late Apr or May. **Larval foodplants** Heathers and herbaceous plants, including Sheep's Sorrel, Devil's-bit Scabious, Common Dog-violet and plantains. **Habitat** Mainly heathland and moorland, less frequently chalk and limestone grassland and open areas in woodland. **Status and distribution** Resident. Local. Widely but patchily distributed in mainland Britain, and most frequent in southern, south-west and south-east England, East Anglia, Wales, north-west England and western Scotland, including the Western Isles. First recorded on Man in 2001. Widespread but local in Ireland (mainly in the west) and in the Channel Islands.

Ruby Tiger

plate 42

Phragmatobia fuliginosa fuliginosa (L.)

Common 72.024 (2064)

ssp. *borealis* (Stdgr.)
Common

Field characters FW 14–19mm. Thickset with rather thinly scaled wings. Forewing pinkish brown, or deep pink, with one or two small dark central spots, or a crescent. Hindwing bright pink (very rarely yellow), including fringes, with highly variable sooty-grey shading and, on some, only the trailing third is pink. Moths from northern England and Ireland are generally somewhat darker. Ssp. *borealis* forewing darker, sometimes dull brown, with no trace of pink. Hindwing usually sooty grey with a pink streak along trailing edge, or entirely sooty grey, including fringes. **Flight season** Ssp. *fuliginosa* has two generations, mid-Apr–Jun and mid-Jul–early Sep. Ssp. *borealis* has one generation, May–Jul. Sometimes flies by day, more especially the first generation, when pairing has been observed. Also flies at night and comes to light, more frequently in the second generation. **Life cycle** Overwinters as a fully grown larva. May–Jul and Aug–Apr where there are two generations, Jul–May where there is one. Often seen basking in early-spring sunshine. **Larval foodplants** Many herbaceous plants, including ragworts and plantains; also heathers, Spindle and Broom. **Habitat** Open habitats, including downland, heathland, moorland, sand-dunes, field margins, open areas in woodland and gardens. **Status and distribution** Resident. Common. Ssp. *fuliginosa* is frequent throughout England, Wales, Ireland, Man and the Channel Islands. Ssp. *borealis* is found throughout most of Scotland, except Shetland.

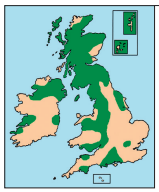
Wood Tiger

plate 42

Parasemia plantaginis plantaginis (L.)

Local 72.025 (2056)

ssp. *insularum* Seitz
Shetland, Orkney, northern mainland Scotland



Field characters FW 17–20mm. Ssp. *plantaginis* is unmistakable. Variable in colour, extent and detail of markings, but overall pattern is diagnostic. In female, black basal markings on hindwing are more extensive. In northern England and parts of Scotland, males with white hindwing ground colour (f. *hospita* [D. and S.]) are frequent. Ssp. *insularum* is similar, but in both sexes ground colour of hindwing is orange-yellow and black basal markings are extensive. **Flight season** One generation. Late May–Jul. Easily disturbed by day from low vegetation. In sunny weather, males fly rapidly and erratically.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Female is more sluggish but is active in the late afternoon and after dark. **Life cycle** Overwinters as a half-grown larva, low down in the vegetation. Larva Jul–Apr or early May. Pupates in a cocoon spun among plant stems. **Larval foodplants** A range of plants, including Bell Heather, Ribwort Plantain, Greater Plantain, Common Rock-rose, Salad Burnet and Groundsel. **Habitat** Moorland, heathland, downland and other scrubby places, including open areas in woodland. **Status and distribution** Resident. Local. Ssp. *plantaginis* is widespread but local in south-west and central southern England (and here increasingly so), the west Midlands, Wales, northern England and on Man. More densely distributed in mainland Scotland, the Hebrides, and western and northern parts of Ireland. Formerly found widely in south-east England but now very rare there. Possible reasons for the losses are agricultural intensification, overgrazing (especially of downland sites), a decline in coppicing, maturation of forestry plantations and climate change. Ssp. *insularum* is found in northern mainland Scotland, Orkney and Shetland.

Garden Tiger

plate 42

Arctia caja (L.)

Common

72.026 (2057)

Field characters FW 28–37mm. Unmistakable, although brown spots and blotches are so highly variable that no two moths are exactly alike. Extreme examples with spots entirely absent, or extensively merged, are rare in the wild but can be obtained through selective breeding. Form *lutescens* Cockll., with yellow hindwing and abdomen ground colour, and f. *fumosa* Horhammer, which is sooty brown, are also rare. If disturbed, this moth displays its orange hindwings with blue-black spots, and produces a clear yellow fluid from two ducts just behind the head. **Flight season** One generation. Jul–Aug. Flies late at night and comes to light, sometimes in numbers. **Life cycle** Overwinters as a small larva. Larva Aug–late Jun. The very hairy larva is known as the 'woolly bear'. Like other tiger larvae, it may feed or bask by day or be seen walking rapidly over open ground. Pupates in a thin cocoon among vegetation on or near the ground. **Larval foodplants** A wide variety of herbaceous plants, including Common Nettle, Broad-leaved Dock, Water Dock, burdocks, Hound's-tongue and many garden plants. **Habitat** Rather open habitats, including gardens, damp meadows, fens, grassland, hedgerows, mature sand-dunes (where it can be abundant) and open woodland. **Status and distribution** Resident. Common. Well distributed and sometimes numerous, formerly throughout most of Britain, Ireland and the Channel Islands (but vagrant in Shetland), and remains so in coastal areas and many parts of northern Britain. In most areas, it has declined significantly since the mid-1980s, most noticeably inland in southern Britain, and is now evidently at very low density in many areas. Whether this is due to habitat loss or climatic factors is uncertain.

Larva of Garden Tiger.

Cream-spot Tiger

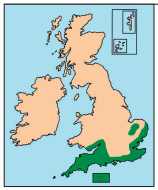
plate 43

Arctia villica (L.)

ssp. *britannica* Ob.

Local

72.027 (2058)



Field characters FW 25–32mm. The broad black furry thorax, with creamy-white blotches on shoulders and on black forewing, together with yellow hindwing, are diagnostic. Upperside of abdomen yellow near base and bright red towards tip. Markings vary considerably in detail, but overall pattern usually remains. Extreme examples, with either highly reduced or greatly enlarged white spots on forewing and black spots on hindwing, are rare. **Similar species** Very rarely, Scarlet Tiger has a yellow hindwing, but it is more slender, with an iridescent forewing that lacks white blotch at base. **Flight season** One generation. Late May–early Jul. Flies from dusk. Regular at light. **Life cycle** Overwinters as a larva. Larva Jul–late Apr or early May, feeding in mild weather throughout the winter, sometimes basking in sunshine before pupating in late Apr in a flimsy cocoon among plant debris. **Larval foodplants** A wide range of herbaceous plants, including White Dead-nettle, chickweeds, hawkweeds, ragworts and Black Horehound. **Habitat** Open ground. Coastal cliffs, edges of saltmarshes and mature sand-dunes. Inland downland, rough grassland, heathland, rough ground and open woodland. **Status and distribution** Resident. Local. Locally frequent from south-west England to Kent, south Wales and in the Channel Islands. Most frequent on or near the coast, and on heathland.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Patton's Tiger plate 43

Hyphoraia testudinaria (Geoffroy)

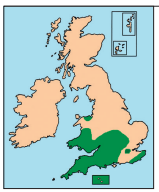
Immigrant 72.028 (2058a)

Field characters and similar species FW 17–22mm. Unlike any resident British species, although somewhat resembles a diminutive Garden Tiger. Cream markings on russet forewing usually include a long bulbous basal mark, sometimes formed into an arrowhead at tip. Hindwing yellow, often with a scarlet flush and large but usually discrete black blotches. Form *crocea* Schultz lacks the scarlet flush on hindwing, and is therefore easily confused with *Hyphoraia aulica* (L.), which also occurs on the near Continent. Usually, *H. aulica* has smaller, more fragmented pale blotches on forewing and larger, more continuous black blotches on hindwing. However, the blotches on both wings are highly variable in both species, and some moths may be separated only by examination of genitalia. *Hyphoraia dejeani* (Godart) (restricted to Iberia) has continuous forewing basal and outer marks. **Flight season** In mainland Europe, one generation. May–Jul. **Life cycle** Overwinters as a part-grown larva. **Larval foodplants** In mainland Europe, an apparently wide range of low-growing plants, but especially sorrels and docks. **Habitat** In mainland Europe, open habitats, often in mountainous areas to 2,000m. **Status and distribution** Immigrant. Five records, the first on 29 May 2005, a male at light at Kingsham, near Chichester, West Sussex, and the second on 12 Jun 2006, at light at Abbotskerswell, Devon. On 5–6 May 2011, two on the Isle of Wight and one in Dorset (Portland). Local in mainland Europe, from Spain and southern France, north to the Paris area, and in Switzerland, Austria, Italy and Sicily.

Scarlet Tiger plate 43

Callimorpha dominula (L.)

Local 72.029 (2068)

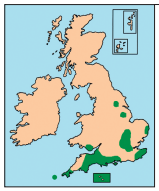


Field characters FW 23–27mm. Iridescent black forewing with white and yellow spots, and largely red hindwing, are diagnostic. Markings vary in detail, but extreme forms are rare. These include f. *bimacula* Cock., with reduced or absent outer forewing spots and extensively black hindwing, and f. *rossica* Kolenati, with yellow hindwing ground colour. **Similar species** See Cream-spot Tiger. **Flight season** One generation. Jun–Jul. Flies by day, and often seen at rest on leaves. Male patrols, flying wildly in late afternoon and early evening. Also flies at night and comes to light. **Life cycle** Overwinters as a larva. Larva Aug–May. Feeds openly by day, especially in sunshine. **Larval foodplants** Associated with Common Comfrey, also Hemp-agrimony and, on Welsh dunes, Hound's-tongue. When larger, often disperses to feed on other plants, including Common Nettle, Bramble, sallows, Honeysuckle and Meadowsweet. **Habitat** Fens and marshes, riverbanks, damp meadows in floodplains, and coastal habitats, including the upper parts of beaches and undercliffs. Disperses widely, appearing in gardens, woodland and along ditches, where colonies may be established, at least temporarily. **Status and distribution** Resident and possible occasional immigrant. Local. Quite well distributed in south-west and central southern England and the south-west Midlands. Locally frequent east to Oxfordshire and Buckinghamshire. Still spreading and has become established in Bedfordshire, with six records from Hertfordshire since 2010. Widespread in south and west Wales. Very local in Sussex, Kent and north Wales. In the Channel Islands, several recorded on Jersey, the first in 1986.

Jersey Tiger plate 43

Euplagia quadripunctaria (Poda)

Nb; suspected immigrant 72.030 (2067)



Field characters FW 28–33mm. Unmistakable, with striped black and creamy-white markings on forewing, and red, orange or yellow hindwing. Variation is usually slight, but examples with entirely black forewings or more extensively marked with white have been recorded. **Flight season** One generation. Mid-Jul–early Sep, usually from early Aug. Active on warm days, visiting flowers such as buddleias and thistles. Also flies at night and comes to light. **Life cycle** Overwinters as a small larva. Larva Sep–May. **Larval foodplants** Many herbaceous plants, particularly Common Nettle, Hemp-agrimony, White Dead-nettle, Borage, plantains and Ground-ivy, and also Bramble. **Habitat** Gardens, rough and disturbed ground, hedgerows, coastal cliffs, undercliffs and the higher parts of beaches. **Status and distribution** Resident and suspected immigrant. Nationally Scarce B. Until 1990, as a resident largely restricted to the coast of South Devon, where it is well established. It has since undergone expansion and has spread into Cornwall and South Wales, and east into Dorset and the Isle of Wight. Also locally in Sussex (near Rye) and in south-east London, where it was first found in Forest Hill in 2004, with scattered records in other parts of the city. A number of records, some recent, of probable immigrants, mainly along the south coast and elsewhere in the south-east. Resident very locally in and around Henley-on-Thames, Oxfordshire, since at least 2010 and seen regularly in Hertfordshire (since 2012) and Bedfordshire. Occasional records elsewhere, north to Leeds (one in 2008). Abundant in the Channel Islands.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

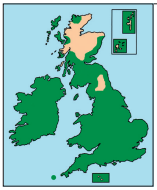
Cinnabar

plate 43

Tyria jacobaeae (L.)

Common

72.031 (2069)



Field characters FW 17–23mm. Unmistakable. Shows little variation, but very rarely the red or pinkish-red markings are replaced by yellow (f. *flavescens* Thierry-Mieg), forewing is red with a black border (f. *coneyi* Watson), or wings are entirely black (f. *negrana* Cabeau). Female is generally smaller. **Similar species** Burnet moths, also active by day, have much narrower forewings and are more thickset, with long, thickened antennae. **Flight season** One generation. May–early Aug. Easily disturbed by day, and flies in sunshine. Comes to light. **Life cycle** Overwinters as a pupa, in a flimsy cocoon just under the ground. Larva Jun–early Sep. Conspicuous, sitting openly on the foodplant by day. **Larval foodplants** Mainly Common Ragwort. Eats the leaves and flowers, and when in large numbers reduces many plants to bare stems. Also other wild ragworts, cultivated ragworts, groundsels and occasionally Colt's-foot. **Habitat** Most numerous in well-drained rabbit-grazed grassland, including mature sand-dunes and heathland, but found in many other open habitats, including gardens and woodland rides. **Status and distribution** Resident. Common. Well distributed throughout most of England, Wales, Ireland and Man. Increasing and spreading in northern Britain. Formerly, largely coastal in northern England and Scotland, to Skye and Angus. Now widespread inland in north-west England and in Scotland north to the Central Belt, and recorded north to Aberdeenshire, Sutherland, Orkney and Shetland. Frequent in the Channel Islands.

Speckled Footman

plate 44

Coscinia cribraria (L.)

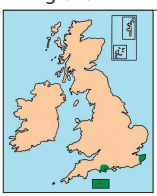
ssp. *bivittata* (South)

RDB

72.032 (2053)

ssp. *arenaria* (Lempke)

Immigrant



Field characters FW 15–18mm. Rests with forewings wrapped closely around body and folded so that tips appear pointed. The rows of rather blurred blackish spots, arranged into cross-bands and sometimes merged, and blackish streaks and clouding on the greyish-white forewing, are variable in extent but make it fairly unmistakable. Hindwing grey with whitish fringes. In ssp. *arenaria*, found in northern France and elsewhere, the streaking is absent, but Continental populations vary geographically and some moths resemble ssp. *bivittata*. **Similar species** Thistle Ermine *Myelois circumvoluta* (Fourcroy) (Pyralidae) is smaller and not streaked, with black spots on

Larva of Cinnabar.

forewing clearly defined and not arranged into bands centrally, and hindwing paler, with a chalky-white fringe. **Flight season** One generation. Jul–Aug. Sometimes disturbed by day, and comes to light. **Life cycle** Overwinters as a small larva. Larva Aug–Jun, basking and feeding as early as Feb. Pupates in a flimsy cocoon among grass or heathers. **Larval foodplants** Recently found on the grass Bristle Bent. Also reported on Bell Heather, Cross-leaved Heath, Heather and Bilberry. **Habitat** Open heathland. Has been found breeding in free-draining tussocky areas that were burned about five years previously, and apparently does not breed in areas of very short growth, or among tall heathers. **Status and distribution** Resident and immigrant. Red Data Book species. Ssp. *bivittata* was formerly widespread and sometimes locally numerous in south-east Dorset and the New Forest, Hampshire. However, it has greatly declined since the 1970s, and since the late 1990s has been found consistently (in very small numbers) at only three sites, all in Dorset. A single vagrant example was recorded at Portland Bill, Dorset, on 1 Jul 1993. Local in the Channel Islands. Ssp. *arenaria* is resident in mainland Europe. Ten immigrant records from East Kent, the most recent in Jul 2014, and others in Sussex, Hampshire and Suffolk.

Feathered Footman

plate 44

Coscinia striata (L.)

Uncertain

72.033 (2052)

Field characters FW 15–22mm. Unmistakable. In male, which has feathered antennae, there are usually numerous black stripes and a black central crescent on yellow forewing. Female usually plainer, with stripes limited to outer edges and central mark reduced. Hindwing usually orange-yellow, with black central crescent and black border that varies in width and may be broken, or almost entirely black. **Flight season** One or two generations in mainland Europe, depending on altitude and latitude. May–Aug. Active by day. **Life cycle** Overwinters as a small larva. Pupates in a cocoon at ground level. **Larval foodplants** A wide range of herbaceous plants, including grasses. **Habitat** Open grassland, dry or damp, including heathland and woodland clearings. **Status and distribution** Uncertain. Four records

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

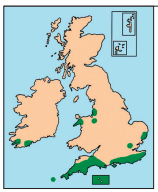
from the 19th century are possibly genuine. These are from Yorkshire (Wharfedale, *c.* 1836), Anglesey (Manachty, before 1803), Caernarvonshire (Betws-y-Coed, 1859) and Denbighshire (near Wrexham, 1859). Others from Berkshire and Essex are considered unreliable. The distribution of the records does not suggest immigration. In mainland Europe, most frequent in the south, but extends north to northern France and Denmark.

Crimson Speckled

plate 44

Utetheisa pulchella (L.)

Immigrant 72.034 (2054)



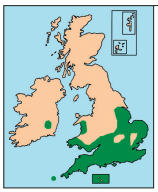
Field characters and similar species FW 15–22mm. The pattern of many red and black spots on creamy-white forewing is unmistakable. The pattern varies in detail; sometimes the red spots are merged into cross-bands, and occasionally the black spots are reduced to tiny dots. Hindwing white, with an irregular black border and often small dark central marks. Beautiful Utetheisa *Utetheisa ornatrix* (L.), a North American species, has been recorded once, on Skokholm Island, Pembrokeshire, in Jul 1948. It is similar to Crimson Speckled but with a pink hindwing and forewing extensively marked with pink or orange. Its arrival may have been ship-assisted. **Flight season** One or more generations, depending on latitude. Mar–Dec, mainly in Oct. Easily disturbed by day, flies freely in sunshine and comes to light. **Life cycle** The early stages have not been found in the British Isles. In southern Europe it overwinters as a larva, and in the sub-tropics it breeds continuously. **Larval foodplants** A wide range of herbaceous plants. **Habitat** In southern Europe and North Africa it is found in dry, open places. **Status and distribution** Immigrant. Scarce but fairly regular, with over 500 records. At least 270 in the 19th century and 135 in the 20th century, but already over 100 in the 21st century. Most numerous in 1892 (49+), 1961 (over 30), 1990 (25), 2006 (20) and 2011 (47). Most have been in southern England, especially the south-west, but a few have reached Scotland, Man and Ireland, and also the Channel Islands. The origin is probably the Mediterranean region, where it is resident, and there are huge populations in North Africa.

Rosy Footman

plate 44

Miltochrista miniata (Forst.)

Local 72.035 (2037)



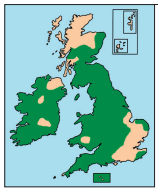
Field characters FW 12–15mm. Unmistakable and invariable, with very rounded pinkish-red forewing and fine black markings. The yellow f. *flava* Bigneau is rare. **Flight season** One generation. Mid-Jun–early Aug. Occasionally in Oct. Sometimes found at rest on woody plants by day. Flies around tree foliage just before dusk. Comes to light, sometimes in numbers. **Life cycle** Overwinters as a larva. Larva Aug–late May, feeding in mild weather. Pupates in a hairy cocoon. **Larval foodplants** Dog lichens (*Peltigera* spp.) and other lichens on oaks and other trees. **Habitat** Broadleaved woodland, wooded heathland and well-wooded hedgerows. **Status and distribution** Resident. Local. Well distributed in central southern, south-west and south-east England, East Anglia, south and west Wales, and the Channel Islands. Local in old woodland in the south and east Midlands, north to Nottinghamshire and Lincolnshire. Four records, from south-east Ireland, in Cos. Waterford in 1962 and Kilkenny in 2005 and 2015 (two).

Muslin Footman

plate 44

Nudaria mundana (L.)

Local 72.036 (2038)



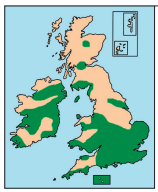
Field characters and similar species FW 10–12mm. Somewhat like Round-winged Muslin, but with strongly transparent wings, the forewing narrower and with two solid, dark, irregularly V-shaped cross-lines and a dark spot before centre, and hindwing plain. **Flight season** One generation. Late Jun–early Aug. Male comes regularly to light, but female is rarely seen. **Life cycle** Overwinters as a larva. Larva Aug–early Jun. In the spring, feeds and basks in sunshine or rests under a stone. Pupates in a loose-spun cocoon, formed in a crevice. **Larval foodplants** Small lichens on stone walls, rocks, posts and isolated bushes. **Habitat** Mainly in open, stony places with drystone or other field boundary walls, or hedgerows, less often in gardens and woodland. **Status and distribution** Resident. Local. Widely and quite well distributed in most of mainland Britain, north to central and north-east Scotland. More frequent in the west and on calcareous soils. Very local and possibly declining in south-east England. Found on Man and widely distributed and fairly frequent in Ireland. Local in the Channel Islands.

Round-winged Muslin

plate 44

Thumatha senex (Hb.)

Local 72.037 (2035)



Field characters FW 10–11mm. A small cream-coloured moth, with very broad, rounded, slightly translucent wings. Forewing has a dark spot beyond centre and one or two cross-rows of dark spots or dashes. Hindwing has a dark crescent mark in leading half. A smaller, greyer and

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

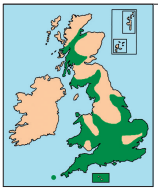
less distinctly marked form occurs in the Scottish Highlands. **Similar species** See Muslin Footman. **Flight season** One generation. Late Jun–late Aug. Occasionally in Sep. Flies slowly but with rapid wing-beats among lush swards, sometimes in numbers, from sunset and also at sunrise. Comes to light. **Life cycle** Overwinters as a small larva. Larva late Aug–May, feeding in mild weather during the winter. Pupates in a cocoon among vegetation near the ground. **Larval foodplants** Lichens, including *Peltigera* spp., and mosses growing on the ground, including Silky Wall Feather-moss and Common Pincushion. Probably also on algae low down on the dead stems of marsh plants. **Habitat** Fens, bogs, wet flushes on moorland, damp grassland, marshes, riverbanks and coastal dune-slacks. **Status and distribution** Resident. Local. Well distributed in southern and south-east England, the south Midlands and East Anglia. More thinly scattered in south-west England, Wales, Man and northern England. Very local in Scotland, in the south-west, Central Belt, and in the Spey Valley at Insh Marshes and near Aviemore. Widespread but local in Ireland. Local in the Channel Islands.

Four-dotted Footman

plate 44

Cybosia mesomella (L.)

Local 72.038 (2040)



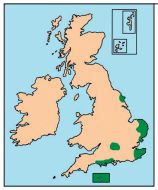
Field characters FW 13–16mm. Broad forewing either white with yellow leading and outer edges, or dull yellow (f. *flava* de Graaf), constantly with a small black dot near centre of leading and trailing edges. Form *flava* occurs in all populations, but is particularly frequent in south-east England. **Flight season** One generation. Mid-Jun–early Aug. Often disturbed from low vegetation by day. Flies from early dusk and comes to light. **Life cycle** Overwinters as a larva. Larva mid-Aug–late May. Pupates in a cocoon among plant debris. **Larval foodplants** Algae and lichens on the stems of heathers, sallows and other woody plants. **Habitat** Heathland, moorland, damp grassland, fens and open woodland. **Status and distribution** Resident. Local. Increasing in numbers within its range. Widely, although somewhat patchily, distributed in the southern half of Britain. More local in northern England and Scotland, north to East Ross. Old records from Man. In the Channel Islands, found on Jersey and Guernsey. Recorded once in Ireland, one in a Belfast garden on 4 Jul 1991.

Dotted Footman

plate 44

Pelosia muscerda (Hufn.)

RDB; suspected immigrant 72.039 (2041)



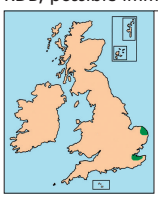
Field characters FW 13–16mm. Forewing rather slender, soft grey-brown and often paler near leading edge with five (occasionally six) small black spots, in two separate rows. **Similar species** See Small Dotted Footman. **Flight season** One generation. Mid-Jul–Aug. Flies at dusk, during the night and again at dawn. Comes to light, sometimes in numbers, but otherwise is seldom seen. **Life cycle** In captivity overwinters as a larva. Larva Aug–Jun. **Larval foodplants** Unknown in the wild, but probably algae and lichens growing on the stems of bushes and other plants, upon which it has been reared in captivity. Will also eat withered leaves of sallows and Bramble. **Habitat** Fens, preferring wetter areas with scattered sallow and Alder carr. **Status and distribution** Resident and suspected immigrant. Red Data Book species. Well established in the Norfolk Broads. In the late 19th and early 20th centuries, it was resident at Ham Fen, Kent, and the New Forest, Hampshire. Over 100 records of suspected immigrants or strays, mainly on or near the coasts of Kent, Sussex and East Anglia. Also once in Berkshire (2008) and occasional in south-west England and Yorkshire. One on Jersey in 1999 and one recorded on Alderney in 2006.

Small Dotted Footman

plate 44

Pelosia obtusa (H.-S.)

RDB; possible immigrant 72.040 (2042)



Field characters and similar species FW 12–14mm. Not unlike Dotted Footman, but forewing shorter and browner, with small black spots arranged in 'V' shape. **Flight season** One generation. Jul. Male comes to light, usually in small numbers. Female has been found at rest on reeds at night. **Life cycle** Overwinters as a larva. Larva Aug–Jun. Pupates in a thin grey cocoon. **Larval foodplants** Unknown in the wild. In captivity it will eat green algae growing on dead wood. **Habitat** Old, dense, uncut reed-beds with tall herbs, often with small bushes. **Status and distribution** Resident and possible immigrant. Red Data Book species. Discovered in 1961, and resident in the Norfolk Broads and adjacent fens only, where it appears to be very localised. One on 3 Jul 2006 on Isle of Grain, Kent, possibly an immigrant.

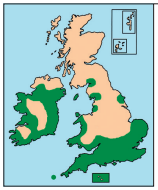
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Four-spotted Footman

plate 44

Lithosia quadra (L.)

Na; immigrant 72.041 (2051)



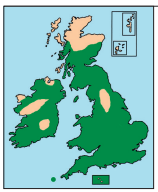
Field characters FW M 18–22mm F 20–26mm. Unmistakable. Twice the size of most British footman moths. Only female has two dark brown spots, on yellow forewing. In male, black and yellow blotches at base of sleek grey forewing are diagnostic. **Flight season** One generation. Jul–Sep. Comes to light, occasionally in large numbers. Also visits flowers and sugar. **Life cycle** Overwinters as a small larva. Larva Sep–late Jun. Pupates in a flimsy cocoon formed in a crevice. **Larval foodplants** Dog lichens (*Peltigera* spp.) and other lichens and algae on oaks and other trees, and on rocks. **Habitat** Mature broadleaved woodland. **Status and distribution** Resident and immigrant. Nationally Scarce A. Resident and locally abundant, in Scilly, Cornwall, Devon, south-west Wales and probably in Hampshire (New Forest) and south-east Dorset. Shows large annual fluctuations in numbers of both adults and larvae, and is reinforced by immigration. As an immigrant, recorded widely but usually sparingly, mainly in the southern half of Britain to north-west England and Man, and in the Channel Islands. Major influxes in some years, such as 2006 when several hundred were recorded. In Ireland, formerly restricted to the south as a resident (in Cos. Cork, Galway, Kerry and Clare), but has expanded and is now regarded as a widespread resident and likely as an immigrant. It is likely that this expansion is mirrored in southern Britain to some extent.

Red-necked Footman

plate 44

Atolmis rubricollis (L.)

Local; immigrant 72.042 (2039)



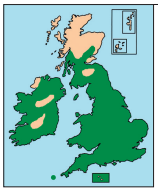
Field characters FW 15–18mm. Unmistakable, with constantly plain blackish wings, a red collar, and a yellow and black abdomen. **Flight season** One generation. Jun–Jul. Sometimes flies around the tops of oak trees and conifers on hot, sunny days, occasionally in large numbers, and is often found at rest on the leaves of bushes. Comes to light, usually in small numbers. **Life cycle** Overwinters as a pupa, in a cocoon formed among plant debris. Larva Aug–Oct. **Larval foodplants** Lichens and green algae on broadleaved and coniferous trees. **Habitat** Woodland, including conifer plantations. **Status and distribution** Resident and immigrant. Local. Formerly found locally in southern English counties, Wales, Ireland and the Channel Islands, but has recently expanded into the Midlands, East Anglia, north-west England, and extensively in southern, central and north-east Scotland (especially in conifer plantations). Also increasingly recorded in many places as an immigrant. In Ireland, greatly increased and expanded, and now frequent, especially in conifer plantations in the north.

Buff Footman

plate 44

Eilema depressa (Esp.)

Local 72.043 (2049)



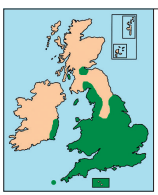
Field characters FW 15–17mm. In male, forewing greyish white, with a faint yellow stripe along basal third of leading edge and orange-yellow fringes. In slightly larger female, forewing usually brownish grey, yellowish brown or with a distinct orange stripe along leading edge, and hindwing grey. Another form, frequent in some populations, has an orange-yellow forewing (f. *unicolor* Bankes) and hindwing only diffusely marked with grey toward trailing edge. There is also the very dark f. *plumbia* Cock. In all forms, forewing may be slightly silky. **Similar species** Dingy Footman has a broader, more silky forewing with a more strongly curved leading edge, and yellow form lacks grey on hindwing. See also Common Footman and Orange Footman. **Flight season** Probably one generation. Late Jun–early Sep, but sometimes later to Oct. Comes to light. **Life cycle** Overwinters as a small larva. Larva Sep–late Jun. Pupates in a cocoon formed in a bark crevice. **Larval foodplants** Lichens and algae on broadleaved and coniferous trees and shrubs. **Habitat** Mainly long-established broadleaved or mixed woodlands; also among scrub on downland and heathland, and in fens. **Status and distribution** Resident. Local. In Britain, formerly found locally from the south-west to East Anglia, sparingly in Wales and north to Lincolnshire and Lancashire, and in the Channel Islands. Since the 1980s, It has increased markedly within its former range and expanded. Now widespread in the north Midlands and northern England (first recorded in Northumberland and on Man in 2004). Also in southern Scotland (since 2008) and the Central Belt, and recorded north to Argyll and Angus. In Ireland, formerly restricted to the south-west, but now widespread.

Dingy Footman

plate 44

Eilema griseola (Hb.)

Common 72.044 (2044)



Field characters FW 15–18mm. Distinguished by broad, rounded forewing, silky when the moth is freshly emerged. Leading edge strongly curved and in the grey form has a narrow, often indistinct pale stripe. Form *stramineola* Doubl., known only from Britain, has a plain straw-yellow forewing and

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

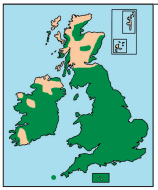
plain and pale hindwing; it is frequent in some populations. **Similar species** See Common Footman, Buff Footman and Orange Footman. **Flight season** One generation. Late Jun–Aug, sometimes later. Occasionally seen resting on foliage by day or beaten from hedges. Comes to light, sometimes in numbers, and visits flowers, including Hemp-agrimony and Lesser Burdock. **Life cycle** Overwinters as a larva. Larva Aug–late May. Pupates among plant debris. **Larval foodplants** Lichens and algae on trees and bushes. In captivity it will eat mosses and withered leaves. **Habitat** Most abundant in fens, wet meadows, damp woodland and other marshy places. Also frequent in drier habitats. **Status and distribution** Resident. Common. Has shown a marked increase in numbers throughout its range since the 1960s. Well distributed in the southern half of England, low-lying parts of Wales and the Channel Islands. Extends north through the Midlands to Yorkshire (where it has expanded its range greatly since the 1990s), Lancashire and, since 2000, into Cumbria and on Man. Since 2010, reported locally in southern Scotland. First recorded in Ireland in 1984, in Co. Cork, and more recently in Cos. Wicklow and Wexford.

Common Footman

plate 44

Eilema lurideola (Zinck.)

Common 72.045 (2050)



Field characters FW 14–17mm. Rests with forewings gently curled over body. These are leaden grey, with a well-defined yellow stripe along leading edge, tapering before wing tip and not quite reaching it. Hindwing pale straw, sometimes with a grey smear near leading edge. Collar orange-yellow with a central grey area. **Similar species** See Scarce Footman, Northern Footman and Hoary Footman. Dark form of Dingy Footman has a much broader forewing, and streak along leading edge is pale and indistinct, and that of Buff Footman is brownish. Both have grey hindwings. **Flight season** One generation. Jul–Aug. Comes to sugar, to flowers such as thistles, and frequently to light. **Life cycle** Overwinters as a small larva. Larva Aug–late May. Pupates in a cocoon formed in a crevice. Can sometimes be found basking in spring sunshine on tree trunks, walls or posts. **Larval foodplants** Lichens and algae on trees, bushes, posts, walls and rocks, and low vegetation. Also leaves of Hawthorn, and accepts Blackthorn, Traveller's-joy and Bramble. **Habitat** Most lowland habitats, including town gardens, farmland, wetlands, woodland and coastal situations. **Status and distribution** Resident. Common. Throughout the southern half of Britain, northern England (and here increasing), Man and the Channels Islands. In Scotland, widespread in the south, near the east coast to Aberdeenshire and around the Moray Firth, and local in the west. Widespread in Ireland, but scarce in the north-west.

Scarce Footman

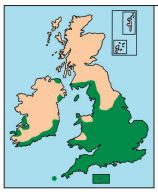
plate 44

Eilema complana (L.) 72.046 (2047)

Local

Northern Footman ssp. *sericea* (Gregs.)

RDB (2048)



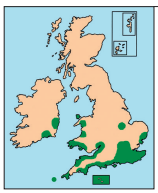
Field characters and similar species Scarce Footman: FW 15–18mm. Very similar to Common Footman, but rests with wings wrapped tightly around body, yellow stripe along leading edge of forewing reaches tip without noticeably narrowing, and collar is completely orange-yellow. Hindwing pale straw, sometimes with a grey smear near leading edge. Northern Footman: FW 14–17mm. Slightly smaller on average, with a narrower forewing. Yellow stripe along edge of forewing often narrows before reaching wing tip, and almost invariably has a grey smear on hindwing, often extensive. **Flight season** One generation. Jul–Aug. Comes to light, sometimes in numbers, and visits flowers such as knapweeds and thistles after dark. **Life cycle** Overwinters as a small larva. Larva Aug–Jun. Pupates in a cocoon formed among plant debris or in a crevice. **Larval foodplants** Lichens and algae on rocks, walls, posts, trees, plant stems and the ground. Will eat decaying leaves in captivity. **Habitat** A wide variety, but perhaps most numerous on heathland, moorland and sand-dunes. Also frequent in woodland, fens and downland, and sometimes found in gardens. Northern Footman is found only on raised peat-bogs and boggy moorland. **Status and distribution** Resident. Scarce Footman: local. Since the 1960s it has increased markedly in numbers within its range. Well distributed and quite frequent in most of southern Britain, north to Yorkshire (recently expanding there, including Spurn Head, where it is found in large numbers) and local in Cumbria. Largely coastal in Ireland. Widespread and fairly frequent in the Channel Islands. Northern Footman: Red Data Book listing (previously regarded as a separate species). Endemic to Britain, and very local in Lancashire, Cheshire, Shropshire, north Wales (Merionethshire) and Man.

Hoary Footman

plate 44

Eilema caniola (Hb.)

Nb; immigrant 72.047 (2045)



Field characters and similar species FW 15–17mm. Forewing narrow, silky and usually very pale grey, with a very pale orange-yellow stripe along leading edge. Hindwing whitish. In f. *lacteola* Boisd., forewing is white and stripe is very faint. Rests with wings wrapped around body, but less so than in Scarce Footman, which along with Common Footman has a darker grey, less silky

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

forewing with a more prominent yellow stripe on leading edge and a pale straw-coloured hindwing. **Flight season** One generation. Jun–Sep. Comes to light and occasionally to sugar. **Life cycle** Overwinters as a larva. Larva Sep–late Jun, feeding at night. Pupates in a cocoon formed under a stone or in a rock crevice. **Larval foodplants** Lichens and algae on rocks and even roof-tiles. Reportedly also Common Bird's-foot-trefoil and related plants. **Habitat** Rocky coastlines, shingle beaches and occasionally inland quarries. The possible habitat preferences of the recent colonists inland in south-east England are unclear. Most of the records are from garden light-traps. **Status and distribution** Resident and suspected immigrant. Nationally Scarce B. Until recently, resident only from south Devon to Anglesey, including Scilly, mainly on the coast, in the Channel Islands and possibly on Man (one in 1868), with occasional immigrants on the south coast of England. Since about 1990, these have become much more frequent, from Dorset to Kent, and since 2000 extending to Suffolk. It also spread rapidly inland and is probably now resident locally from Dorset to Kent and inland in the south-east at least to Berkshire, Buckinghamshire, south Oxfordshire and probably Hertfordshire. It has also been recorded as far north as Leicestershire (in 2013). In Ireland, found very locally on the south-east coast, most recently from Waterford, Wexford and Wicklow.

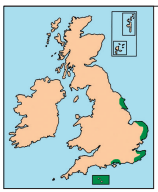
Pigmy Footman

plate 44

Eilema pygmaeola pygmaeola (Doubl.)

RDB; immigrant 72.048 (2046)

Dungeness Pigmy Footman ssp. *pallifrons* (Zell.)
RDB



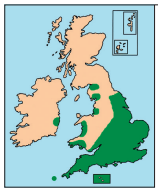
Field characters and similar species FW 10–15mm. Ssp. *pygmaeola* is smaller than all other British footman moths, with a narrow greyish-white or light grey silky forewing, and a distinct, often extensive grey smear in leading half of hindwing. Rests with wings held close to body. Ssp. *pallifrons* has a straw-yellow forewing. The abundant micro-moth *Crambus perlella* (Scop.) is superficially similar, but has shiny forewings and rests with them steeply arched, and has long, protruding palps. **Flight season** One generation. Mid-Jul–Aug. Comes to light, sometimes in large numbers, and occasionally to sugar. **Life cycle** Overwinters as a small larva. Larva Aug–Jun. A tightly packed 'nest' of some 30 larvae of ssp. *pallifrons* has been found attached to the base of a dead grass stem on shingle in mid-Apr. Pupates in a flimsy cocoon among lichens and moss. **Larval foodplants** Lichens and algae on stones, plant stems and posts, almost certainly including *Cladonia rangiformis*. Will accept decaying sallow leaves in captivity. **Habitat** Coastal sand-dunes and shingle with a mosaic of grasses and lichens. **Status and distribution** Resident and immigrant. Red Data Book species. Ssp. *pygmaeola* is locally frequent in Kent between Sandwich and Deal, and possibly on the Isle of Sheppey, and in Norfolk between Winterton and Waxham. Occasional immigrants on the south and east coasts, from Exmouth, Devon, to Flamborough Head, Yorkshire. In the Channel Islands, first recorded on Guernsey in 1997 and 1998, on Sark in 1998 and recently on Alderney. Ssp. *pallifrons* is known in Britain only from coastal shingle at Dungeness, Kent, where it can be numerous. Moths resembling ssp. *pygmaeola* also occur at this locality, and yellow forms occur in mainland Europe.

Orange Footman

plate 44

Eilema sororcula (Hufn.)

Local; suspected immigrant 72.049 (2043)



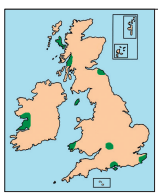
Field characters FW 13–16mm. Shape of plain orange-yellow forewing is diagnostic, with leading edge very straight in basal half, then strongly curved towards tip. Shows little variation, but worn examples are paler. **Similar species** Dingy Footman and Buff Footman (yellow forms) are larger, and in Dingy leading edge of forewing is evenly curved. **Flight season** One generation. Late May–Jun. Flies from dusk onwards and comes to light, and is occasionally beaten from branches by day. **Life cycle** Overwinters as a pupa, in a flimsy cocoon formed among lichens. Larva late Jun–Sep. **Larval foodplants** Lichen on oaks, Beech, larches, Blackthorn and other trees. **Habitat** Mature broadleaved woodland, also dense, mature Blackthorn scrub. In many places, now regular away from woodland, including in gardens, and may be breeding more widely. **Status and distribution** Resident and suspected immigrant. Local. Formerly found mainly in south-west, central southern and south-east England, south Wales and the Channel Islands. Since the 1990s, it has increased greatly within its former range and expanded markedly in the Midlands and north to Yorkshire and Cumbria. Widespread in the Channel Islands. Recorded once in Ireland, in May 2008, in Co. Wicklow.

Dew Moth

plate 44

Setina irrorella (L.)

Na 72.050 (2036)



Field characters FW 11–18mm. Unmistakable. Forewing orange-yellow, with small black spots roughly arranged in three rows. Leading edge is quite straight, especially in male, giving it a rather triangular appearance when at rest. Female is smaller, with a narrower forewing. Rarely, there is a dark central V-shaped mark and one or more dark lines

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

on forewing (f. *signata* Borkh.). **Flight season** One generation. Jun–Jul. Male flies in the afternoon, from dusk and at dawn. Both sexes come to light in small numbers, and rest on grass stems both by day and night. **Life cycle** Overwinters as a larva. Larva Aug–Jun. Pupates in a flimsy cocoon between stones or rocks. **Larval foodplants** Lichens on rocks, shingle and in grassland. **Habitat** Rocky coasts, shingle beaches and calcareous grassland inland. **Status and distribution** Resident. Nationally Scarce A. Very local and widely scattered. On coastal shingle in Kent (Dungeness, Folkestone Warren) and Hampshire (Hurst Spit), and chalky cliff-tops on the Isle of Wight (near Freshwater). Also found on the west coast of Wales and on Man. In Scotland, in Argyll and the Inner Hebrides (Skye, Canna and Rum). Very local inland in the Gloucestershire Cotswolds and formerly on the North Downs in Surrey (not seen there since 1999). Well established in the limestone regions of Cos. Clare and Galway, Ireland.

Herminiinae
Fan-foots

Fan-foot

Small Fan-foot

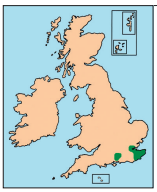
Dotted Fan-foot

Clay Fan-foot

plate 45

Paracolax tristalis (Fabr.)

Na; immigrant 72.051 (2494)



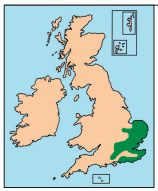
Field characters FW 14–16mm. Warm sandy colour of fore- and hindwings, with slit-like kidney mark, and smooth, curved, dark brown cross-lines, distinguish this moth from all other fan-foots. Shows little variation. **Similar species** See Olive Crescent. The micro-moth *Anania crocealis* (Hb.) is smaller with hindwing white. **Flight season** One generation. Late Jun–early Aug, with peak numbers in mid–late Jul. Easily disturbed from low vegetation by day. Also flies at dusk and later, and comes in small numbers to sugar and to light. **Life cycle** Overwinters as a small larva, in spun leaves on the ground, where it pupates. Larva Aug–early Jun. **Larval foodplants** Oaks and perhaps other broadleaved trees. Usually stated to feed on moist fallen leaves, but has been beaten from the branches in the autumn. **Habitat** Broadleaved woodland, favouring open areas with low regrowth. Occurs on soil types ranging from heavy Wealden clay to gault and chalk. **Status and distribution** Resident, also immigrant. Nationally Scarce A. Very local in Kent, Surrey and Sussex, and formerly in Essex (not seen since 1976), and apparently declining. Singletons at light at Alice Holt, Hampshire (1971), and near Hawkley, Hampshire (1995). Four in 1992–2002 on the Kent coast in the Dungeness/Greatstone area, and singletons at the Clarendon Estate, Wiltshire (1938), and in Swanage (1948) and near Corfe Castle (2009), Dorset. Two on Guernsey in 1898.

Dotted Fan-foot

plate 45

Macrochilo cribrumalis (Hb.)

Nb 72.052 (2493)



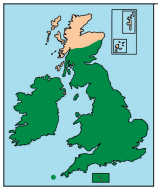
Field characters and similar species FW 13–14mm. Easily distinguished from other fan-foots and snouts by whitish-fawn coloration, small rounded central dot and two rows of black dots rather than cross-lines on forewing. Antennae feathered in male. **Flight season** One generation. Mid-Jun–Aug. Sometimes disturbed from the sward by day; flies from just before dusk. Comes to light, sometimes in fair numbers, and often seen resting on low vegetation after dark. **Life cycle** Overwinters as a part-grown larva in tussocky vegetation. Larva Jul–May. Pupates in a cocoon at ground level among plant debris. **Larval foodplants** Reported to feed on Wood-sedge, Hairy Wood-rush and Field Wood-rush, living in the stems but eating the leaves as well. **Habitat** Wetlands. Sedge-beds, fens, bogs and other peaty areas, marshes and ditch-banks, in both calcareous and acid situations. Favours open areas, but also present within light carr. **Status and distribution** Resident. Nationally Scarce B. Mainly East Anglia into Essex and the Thames Estuary. Notable populations are in the Norfolk Broads, Chippenham Fen NNR, Redgrave and Lopham Fen NNR, and along the coast. Found locally in East Kent, East Sussex (e.g. Pevensey Levels and nearby), Hampshire (Emer Bog), Hertfordshire (Sawbridgeworth Marsh in the Stort Valley and Rye Meads in the Lea Valley), south Oxfordshire (Withymead NR), Huntingdonshire (Woodwalton Fen NNR) and Messingham Heath, Lincolnshire. There are 19th-century reports from Surrey, Somerset and Dorset.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Fan-foot plate 45

Herminia tarsipennalis Treit.

Common 72.053 (2489)

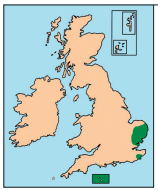


Field characters FW 13–16mm. Forewing brown, with three dark brown cross-lines, the central one usually slightly curved and shaped roughly like a question mark, and the outermost almost straight, extending to leading edge. Has a fine, dark central crescent mark, and a row of very fine dashes along outer edge. In male, antennae have a small bulge roughly one-third from base. These last two characters are best seen with a hand-lens. A yellowish-brown form occurs in western Scotland and southern Ireland. **Similar species** See Jubilee Fan-foot, Shaded Fan-foot and Small Fan-foot. Also Common Fan-foot, with a fawn forewing and whitish hindwing. **Flight season** Mainly one generation. Jun–early Aug. Occasional, usually small, moths seen in late summer and autumn are probably a partial second generation. Flies from dusk and comes to light and sugar. Easily disturbed by day. **Life cycle** Overwinters as a fully grown larva, in a slight cocoon among plant debris, in which it pupates in the spring. Larva late Jul–Apr, feeding until Oct. **Larval foodplants** Withered leaves, including those of oaks and Beech on the ground or on fallen or damaged branches, and of Bramble. **Habitat** Broadleaved woodland and other places with dense cover, such as hedgerows and gardens. **Status and distribution** Resident. Common. Well distributed and frequent throughout Britain, north to southern Scotland and extending to Argyll and Aberdeenshire. Also Man, Ireland and the Channel Islands.

Shaded Fan-foot plate 45

Herminia tarsicrinalis (Knoch)

RDB; suspected immigrant 72.054 (2491)

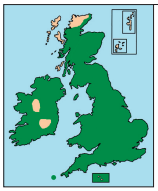


Field characters and similar species FW 12–14mm. Most similar to Fan-foot, but slightly smaller. Combination of distinct (although rather diffuse) brown central cross-band, running through thin central crescent, and fine but distinct continuous dark brown line along outer edge (finer and usually broken in Fan-foot) is diagnostic. Inner cross-line is usually straight, apart from angle at leading edge. In male, antennae lack bulge. See also Small Fan-foot and Jubilee Fan-foot. **Flight season** One generation. Late Jun–Jul. Highly sedentary and seldom seen except at light, especially if traps are placed close to Bramble thickets, coming from dusk until about midnight. **Life cycle** Overwinters as a nearly fully grown larva, probably in leaf litter. Larva late Jul or Aug–May. Pupates in a cocoon among plant litter. **Larval foodplants** Unknown in the wild, but captive larvae selected withered and even mouldy leaves of Bramble. **Habitat** Bramble thickets in open, scrubby places and mature broadleaved woodland with dense Bramble ground-cover. **Status and distribution** Resident. Red Data Book species. Found very locally in Norfolk, Suffolk and Essex. First recorded in Britain on 11 Jul 1965, a male near Thorpeness on the Suffolk coast, followed by one on 27 Jun 1967 near Woodbridge, Suffolk, and then over 20 on 10 Jul 1982 on lightly wooded common land near the sites of the first captures. Now locally frequent in south-east Suffolk, and found very locally in Norfolk and north Essex. One, a presumed immigrant, was recorded at Dungeness, Kent, on 18 Jun 2000. Recorded once in the Channel Islands, on Jersey (2002).

Small Fan-foot plate 45

Herminia grisealis ([D. and S.])

Common 72.055 (2492)



Field characters and similar species FW 11–13mm. Similar to Fan-foot and Shaded Fan-foot, but distinguished by its smaller size, bolder markings and, crucially, outer cross-line on forewing, which is curved and extends to tip. Antennae in male lack a bulge. **Flight season** One generation. Early Jun–late Aug. Sometimes disturbed by day from bushes and low branches. Flies from dusk, feeding at flowers and sugar, and comes to light. **Life cycle** Overwinters as a pupa, in a cocoon formed in a bark crevice or among plant debris. Larva Jul–Oct. **Larval foodplants** Healthy and withered leaves of a range of trees, including Pedunculate Oak, Downy Birch, Alder, Hazel, Hawthorn and Bird Cherry, on the tree or on the ground, and of Bramble and Traveller's-joy. **Habitat** Broadleaved woodland, scrub, hedgerows and gardens. **Status and distribution** Resident. Common. Well distributed and frequent throughout most of England, including Scilly, Wales, Man, southern Scotland, Ireland and the Channel Islands. More local in the northern half of mainland Scotland, reaching Caithness.

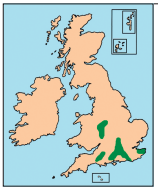
Larva of Small Fan-foot.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Common Fan-foot plate 45

Pechipogo strigilata (L.)

Na 72.056 (2488)

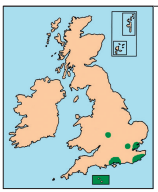


Field characters and similar species FW 14–16mm. Forewing whitish fawn or greyish fawn, dusted with grey and with slightly diffuse brown cross-lines, the outermost weakly pale-edged, reaching leading edge slightly before tip. Kidney mark is narrow and rather faint. Hindwing with a whitish ground colour. All similar species have a deeper, richer brown forewing, mainly darker and clearer cross-lines, and a grey-brown hindwing. Fan-foot is much more widespread and is actually the 'common' species. **Flight season** One generation. Mainly late May–Jun, sometimes into Jul. Easily flushed by day from bushes and coppice regrowth. Flies from dusk. Comes to light in small numbers. **Life cycle** Overwinters as an almost fully grown larva, among leaves withered on the branch or fallen on the ground. Larva Jul–Apr. Pupates in a flimsy cocoon among leaf litter. **Larval foodplants** Pedunculate Oak, particularly on damaged branches with withering leaves. In captivity, will feed at first on fresh young leaves but later prefers older, withered and even mouldy leaves. It is probable that leaves of other species such as Hazel are also eaten. **Habitat** Usually fairly open, mature ancient woodland with plenty of low bushy growth. Probably benefits from long rotational coppicing. **Status and distribution** Resident. Nationally Scarce A. A much declined species. Formerly quite widespread in southern England, East Anglia and the Midlands. Recent records are from scattered sites, mainly in Hampshire, Sussex, Wiltshire, Oxfordshire, Buckinghamshire, Gloucestershire, Shropshire and Staffordshire.

Plumed Fan-foot plate 45

Pechipogo plumigeralis (Hb.)

Immigrant; probable colonist 72.057 (2488a)



Field characters and similar species FW 15–17mm. A warm brown, quite large fan-foot with a pointed forewing. In male, antennae strongly feathered. Two irregular, fine dark cross-lines, a conspicuous dark-edged pale outermost cross-line and a pale-centred kidney mark further distinguish it from most others except Dusky Fan-foot, which has a toothed central cross-line and usually partial kidney mark. **Flight season** Probably one generation in Britain, Jul–Aug. Comes to light. Two generations in mainland Europe, May–Oct. **Life cycle** Overwinters as a larva. Larva Aug–May or Jun, but produces a second generation in captivity if kept warm. Probably pupates on the ground among plant debris. **Larval foodplants** Unknown in Britain. In mainland Europe, roses, Broom, Ivy and probably other plants. In captivity, also accepts withered leaves of Bramble, Hawthorn and Dandelion. **Habitat** The site at Rye has gardens, shingle and scrub. **Status and distribution** Rare immigrant and probable recent colonist. One at Greatstone, Kent (a female), on 12 Oct 1995, and a male at the same site on 20 Jul 1999. Singletons nearby on 8 Aug 1996 at New Romney and 9 Aug 1997 at Dungeness, all at light. Three at light at Rye Harbour NR, Sussex, in 1996, one in 1997 and two in 1998. Regular in small numbers there since and also very locally at other sites on the Sussex coast, and likely to be resident. Suspected immigrants continue to be recorded elsewhere in most years, mainly in East Kent. One at Rugby, Warwickshire, in 2005. Twenty in 2006, including seven in East Kent, three in Hampshire, five in Middlesex and three in Essex. Further colonisation seems likely. One on Guernsey in 2014. Resident in central and southern Europe and northern Africa.

Jubilee Fan-foot plate 45

Zanclognatha lunalis (Scop.)

Suspected immigrant 72.058 (2490)

Field characters and similar species FW 14–17mm. Slightly larger than Fan-foot and Shaded Fan-foot, with bolder and a more strongly arched, narrow, dark central crescent mark on forewing. Forewing brown, often with purplish tinge. Central cross-line is irregular and slightly scalloped (smooth or slightly irregular in Fan-foot) but less so than in Dusky Fan-foot, which is a rougher-looking moth with a more conspicuous pale outermost cross-line. Antennae have a nodule one-third from base in male. **Flight season** In Europe, usually one generation, Jun–Aug. Comes to light. **Life cycle** In Europe, overwinters as a larva. Larva Aug–Apr or May. Probably pupates on the ground. **Larval foodplants** In Europe, reported to feed on withered and dead leaves of many broadleaved plants. **Status and distribution** Suspected immigrant. Two British records, both at light. The first at Dorney Reach, near Maidenhead, Buckinghamshire, in late Aug 1976. It is not a noted migrant and there was speculation that a resident population might exist. However, another was trapped on 4 Jul 2001, at Durlston Country Park, Swanage, Dorset, a site much trapped for intercepting immigrant moths. Widespread in western Europe, from Portugal to southern Sweden, but local and infrequent from Belgium northwards.

Dusky Fan-foot plate 45

Zanclognatha zelleralis (Wocke)

Suspected immigrant 72.059 (2491a)

Field characters FW 14–17mm. Generally looks somewhat rougher than other British fan-foots. Distinguished by combination of distinctly scalloped central cross-line, broad, pale-centred kidney mark (often faint on its outer side) and conspicuous pale outer cross-line from leading edge to trailing edge.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Antennae have a nodule one-third from base in male. **Similar species** See Plumed Fan-foot (with more pointed forewing), Jubilee Fan-foot and Shaded Fan-foot. **Flight season** In central Europe, two generations, May–Jul and Aug–Sep. Comes to light. **Life cycle** In central Europe, overwinters as a larva. Larva Aug–May. Pupates among plant debris. **Larval foodplants** In mainland Europe, the withered leaves of many low-growing plants. **Status and distribution** Suspected immigrant. One record, one at light at Stackpole, Pembrokeshire, in late Jul 1982. Widespread in central and southern Europe.

Hypenodinae

Marsh Oblique-barred

Pinion-streaked Snout

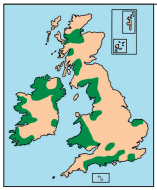
White-line Snout

Marsh Oblique-barred

plate 45

Hypenodes humidalis Doubl.

Nb 72.060 (2485)



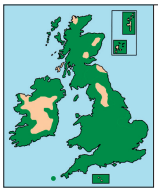
Field characters and similar species FW 6–8mm. Easily confused with micro-moths because of its small size and appearance, and distinctly smaller than related species. Forewing narrow, brown. Oblique, often white-edged dark central cross-line kinked or curving widely around distinct dark kidney mark. Beyond this, a narrow oblique dark cross-band extends to wing tip. White-line Snout is larger, with less oblique lines and lacking dark diagonal outer band. **Flight season** Mainly one generation. Late Jun–late Aug, depending on latitude. A small second generation in Sep–Oct in south-west England. Flies in late afternoon and at dusk, sometimes seen on the wing in numbers. Comes to sugar and light, sometimes in abundance. **Life cycle** Largely unknown. Overwinters as either a larva (most likely) or a pupa. Pupates in a pendulous cocoon, suspended from a plant stem near the ground. **Larval foodplants** Unknown in the wild. Reported to have been reared on Cross-leaved Heath and, in mainland Europe, on *Sphagnum* moss and Marsh Cinquefoil. At one British breeding site the only plants present, in addition to those above, are Heather and Purple Moor-grass. **Habitat** Boggy moorland, heathland, bogs, swamps, fens, marshes and watermeadows, including small sites of only 1–2ha. **Status and distribution** Resident. Nationally Scarce B. Easily overlooked. Has a scattered distribution up the western side of Britain from Devon and the turf moors of North Somerset, through the boggy moorland of western Wales, the raised bogs of Shropshire and Cumbria, and on moorland in the western half of Scotland from the southern uplands to Argyllshire, and north to the Moray Firth. Occurs widely on the heaths of east Dorset, Hampshire and Surrey, and in river marshes and watermeadows in the Itchen Valley in Hampshire. Very local in Sussex and in the south Midlands. Recorded at Cothill Fen, Oxfordshire, and at Dersingham Bog and other sites near the Norfolk coast. In Ireland, widespread in the western half and more local elsewhere.

Pinion-streaked Snout

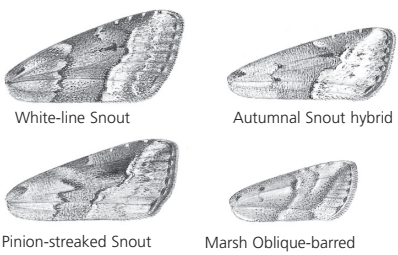
plate 45

Schrankia costaestrigalis (Steph.)

Local 72.061 (2484)



Field characters FW 9–11mm. Like related species, is small, slender and easily mistaken for a pyralid or other micro-moth, especially as they sit with front end raised. Forewing narrow, dull straw-coloured or brown. Very variable. In well-marked forms, a thick, dark streak obscures kidney mark and extends to reach outer central cross-line, which is fine, dark and oblique, with a distinct bulge beyond kidney mark and acutely angled near leading edge. Beyond this line, often much paler or with a diagonal whitish cross-band extending to wing tip. Sometimes has a large, dark brown blotch in leading half between cross-lines. Some markings may be obscure and forewing may also be uniformly brown. **Similar species** See White-line Snout. **Flight season** Two generations in southern England, Jun–Jul and Aug–Oct. In northern England, Scotland and Ireland, the second generation is partial (small in the north), in Sep–Oct, and the first is Jun–Aug. Flies from dusk, when it feeds at flowers and comes to sugar. Comes to light, usually in small numbers. **Life cycle** Overwinters as a larva. **Larval foodplants** Unknown in the wild. In captivity eats lettuce leaves, flowers of Heather, Wild Marjoram, Wild Thyme and mints, and damp, withered sallow leaves. **Habitat** Damp woodland, fens, wet meadows, boggy heathland, raised bogs, riversides


White-line Snout

Autumnal Snout hybrid

Pinion-streaked Snout

Marsh Oblique-barred

Details of Hypenodinae forewing markings.

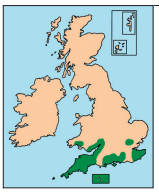
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

and other marshy areas. **Status and distribution** Resident. Local. Fairly well distributed and locally frequent, but often overlooked, in suitable habitat throughout most of Britain, Man, much of Ireland and in the Channel Islands. In Scotland, formerly almost entirely restricted to the west, but has recently spread east, and also north to Caithness and Orkney, with one in Shetland in 2013.

White-line Snout plate 45

Schrankia taenialis (Hb.)

Nb 72.062 (2482)



Field characters and similar species FW 9–11mm. Very similar to some forms of Pinion-streaked Snout, but less variable. Forewing broader, brown. Outer central cross-line well defined, finely edged with white, less oblique and with less pronounced kink near kidney mark. Outer band, if present, not diagonal and streak through kidney not pronounced. No dark blotch on leading edge. Kidney distinct, but streak absent or short. See also Marsh Oblique-barred. **Flight season** Mainly one generation, early Jul–mid-Aug, but occasionally adults of a partial second generation are recorded Sep–Oct. Adults reared in captivity from eggs (see below) emerged in the autumn. Comes to flowers, sugar and light, and is sometimes netted at dusk. **Life cycle** As yet unknown. By analogy with related species, probably overwinters as a part-grown larva. The pupa is suspended from grass stalks and other objects near the ground. **Larval foodplants** Unknown in the wild. Has been reared initially on a mixture of lettuce and the flowers of Cross-leaved Heath, Bell Heather and Wild Thyme, later on sliced immature Runner Bean pods. Flowers of Hogweed have also been accepted and, in mainland Europe, the fresh flowers of Heather. **Habitat** Damp woodland, including conifer plantations, shaded hedge banks (in south-west England and Wales) and open heathland. **Status and distribution** Resident. Nationally Scarce B. Locally widespread in south-west England and local in Hampshire, Sussex, Kent, Surrey and Hertfordshire. Also around the Bristol Channel and Wye Valley, Herefordshire, and in south Wales. Not reliably recorded from Ireland.

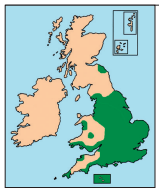
Note – Autumnal Snout *Schrankia intermedialis* Reid was described as a new species in 1972 from moths caught at Broxbourne Woods in Hertfordshire in 1971, with characters intermediate between Pinion-streaked Snout and White-line Snout. It was subsequently found sparingly in the same area and in Kent and Devon, and also in Sweden, Finland and Latvia. However, this taxon has now been shown by DNA analysis to be a hybrid between those two species, as had been suspected. In the hybrid, central black forewing mark is not connected to outer cross-line, which is well defined and edged narrowly with white, as in White-line Snout, but with more a pronounced bend, as in Pinion-streaked Snout.

Toxocampinae Blacknecks

Blackneck plate 45

Lygephila pastinum (Treit.)

Local 72.063 (2466)

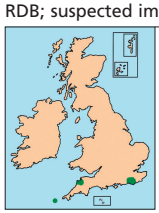


Field characters FW 18–21mm. Body rather slender, with ample wings. Top of head and collar dark brown, often appearing blackish to the naked eye. Forewing light pastel grey, sometimes darker, with very fine, wavy brown pencilling. Rather narrow, solidly dark brown kidney mark has one or two small dark spots beside it, and oval is reduced to a dot. Shows little variation. **Similar species** See Scarce Blackneck. **Flight season** One generation. Jun–Jul. Occasional, possibly second-generation moths in Sep. Easily disturbed by day, feeds at flowers at dusk and comes to light. Can be seen on the wing soon after dusk by sweeping meadows with a bright light. **Life cycle** Overwinters as a small larva. Larva Aug–late May. Feeds at night, resting low down on the foodplant by day. Pupates in a cocoon, usually formed on or just beneath the ground. **Larval foodplants** Tufted Vetch; also recorded on Marsh Pea and Wild Liquorice. **Habitat** Unimproved damp pasture, watermeadows and hay-meadows. Fens, marshland, dry calcareous grassland, and damp woodland rides and edges. **Status and distribution** Resident. Local. Fairly well distributed and locally quite frequent in most southern parts of England. Local in south-west England, largely coastal in south and west Wales, and extends into the north Midlands. In Lancashire, it has expanded greatly since 2007 from a localised population in south-west Manchester, it is now established in Cumbria, and in 2008 it spread into Yorkshire, where it is now widespread. In Scotland, long established very locally on the coast of Berwickshire.

Scarce Blackneck plate 45

Lygephila craccae ([D. and S.])

RDB; suspected immigrant 72.064 (2467)



Field characters and similar species FW 18–20mm. Very similar to Blackneck, but stouter and with a narrower, darker forewing, sometimes very finely flecked but not pencilled, and usually with distinct pale veins. Has three or four dark brown spots along leading edge, and a brown kidney mark with thick, dark, broken edging, usually complete on inner edge, and without dark spots nearby. **Flight season** One generation. Usually mid-Jul–mid-Aug. There are two generations in southern mainland

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

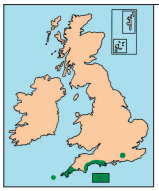
Europe, extending into Oct. Sometimes disturbed by day from among the larval foodplant, especially in hot weather, and seen flying gently around it soon after dark, when it also visits flowers such as Wood Sage, Goldenrod, Hemp-agrimony and Red Valerian. Comes to light and sugar. **Life cycle** Overwinters as an egg. Larva May–early Jul. Feeds at night. Pupates in a cocoon among plant debris on the ground. **Larval foodplants** Wood Vetch; also accepts other vetches and vetchlings in captivity. **Habitat** Rocky coastlines and rather steep coastal cliffs. Appears to specialise in exploiting landslips with open ground, which provide opportunities for the foodplant. **Status and distribution** Resident and suspected immigrant. Red Data Book species. Known only from a few sites on the north coasts of Cornwall and Devon, where the historical records span over 100km of coastline, and a single site on the coast of Somerset. Two confirmed records of suspected immigrants: one on 7 Aug 2010 at Eastbourne, East Sussex, and one on 5 Oct 2013 at St Mary's, Scilly. Possibly one on the Lizard, Cornwall, on 15 Oct 1985 but it was not kept for confirmation.

Levant Blackneck

plate 45

Tathorhynchus exsiccata (Led.)

Immigrant 72.065 (2296)



Field characters FW 13–18mm. Forewing narrow and rather blunt, grey-brown, darker towards outer edge, with black streak at base and another between small, indistinct pale oval and kidney mark. Zigzagged whitish outer cross-line not always conspicuous. Veins pale. Hindwing has broad, dark grey-brown border. **Flight season** Most British records Jan–Mar, also Jun, Sep, Nov and Dec. Comes to light. **Life cycle** Breeds continuously where it is resident. **Larval foodplants** Lucerne, Spanish Broom and probably other members of the pea family. **Status and distribution** Rare immigrant. Twenty-eight records from mainland Britain, the first three in Mar 1952, at Maidencombe in Devon, Farringdon in Hampshire and Ashford in Kent. Singles in Cornwall, in Sep 1954 and at Rodborough, Gloucestershire, on 1 Jun 1955, and three at Arundel, Sussex, on 2 Jun 1955. Three at Martyr Worthy, Hampshire, on 2 and 3 Feb 1967. One at Mawnan Smith, Cornwall, on 22 Nov 1981. Nine on 10–15 Feb 2004, in Cornwall (one) and Dorset (eight, with four on Portland). One at the Lizard, Cornwall, on 28 Jan 2008. Two in 2011, one on Scilly on 29 Apr and one in East Kent on 7 May. Two in Dec 2015, one at Farnham, Surrey, on the 18th and one at Portland Bill on the 27th. One found dead on 9 Mar 2016 at Buckland, Surrey (date of death unknown). One at St Peters, Guernsey, on 12 Feb 2004. Resident in Africa, the Canary Islands and the Middle East; immigrant in Europe.

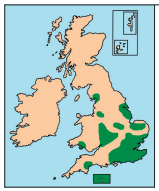
Boletobiinae

Waved Black

plate 45

Parascotia fuliginaria (L.)

Nb; suspected immigrant 72.066 (2475)



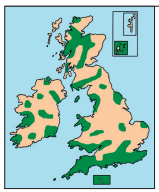
Field characters FW 11–14mm. The charcoal colour, white or cream spotting, wavy cross-lines and (often) yellow blotches on outer edge of central line of both fore- and hindwing are distinctive. Rests with wings widely spread and pressed flat against a tree trunk or wall, like a geometrid moth (and often mistaken for one). **Flight season** Usually one generation, Jun–Jul. Occasional, probable second-generation moths in Sep. Often emerges the same year in captivity. Sometimes flushed out by day. Flies from dusk, visiting sugar and light, usually soon after dark. **Life cycle** Overwinters as a small larva. Larva Aug–mid-Jun. Pupates on or near the larval food, on the underside of which larvae can be found day and night. **Larval foodplants** The earliest records were from slime moulds on rotting wood in docks and cellars in London. The main food is fungi on rotting trees, particularly birches and pines, including bracket fungi such as *Trametes versicolor*, *Trichaptum abietinum*, *Piptoporus betulinus* (these three most frequently), *Phaeolus schweinitzii*, *Tapinella panuoides*, *Stereum hirsutum*, *Daldinia concentrica* and *Botryobasidium* spp. The lichen *Cladonia fimbriata* is also eaten. The food must be moist. **Habitat** Damp or boggy woodland, especially old stands of birch or willow. Will also breed on stored logs and old timber in buildings. **Status and distribution** Resident and suspected immigrant. Nationally Scarce B. In the 19th century it was thought to be confined to London, but in the 20th century it was found to be quite well distributed in south-east England, from Hampshire to Kent, Suffolk, Berkshire and south Oxfordshire, probably in part due to range expansion. Also found in and around Worcestershire, has increased in Warwickshire since the 1990s and is currently resident very locally in Nottinghamshire. A number of isolated records elsewhere in southern Britain north to Yorkshire, Lancashire and Cumbria (one in 2011), in some cases possibly of immigrants.

Small Purple-barred

plate 45

Phytometra viridaria (Cl.)

Local 72.067 (2470)



Field characters FW 9–11mm. One form (f. *aenea* (Hb.)) is unmistakable, with dark magenta bands on dull olive-brown forewing and sometimes around outer edge of hindwing. Form *fusca* Tutt is almost plain olive brown and the less

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

frequent f. *lunghali* Nordström is similar, but with a darker brown outer band on forewing and hindwing. **Similar species** The day-flying brown micro-moth *Pyrausta despicata* (Scop.) (Crambidae) is more slender, with a narrower forewing that has a discernible kidney mark, and one or more thin pale central bands on hindwing. **Flight season** Two generations in some southernmost counties of England, early May–early Jun and Jul–Aug. One generation elsewhere, late May–Jul. Flies mainly in sunshine but sometimes after dark, when it comes to light. **Life cycle** Overwinters as a pupa, in a strong cocoon formed among plant debris. Larva late Jun–early Sep. Rests on the foodplant. **Larval foodplants** Common Milkwort and Heath Milkwort; also reported from Lousewort. **Habitat** Unimproved calcareous grassland, heathland, moorland, woodland rides and coastal sand-dunes. **Status and distribution** Resident. Local. Locally frequent in south-west, central southern and south-east England, extending to Buckinghamshire (mainly the Chilterns) and Gloucestershire (mainly the Cotswolds). Also in Wales and north Yorkshire. Generally recorded more widely formerly, especially in the Midlands and East Anglia, but apparently now rare in many areas. Local in most of northern England and Man. In Scotland, found in the south but mainly in the central Highlands, also north to Orkney. Widespread but local in Ireland. Local and rare in the Channel Islands.

Lesser Belle

plate 45

Colobochyla salicalis ([D. and S.])

Immigrant; extinct resident 72.068 (2472)

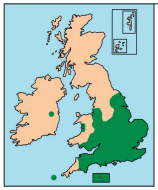
Field characters FW 13–15mm. An unmistakable delta-shaped grey moth. Forewing pointed, with three reddish-brown cross-lines lightly edged with pale yellow, the outermost curving to wing tip. **Flight season** One generation. End May–mid-Jul, very occasionally later to mid-Sep, either as an immigrant or possible second generation. Easily disturbed by day from among the larval foodplant. Comes to light from dusk. **Life cycle** Overwinters as a pupa, in a tough cocoon of silk and chewed bark on the foodplant. Larva Jul–early Aug. **Larval foodplants** Aspen, favouring the tenderest foliage on saplings 1–3m tall. **Habitat** Clearings and edges of open rides in damp woodland on heavy soils. **Status and distribution** Former resident, presumed extinct, and suspected immigrant. Discovered in Orlestone Forest, south-east Kent, in 1932 and recorded there until 1977. In the 19th century, recorded in Surrey at Dulwich (1858) and Haslemere (several, 1862–66). One at light at Maidencombe, near Torquay, South Devon, on 14 Aug 1965, and one at Eccles-on-Sea, Norfolk, on 23 Jun 1998.

Beautiful Hook-tip

plate 45

Laspeyria flexula ([D. and S.])

Local 72.069 (2473)



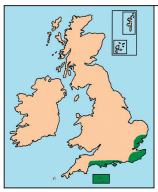
Field characters FW 13–15mm. Quite slender. Forewing warm greyish brown, often lilac-tinted, rusty brown towards outer edge. Tip strongly hooked and outer edge smooth but with a prominent central projection. Has two small dark central dots and two fine, fairly straight, dark-edged yellowish-brown cross-lines, angled at leading edge. Hindwing slightly paler, with a single dark-edged yellow cross-line. Shows little variation. **Similar species** Scalloped Hook-tip (grey form) rests with wings steeply raised, tent-like, and has a single central dot and irregular outer edge on forewing. **Flight season** Usually one generation. Late Jun–early Aug. In some recent years, a sizeable second generation in the southern half of England, late Aug–early Sep. Flies from dusk and comes to light, usually in small numbers. **Life cycle** Overwinters as a small larva. Larva Aug or Sep–late May, most active at night. Pupates in a tough cocoon, formed on a twig or branch. **Larval foodplants** Lichens growing on broadleaved and coniferous trees. **Habitat** Woodland, parkland, scrub, hedgerows, old orchards and some mature gardens. **Status and distribution** Resident. Local. Well distributed and locally fairly frequent in most of southern Britain and in the Channel Islands, north to the south Midlands, the southern half of Wales and Lincolnshire, and recently expanded into Yorkshire and the north Midlands, reaching South Lancashire. In Ireland, one in Co. Kildare on 7 Aug 2013.

Olive Crescent

plate 45

Trisateles emortualis ([D. and S.])

RDB; immigrant 72.070 (2495)



Field characters and similar species FW 14mm. Forewing light fawn to sandy brown, with an olive-green tint when fresh. Not unlike one of the fan-foots, but cross-lines and other markings all pale. **Flight season** One generation. Late Jun–Jul, sometimes later. Seldom seen except at light-traps on warm nights. **Life cycle** Overwinters as a pupa, in a cocoon between dead leaves among leaf litter on the ground. Larva Jul–Oct. **Larval foodplants** Dead and dying leaves of oaks, beech and Sweet Chestnut. Larvae have been beaten from withered oak foliage on damaged branches, and in the autumn from dead Beech leaves on twigs. **Habitat** Mature woodland. **Status and distribution** Resident and immigrant. Red Data Book species. Found very locally in several woodlands in North Essex and in nearby areas of Suffolk, where it was discovered in 1972, and in Sussex and Kent.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Formerly resident in a small group of woodlands in the Chilterns, Buckinghamshire (first found in 1962), but last seen there in 1976, in spite of searches. A female at light in a garden in Caversham, Oxfordshire, in 1987, some 13km from the nearest known colony, is the most recent record from the area. Previously recorded from the same area in 1859 and 1910. About 45 probable immigrants since 1858, almost exclusively on the south and south-east coasts, from Dorset to Suffolk, with nine in 2001. One on Guernsey in 1984 and one on Jersey in 2009.

Scarce Marbled

plate 45

Eublemma minutata (Fabr.)

Suspected immigrant 72.071 (2409)

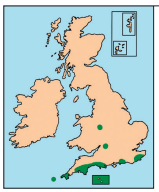
Field characters and similar species FW 7–8mm. Somewhat similar to Small Marbled in size and shape. Thorax and forewing ground colour white, and narrow white cross-band beyond middle with a small but distinct outward-pointing V-shaped central kink. Other non-British species are similar and any further record would require confirmation. **Flight season** Two generations, May–Jun and Aug. **Larval foodplants** The flowers of Dwarf Everlasting and Mountain Everlasting. **Habitat** Open, dry places. **Status and distribution** Suspected rare immigrant. One authenticated record. A singleton in a cornfield near the cliffs at Freshwater, Isle of Wight, in Jun 1872, a year in which immigrants were numerous. A predominantly central and eastern European species, with populations in central France, western Germany and Denmark.

Purple Marbled

plate 45

Eublemma ostrina (Hb.)

Immigrant 72.072 (2407)



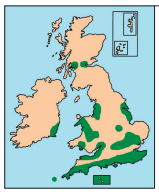
Field characters FW 8–9mm. Forewing straw yellow (f. *carthami* H.-S.) or brown, with a dark streak at base and, often more generally, a pale patch near outer part of leading edge and a fine, inwardly indented pale cross-line close to outer edge. Darker forms are usually clouded purplish and brown in outer area and may be brown in basal half. Pale forms may be faintly marked and virtually unstreaked. **Similar species** See Small Marbled and Beautiful Marbled. **Flight season** At least two generations in mainland Europe. As an immigrant, Jan–Dec, but usually May–Oct. May be disturbed by day or seen flying in sunshine. Comes to light and sugar. **Life cycle** No evidence of overwintering. Larvae are occasionally found in Jul–Aug, the progeny of spring immigrants. Pupates in or on flowers of the foodplant. **Larval foodplants** The flowers and seedheads of various thistles, particularly Carline Thistle. **Habitat** Open and disturbed ground. **Status and distribution** Immigrant. Over 160 records of the adult. Larvae and pupae were recorded in some years, including 1992 (western Ireland and Cornwall) and 1999 (Dorset and Devon). The highest annual total of adults is 23 (2011). Mainly in southern coastal counties of England, particularly the south-west. Only a handful of records elsewhere in the British Isles. A species mainly of southern Europe and North Africa.

Small Marbled

plate 45

Eublemma parva (Hb.)

Immigrant 72.073 (2408)



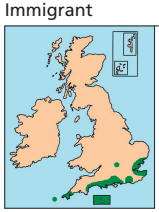
Field characters and similar species FW 7–8mm. Very small and easily overlooked among micro-moths, especially Tortricoidea. Similar in shape to Purple Marbled, but smaller, and forewing without streaky pattern and with fine outer central cross-line bent noticeably outwards in leading half. Has a thin, more or less straight white central cross-line, with darker brown shading on its basal side. See also Scarce Marbled. **Flight season** Two or more generations abroad. As an immigrant, Mar–Oct, mostly recorded at light. **Life cycle** No evidence of overwintering. Larva Jul–Sep in the British Isles, producing late-season adults. Pupates in a cocoon attached to flowers of the foodplant. **Larval foodplants** The flowers of Common Fleabane and Ploughman's-spikenard. **Habitat** Open and disturbed habitats. **Status and distribution** Immigrant. Over 550 adults recorded, the highest annual total in 2011 (316). Larvae have also been reported on several occasions, mainly in south-west England. Mainly recorded from the southern coastal counties of England and only occasional elsewhere in the British Isles, including three in Scotland and seven in Ireland. Resident in central and southern Europe and North Africa.

Beautiful Marbled

plate 45

Eublemma purpurina ([D. and S.])

Immigrant 72.074 (2409a)

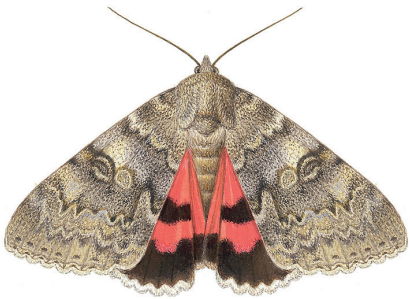


Field characters FW 10–15mm. Basal half of forewing pale lemon yellow, gradually darkening towards centre, with clear, strongly angulated demarcation to purplish-pink outer half. Has a fine, curved dark cross-line, running roughly through centre of pink outer half. Varies in size and in intensity of pink coloration. **Similar species** Purple Marbled is smaller, with a basal streak, and lacks angulated colour demarcation and dark outer cross-line. **Flight season** Two generations. May–Jul and Aug–Sep. **Larval foodplants** Thistles, including Creeping Thistle. **Habitat** In mainland Europe, found in warm, dry, open places. **Status and distribution** Immigrant. About 50 records. The first British specimen, a poorly marked female, was

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

caught on 20 Aug 2001 at Southwell, Portland, Dorset, but misidentified as an atypical Purple Marbled. Its true identity was realised after nine were caught on 31 Jul–22 Aug 2004, from Scilly (two), Cornwall (two), Dorset (two), Hampshire (two) and Buckinghamshire (Wendover, one). Others have been reported since, with 11 in 2012. Mainly on southern coasts and rarely inland. Widespread but local in central, southern and eastern Europe.

Erebinae



Red Underwing

Oak Yellow Underwing plate 46

Catocala nymphagoga (Esp.)

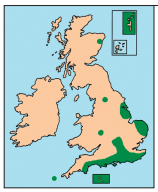
Suspected immigrant 72.075 (2455a)

Field characters and similar species FW 17–21mm. Somewhat like a miniature Crimson Underwing, but with a yellow hindwing. Forewing mottled with various shades of brown and grey. The most abundant of several European *Catocala* species with a yellow hindwing, distinguished by outer central cross-line on forewing, which makes a narrow loop extending inward to near kidney mark, and central black band on hindwing, which is fairly narrow, almost straight and turns at a right angle to trailing edge. *Catocala disjuncta* (Geyer) is the most similar of those that could conceivably occur in the British Isles, but in that species the outer central cross-line fails to make a loop centrally. Instead, there is a prominent, roughly triangular, black-outlined white mark next to the kidney mark. **Flight season** One generation. Jun–Aug. **Life cycle** Larva Mar–Jun. **Larval foodplants** Oaks, including Evergreen Oak. **Status and distribution** Suspected immigrant. Six records. Two in Rothamsted Insect Survey light-traps in 1982, at Tregaron, Cardiganshire, on 28 Jul and Denny Lodge, New Forest, Hampshire, on 31 Jul. One at light at Buckingham Palace Gardens, London, on 3 Sep 2002; one at Holcombe, Devon, on 26 Aug 2005; one at Carshalton, Surrey, on 15 Jul 2007; and one at Bexhill-on-Sea, East Sussex, on 21 Jul 2014. Resident in central and southern Europe.

Clifden Nonpareil/ Blue Underwing plate 46

Catocala fraxini (L.)

Recent colonist; immigrant; former resident 72.076 (2451)



Field characters and similar species FW 41–48mm. Very large size, and grey forewing and broad violet-blue curved band across black hindwing, make this species unmistakable. Larger and greyer than all the red and crimson underwings. Forewing has an undulating inner cross-line and zigzagged outer central one, both pale and dark-edged, and a pale mark next to dark kidney mark. Hindwing has a broad white fringe. **Flight season** One generation. Late Aug–early Oct. Recorded by day at rest on tree trunks and walls, at least once in a mist-net set for birds, and flying inland from the sea. Strongly attracted to sugar at dusk and comes to light. **Life cycle** Overwinters as an egg on the foodplant. Larva late Apr–Jul, feeding at night. Pupates in a silken cocoon spun between leaves or among leaf litter. **Larval foodplants** Mainly Aspen, but recorded on other poplars in mainland Europe. **Habitat** Broadleaved woodland, but highly mobile and likely to be seen in other habitats. **Status and distribution** Resident and immigrant. Resident 1935–64 in Orlestone Forest near Hamstreet, Kent, and in the Norfolk Broads in the early 1930s. Recolonised southern England from about 2007 and now resident locally in Hampshire, Isle of Wight, South Wiltshire, Dorset, Sussex and Kent. Evidence suggests that it is slowly spreading north, with 11 from a wide spread of sites in Berkshire (including modern Oxfordshire) in 2015. Until recently, scarce as an immigrant, with usually only a handful each year (exceptionally, 19 in 1976) and none in many years. However, numbers have increased in the 21st century (174 records in 2002–11) and immigration has continued since colonisation (although some confusion with dispersing resident moths is likely). Predominantly recorded in southern Britain, mainly on the south and east coast, in the Channel Islands and more sparsely up the eastern coast to Shetland, suggesting origins in both northern Europe and further south and west, the latter increasingly so. Eastern arrivals have sometimes been associated with Camberwell Beauty butterflies *Nymphalis antiopa* (L.), Great Brocade moths and, in 1995, Barred Warblers *Sylvia nisoria* (Bechstein). Widespread across most of Europe, from Spain to Russia.

Minsmere Crimson Underwing plate 46

Catocala conjuncta (Esp.)

Suspected immigrant 72.077 (2451a)

Field characters and similar species FW 25–29mm. Slightly smaller than Light Crimson Underwing and forewing less variegated and browner. Most

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

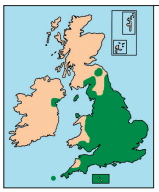
crucially, central black cross-band on hindwing is gently curved rather than forming a 'W'. Also, dark outer central cross-line on forewing has obvious two-pronged projection in leading half, as in Dark Crimson Underwing, but sweeps back in a more or less smooth curve in trailing half (jagged and less curved here than in the other crimson underwings) before turning inwards. Inner central cross-line is fairly straight (more irregular in the aforementioned species) and there is a continuous wavy dark line along outer edge. **Flight season and life cycle** One generation. Late Jul–Sep, coming in numbers to light and sugar baits, the larva feeding in the spring. **Larval foodplants** Evergreen Oak. **Habitat** Dry, sunny hillsides. **Status and distribution** Rare immigrant. One on 14 Sep 2004 at RSPB Minsmere, Suffolk, at rest on the outside of a light-trap, much of the catch inside having been destroyed by hornets. Occurs widely in southern Europe, from Spain and western France to Turkey.

Red Underwing

plate 46

Catocala nupta (L.)

Common 72.078 (2452)



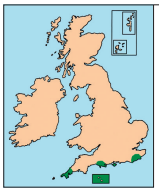
Field characters FW 33–40mm. Large. Forewing grey with irregular jagged cross-lines and bands, and rather obscurely marbled brownish grey. Hindwing red, with bold black border and strongly elbowed central band (pinched in leading half), and scalloped white fringe. Underside of fore- and hindwings black with bold white bands (as in some other *Catocala* species), which show up strikingly in flight. Rare f. *cockaynei* Lorimer (= f. *nigra* Cock.), with a black forewing, has occurred in Hertfordshire and Middlesex on four occasions. An even rarer form, f. *brunnescens* Warr. (= f. *nigra* Lempke), with a dark brown and black hindwing, was recorded at Orpington, Kent, in 1971. **Similar species** See Rosy Underwing and French Red Underwing. **Flight season** One generation. Early Aug–Oct. Comes to light in small numbers; often ignores light-traps but more frequent at sugar. Sometimes found at rest on walls by day and, if disturbed, flies off vigorously. Has also been seen flying and feeding at flowers by day. **Life cycle** Overwinters as an egg, laid in a bark crevice on the main trunk of the foodplant. Larva May–Jul. Feeds at night, hiding by day under loose bark or in a crevice. Pupates in a cocoon, formed either in a bark crevice or among plant debris. **Larval foodplants** Poplars and willows. **Habitat** Woodland, parkland, scrub, carr, riverbanks and gardens. **Status and distribution** Resident. Common. Well distributed in most of southern Britain (but local in Cornwall and west Wales) and in the Channel Islands. In northern England it has spread and increased considerably in recent decades and now extends to Cumbria, Man and south Northumberland. Occasionally further north into southern Scotland. In Ireland, probably a recent colonist in the east, with five recorded since 2006, in Cos. Louth and Dublin. Previously, one in Co. Cork, in Sep 1906.

Rosy Underwing

plate 46

Catocala electa (View.)

Immigrant; resident in Channel Islands 72.079 (2453)



Field characters and similar species FW 33–39mm. Superficially similar to Red Underwing, but slightly smaller and forewing paler, light grey and smoother-looking. Outer jagged cross-line is dark and much more noticeable, projecting strongly towards outer edge in leading half. Hindwing red, tending to pink, and central band strongly elbowed. *Catocala optata* (Godart), found in mainland Europe (including France), is smaller, with a long, broad black basal streak on forewing and a curved central black band on hindwing. **Flight season** One generation. Jul–Sep in mainland Europe. Immigrants Aug–Sep. Comes to sugar, and in small numbers to light. **Life cycle** No evidence of breeding in the British Isles. Larva May–Jun elsewhere. **Larval foodplants** Willows and poplars. **Status and distribution** Rare immigrant. Fifteen records from Britain, the first at Shoreham, Sussex, in 1875. Four other historical records: at Corfe, Dorset, and Dedham, Essex, in 1892; Hoddesdon, Hertfordshire, in 1927; and Hammersmith, London (undated). Ten in recent times, at Portland, Dorset, in 1993; Walberton, Sussex, and Lydd, Kent, in 2004; and Dungeness, Kent, in 2008. Since then, one in West Cornwall, four more in Dorset and one on the Isle of Wight. First recorded in the Channel Islands in 2002, and now thought to be resident. Widespread in central and eastern Europe.

French Red Underwing

plate 47

Catocala elocata (Esp.)

Suspected immigrant 72.080 (2453a)

Field characters and similar species FW 39–43mm. Very similar to Red Underwing, but often slightly larger. Dark central cross-band on hindwing gently curved, slightly indented on outer edge but not elbowed. Also, forewing markings are often less distinct, and usually with kidney and cross-lines marked with tawny brown. *Catocala* species are generally mobile moths, and species are present in Europe with red, pink or yellow hindwings. If a moth does not appear to fit any of the descriptions herein, the possibility that it is another species should be considered. **Flight season** One generation. Jul–Oct. **Larval foodplants** Poplars and willows. **Habitat** Woodland, river valleys and urban areas. **Status and distribution** Suspected immigrant. A single record, one on Jersey on 20 Oct 1903. Found in nearly all of Europe outside Scandinavia.

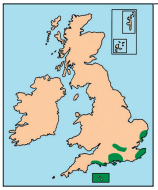
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Dark Crimson Underwing

plate 47

Catocala sponsa (L.)

RDB; suspected immigrant 72.081 (2455)



Field characters and similar species FW 29–34mm. Most reliably distinguished by wavy black central band on hindwing, which is contorted into a deep 'W' shape, and by larger size. Forewing has an obvious double prong on outer central cross-line in leading half, and inner central cross-line bends outwards so it usually touches pale central mark. Has a line of dark dashes along outer edge. See also under Light Crimson Underwing and Minsmere Crimson Underwing. **Flight season** One generation. Late Jul–early Oct. Comes to light, but in larger numbers to sugar, wine ropes and oozing tree sap, sometimes arriving well before dusk. Has been seen recently flying in daylight at least two hours before dusk, investigating sap runs and sugar patches. **Life cycle** Overwinters as an egg on the foodplant. Larva Apr–early Jun. Feeds by night, initially on flowers and buds, then on the expanding foliage, resting on twigs and in bark fissures by day. Pupates in a cocoon spun between leaves. **Larval foodplants** Pedunculate Oak and possibly Sessile Oak. **Habitat** Large tracts of mature oak woodland. **Status and distribution** Resident and suspected immigrant. Red Data Book species. Breeding is now probably confined to the New Forest and Harewood Forest, Hampshire, and woods in South Wiltshire, including Tytherley Woods, where it has recolonised Bentley Wood in oak plantations established in the 1950s. Two records from Briddlesford Copse, Isle of Wight, in 2013 suggest it is possibly breeding there. Historical records suggest it was formerly resident in Kent (Weald, Orlestone Forest) and probably Sussex, and also Warwickshire, Buckinghamshire, Suffolk and Essex. Recorded at least 60 times as a suspected immigrant, usually at open coastal sites from Devon to Essex. Some records may refer to moths dispersing from resident populations. One on Jersey in 2004.

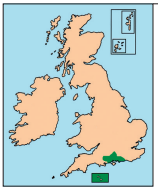
Larva of Dark Crimson Underwing.

Light Crimson Underwing

plate 47

Catocala promissa ([D. and S.])

RDB; immigrant 72.082 (2454)



Field characters and similar species FW 26–32mm. Most reliably distinguished from the other crimson underwings by shape of black central band on hindwing, which is gently wavy. Forewing grey-brown with irregular dark cross-lines and bands, and variably variegated whitish, usually extensively. Line of dark dashes along outer edge. Double prong on outer central cross-line usually less obvious than in similar species. Dark Crimson Underwing is larger and forewing tends to be darker and less variegated, but may also have patches of whitish scales, especially near kidney mark. See also under Dark and Minsmere crimson underwings. **Flight season** One generation. Mid-Jul–early Sep. Comes to light, but more readily and in larger numbers to sugar, wine ropes and sap oozing from trees, sometimes arriving well before dusk. Occasionally seen flying around the oak canopy in afternoon sunshine. **Life cycle** Overwinters as an egg attached to an oak twig. Larva late Apr–late May or early Jun. Feeds at first on the flowers and leaf buds, later on the foliage, feeding at night. Pupates in a cocoon between leaves or on the trunk. **Larval foodplants** Pedunculate Oak and possibly Sessile Oak. **Habitat** Large tracts of mature oak woodland. **Status and distribution** Resident and immigrant. Red Data Book species. Now confined to the New Forest, Hampshire, where it remains widespread; South Wiltshire, including Langley Wood and Tytherley Woods (including Bentley Wood, where it has colonised oak plantations established in the 1950s from neighbouring woodlands following extensive clear-felling); and Harewood Forest, near Andover, Hampshire. Lost since the 1940s and 1950s from other woodlands in Wiltshire, Hampshire, Sussex and Kent, and Bernwood Forest on the Oxfordshire–Buckinghamshire border, coincident with large-scale clear-felling of mature oaks. More widespread in the 19th century, with resident populations recorded north to Gloucestershire, Huntingdonshire and Cambridgeshire, and reports from Monmouthshire and Suffolk. Occasional suspected immigrants (or strays from resident populations) most recently in east Dorset (1978, 2009), Isle of Wight (1979, 1982) and West Sussex (two in 2011). One on Jersey (2005).

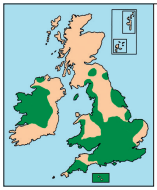
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Burnet Companion

plate 47

Euclidia glyphica (L.)

Common 72.083 (2463)



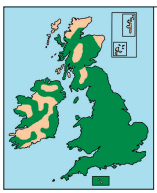
Field characters FW 13–15mm. Quite distinctive, but often mistaken for a small butterfly, especially in flight, when the orange-yellow underside can be conspicuous. Main markings on warm, dark greyish-brown (sometimes lilac-tinged) forewing, comprising two dark brown cross-bands and a dark blotch near tip, show only slight variation. Often settles with yellow bands and dark veins on outer part of hindwings visible. **Similar species** See Goldwing. **Flight season** One generation. Mid-May–early Jul. Sometimes a small second generation in southern England, Aug–Sep. Flies by day. Easily disturbed, usually flying only a short distance. Mate-seeking males have much longer flights in the late afternoon. **Life cycle** Overwinters as a pupa, in a cocoon formed among plant debris. Larva late Jun–late Aug. Feeds at night, resting by day stretched out along a stem. **Larval foodplants** Clovers, Common Bird's-foot-trefoil, Black Medick, Lucerne, Tufted Vetch and probably other trefoils and vetches. **Habitat** Rough grassland, usually on calcareous soils, including downland, flower-rich hay-meadows, woodland rides and embankments. **Status and distribution** Resident. Common. Well distributed and quite frequent in central southern and south-east England, the south and west Midlands, and south Wales. Local in south-west England, East Anglia, Lincolnshire, Yorkshire, north-west England and southern Scotland. Widespread in Ireland, mainly in central and western areas. Local and rare in the Channel Islands.

Mother Shipton

plate 47

Euclidia mi (Cl.)

Common 72.084 (2462)



Field characters FW 13–16mm. The large, irregular, cream-edged, dark brown blotch in centre of forewings of this unmistakable moth resembles a caricature of an old hag in profile, with a conspicuous eye and hooked nose. It was therefore named after Old Mother Shipton, a 16th-century Yorkshire witch. Forewing dusted and marked with greyish yellow. **Flight season** One generation. Early May–early Jul. Flies in sunshine and is easily disturbed, flying only a short distance. Visits flowers. **Life cycle** Overwinters as a pupa, in a cocoon formed among grass blades or just beneath the ground. Larva late Jun–early Sep. Most active at night, resting on the foodplant or along a grass stem by day. **Larval foodplants** White Clover, Red Clover, Hare's-foot Clover, Black Medick, Lucerne and Common Bird's-foot-trefoil. Also confirmed feeding on Cock's-foot and other grasses, on which it has been reared. **Habitat** Rough grassy places, including downland, heathland, low moorland, flower-rich hay-meadows, woodland rides, verges and embankments. **Status and distribution** Resident. Common. Fairly well distributed and quite frequent in England and Wales. Local in Scotland north to East Sutherland. Also local on Man, in Ireland and in the Channel Islands.

Larva of Burnet Companion.

Alchymist

plate 47

Catephia alchymista ([D. and S.])

Immigrant 72.085 (2464)

Field characters FW 19–21mm. Forewing broad and blackish, with thin, wavy or jagged, deep black cross-lines. Kidney mark dark, sometimes marked paler. Jagged-edged brown patch in trailing corner, sometimes with a whitish component, usually extending as a narrow outer cross-band, sometimes complete to leading edge. Hindwing black with a large white basal patch, and sections of outer edge and fringe also white. **Similar species** See Sorcerer and Druid. **Flight season** In mainland Europe, usually one generation, May–Aug, sometimes with a partial second in the south. British records May–Sep, the majority at sugar, but comes to light and has been found at rest by day on a tree trunk. **Life cycle** Overwinters as a pupa, in a cocoon on the ground. Larva Jul–Aug and possibly later. **Larval foodplants** In mainland Europe, scrubby oaks, including Evergreen Oak, and recorded on elms. The larva has not been reliably recorded in Britain. **Habitat** Open woodland and scrub. **Status and distribution** Immigrant. Nineteen recorded, mainly in south-east England on or near the coast. The first was at sugar on 13 Sep 1858 at Bembridge, Isle of Wight. Sixteen further records to 1934, from Isle of Wight (three), Sussex (three), Kent (seven, with three in 1934), Essex, Wiltshire and Shropshire. One at Bexhill-on-Sea, Sussex, in 1963 and two at the same site in 2006 and 2007. Resident in northern France and Belgium, but more widespread in central and southern Europe.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Lunar Double-stripe

plate 48

Minucia lunaris ([D. and S.])

Immigrant; transitory resident 72.086 (2456)

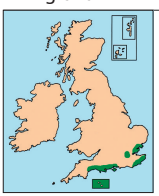
Field characters FW 23–26mm. Unmistakable, but variable in colour. Forewing light warm brown, grey-brown, light to dark grey or blackish, with darker brown shading, especially towards outer edge. Two thin, smooth whitish cross-lines, a dark brown kidney mark and a very small oval are almost constant features, varying relatively little. Hindwing pale to dark brown with a golden sheen. **Flight season** One generation. May–Jun in Britain, but Mar–Apr in southern Europe. Easily flushed by day from dry leaf litter. Comes readily to sugar and light. **Life cycle** Overwinters as a pupa, in a cocoon among leaf litter. Larva early Jul–mid-Aug. **Larval foodplants** In Britain, Pedunculate Oak, found only on fresh regrowth from coppice stools. Was also reared on secondary 'Lammas' growth. In southern Europe, also frequent on Evergreen Oak. **Habitat** Open, dry oak woodland. In Britain, bred in coppiced stands. **Status and distribution** Immigrant and former transitory resident. First recorded in 1832 at Lowestoft, Suffolk. Found as a resident in 1942–58 in woods near Hamstreet, Kent, and in 1948–53 near Laughton, Sussex. Two larvae at Hadleigh, Essex, in 1951. Forty immigrants recorded since the first, mainly from Kent and Sussex, but also in Hampshire, Dorset and Cheshire. One at Wokingham, Berkshire, in 2011. One on Guernsey in 1998 and one on Jersey in 2009. Most recently, two in East Kent, in 2007 and 2008. Resident in central and southern Europe.

Passenger

plate 48

Dysgonia algira (L.)

Immigrant 72.087 (2460)



Field characters and similar species FW 17–23mm. Distinguished from other moths on the British list by its wide delta shape, waisted whitish or pale pinkish-grey central cross-band (with inner edge weakly obtusely angled) on mid- to dark-brown forewing, and pale outer area with roughly triangular marks at tip. Hindwing brown with diffuse, narrow whitish central cross-band. The very similar *Dysgonia torrida* (Guen.), found in coastal areas of southern Europe, could possibly occur. It is slightly larger, with a smoothly curved or nearly straight inner edge of pale central band on forewing, and a stronger pale band on hindwing. Suspected examples of either species should be retained for confirmation by dissection. **Flight season** In southern Europe, two generations, Apr–May and Jul–Sep. British records Jul–Sep. Sometimes disturbed by day. Comes to light. **Life cycle** In southern Europe overwinters as a pupa. Larva Jun–Oct. No evidence of breeding in the British Isles. **Larval foodplants** Many plants, including Pomegranate, Castor-oil-plant, Pellitory-of-the-wall and Bramble. **Status and distribution** Immigrant. Twenty-six recorded from mainland Britain, the first near Dover, Kent, in 1967. Mainly on southern coasts from Dorset to Essex, and once inland at Ealing, Middlesex. Twenty since 2001, with a peak of 12 in 2006. In the Channel Islands, singles on Jersey in 1960, 1992 and 2005, and on Alderney in 2006. A widespread resident in southern Europe.

Geometrician

plate 48

Grammodes stolida (Fabr.)

Immigrant 72.088 (2461)

Field characters FW 14–16mm. Forewing dark brown with straight cream and (sometimes) brown inner cross-band and thinner, irregular wavy white outer band, curved near leading edge, with a central inward projection and thickly edged on outer side by brown. Hindwing dark brown, with banded brown and white fringes and a white spot near outer edge. *Grammodes bifasciata* (Petagna), which is also found in southern Europe and might occur in Britain, is larger and both cream cross-bands are straight. **Flight season** Two generations in mainland Europe, May–Jun and Aug–Sep. Comes to sugar and readily to light. **Life cycle** Overwinters as a pupa. Larva Jun–Oct. **Larval foodplants** Bramble, oaks and other plants. **Habitat** Maquis scrub, waste ground and cultivated land. **Status and distribution** Rare immigrant. Two records. One at sugar near Dartmouth, Devon, on 23 Sep 1903 and one at light at Crowborough, Sussex, on 30 Sep 1990. Resident in southern Europe and much of Africa.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

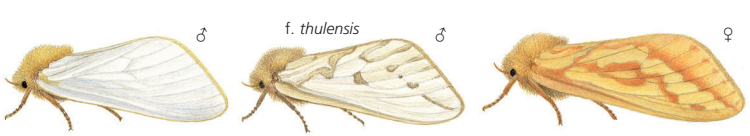
Hepialidae Swift moths

Orange Swift (p. 25)
Triodia sylvina

Common Swift (p. 25)
Korscheltellus lupulina

Map-winged Swift (p. 26)
Korscheltellus fusconebulosa

Gold Swift (p. 26)
Phymatopus hecta



Ghost Moth (p. 26)
Hepialus humuli

Cossidae Leopard and goat moths

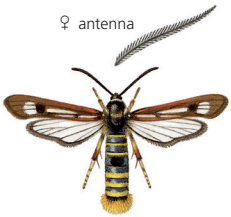
Goat Moth (p. 27)
Cossus cossus

Leopard Moth (p. 27)
Zeuzera pyrina

Reed Leopard (p. 28)
Phragmataecia castaneae

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Sesiidae Clearwing moths



Raspberry Clearwing (p. 29)
Pennisetia hylaeiformis

Hornet Moth (p. 30)
Sesia apiformis

Lunar Hornet Moth (p. 30)
Sesia bembeciformis

Dusky Clearwing (p. 30)
Paranthrene tabaniformis

Welsh Clearwing (p. 31)
Synanthedon scoliaeformis

White-barred Clearwing (p. 31)
Synanthedon spheciformis

Large Red-belted Clearwing (p. 31)
Synanthedon culiciformis

Red-tipped Clearwing (p. 32)
Synanthedon formicaeformis

Sallow Clearwing (p. 32)
Synanthedon flaviventris

Orange-tailed Clearwing (p. 32)
Synanthedon andrenaeformis

Red-belted Clearwing (p. 33)
Synanthedon myopaeformis

Yellow-legged Clearwing (p. 33)
Synanthedon vespiformis

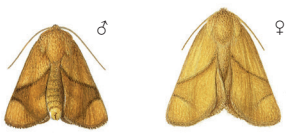
Currant Clearwing (p. 33)
Synanthedon tipuliformis

Six-belted Clearwing (p. 34)
Bembecia ichneumoniformis

Fiery Clearwing (p. 34)
Pyropteron chrysidiformis

Thrift Clearwing (p. 34)
Pyropteron muscaeformis

Limacodidae



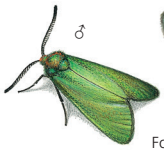
Festoon (p. 35)
Apoda limacodes

Triangle (p. 36)
Heterogenea asella

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Zygaenidae Forester and burnet moths

Scarce Forester (p. 37)
Jordanita globulariae



Forester (p. 37)
Adscita statices

Cistus Forester (p. 37)
Adscita geryon

Transparent Burnet (p. 38)

Zygaena purpuralis | *Z. p. segontii* | *Z. p. sabulosa* | *Z. p. caledonensis* | *Z. p. caledonensis* f. *obscura*

Slender Scotch Burnet (p. 38)
Zygaena loti scotica

Scotch Burnet (p. 38)
Zygaena exulans subochracea

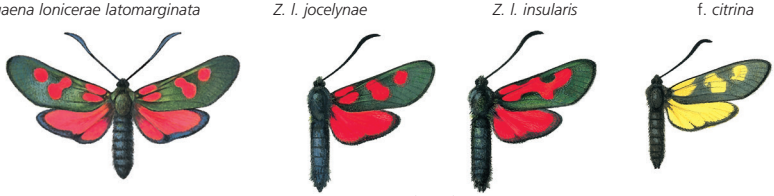
New Forest Burnet (p. 39)
Zygaena viciae ytenensis

Six-spot Burnet (p. 39)

Zygaena filipendulae stephensi | f. *unitella* | f. *flava*

Narrow-bordered Five-spot Burnet (p. 40)

Zygaena lonicerae latomarginata | *Z. l. jocelynae* | *Z. l. insularis* | f. *citrina*



Five-spot Burnet (p. 40)

Zygaena trifolii decreta | *Z. t. palustrella* | f. *minoides* | f. *lutescens*

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Drepanidae Hook-tips and lutestrings

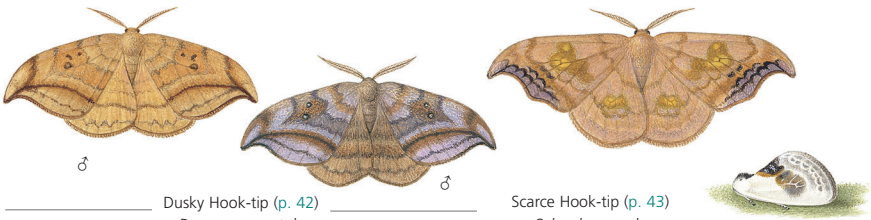
Scalloped Hook-tip (p. 41)
Falcaria lacertinaria

Oak Hook-tip (p. 42)
Watsonalla binaria

Barred Hook-tip (p. 42)
Watsonalla cultraria

Pebble Hook-tip (p. 42)
Drepana falcataria falcataria

D. f. scotica



Dusky Hook-tip (p. 42)
Drepana curvatula

Scarce Hook-tip (p. 43)
Sabra harpagula

Chinese Character (p. 43)
Cilix glaucata

f. *fusca*

Peach Blossom (p. 43)
Thyatira batis

Buff Arches (p. 44)
Habrosyne pyritoides

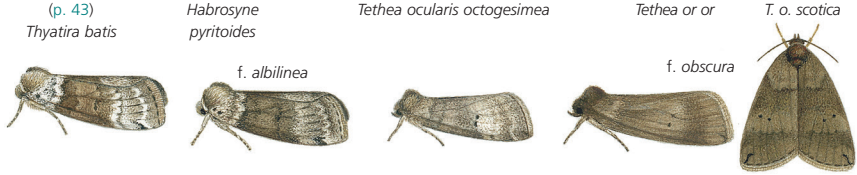
Figure of Eighty (p. 44)
Tethea ocularis octogesimea

Poplar Lutestring (p. 44)
Tethea or

T. o. scotica

f. *albilinea*

f. *obscura*



Satin Lutestring (p. 45)
Tetheella fluctuosa

Common Lutestring (p. 45)
Ochropacha duplaris

f. *nubilata*

Oak Lutestring (p. 45)
Cymatophorina diluta

Yellow Horned (p. 46)
Achlya flavicornis scotica

A. f. galbanus

Frosted Green (p. 46)
Polyploca ridens

f. *fumosa*

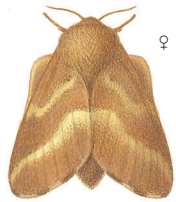
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Lasiocampidae Eggar and lappet moths

December Moth (p. 47)
Poecilocampa populi

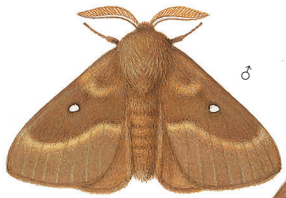
Pale Eggar (p. 47)
Trichiura crataegi

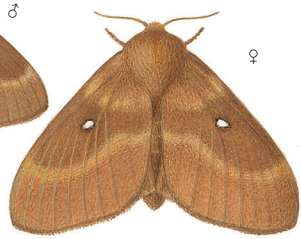
Lackey (p. 48)
Malacosoma neustria



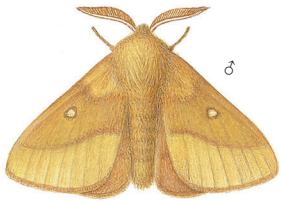
Ground Lackey (p. 48)
Malacosoma castrensis

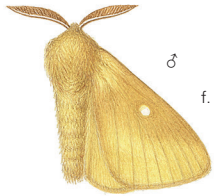
Small Eggar (p. 48)
Eriogaster lanestris





Grass Eggar (p. 49)
Lasiocampa trifolii



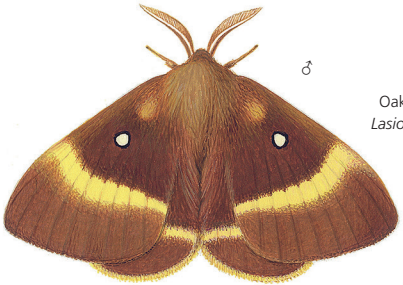


f. *obsoleta*

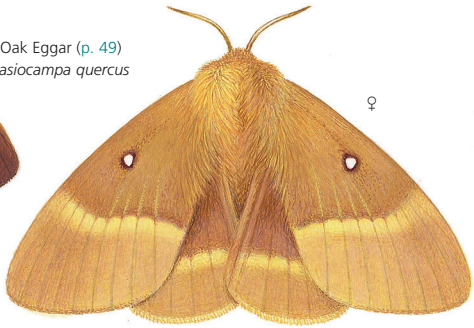
Pale Grass Eggar (p. 49)
Lasiocampa trifolii flava

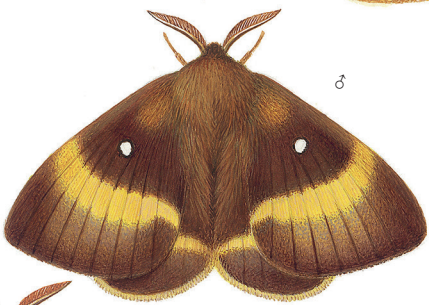
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

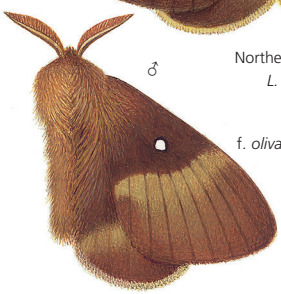
Lasiocampidae Eggar and lappet moths



Oak Eggar (p. 49)
Lasiocampa quercus

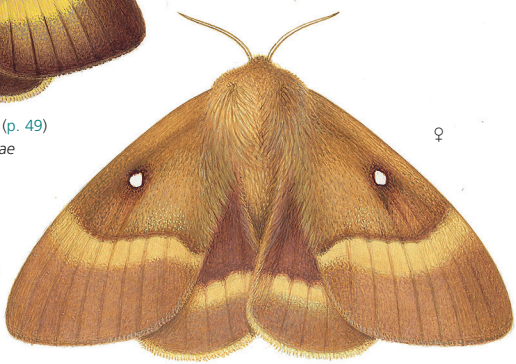


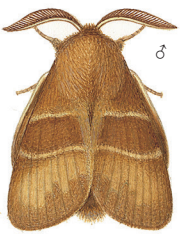


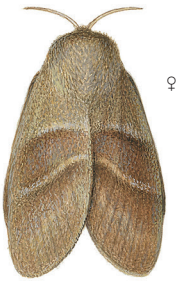


Northern Eggar (p. 49)
L. q. callunae

f. *olivacea*





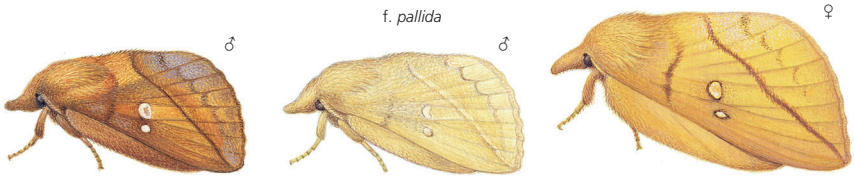


Fox Moth (p. 50)
Macrothylacia rubi

Pine-tree Lappet (p. 50)
Dendrolimus pini

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Lasiocampidae Eggar and lappet moths



Drinker (p. 51)
Euthrix potatoria

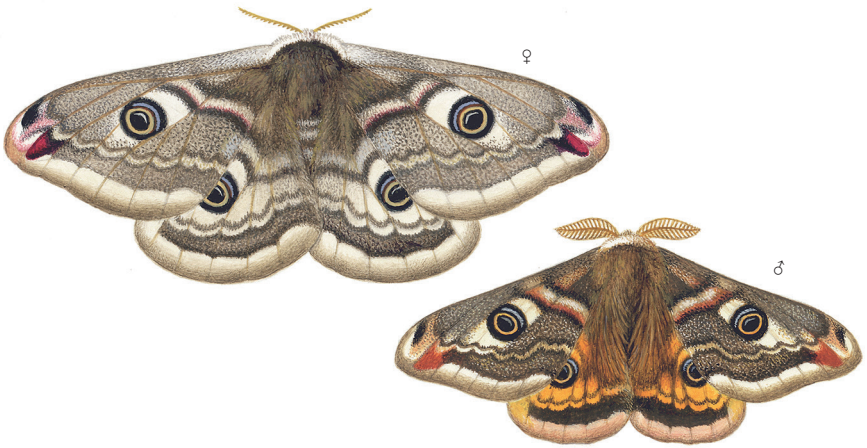
Small Lappet (p. 51)
Phyllodesma ilicifolia

Lappet (p. 51)
Gastropacha quercifolia

Endromidae

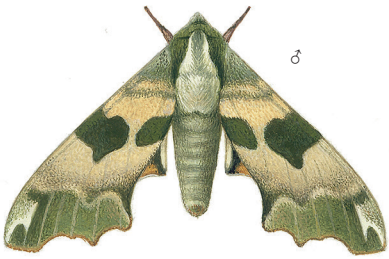
Kentish Glory (p. 52)
Endromis versicolora

Saturniidae Emperor moths

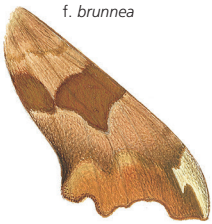


Emperor Moth (p. 53)
Saturnia pavonia

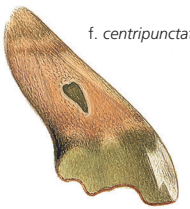
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025



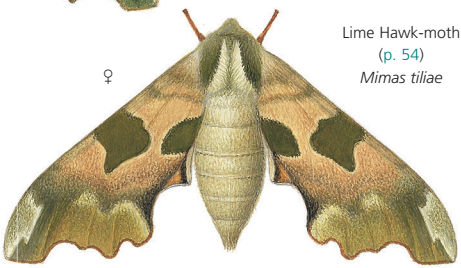
♂



f. *brunnea*

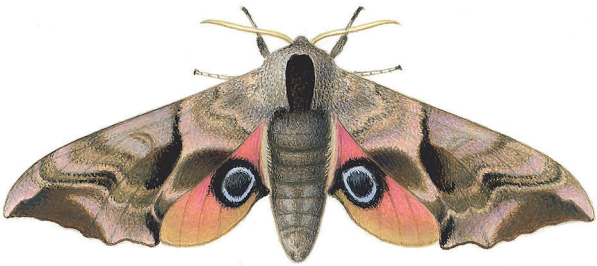


f. *centripunctata*



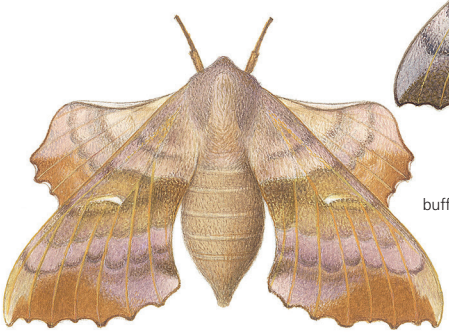
♀

Lime Hawk-moth
(p. 54)
Mimas tiliae



Eyed Hawk-moth (p. 55)
Smerinthus ocellata

♂

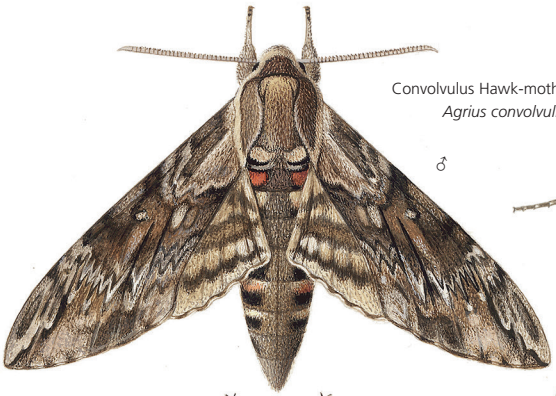


buff form ♀

Poplar Hawk-moth (p. 55)
Laothoe populi

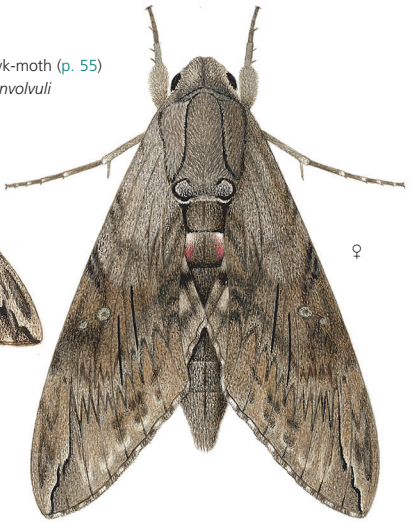
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Sphingidae: Sphinginae Hawk-moths

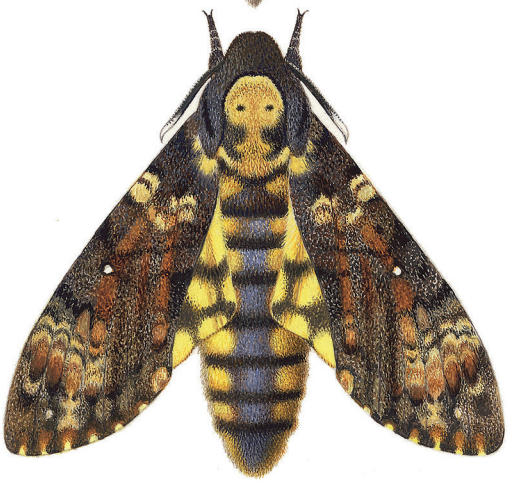


Convolvulus Hawk-moth (p. 55)
Agrius convolvuli

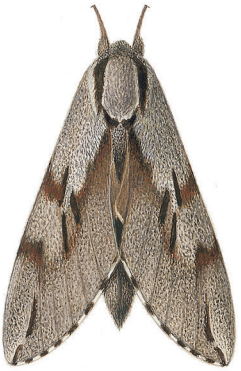
♂



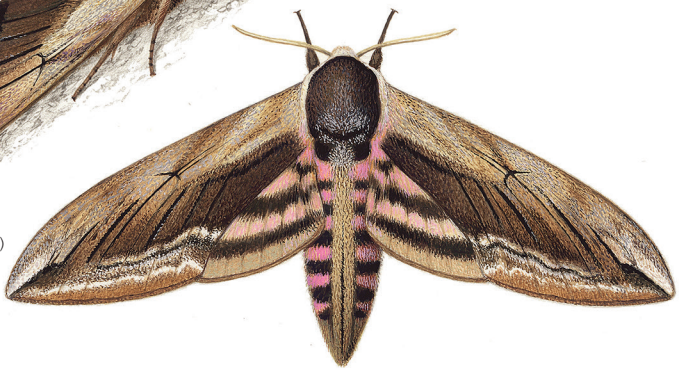
♀



Death's-head Hawk-moth (p. 56)
Acherontia atropos

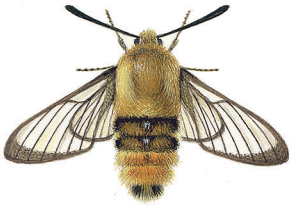


Pine Hawk-moth (p. 56)
Sphinx pinastri

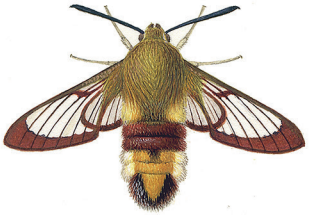


Privet Hawk-moth (p. 56)
Sphinx ligustri

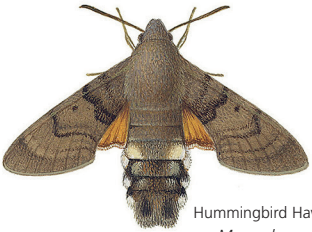
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025



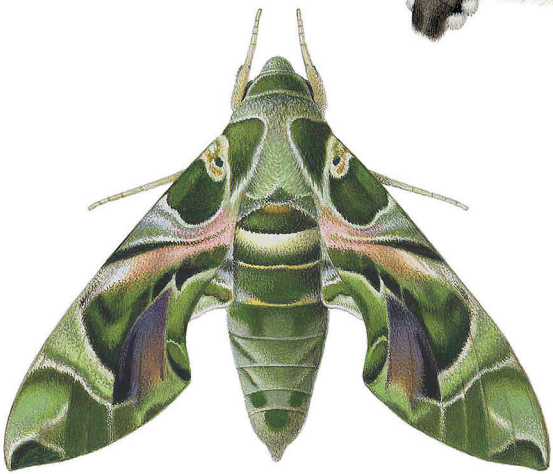
Narrow-bordered Bee Hawk-moth (p. 57)
Hemaris tityus



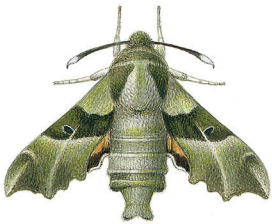
Broad-bordered Bee Hawk-moth (p. 57)
Hemaris fuciformis



Hummingbird Hawk-moth (p. 58)
Macroglossum stellatarum



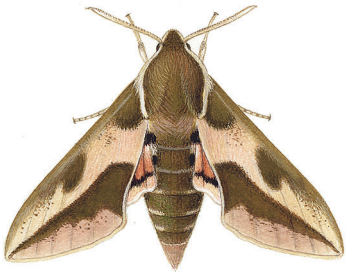
Oleander Hawk-moth (p. 58)
Daphnis nerii



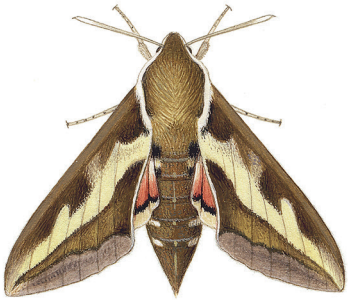
Willowherb Hawk-moth (p. 58)
Proserpinus proserpina

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

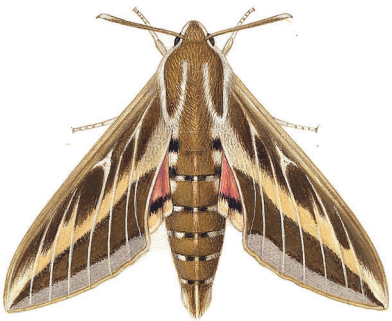
Sphingidae: Macroglossinae Hawk-moths



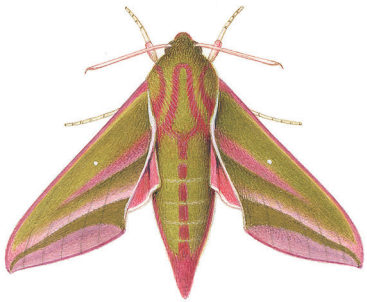
Spurge Hawk-moth (p. 58)
Hyles euphorbiae



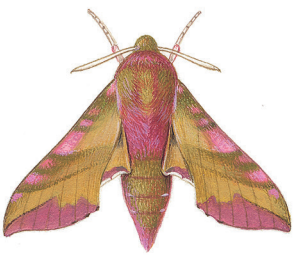
Bedstraw Hawk-moth (p. 59)
Hyles gallii



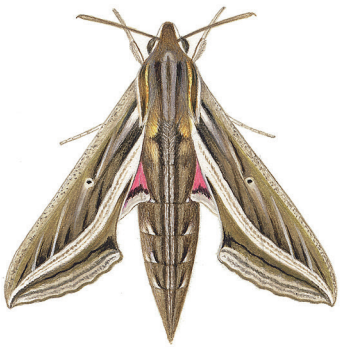
Striped Hawk-moth (p. 59)
Hyles livornica



Elephant Hawk-moth (p. 62)
Deilephila elpenor

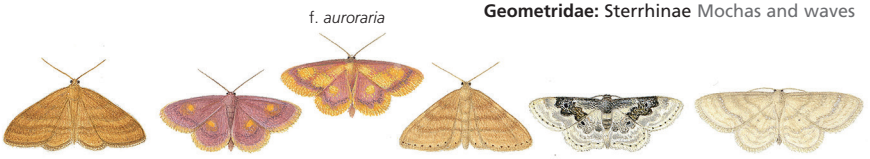


Small Elephant Hawk-moth (p. 62)
Deilephila porcellus



Silver-striped Hawk-moth (p. 62)
Hippotion celerio

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025



Ochraceous Wave (p. 64) *Idaea serpentata*

Purple-bordered Gold (p. 64) *Idaea muricata*

Bright Wave (p. 65) *Idaea ochrata*

Least Carpet (p. 65) *Idaea rusticata*

Silky Wave (p. 65) *Idaea dilutaria*

Dwarf Cream Wave (p. 66) *Idaea fuscovenosa*

Isle of Wight Wave (p. 66) *Idaea humiliata*

Small Dusty Wave (p. 66) *Idaea seriata*

Satin Wave (p. 67) *Idaea subsericeata*

Dotted Border Wave (p. 67) *Idaea sylvestraria*

Single-dotted Wave (p. 67) *Idaea dimidiata*

Treble Brown Spot (p. 68) *Idaea trigeminata*

Small Fan-footed Wave (p. 68) *Idaea biselata*

Weaver's Wave (p. 68) *Idaea contiguaria*

Small Scallop (p. 69) *Idaea emarginata*

Riband Wave (p. 69) *Idaea aversata*

Portland Ribbon Wave (p. 69) *Idaea degeneraria*

Plain Wave (p. 70) *Idaea straminata*

Lewes Wave (p. 70) *Scopula immorata*

Sub-angled Wave (p. 70) *Scopula nigropunctata*

Lace Border (p. 71) *Scopula ornata*

Tawny Wave (p. 71) *Scopula rubiginata*

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Geometridae: Sterrhinae Mochas and waves

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Geometridae: Larentiinae Carpets, pugs and allies

Oblique Striped (p. 77)
Phibalapteryx virgata

Lead Belle (p. 78)
Scotopteryx mucronata umbrifera

S. m. scotica

July Belle (p. 78)
Scotopteryx luridata

Spanish Carpet (p. 78)
Scotopteryx peribolata

Chalk Carpet (p. 79)
Scotopteryx bipunctaria

Fortified Carpet (p. 79)
Scotopteryx moeniata

Shaded Broad-bar (p. 79)
Scotopteryx chenopodiata

Oblique Carpet (p. 80)
Orthonama vittata

Gem (p. 80)
Nycterosea obstipata

Red Carpet (p. 80)
Xanthorhoe decoloraria decoloraria

X. d. hethlandica

Garden Carpet (p. 81)
Xanthorhoe fluctuata

Balsam Carpet (p. 81)
Xanthorhoe biriviata

Red Twin-spot Carpet (p. 81)
Xanthorhoe spadicearia

Dark-barred Twin-spot Carpet (p. 82)
Xanthorhoe ferrugata

Flame Carpet (p. 82)
Xanthorhoe designata

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Geometridae: Larentiinae Carpets, pugs and allies

Silver-ground Carpet (p. 82)
Xanthorhoe montanata montanata

Traveller (p. 84)
Costaconvexa centrostrigaria

Large Twin-spot Carpet (p. 83)
Xanthorhoe quadrifasiata

Royal Mantle (p. 83)
Catarhoe cuculata

Ruddy Carpet (p. 83)
Catarhoe rubidata

Many-lined (p. 84)
Costaconvexa polygrammata

Yellow Shell (p. 84)

Camptogramma bilineata bilineata | *C. b. atlantica* | *C. b. bilineata* | *C. b. bilineata* | *C. b. hibernica* | *C. b. isolata*

Small Argent and Sable (p. 84)
Epirrhoe tristata

Common Carpet (p. 85)
Epirrhoe alternata alternata | *E. a. obscurata*

Wood Carpet (p. 85)
Epirrhoe rivata

dark form, Co. Clare

Galium Carpet (p. 85)
Epirrhoe galiata

Cloaked Carpet (p. 86)
Euphyia biangulata

Sharp-angled Carpet (p. 86)
Euphyia unangulata

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Shoulder Stripe (p. 86)
Earophila badiata

Streamer (p. 87)
Anticlea derivata

Beautiful Carpet (p. 87)
Mesoleuca albicillata

Dark Spinach (p. 87)
Pelurga comitata

Mallow (p. 87)
Larentia clavaria

Yellow-ringed Carpet (p. 88)
Entephria flavicinctata flavicinctata
E. f. ruficinctata

Grey Mountain Carpet (p. 88)
Entephria caesiata

White-banded Carpet (p. 88)
Spargania luctuata

July Highflyer (p. 89)
Hydriomena furcata

July Highflyer (p. 89)
Hydriomena furcata

May Highflyer (p. 89)
Hydriomena impluviata

Ruddy Highflyer (p. 89)
Hydriomena ruberata

Pine Carpet (p. 90)
Pennithera firmata

Orkney specimen

Chestnut-coloured Carpet (p. 90)
Thera cognata

Spruce Carpet (p. 91)
Thera britannica

Fir Carpet (p. 91)
Thera vetustata

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Geometridae: Larentiinae Carpets, pugs and allies

Grey Pine Carpet (p. 91)
Thera obeliscata

Juniper Carpet (p. 92)
Thera juniperata juniperata

T. j. scotica

Cypress Carpet (p. 92)
Thera cupressata

Blue-bordered Carpet (p. 93)
Plemyria rubiginata rubiginata

P. r. plumbata f. *semifumosa*

Barred Yellow (p. 93)
Cidaria fulvata

Broken-barred Carpet (p. 93)
Electrophaes corylata

f. *albocrenata*

Purple Bar (p. 94)
Cosmorhoe ocellata

Netted Carpet (p. 94)
Eustroma reticulata

Phoenix (p. 94)
Eulithis prunata

Chevron (p. 94)
Eulithis testata

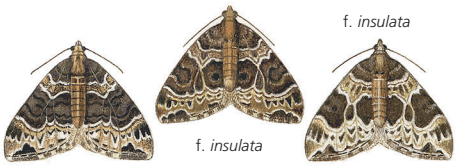
Northern Spinach (p. 95)
Eulithis populata

dark form, Scotland

Spinach (p. 95)
Eulithis mellinata

Barred Straw (p. 96)
Gandaritis pyraliata

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025



Small Phoenix (p. 96)
Ecliptopera silaceata

Red-green Carpet (p. 96)
Chloroclysta siterata

Autumn Green Carpet (p. 97)
Chloroclysta miata

Common Marbled Carpet (p. 97)
Dysstroma truncata truncata

Arran Carpet (p. 97)
Dysstroma truncata concinnata

Dark Marbled Carpet (p. 97)
Dysstroma citrata citrata

D. c. pythonissata

Beech-green Carpet (p. 98)
Colostygia olivata

Green Carpet (p. 98)
Colostygia pectinataria

Mottled Grey (p. 98)
Colostygia multistrigaria

Striped Twin-spot Carpet (p. 99)
Coenotephria salicata

Water Carpet (p. 99)
Lampropteryx suffumata

Devon Carpet (p. 99)
Lampropteryx otregiata

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Geometridae: Larentiinae Carpets, pugs and allies

Northern Winter Moth (p. 100)
Operophtera fagata

Winter Moth (p. 100)
Operophtera brumata

November Moth (p. 101)
Epirrita dilutata

Pale November Moth (p. 101)
Epirrita christyi

Autumnal Moth (p. 102)
Epirrita autumnata

Small Autumnal Moth (p. 102)
Epirrita filigrammaria

Small White Wave (p. 102)
Asthena albulata

Dingy Shell (p. 103)
Euchoeca nebulata

Waved Carpet (p. 103)
Hydrelia sylvata

Small Yellow Wave (p. 103)
Hydrelia flammeolaria

Welsh Wave (p. 103)
Venusia cambrica
f. *bradyi*

Blomer's Rivulet (p. 104)
Venusia blomeri

Drab Looper (p. 104)
Minoa murinata

Brown Scallop (p. 104)
Philereme vetulata

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Dark Umber (p. 105)
Philereme transversata

Argent and Sable (p. 105)
Rheumaptera hastata hastata

R. h. nigrescens

Scallop Shell (p. 106)
Hydria undulata

Scarce Tissue (p. 106)
Hydria cervinalis

Tissue (p. 106)
Triphosa dubitata

Barberry Carpet (p. 107)
Pareulype berberata

Slender-striped Rufous (p. 107)
Coenocalpe lapidata

Small Waved Umber (p. 108)
Horisme vitalbata

Fern (p. 108)
Horisme tersata

Pretty Chalk Carpet (p. 108)
Melanthia procellata

Dentated Pug (p. 108)
Anticollix sparsata

Chimney Sweeper (p. 109)
Odezia atrata

Twin-spot Carpet (p. 109)
Mesotype didymata didymata
Wigtownshire specimen Ross-shire specimen Berkshire specimen

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Geometridae: Larentiinae Carpets, pugs and allies

Rivulet (p. 110)
Perizoma affinitata

Small Rivulet (p. 110)
Perizoma alchemillata

Barred Rivulet (p. 110)
Perizoma bifaciata

Heath Rivulet (p. 111)
Perizoma minorata

Pretty Pinion (p. 111)
Perizoma blandiata blandiata

Grass Rivulet (p. 111)
Perizoma albulata albulata

Sandy Carpet (p. 112)
Perizoma flavofasciata

Barred Carpet (p. 112)
Martania taeniata

Marsh Carpet (p. 112)
Gagitodes sagittata

All pugs shown at ×1.25

Double-striped Pug (p. 115)
Gymnoscelis rufifasciata

V-Pug (p. 115)
Chloroclystis v-ata

Sloe Pug (p. 115)
Pasiphila chloerata

f. *anthrax*

Green Pug (p. 116)
Pasiphila rectangulata

Bilberry Pug (p. 116)
Pasiphila debiliata

Haworth's Pug (p. 116)
Eupithecia haworthiata

f. *johnsoni*

Slender Pug (p. 117)
Eupithecia tenuiata

Maple Pug (p. 117)
Eupithecia inturbata

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

All pugs shown at ×1.25

Cloaked Pug (p. 117)
Eupithecia abietaria

Toadflax Pug (p. 118)
Eupithecia linariata

E.p. hebudium

Foxglove Pug (p. 118)
Eupithecia pulchellata pulchellata

Channel Islands Pug (p. 118)
Eupithecia ultimaria

Lead-coloured Pug (p. 119)
Eupithecia plumbeolata

Marsh Pug (p. 119)
Eupithecia pygmaeata

Eupithecia venosata venosata

E. v. fumosae

E. v. plumbea

E. v. ochracae

Netted Pug (p. 119)

f. *hirschkei*

Brindled Pug (p. 120)
Eupithecia abbreviata

Oak-tree Pug (p. 120)
Eupithecia dodoneata

Epping Pug (p. 120)
Eupithecia massiliata

melanic form

Juniper Pug (p. 120)
Eupithecia pusillata

Cypress Pug (p. 121)
Eupithecia phoeniceata

f. *angelicata*

f. *nigra*

White-spotted Pug (p. 121)
Eupithecia tripunctaria

Golden-rod Pug (p. 122)
Eupithecia virgaureata

Dwarf Pug (p. 122)
Eupithecia tantillaria

f. *nigra*

Larch Pug (p. 122)
Eupithecia lariciata

Fletcher's Pug/Pauper Pug (p. 123)
Eupithecia egenaria

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Geometridae: Larentiinae Carpets, pugs and allies

All pugs shown at ×1.25

Pimpinel Pug (p. 123)
Eupithecia pimpinellata

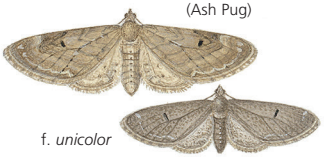
Plain Pug (p. 123)
Eupithecia simpliciata

Goosefoot Pug (p. 124)
Eupithecia sinuosaria

f. *oliveri*

Narrow-winged Pug (p. 124)
Eupithecia nanata

E. i. fraxinata
(Ash Pug)



f. *unicolor*

Angle-barred Pug (p. 125)
Eupithecia innotata

Marbled Pug (p. 125)
Eupithecia irriguata

Ochreous Pug (p. 125)
Eupithecia indigata

Thyme Pug (p. 126)
Eupithecia distinctaria

Lime-speck Pug (p. 126)
Eupithecia centaureata

f. *angelicata*

Pinion-spotted Pug (p. 126)
Eupithecia insigniata

Triple-spotted Pug (p. 127)
Eupithecia trisignaria

Edinburgh Pug (p. 127)
Eupithecia intricata intricata

f. *callunaria*

E. s. satyrata

E. s. curzoni

Satyr Pug (p. 128)
Eupithecia satyrata

Freyer's Pug (p. 127)
Eupithecia intricata intricata

Mere's Pug (p. 127)
E. i. hibernica

Scarce Pug (p. 128)
Eupithecia extensaria

Wormwood Pug (p. 128)
Eupithecia absinthiata

Ling Pug (p. 128)
E. a. goossensiata

Bleached Pug (p. 129)
Eupithecia expallidata

Valerian Pug (p. 129)
Eupithecia valerianata

Currant Pug (p. 130)
Eupithecia assimilata

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Geometridae: Larentiinae Carpets, pugs and allies

All pugs shown at ×1.25

Common Pug (p. 130)
Eupithecia vulgata

Mottled Pug (p. 131)
Eupithecia exiguata exiguata *E. e. muricolor*

Campanula Pug (p. 131)
Eupithecia denotata

Yarrow Pug (p. 132)
Eupithecia millefoliata

Tawny Speckled Pug (p. 132)
Eupithecia icterata

Bordered Pug (p. 132)
Eupithecia succenturiata

Shaded Pug (p. 133)
Eupithecia subumbrata

Grey Pug (p. 133)
Eupithecia subfuscata

Manchester Treble-bar (p. 133)
Carsia sororiata

Treble-bar (p. 134)
Aplocera plagiata plagiata *A. p. scotica*

Lesser Treble-bar (p. 134)
Aplocera efformata

Purple Treble-bar (p. 134)
Aplocera praeformata

Streak (p. 135)
Chesias legatella

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Geometridae: Larentiinae Carpets, pugs and allies

Broom-tip (p. 135)
Chesias rufata rufata

Grey Carpet (p. 135)
Lithostege griseata

Seraphim (p. 136)
Lobophora halterata

Small Seraphim (p. 136)
Pterapherapteryx sexalata

Yellow-barred Brindle (p. 136)
Acasis viretata

Barred Tooth-striped (p. 137)
Trichopteryx polycommata

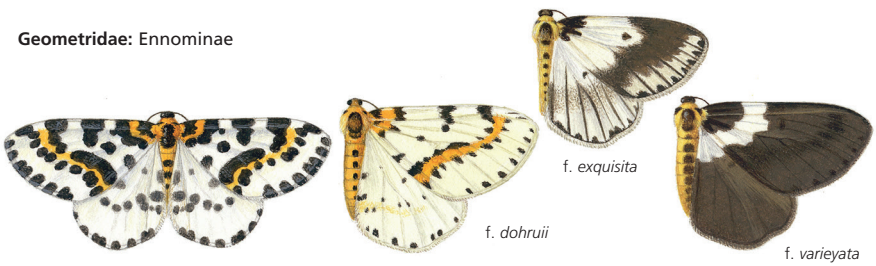
Early Tooth-striped (p. 137)
Trichopteryx carpinata

Geometridae: Archiearinae

Orange Underwing (p. 137)
Archiearis parthenias

Light Orange Underwing (p. 138)
Boudinotiana notha

Geometridae: Ennominae



Magpie (p. 138)
Abraxas grossulariata

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Clouded Magpie (p. 139)
Abraxas sylvata

Clouded Border (p. 139)
Lomaspilis marginata

Scorched Carpet (p. 139)
Ligdia adustata

Ringed Border (p. 140)
Stegania cararia

Dorset Cream Wave (p. 140)
Stegania trimaculata

Peacock Moth (p. 140)
Macaria notata

Sharp-angled
Peacock (p. 140)
Macaria alternata

Dusky Peacock (p. 141)
Macaria signaria

f. *nigrofulvata*

Tawny-barred Angle (p. 141)
Macaria liturata

V-Moth (p. 141)
Macaria wauaria

Netted Mountain Moth (p. 142)
Macaria carbonaria

Rannoch Looper (p. 142)
Macaria brunneata

Latticed Heath (p. 143)
Chiasmia clathrata clathrata

f. *alboguttata*

Tamarisk Peacock (p. 143)
Chiasmia aestimaria

Frosted Yellow (p. 143)
Isturgia limbaria

Little Thorn (p. 144)
Cepphis advenaria

Brown Silver-line
(p. 144)
Petrophora chlorosata

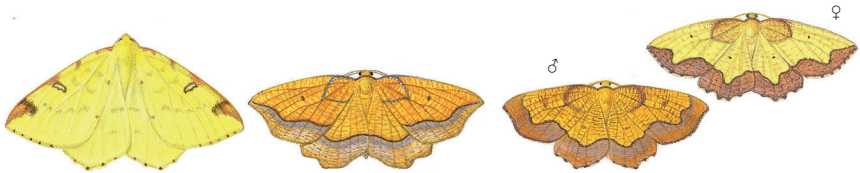
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Geometridae: Ennominae Thorns, beauties, umbers and allies

Barred Umber (p. 144)
Plagodis pulveraria

Scorched Wing (p. 145)
Plagodis dolabraria

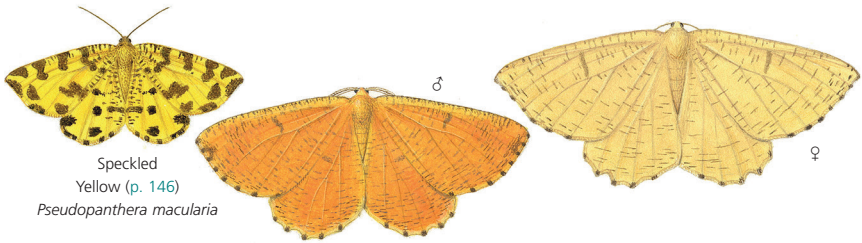
Horse Chestnut (p. 145)
Pachycnemia hippocastanaria



Brimstone Moth (p. 145)
Opisthograptis luteolata

Bordered Beauty (p. 146)
Epione repandaria

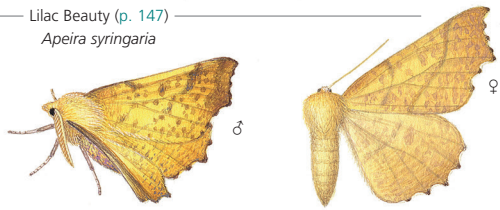
Dark Bordered Beauty (p. 146)
Epione vespertaria



Speckled Yellow (p. 146)
Pseudopanthera macularia

Orange Moth (p. 147)
Angerona prunaria

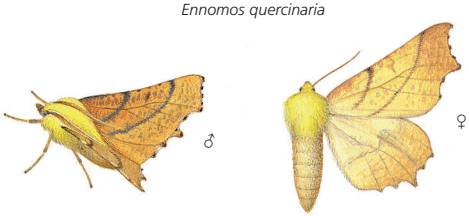
Lilac Beauty (p. 147)
Apeira syringaria



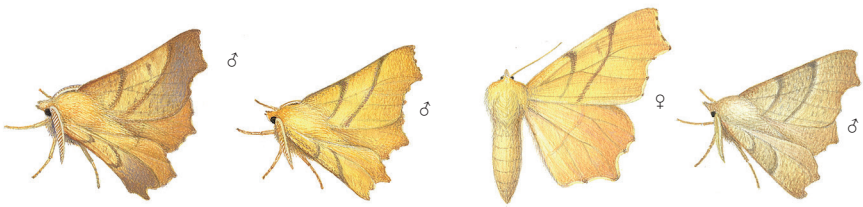
Large Thorn (p. 147)
Ennomos autumnaria

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

August Thorn (p. 148)
Ennomos quercinaria



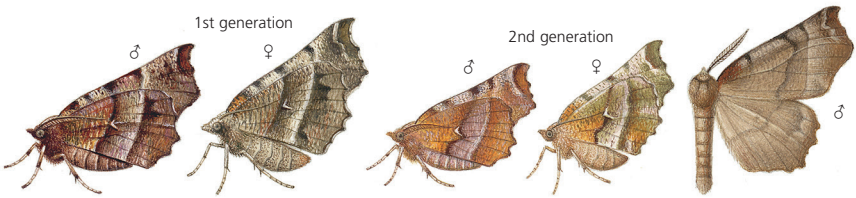
Canary-shouldered Thorn (p. 148)
Ennomos alniaria



Dusky Thorn (p. 148)
Ennomos fuscantaria

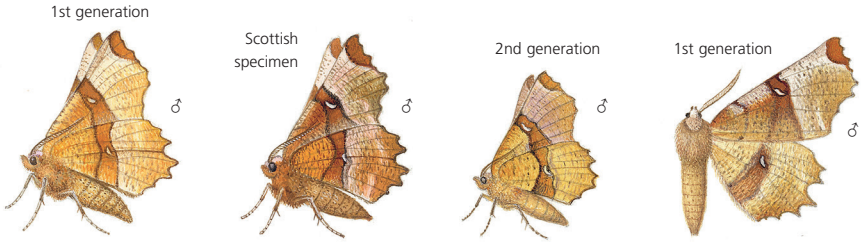
September Thorn (p. 149)
Ennomos erosaria

Clouded August Thorn (p. 149)
Ennomos quercaria



Early Thorn (p. 149)
Selenia dentaria

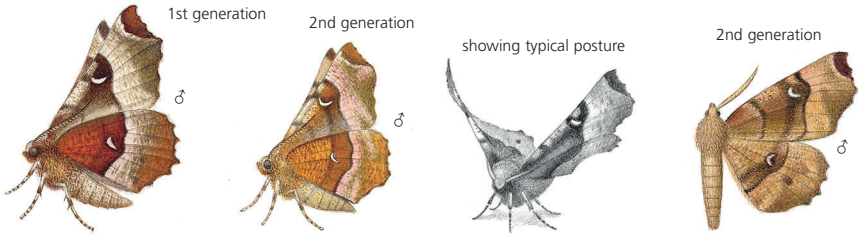
f. *harrisoni*



Lunar Thorn (p. 149)
Selenia lunularia

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Geometridae: Ennominae Thorns, beauties, umbers and allies

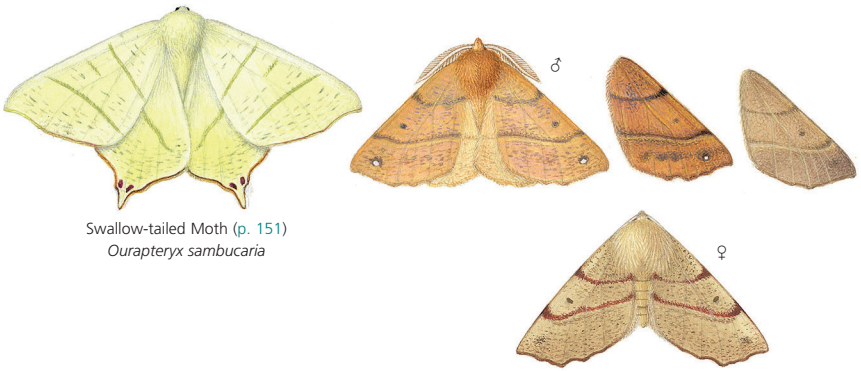


Purple Thorn (p. 150)
Selenia tetralunaria

Scalloped Hazel (p. 150)
Odontopera bidentata

Scalloped Oak (p. 150)
Crocallis elinguaria

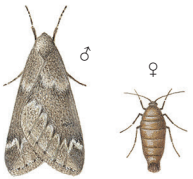
Dusky Scalloped Oak (p. 151)
Crocallis dardoinaria



Swallow-tailed Moth (p. 151)
Ourapteryx sambucaria

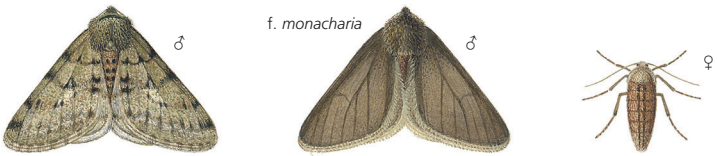
Feathered Thorn (p. 151)
Colotois pennaria

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025



March Moth (p. 152)
Alsophila aescularia

Small Brindled Beauty (p. 152)
Apocheima hispidaria



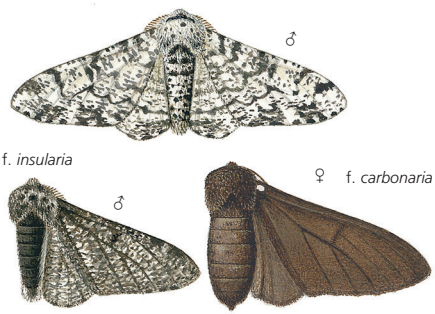
Pale Brindled Beauty (p. 152)
Phigalia pilosaria

Brindled Beauty (p. 153)
Lycia hirtaria

Rannoch Brindled Beauty (p. 153)
Lycia lapponaria

Belted Beauty (p. 154)
Lycia zonaria

Oak Beauty (p. 155)
Biston strataria

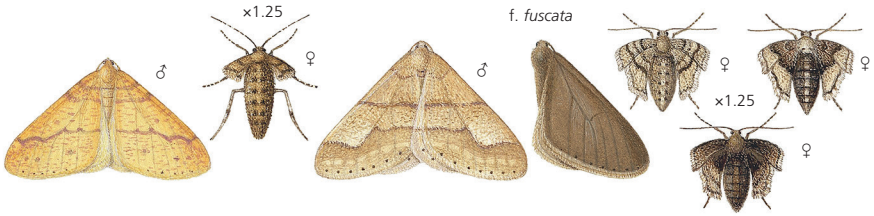


Peppered Moth (p. 155)
Biston betularia

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Geometridae: Ennominae Thorns, beauties, umbers and allies

Spring Usher (p. 155)
Agriopis leucophaearia

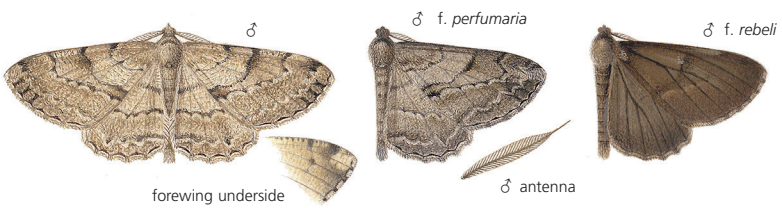


Scarce Umber (p. 156)
Agriopis aurantiaria

Dotted Border (p. 156)
Agriopis marginaria

Mottled Umber (p. 156)
Erannis defoliaria

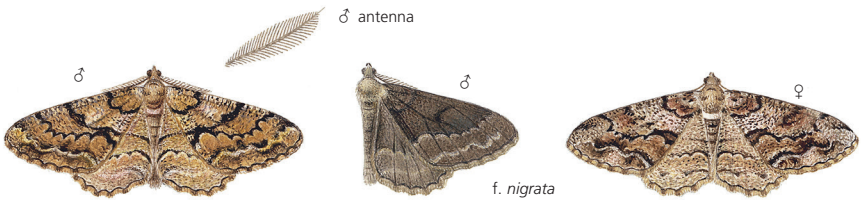
Waved Umber (p. 157)
Menophra abruptaria



Willow Beauty (p. 157)
Peribatodes rhomboidaria

Olive-tree Beauty (p. 158)
Peribatodes umbraria

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025



Feathered Beauty (p. 158)
Peribatodes secundaria

Lydd Beauty (p. 158)
Peribatodes ilicaria

Bordered Grey (p. 159)
Selidosema brunnearia

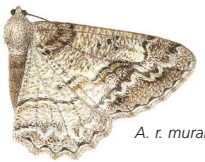
Ringed Carpet (p. 159)
Cleora cinctaria cinctaria *C. c. bowesi*

Satin Beauty (p. 160)
Deileptenia ribeata

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Mottled Beauty (p. 160)
Alcis repandata repandata

Alcis r. r.
f. *conversaria*



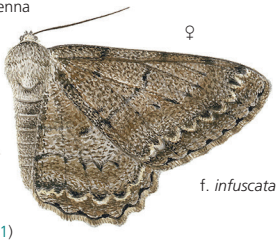
A. r. muraria

A. r. muraria

Mottled Beauty (p. 160)

Dotted Carpet (p. 161)
Alcis jubata

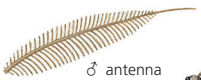
forewing underside



f. *infuscata*

Great Oak Beauty (p. 161)
Hypomecis roboraria

forewing underside

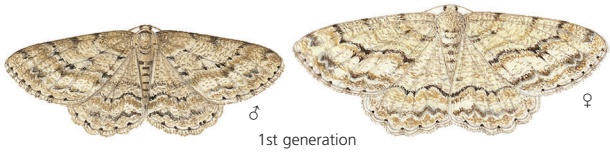


f. *humperti*

Pale Oak Beauty (p. 161)
Hypomecis punctinalis

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Speckled Beauty (p. 162)
Fagivorina arenaria

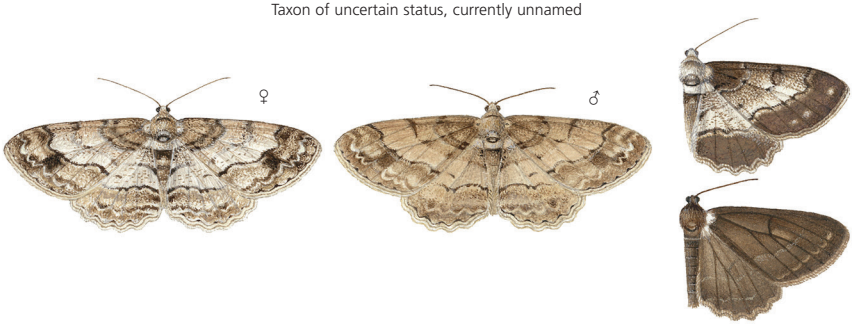


1st generation

2nd generation

Engrailed (p. 162)
Ectropis crepuscularia

Small Engrailed (p. 163)
Taxon of uncertain status, currently unnamed

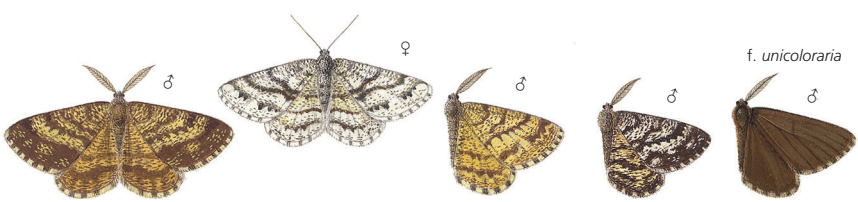


Square Spot (p. 163)
Paradarisa consonaria

Brindled White-spot (p. 163)
Parectropis similaria

f. *variegata*

Grey Birch (p. 164)
Aethalura punctulata



Common Heath (p. 164)
Ematurga atomaria

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Geometridae: Ennominae Thorns, beauties, umbers and allies

northern specimens — southern specimens

Bordered White (p. 164)
Bupalus piniaria

Common White Wave (p. 165)
Cabera pusaria

Common Wave (p. 165)
Cabera exanthemata

White-pinion Spotted (p. 165)
Lomographa bimaculata

Clouded Silver (p. 166)
Lomographa temerata

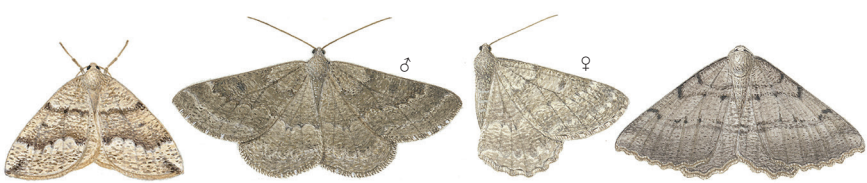
Sloe Carpet (p. 166)
Aleucis distinctata

Early Moth (p. 166)
Theria primaria

Light Emerald (p. 167)
Campaea margaritaria

f. *prasinaria*

Barred Red (p. 167)
Hylaea fasciaria



Banded Pine Carpet (p. 167)
Pungeleria capreolaria

Scotch Annulet (p. 168)
Gnophos obfuscata

Irish Annulet (p. 168)
Gnophos dumetata

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

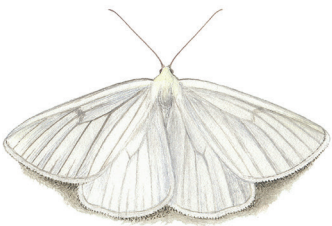
Annulet (p. 168)
Charissa obscurata

specimen from: Lulworth, Dorset | Swanage, Dorset | Wareham, Dorset | Portland, Dorset

Brussels Lace (p. 169)
Cleorodes lichenaria

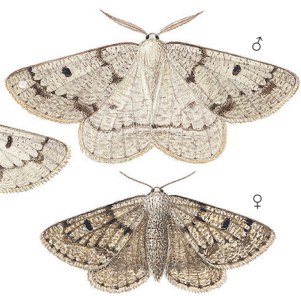
Black Mountain Moth (p. 169)
Glacies coracina

Common Forest Looper (p. 169)
Pseudocoremia suavis



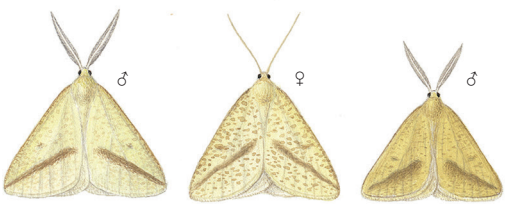
Black-veined Moth (p. 170)
Siona lineata

specimen from Dorset chalk



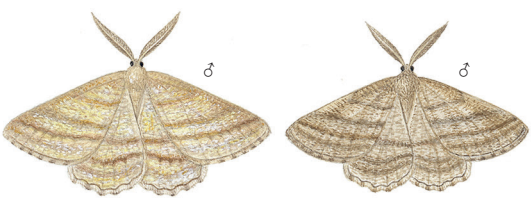
specimens from Surrey heaths

Grey Scalloped Bar (p. 170)
Dyscia fagaria



Straw Belle (p. 171)
Aspitates gilvaria gilvaria

Yellow Belle (p. 171)
Aspitates ochrearia



Grass Wave (p. 172)
Perconia strigillaria

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Geometridae: Geometrinae Emeralds

Rest Harrow (p. 172)
Aplasta ononaria

Grass Emerald (p. 173)
Pseudoterpna pruinata

Jersey Emerald (p. 173)
Pseudoterpna coronillaria

Large Emerald (p. 173)
Geometra papilionaria

Blotched Emerald (p. 173)
Comibaena bajularia

Essex Emerald (p. 174)
Thetidia smaragdaria

Small Emerald (p. 174)
Hemistola chrysoprasaria

Little Emerald (p. 174)
Jodis lactearia

Sussex Emerald (p. 175)
Thalera fimbrialis

Common Emerald (p. 175)
Hemithea aestivaria

Small Grass Emerald (p. 175)
Chlorissa viridata

Southern Grass Emerald (p. 176)
Chlorissa cloraria

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Oak Processionary Moth (p. 178)
Thaumetopoea processionea

Pine Processionary Moth (p. 178)
Thaumetopoea pityocampa

Puss Moth (p. 179)
Cerura vinula

The Feline (p. 179)
Cerura erminea

Sallow Kitten (p. 179)
Furcula furcula

Alder Kitten (p. 180)
Furcula bicuspis

Poplar Kitten (p. 180)
Furcula bifida

Tawny Prominent (p. 180)
Harpyia milhauseri

Lobster Moth (p. 181)
Stauropus fagi

f. *obscura*

Marbled Brown (p. 181)
Drymonia dodonaea

Lunar Marbled Brown (p. 181)
Drymonia ruficornis

Iron Prominent (p. 182)
Notodonta dromedarius

northern form

Pebble Prominent (p. 182)
Notodonta ziczac

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Notodontidae Prominent, kitten and processionary moths

Large Dark Prominent (p. 182)
Notodonta torva

Three-humped Prominent (p. 182)
Notodonta tritophus

Great Prominent (p. 183)
Peridea anceps

Swallow Prominent (p. 183)
Pheosia tremula

Lesser Swallow Prominent (p. 183)
Pheosia gnoma

White Prominent (p. 184)
Leucodonta bicoloria

dark form

Pale Prominent (p. 184)
Pterostoma palpina

Coxcomb Prominent (p. 184)
Ptilodon capucina

Maple Prominent (p. 185)
Ptilodon cucullina

Scarce Prominent (p. 185)
Odontosia carmelita

Plumed Prominent (p. 185)
Ptilophora plumigera

Buff-tip (p. 186)
Phalera bucephala

Dusky Marbled Brown (p. 186)
Gluphisia crenata

Chocolate-tip (p. 186)
Clostera curtula

Small Chocolate-tip (p. 187)
Clostera pigra

Scarce Chocolate-tip (p. 187)
Clostera anachoreta

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Erebidae Tussocks, ermines, tigers, footman moths, snouts, fan-foots, marbleds, blacknecks and underwings

Herald (p. 189)
Scoliopteryx libatrix

Straw Dot (p. 190)
Rivula sericealis

Snout (p. 190)
Hypena proboscidalis

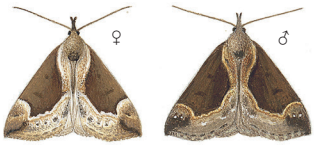
f. *unicolor*

Buttoned Snout (p. 190)
Hypena rostralis

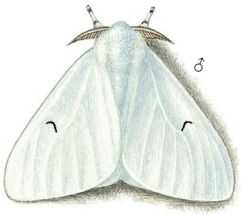
Paignton Snout (p. 191)
Hypena obesalis

Bloxworth Snout (p. 191)
Hypena obsitalis

Chevron Snout (p. 191)
Hypena lividalis



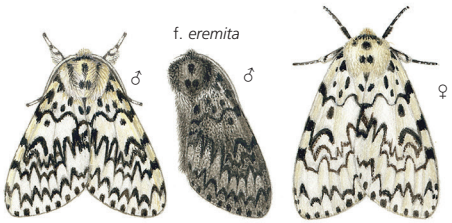
Beautiful Snout (p. 192)
Hypena crassalis



Black V Moth (p. 192)
Arctornis l-nigrum

White Satin Moth (p. 192)
Leucoma salicis

f. *eremita*



Black Arches (p. 193)
Lymantria monacha

Gypsy Moth (p. 193)
Lymantria dispar

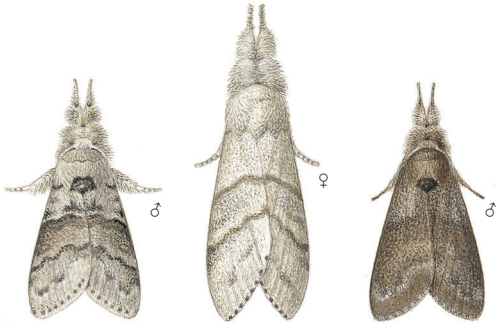
Brown-tail (p. 194)
Euproctis chrysorrhoea

Yellow-tail (p. 194)
Euproctis similis

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

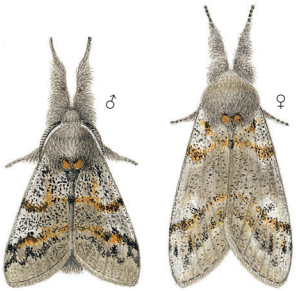
Erebidae Tussocks, ermines, tigers, footman moths, snouts, fan-foots, marbleds, blacknecks and underwings

Reed Tussock (p. 194)
Laelia coenosa

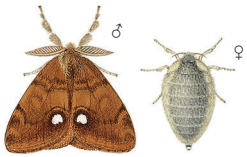


Pale Tussock (p. 195)
Calliteara pudibunda

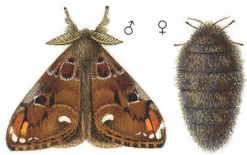
f. *concolor*



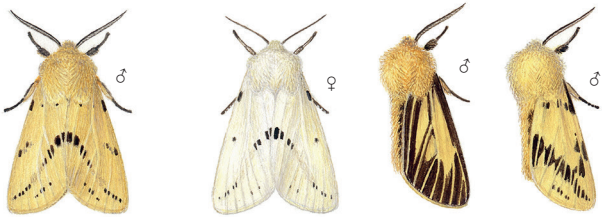
Dark Tussock (p. 195)
Dicallomera fascelina



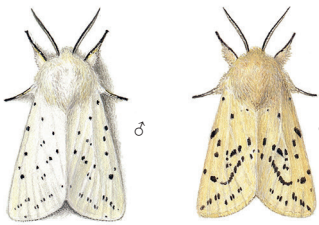
Vapourer (p. 195)
Orgyia antiqua



Scarce Vapourer (p. 196)
Orgyia recens

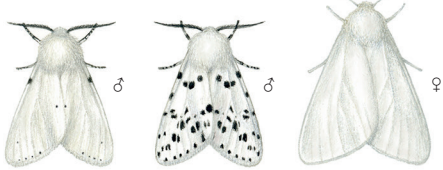


Buff Ermine (p. 196)
Spilosoma lutea



White Ermine (p. 197)
Spilosoma lubricipeda

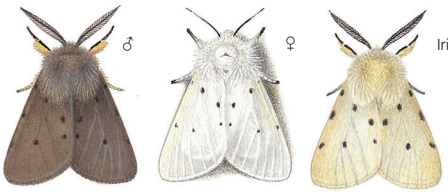
Water Ermine (p. 197)
Spilosoma urticae



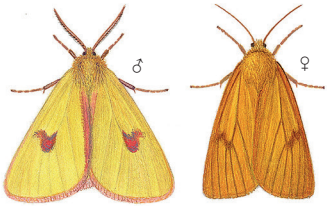
Autumn Webworm/Mulberry Moth (p. 197)
Hyphantria cunea

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Erebidae Tussocks, ermines, tigers, footman moths, snouts, fan-foots, marbleds, blacknecks and underwings

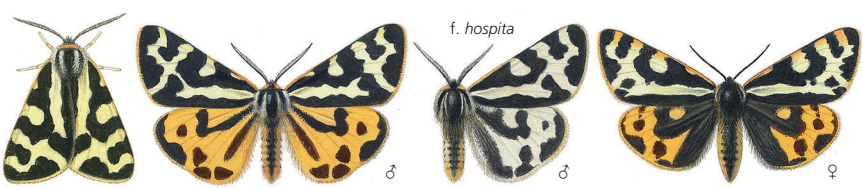


Muslin Moth (p. 197)
Diaphora mendica

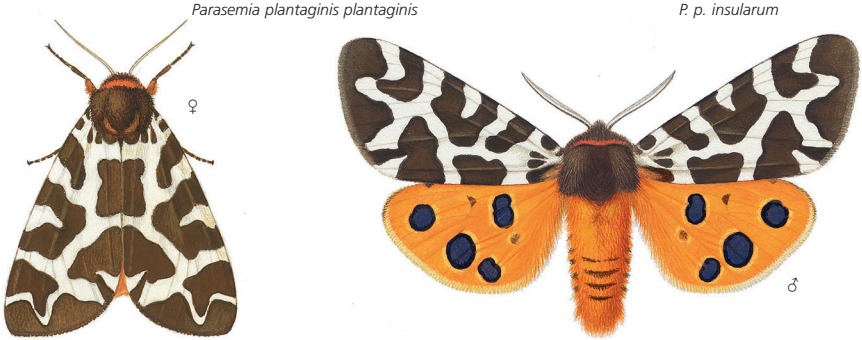


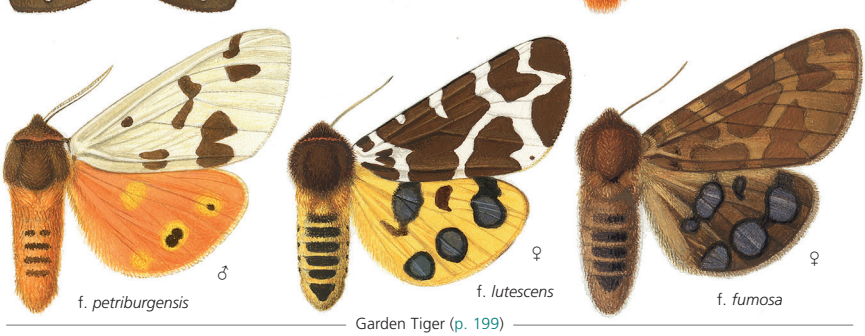
Clouded Buff (p. 198)
Diacrisia sannio

Ruby Tiger (p. 198)
P. f. fuliginosa — *Phragmatobia fuliginosa borealis* — *P. f. fuliginosa*



Wood Tiger (p. 198)
Parasemia plantaginis plantaginis — *P. p. insularum*

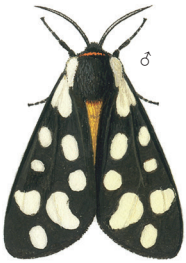


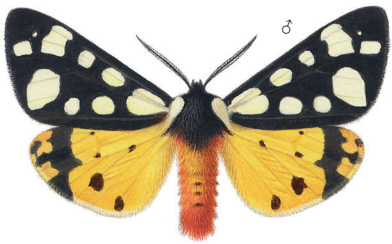


Garden Tiger (p. 199)
Arctia caja

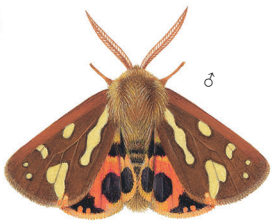
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Erebidae Tussocks, ermines, tigers, footman moths, snouts, fan-foots, marbleds, blacknecks and underwings

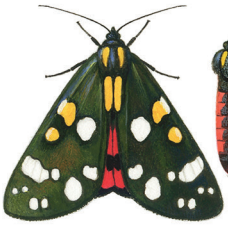


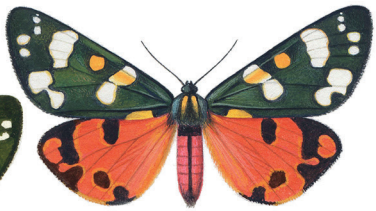


Cream-spot Tiger (p. 199)
Arctia villica

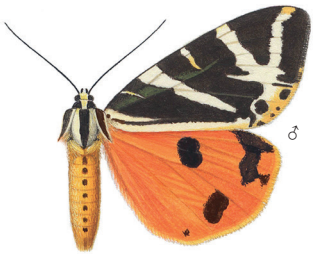


Patton's Tiger (p. 200)
Hyphoraia testudinaria





Scarlet Tiger (p. 200)
Callimorpha dominula



Jersey Tiger (p. 200)
Euplagia quadripunctaria

Cinnabar (p. 201)
Tyria jacobaeae

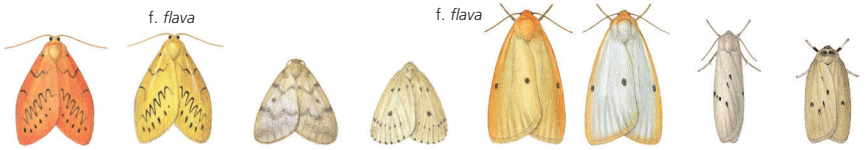
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Erebidae Tussocks, ermines, tigers, footman moths, snouts, fan-foots, marbleds, blacknecks and underwings

Speckled Footman (p. 201)
Coscinia cribraria

Feathered Footman (p. 201)
Coscinia striata

Crimson Speckled (p. 202)
Utetheisa pulchella



Rosy Footman (p. 202)
Miltochrista miniata

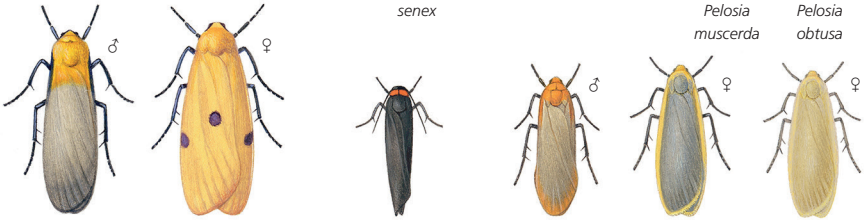
Muslin Footman (p. 202)
Nudaria mundana

Round-winged Muslin (p. 202)
Thumatha senex

Four-dotted Footman (p. 203)
Cybosia mesomella

Dotted Footman (p. 203)
Pelosia muscerda

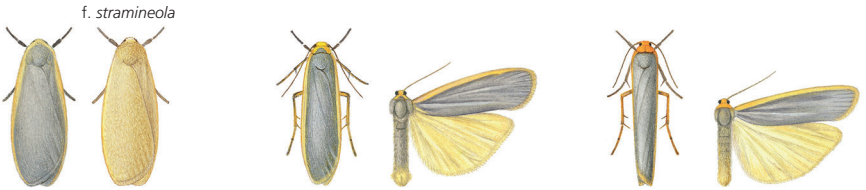
Small Dotted Footman (p. 203)
Pelosia obtusa



Four-spotted Footman (p. 204)
Lithosia quadra

Red-necked Footman (p. 204)
Atolmis rubricollis

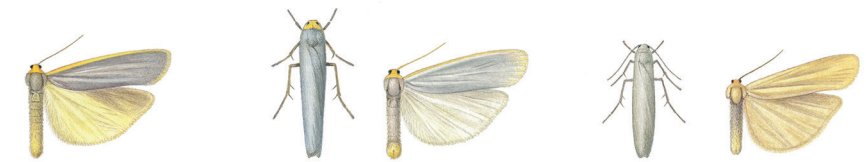
Buff Footman (p. 204)
Eilema depressa



Dingy Footman (p. 204)
Eilema griseola

Common Footman (p. 205)
Eilema lurideola

Scarce Footman (p. 205)
Eilema complana



Northern Footman (p. 205)
Eilema complana sericea

Hoary Footman (p. 205)
Eilema caniola

Pigmy Footman (p. 206)
Eilema pygmaeola pygmaeola

Orange Footman (p. 206)
Eilema sororcula

Dew Moth (p. 206)
Setina irrorella

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Erebidae Tussocks, ermines, tigers, footman moths, snouts, fan-foots, marbleds, blacknecks and underwings

Clay Fan-foot (p. 207)
Paracolax tristalis

Dotted Fan-foot
(p. 207)
Macrochilo cribrumalis

Fan-foot (p. 208)
Herminia tarsipennalis

Shaded Fan-foot
(p. 208)
Herminia tarsicrinalis

Small Fan-foot
(p. 208)
Herminia grisealis

Common Fan-foot
(p. 209)
Pechipogo strigilata

Plumed Fan-foot (p. 209)
Pechipogo plumigeralis

Jubilee Fan-foot
(p. 209)
Zanclognatha lunalis

Dusky Fan-foot
(p. 209)
Zanclognatha zelleralis

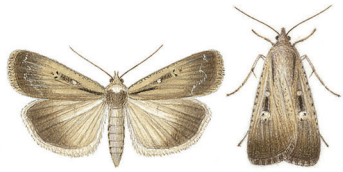
Marsh Oblique-barred
(p. 210)
Hypenodes humidalis

Pinion-streaked Snout (p. 210)
Schrankia costaestrigalis

White-line Snout (p. 211)
Schrankia taenialis

Blackneck (p. 211)
Lygephila pastinum

Scarce Blackneck
(p. 211)
Lygephila craccae



Levant Blackneck (p. 212)
Tathorhynchus exsiccata

Waved Black (p. 212)
Parascotia fuliginaria

Small Purple-barred (p. 212)
Phytometra viridaria

f. *fusca*

Lesser Belle (p. 213)
Colobochyla salicalis

Beautiful Hook-tip (p. 213)
Laspeyria flexula

Olive Crescent (p. 213)
Trisateles emortualis

Scarce Marbled
(p. 214)
Eublemma minutata

f. *carthami*

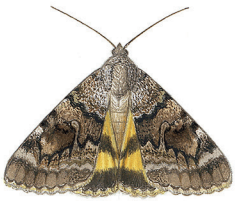
Purple Marbled
(p. 214)
Eublemma ostrina

Small Marbled
(p. 214)
Eublemma parva

Beautiful Marbled (p. 214)
Eublemma purpurina

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Erebidae Tussocks, ermines, tigers, footman moths, snouts, fan-foots, marbleds, blacknecks and underwings

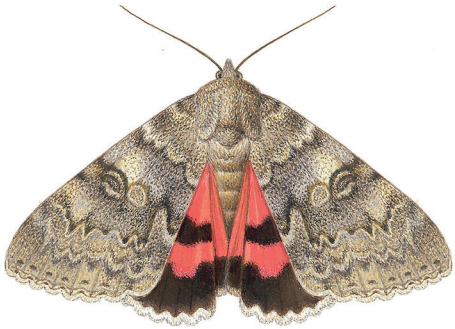


Oak Yellow Underwing (p. 215)
Catocala nymphagoga

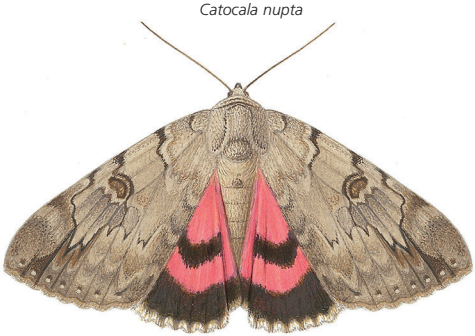
Clifden Nonpareil/Blue Underwing (p. 215)
Catocala fraxini

Minsmere Crimson Underwing (p. 215)
Catocala conjuncta

f. *brunnescens*



Red Underwing (p. 216)
Catocala nupta

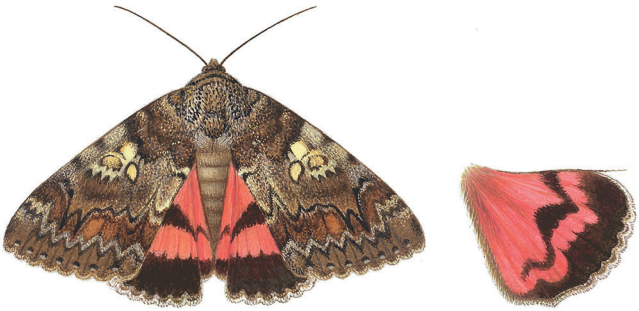


Rosy Underwing (p. 216)
Catocala electa

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Erebidae Tussocks, ermines, tigers, footman moths, snouts, fan-foots, marbleds, blacknecks and underwings

French Red Underwing (p. 216)
Catocala elocata



Dark Crimson Underwing (p. 217)
Catocala sponsa

Light Crimson Underwing (p. 217)
Catocala promissa

Burnet Companion (p. 218)
Euclidia glyphica

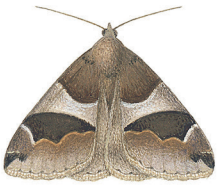
Mother Shipton (p. 218)
Euclidia mi

Alchymist (p. 218)
Catephia alchymista

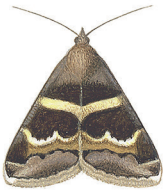
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Erebidae Tussocks, ermines, tigers, footman moths, snouts, fan-foots, marbleds, blacknecks and underwings

Lunar Double-stripe (p. 219)
Minucia lunaris



Passenger (p. 219)
Dysgonia algira



Geometrician (p. 219)
Grammodes stolida

head-on view showing 'spectacles'

Spectacle (p. 294)
Abrostola tripartita

Dark Spectacle (p. 294)
Abrostola triplasia

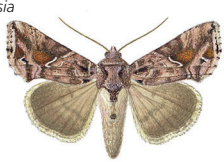
Noctuidae: Plusiinae

Ni Moth (p. 295)
Trichoplusia ni

Slender Burnished Brass (p. 295)
Thysanoplusia orichalcea

Boathouse Gem (p. 295)
Thysanoplusia daubei

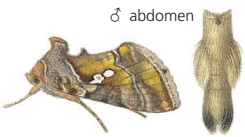
Scar Bank Gem (p. 296)
Ctenoplusia limbirena



Accent Gem (p. 296)
Ctenoplusia accentifera

Streaked Plusia (p. 296)
Vittaplusia vittata

♂ abdomen



Golden Twin-spot (p. 296)
Chrysodeixis chalcites

♂ abdomen

Tunbridge Wells Gem (p. 297)
Chrysodeixis acuta

Dewick's Plusia (p. 297)
Macdunnoughia confusa

Scarce Burnished Brass (p. 297)
Diachrysia chryson

f. *tutti*

f. *aurea*

Burnished Brass (p. 298)
Diachrysia chrysitis

Purple-shaded Gem (p. 298)
Euchalcia variabilis

Golden Plusia (p. 299)
Polychrysia moneta

f. *gammina*

f. *nigricans*

Silver Y (p. 299)
Autographa gamma

Beautiful Golden Y (p. 300)
Autographa pulchrina

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Plusiinae; Eustrotiinae; Acontiinae; Aediinae; Pantheinae; Dilobinae; Acronictinae

Plain Golden Y (p. 300)
Autographa jota

Gold Spangle (p. 300)
Autographa bractea

Stephens' Gem (p. 301)
Megalographa biloba

Essex Y (p. 301)
Cornutiplusia circumflexa

Scarce Silver Y (p. 301)
Syngrapha interrogationis

Gold Spot (p. 302)
Plusia festucae

Lempke's Gold Spot (p. 302)
Plusia putnami

Marbled White Spot (p. 302)
Deltote pygarga

Pretty Marbled (p. 303)
Deltote deceptoria

Silver Hook (p. 303)
Deltote uncula

Silver Barred (p. 303)
Deltote bankiana

Pale Shoulder (p. 304)
Acontia lucida

Spotted Sulphur (p. 304)
Acontia trabealis

Sorcerer (p. 304)
Aedia leucomelas

Druid (p. 305)
Aedia funesta

Four-spotted (p. 305)
Tyta luctuosa

Nut-tree Tussock (p. 305)
Colocasia coryli

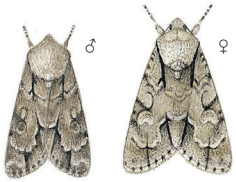
Figure of Eight (p. 306)
Diloba caeruleocephala

Scarce Merveille du Jour (p. 306)
Moma alpium

Reed Dagger/ Powdered Wainscot (p. 307)
Simyra albovenosa

Alder Moth (p. 307)
Acronicta alni

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025



Dark Dagger (p. 308)
Acronicta tridens

Grey Dagger (p. 308)
Acronicta psi

Sycamore (p. 309)
Acronicta aceris

Miller (p. 309)
Acronicta leporina

Marsh Dagger
(p. 309)
Acronicta strigosa

Light Knot Grass (p. 310)
Acronicta menyanthidis menyanthidis

A. m. scotica

Scarce Dagger
(p. 310)
Acronicta auricoma

Sweet Gale Moth
(p. 310)
Acronicta cinerea

Knot Grass (p. 311)
Acronicta rumicis

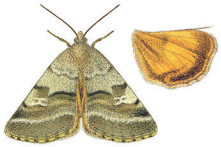
Poplar Grey (p. 311)
Subacronicta megacephala

Coronet (p. 312)
Craniophora ligustri

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Metoponiinae; Culculliinae; Oncocnemidinae; Amphipyrinae

Small Yellow Underwing (p. 312)
Panemeria tenebrata



Goldwing (p. 312)
Synthymia fixa

Wormwood (p. 313)
Cucullia absinthii

Scarce Wormwood (p. 313)
Cucullia artemisiae

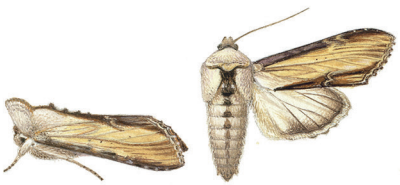
Shark (p. 313)
Cucullia umbratica

Chamomile Shark (p. 314)
Cucullia chamomillae

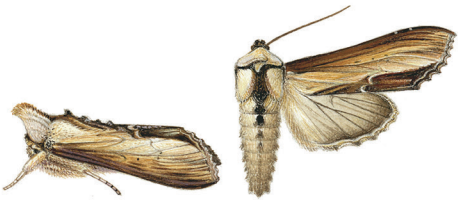
Cudweed (p. 314)
Cucullia gnaphalii

Star-wort (p. 314)
Cucullia asteris

Water Betony (p. 315)
Cucullia scrophulariae



Striped Lychnis (p. 315)
Cucullia lychnitis

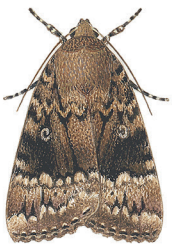


Mullein (p. 316)
Cucullia verbasci

Toadflax Brocade (p. 316)
Calophasia lunula

Antirrhinum Brocade (p. 317)
Calophasia platyptera

Anomalous (p. 317)
Stilbia anomala



Copper Underwing (p. 317)
Amphipyra pyramidea

Svensson's Copper Underwing (p. 318)
Amphipyra berbera

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Amphipyrinae; Psaphidinae; Heliothinae; Condicinae; Eriopinae

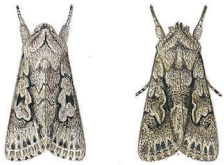
Mouse Moth (p. 318)
Amphipyra tragopoginis

Sprawler (p. 318)
Asteroscopus sphinx

Rannoch Sprawler (p. 319)
Brachionycha nubeculosa

Double-spot Brocade (p. 319)
Meganephria bimaculosa

Green-brindled Crescent (p. 319)
Allophyes oxyacanthae



Early Grey (p. 320)
Xylocampa areola

Bordered Sallow (p. 320)
Pyrrhia umbra

Spotted Clover (p. 320)
Protoschinia scutosa

Marbled Clover (p. 321)
Heliothis viriplaca

Shoulder-striped Clover (p. 321)
Heliothis maritima

Bordered Straw (p. 322)
Heliothis peltigera

Eastern Bordered Straw (p. 322)
Heliothis nubigera

Scarce Bordered Straw
Old World Bollworm (p. 322)
Helicoverpa armigera

Pease Blossom (p. 323)
Periphanes delphinii

African (p. 323)
Condica capensis

Reddish Buff (p. 323)
Acosmetia caliginosa

Silvery Gem (p. 324)
Eucarta virgo

Cumberland Gem (p. 324)
Eucarta amethystina

Latin (p. 324)
Callopistria juventina

Latreille's Latin (p. 324)
Callopistria latreillei

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Bryophilinae; Xyleninae

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Treble Lines (p. 331)
Charanyca trigrammica

Brown Rustic (p. 332)
Rusina ferruginea

Marsh Moth (p. 332)
Athetis pallustris

Porter's Rustic (p. 333)
Athetis hospes

Bird's Wing (p. 333)
Dypterygia scabriuscula

Orache Moth (p. 333)
Trachea atriplicis

Old Lady (p. 333)
Mormo maura

hindwing upperside

Guernsey Underwing (p. 334)
Polyphaenis sericata

Straw Underwing (p. 334)
Thalpophila matura

Saxon (p. 334)
Hyppa rectilinea

Purple Cloud (p. 334)
Actinotia polyodon

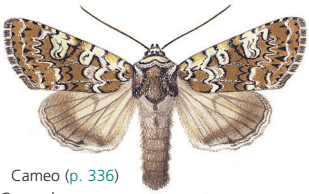
Pale-shouldered Cloud (p. 335)
Chloantha hyperici

Angle Shades (p. 335)
Phlogophora meticulosa

Small Angle Shades (p. 335)
Euplexia lucipara

Berber (p. 336)
Pseudenargia ulicis

Burren Green (p. 336)
Calamia tridens



Cameo (p. 336)
Crypsedra gemmea

Haworth's Minor (p. 336)
Celaena haworthii

Crescent (p. 337)
Helotropha leucostigma leucostigma

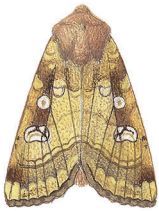
H. l. scotica

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Xyleninae

Dusky Sallow (p. 337)
Eremobia ochroleuca

Frosted Orange (p. 337)
Gortyna flavago



Fisher's Estuarine Moth (p. 338)
Gortyna borelii

Rosy Rustic (p. 338)
Hydraecia micacea

Butterbur (p. 338)
Hydraecia petasitis

Marsh Mallow Moth (p. 339)
Hydraecia osseola

Saltern Ear (p. 339)
Amphipoea fucosa

Large Ear (p. 340)
Amphipoea lucens

Ear Moth (p. 340)
Amphipoea oculea

Crinan Ear (p. 340)
Amphipoea crinanensis

Dumeril's Rustic (p. 340)
Luperina dumerilii

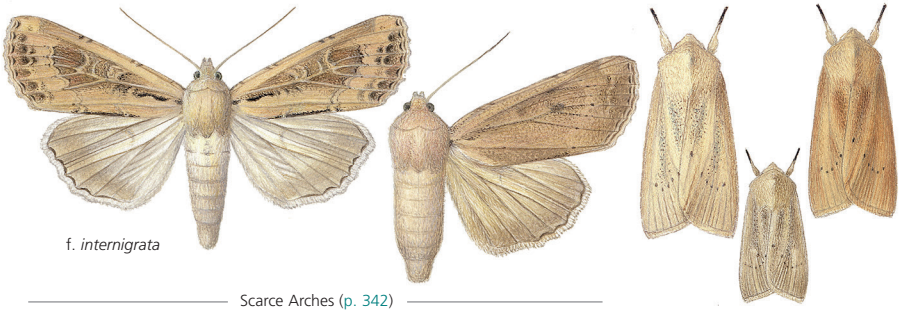
Flounced Rustic (p. 341)
Luperina testacea

Sandhill Rustic (p. 341)

Luperina nickerlii gueneei — *L. n. knilli* — *L. n. leechi* — *L. n. demuthi*

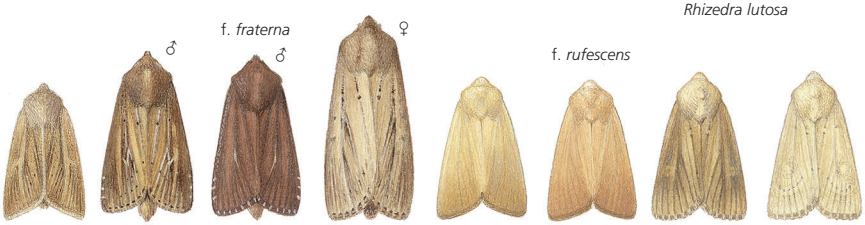
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Xyleninae



Scarce Arches (p. 342)
Fabula zollikoferi

Large Wainscot (p. 342)
Rhizedra lutosa



Blair's Wainscot (p. 342)
Sedina buettneri

Bulrush Wainscot (p. 343)
Nonagria typhae

Fen Wainscot (p. 343)
Arenostola phragmitidis

Lyme Grass (p. 343)
Longalatedes elymi

Twin-spotted Wainscot (p. 344)
Lenisa geminipuncta

White-mantled Wainscot (p. 344)
Archanara neurica

Brown-veined Wainscot (p. 344)
Archanara dissoluta

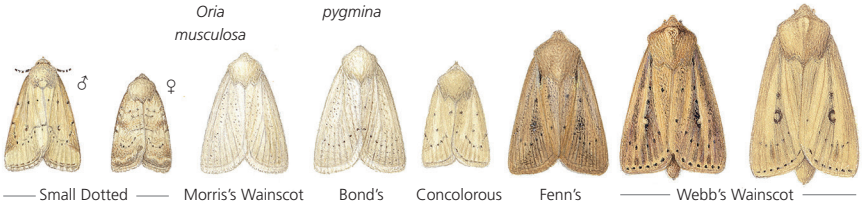
Small Rufous (p. 345)
Coenobia rufa

Brighton Wainscot (p. 345)
Oria musculosa

Small Wainscot (p. 345)
Denticucullus pygmina

Mere Wainscot (p. 346)
Photedes fluxa

Least Minor (p. 346)
Photedes captiuncula



Small Dotted Buff (p. 347)
Photedes minima

Morris's Wainscot (p. 347)
Photedes morrisii morrisii

Bond's Wainscot (p. 347)
P. m. bondii

Concolorous (p. 347)
Photedes extrema

Fenn's Wainscot (p. 348)
Protarchanara brevilinea

Webb's Wainscot (p. 348)
Globia sparganii

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Xyleninae

Rush Wainscot (p. 349)
Globia algae

Union Rustic (p. 349)
Pabulatrix pabulatricula

Dusky Brocade (p. 349)
Apamea remissa

Clouded Brindle (p. 350)
Apamea epomidion

Clouded-bordered Brindle (p. 350)
Apamea crenata

Large Nutmeg (p. 350)
Apamea anceps

Rustic Shoulder-knot (p. 351)
Apamea sordens

Small Clouded Brindle (p. 351)
Apamea unanimis

Slender Brindle (p. 351)
Apamea scolopacina

Crescent Striped (p. 352)
Apamea oblonga

Dark Arches (p. 352)
Apamea monoglypha

f. *aethiops*

Light Arches (p. 352)
Apamea lithoxylaea

Reddish Light Arches (p. 353)
Apamea sublustris

Confused (p. 353)
Apamea furva

Scarce Brindle (p. 353)
Apamea lateritia

Northern Arches (p. 354)
Apamea exulis

Exile (p. 354)
Apamea exulis

Double Lobed (p. 354)
Lateroligia ophiogramma

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Xyleninae

Common Rustic (p. 354)
Mesapamea secalis

Lesser Common Rustic (p. 355)
Mesapamea didyma

f. *aethalodes*

Rosy Minor (p. 355)
Litoligia literosa

f. *bicoloria*

f. *latistriata*

Cloaked Minor (p. 355)
Mesoligia furuncula

Marbled Minor (p. 356)
Oligia strigilis

Burren, Co. Clare

Tawny Marbled Minor (p. 356)
Oligia latruncula

Rufous Minor (p. 357)
Oligia versicolor

f. *pallida*

Middle-barred Minor (p. 357)
Oligia fasciuncula

Maize Wainscot (p. 357)
Sesamia nonagrioides

Beautiful Gothic (p. 357)
Leucochlaena oditis

Orange Sallow (p. 358)
Tiliacea citrago

Barred Sallow (p. 358)
Tiliacea aurago

Pink-barred Sallow (p. 358)
Xanthia togata

Sallow (p. 359)
Cirrhia icteritia

Dusky-lemon Sallow (p. 359)
Cirrhia gilvago

f. *gilvescens*

Pale-lemon Sallow (p. 359)
Cirrhia ocellaris

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Xyleninae

Pale Stigma (p. 360)
Mesogona acetosellae

Beaded Chestnut (p. 360)
Agrochola lychnidis

f. *rufa-pallida*

Brown-spot Pinion (p. 361)
Agrochola litura

Flounced Chestnut (p. 361)
Agrochola helvola

Red-line Quaker (p. 361)
Agrochola lota

Yellow-line Quaker (p. 362)
Agrochola macilenta

Southern Chestnut (p. 362)
Agrochola haematidea

Brick (p. 363)
Agrochola circellaris

Lunar Underwing (p. 363)
Omphaloscelis lunosa

Chestnut (p. 363)
Conistra vaccinii

Dark Chestnut (p. 364)
Conistra ligula

Black-spotted Chestnut (p. 364)
Conistra rubiginosa

Dotted Chestnut (p. 364)
Conistra rubiginea

Red-headed Chestnut (p. 365)
Conistra erythrocephala

Orange Upperwing (p. 365)
Jodia croceago

Tawny Pinion (p. 366)
Lithophane semibrunnea

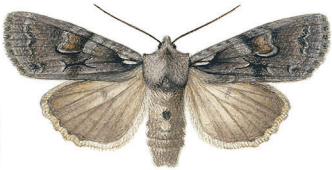
Pale Pinion (p. 366)
Lithophane socia

Grey Shoulder-knot (p. 366)
Lithophane ornitopus lactipennis

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

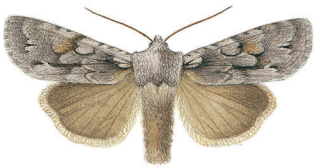
Noctuidae: Xyleninae

L. f. suffusa



Conformist (p. 367)
Lithophane furcifera furcifera

Softly's Shoulder-knot (p. 367)
Lithophane consocia



Nonconformist (p. 367)
Lithophane lamda

Blair's Shoulder-knot (p. 368) *Lithophane leautieri hesperica*

Golden-rod Brindle (p. 368)
Xylena solidaginis

Sword-grass (p. 368)
Xylena exsoleta

Red Sword-grass (p. 369)
Xylena vetusta

Satellite (p. 369)
Eupsilia transversa

Angle-striped Sallow (p. 369)
Enargia paleacea

Double Kidney (p. 370)
Ipimorpha retusa

Olive (p. 370)
Ipimorpha subtusa

White-spotted Pinion (p. 370)
Cosmia diffinis

Lesser-spotted Pinion (p. 371)
Cosmia affinis

Dun-bar (p. 371)
Cosmia trapezina

f. *badiofasciata*

Lunar-spotted Pinion (p. 371)
Cosmia pyralina

Heart Moth (p. 372)
Dicycla oo

Centre-barred Sallow (p. 372)
Atethmia centrago

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Xyleninae

Minor Shoulder-knot (p. 372)
Brachylomia viminalis

Suspected (p. 373)
Parastichtis suspecta

Dingy Shears (p. 373)
Apterogenum ypsillon

Oak Rustic (p. 373)
Dryobota labecula

f. *albomacula*

Merveille du Jour (p. 374)
Griposia aprilina

Brindled Green (p. 374)
Dryobotodes eremita

Southern Brindled Green (p. 374)
Dryobotodes roboris

Sombre Brocade (p. 375)
Dryobotodes tenebrosa

Grey Chi (p. 375)
Antitype chi

Flame Brocade (p. 375)
Trigonophora flammea

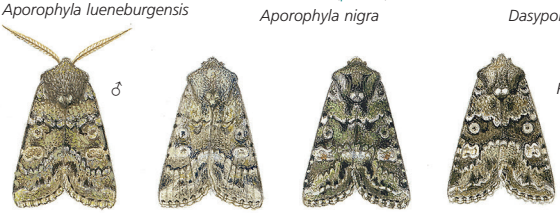
Feathered Brindle (p. 376)
Aporophyla australis pascuea

Deep-brown Dart (p. 376)
Aporophyla lutulenta

Northern Deep-brown Dart (p. 377)
Aporophyla lueneburgensis

Black Rustic (p. 377)
Aporophyla nigra

Brindled Ochre (p. 377)
Dasypolia templi



Feathered Ranunculus (p. 378)
Polymixis lichenea lichenea

P. l. scillonea

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Xyleninae; Hadeninae

Black-banded (p. 378)
Polymixis xanthomista statices

Large Ranunculus (p. 378)
Polymixis flavicincta

Dark Brocade (p. 379)
Mniotype adusta

Bedrule Brocade (p. 379)
Mniotype solieri

Beautiful Arches
(p. 379)
Mniotype satura

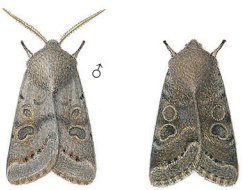
Pine Beauty (p. 380)
Panolis flammea

Clouded Drab (p. 380)
Orthosia incerta

Blossom
Underwing (p. 381)
Orthosia miniosa

Common Quaker (p. 381)
Orthosia cerasi

Small Quaker (p. 382)
Orthosia cruda



Lead-coloured Drab (p. 382)
Orthosia populeti

Powdered Quaker (p. 382)
Orthosia gracilis

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

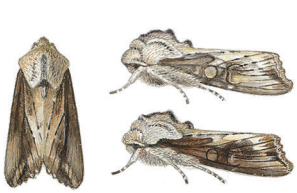
Noctuidae: Hadeninae Brocades, quakers and leaf-eating wainscots

Essex specimen

Northern Drab (p. 383)
Orthosia opima

Hebrew Character (p. 383)
Orthosia gothica

Twin-spotted Quaker (p. 384)
Anorthoa munda



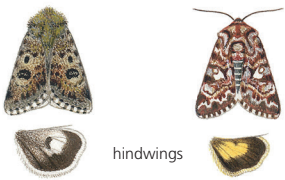
Silver Cloud (p. 384)
Egira conspicillaris

Hedge Rustic (p. 384)
Tholera cespitis

Feathered Gothic (p. 385)
Tholera decimalis

Antler Moth (p. 385)
Cerapteryx graminis

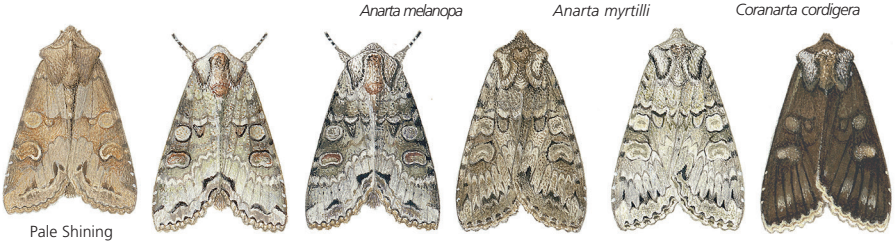
Nutmeg (p. 385)
Anarta trifolii



Broad-bordered White Underwing (p. 386)
Anarta melanopa

Beautiful Yellow Underwing (p. 386)
Anarta myrtilli

Small Dark Yellow Underwing (p. 386)
Coranarta cordigera



Pale Shining Brown (p. 387)
Polia bombycina

Silvery Arches (p. 387)
Polia hepatica

Grey Arches (p. 388)
Polia nebulosa

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Hadeninae Brocades, quakers and leaf-eating wainscots

Feathered Ear (p. 388)
Pachetra sagittigera

Light Brocade (p. 388)
Lacanobia w-latinum

f. *humeralis*

Pale-shouldered Brocade (p. 389)
Lacanobia thalassina

Beautiful Brocade (p. 389)
Lacanobia contigua

Dog's Tooth (p. 389)
Lacanobia suasa
f. *dissimilis*

Bright-line Brown-eye (p. 390)
Lacanobia oleracea

Splendid Brocade (p. 390)
Lacanobia splendens

Stranger (p. 390)
Lacanobia blenna

Dot Moth (p. 391)
Melanchra persicariae

Broom Moth (p. 391)
Ceramica pisi

Glaucous Shears (p. 391)
Papestra biren

Shears (p. 392)
Hada plebeja

Cabbage Moth (p. 392)
Mamestra brassicae

White Colon (p. 392)
Sideridis turbida

Campion (p. 393)
Sideridis rivularis

Bordered Gothic (p. 393)
Sideridis reticulata
S. r. hibernica
marginosa

Barrett's Marbled Coronet (p. 394)
Conisania andalusica barrettii

Broad-barred White (p. 394)
Hecatera bicolorata

Small Ranunculus (p. 394)
Hecatera dysodea

Lychnis (p. 395)
Hadena bicruris

Varied Coronet (p. 395)
Hadena compta

Marbled Coronet (p. 395)
Hadena confusa

White Spot (p. 396)
Hadena albimacula

Grey (p. 396)
Hadena caesia mananii

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Hadeninae Brocades, quakers and leaf-eating wainscots

Tawny Shears (p. 397)
Hadena perplexa perplexa

Pod Lover (p. 397)
H. p. capsophila

Viper's Bugloss (p. 397)
Hadena irregularis

Double Line (p. 398)
Mythimna turca

Striped Wainscot (p. 398)
Mythimna pudorina

Brown-line Bright-eye (p. 398)
Mythimna conigera

Common Wainscot (p. 399)
Mythimna pallens

Mathew's Wainscot (p. 399)
Mythimna favicolor

Smoky Wainscot (p. 399)
Mythimna impura

Southern Wainscot (p. 400)
Mythimna straminea

Delicate (p. 400)
Mythimna vitellina

White-speck (p. 401)
Mythimna unipuncta

White-point (p. 401)
Mythimna albipuncta

Clay (p. 401)
Mythimna ferrago

Shore Wainscot (p. 402)
Mythimna litoralis

L-album Wainscot (p. 402)
Mythimna l-album

Shoulder-striped Wainscot (p. 402)
Leucania comma

Obscure Wainscot (p. 402)
Leucania obsoleta

Devonshire Wainscot (p. 403)
Leucania putrescens

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Hadeninae; Noctuinae

Cosmopolitan (p. 403)
Leucania loreyi

Flame Wainscot (p. 404)
Senta flammea

Silurian (p. 404)
Eriopygodes imbecilla

Pearly Underwing (p. 405)
Peridroma saucia

Portland Moth (p. 405)
Actebia praecox

Eversmann's Rustic (p. 405)
Actebia fennica

Black Collar (p. 406)
Dichagyris flammatra

Coast Dart (p. 406)
Euxoa cursoria

Square-spot Dart (p. 406)
Euxoa obelisca grisea

White-line Dart (p. 407)
Euxoa tritici

Garden Dart (p. 407)
Euxoa nigricans

Great Dart (p. 408)
Agrotis bigramma

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Noctuinae Darts, yellow underwings, clays and allies

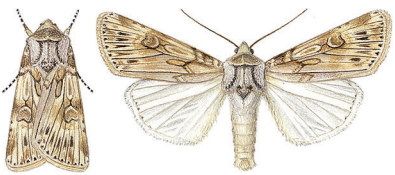
Light Feathered Rustic (p. 408)
Agrotis cinerea

Heart and Dart (p. 408)
Agrotis exclamationis

Woods's Dart (p. 409)
Agrotis graslini

Turnip Moth (p. 409)
Agrotis segetum

Heart and Club (p. 409)
Agrotis clavis



Spalding's Dart (p. 410)
Agrotis herzogi

Archer's Dart (p. 410)
Agrotis vestigialis

Sand Dart (p. 410)
Agrotis ripae

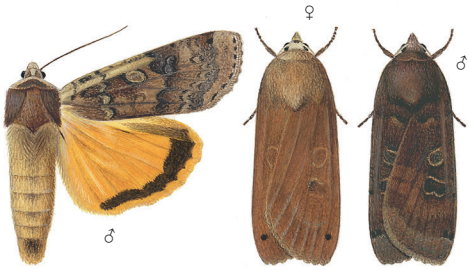
Crescent Dart (p. 411)
Agrotis trux lunigera

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

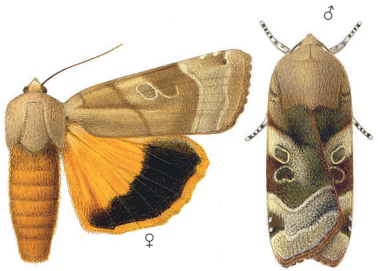
Noctuidae: Noctuinae Darts, yellow underwings, clays and allies

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

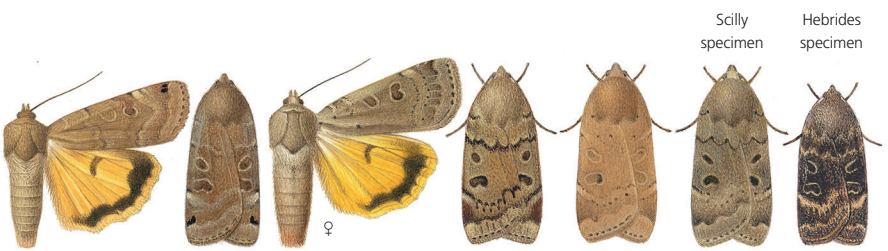
Noctuidae: Noctuinae Darts, yellow underwings, clays and allies



Large Yellow Underwing (p. 417)
Noctua pronuba



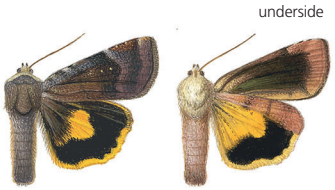
Broad-bordered Yellow Underwing (p. 417)
Noctua fimbriata



Lunar Yellow Underwing (p. 418)
Noctua orbona

Lesser Yellow Underwing (p. 418)
Noctua comes

Least Yellow Underwing (p. 418)
Noctua interjecta



Langmaid's Yellow Underwing (p. 419)
Noctua janthina

Lesser Broad-bordered Yellow Underwing (p. 419)
Noctua janthe

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Stout Dart (p. 420)
Spaelotis ravida

immigrant resident

Great Brocade (p. 420)
Eurois occulta

Double Dart (p. 420)
Graphiphora augur

Green Arches (p. 421)
Anaplectoides prasina

Dotted Clay (p. 421)
Xestia baja

Square-spotted Clay (p. 421)
Xestia stigmatica

Neglected Rustic (p. 422)
Xestia castanea

Heath Rustic (p. 422)
Xestia agathina agathina

Square-spot Rustic (p. 422)
Xestia xanthographa

Six-striped Rustic (p. 423)
Xestia sexstrigata

Setaceous Hebrew Character (p. 423)
Xestia c-nigrum

Triple-spotted Clay (p. 423)
Xestia ditrapezium

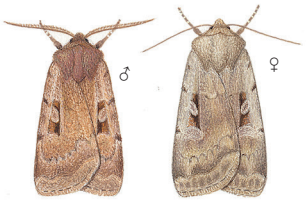
Double Square-spot (p. 424)
Xestia triangulum

Ashworth's Rustic (p. 424)
Xestia ashworthii

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Noctuidae: Noctuinae Darts, yellow underwings, clays and allies

Northern Dart (p. 424)
Xestia alpicola alpina



Rosy Marsh Moth (p. 425)
Coenophila subrosea

Autumnal Rustic (p. 425)
Eugnorisma glareosa

Plain Clay (p. 426)
Eugnorisma depuncta

Cousin German (p. 426)
Protolampra sobrina

Gothic (p. 427)
Naenia typica

Nolidae

Small Black Arches (p. 427)
Meganola strigula

Kent Black Arches (p. 428)
Meganola albula

Short-cloaked Moth (p. 428)
Nola cucullatella

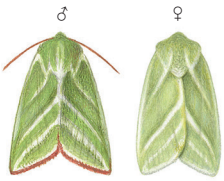
Least Black Arches (p. 428)
Nola confusalis

Scarce Black Arches (p. 428)
Nola aerugula

Jersey Black Arches (p. 429)
Nola chlamitulalis

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Scarce Silver-lines (p. 429)
Bena bicolorana



Green Silver-lines (p. 429)
Pseudoips prasinana britannica

Oak Nycteoline (p. 430)
Nycteola revayana

f. *ramosana* f. *notata* f. *lichenodes* f. *rosea* f. *undulana*

Grey Square (p. 430)
Pardasena virgulana

Eastern Nycteoline (p. 430)
Nycteola asiatica

Sallow Nycteoline (p. 430)
Nycteola degenerana

Cream-bordered Green Pea (p. 430)
Earias clorana

Egyptian Bollworm (p. 431)
Earias insulana

Spiny Bollworm (p. 431)
Earias biplaga

Eastern Bollworm (p. 431)
Earias vittella

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

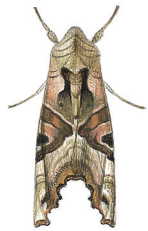
Noctuidae
Noctuids

Heart and Dart

Marbled Coronet

Orange Sallow

Shark


Angle Shades

Silver Y

Common Rustic

The Noctuidae is the largest family of macro-moths in the British Isles, with about 370 species. Depending on how the family is defined, worldwide there are probably about 20,000 species described, and it is well represented in every continent. However, in the new British Isles list (Agassiz *et al.* 2013), the family looks quite different. A total of 45 species (from eight sub-families) have been removed and now reside in eight sub-families in the Erebidae, although still under the 'umbrella' of the superfamily Noctuoidea. Two further sub-families have been moved to the Nolidae, also in the Noctuoidea. Within the groups that remain, some sub-families have also changed, with several splits, so that even after the removal of ten of them, the total has only dropped slightly from 20 to 19. The taxonomy of the group has long been in a state of flux, and is still not fully understood, and the overdue adoption of many aspects of the European system seems unlikely to be the end of the story.

Most British noctuids are medium-sized, stout-bodied, frequently brown moths, with forewings often substantially longer than they are deep. Most are specialised for powerful, manoeuvrable flight and fly mainly at night. The majority of long-distance migrant moths are noctuids. They require regular refuelling for flight, and feed at flowers, oozing tree sap, aphid honeydew or sugary baits. A small minority are not specialised for powerful flight and have deep wings and slight bodies, more like geometrid moths. However, most noctuid moths rest with the trailing edges of the forewings brought together or slightly overlapping, over the folded hindwings, and hold their wings tent-like over the body. In the Noctuinae, the narrowed forewings are mainly held horizontally over the body in the same plane, and overlap to a much greater extent, making the moth much narrower and more able to slip between vertical stems and grass blades in the open grassy places in which they predominate.

There is usually a conspicuous kidney-shaped marking and an adjacent oval and other marks in the central area of the forewing, the size, colour and configuration of which provide useful recognition features. This pattern of markings rarely occurs in

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

other families, but see Drepanidae (Thyatirinae). Many species are quite distinctive, but many are very similar to one another, and variable, and are easily misidentified.

The majority of noctuid moths have bald larvae (a notable exception being the daggers). The full complement of five pairs of claspers (prolegs) is usually present, but in the Plusiinae (Ys and brasses) they are often reduced to three or four pairs, including the anal claspers. The majority of noctuid larvae feed on the leaves, stems or roots of grasses or broadleaved herbaceous plants, but some feed on the foliage of trees and shrubs, most notably the daggers, quakers, drabs and pinions. A substantial number of species feed on both woody and herbaceous plants. Those dependent on grasses and herbs tend to overwinter as larvae, feeding in mild periods from autumn to spring. Those feeding exclusively on trees and shrubs tend to overwinter as eggs or pupae. The larval period of some coincides with the flowers, fruits or tender spring leaves, but others can cope with the older leaves or seek out new late-summer growth. The majority of noctuids have one generation per year in the British Isles.

While the majority pupate on or below ground, or sometimes in surface leaf litter, some, particularly those feeding in trees and shrubs, pupate in cocoons attached to leaves, tree trunks, fences and other objects, and the whole life cycle may take place in the tree canopy.

Taxonomy

Although most noctuid moths have a certain jizz that sets them apart from other families of moths, the evolutionary relationships between some species and groups within the family are still not completely understood or agreed upon by taxonomists. Hence, although the British species are divided into almost the same number of sub-families in both the British and European lists, the arrangement of species into sub-families and the sequence in which they are presented differs considerably, and further changes are underway. The major sub-families are presented in the following order (with their general characteristics):

Plusiinae Silver and golden Ys, gems, brasses and allies. Usually with metallic patches or letters on forewings, which are held close to the body at rest, and conspicuous tufts atop thorax and abdomen.

Acronictinae Daggers. Many species with dagger-like markings on grey forewings, and elaborately marked hairy larvae.

Cuculliinae Sharks. Wings are pulled close to body at rest, and thorax has a frontal crest or crests, in some cases resembling a shark's dorsal fin.

Heliothinae Straws and clovers. Robust, often migratory species, usually quite strikingly marked.

Bryophilinae rather small species whose larvae are hairy and feed on lichens.

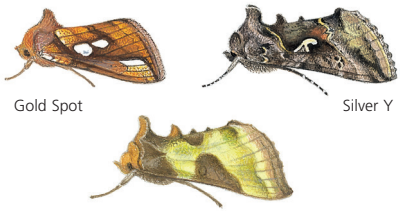
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Xyleninae a large, diverse group, including rustics, brindles, arches, wainscots and minors, many feeding internally on grasses and herbaceous plants. Also includes sallows, chestnuts, pinions, brocades and allies, some of which feed on woody plants.

Hadeninae Brocades, quakers and the wainscots, with leaf-feeding larvae. Usually have well-patterned forewings held in a shallow tent-like fashion, with ends forming a 'V' shape.

Noctuinae Darts, yellow underwings, clays and allies. Forewings narrow, square-ended, held flat over body and deeply overlapped, variable in colour, and often richly and intricately marked.

Plusiinae Silver and golden Ys, gems, brasses and allies



Gold Spot

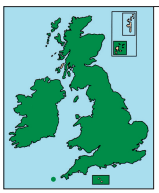
Silver Y

Burnished Brass

Spectacle plate 48

Abrostola tripartita (Hufn.)

Common 73.001 (2450)

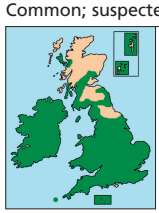


Field characters FW 15–17mm. Named after the grey shape, like a pair of spectacles or flying goggles, visible on thorax when viewed from front. Fur on top of thorax is piled up into a turret. Forewing grey, sometimes tinged with lilac or pink. A broad blackish central band encloses the large blackish-outlined oval and kidney mark. Oval is larger than kidney mark as it is fused with a second central oval. General pattern varies little, but whitish markings vary in extent and are absent in f. *plumbea* Cock., which is warm, dark grey and is frequent in many parts of England. **Similar species** See Dark Spectacle. **Flight season** In some southern parts of Britain, two generations, late Apr–early Sep. Further north (and probably in Ireland), one or two generations, Apr or May–Aug. In Scotland, one generation, late May–early Aug. Flies from dusk. Feeds at flowers, including those of Red Valerian and cultivated Sage, and comes to light regularly. **Life cycle** Overwinters as a pupa, formed among plant debris or low down, behind bark. Larva Jul–Sep, again in Oct–Nov in the south. **Larval foodplants** Common Nettle. **Habitat** Gardens, hedgerows, ditches, rough pasture, fens, woodland edges and disturbed ground. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout most of Britain, Man, Ireland and the Channel Islands, but not recorded from Shetland.

Dark Spectacle plate 48

Abrostola triplasia (L.)

Common; suspected immigrant 73.002 (2449)



Field characters and similar species FW 14–18mm. Similar in pattern to Spectacle, but differs in several respects. Ground colour is brownish black, base of forewing and thorax are dull straw or reddish brown, and cross-lines are edged with reddish brown. There is also a diffuse dull straw-coloured blotch beyond kidney mark, and trailing corner blotch and outer cross-line are straw grey (whitish in Spectacle). Oval and kidney mark comparatively faint. **Flight season** In most regions, one or two generations, May–Aug. Two generations in southern and south-west England, May–Oct. Flies from dusk and feeds at flowers, including those of Red Valerian. Comes to light in small numbers. **Life cycle** Overwinters as a pupa, in a cocoon in a folded leaf of the foodplant. Larva Jul–Sep, and again in Oct–Nov in south-west England. Rests on the foodplant and is active by day and night. **Larval foodplants** Common Nettle and Hop. **Habitat** A wide range of habitats, often acidic, including rocky river valleys, marshes, hedgerows and gardens. **Status and distribution** Resident and suspected immigrant. Common. More numerous in western Britain. Well distributed in south-west England,

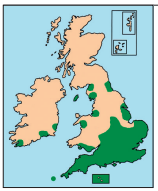
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Wales, north-west England, Man and Ireland. Recorded from all other parts of England, including Scilly, but rather local and sporadic, and generally infrequent. Very local in the southern half of Scotland (mainly in the south-west) and occasionally further north. Some records, especially from Dorset, are suspected to be of immigrants. Has recently been recorded from Orkney and Shetland, also probably as an immigrant. Widespread and frequent in the Channel Islands.
Note Until fairly recently, this species had long been known as *Abrostola trigemina*, and Spectacle as *A. triplasia*. Going back even earlier, Dark Spectacle was again known as *A. triplasia*. This can make interpretation of records, especially older ones, difficult where the name *triplasia* is used, unless the English names, which have not changed, are given.

Ni Moth

plate 48

Trichoplusia ni (Hb.)
Immigrant 73.003 (2432)

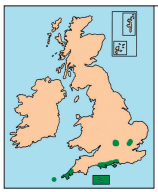


Field characters and similar species FW 15–17mm. Not unlike a rather small, pale Silver Y, but with more ornately marked, light grey-brown forewing, with pale wedges or patches along outer edge. The silver central mark is usually broken in two, forming an 'n' and a detached tail. Often has a whitish spot near trailing corner. See also Scar Bank Gem and Scarce Silver Y. **Flight season** Recorded in almost every month of the year, but more usually May–Oct, and most frequently in Aug. Mostly seen at light but sometimes visits flowers at dusk or by day. **Life cycle** A few larvae produced by spring immigrants have been found in Aug. Breeds continuously with several generations per year and is unlikely to survive the winter in Britain. **Larval foodplants** Recorded once from each of Sea Rocket, marigolds and the flowers of a hawkweed. Has also been found on Tomato in greenhouses and known to accept many cultivated plants. **Habitat** Occasionally breeds in coastal situations. **Status and distribution** Immigrant. Not seen every year, but occasionally appears in numbers. The years of greatest abundance were 1996 (140 records) and 2006 (451), but only one was recorded in the following two years. In Britain, mainly recorded from southern coasts of England and less frequently on the east coast, with occasional records inland and as far north as Cumbria and Northumberland. Also recorded from Man, the southern half of Ireland and in the Channel Islands. Accidental importation of larvae to Guernsey was confirmed in 1996. A very widespread tropical species, where it is a major agricultural pest, but probably only an immigrant in Europe.

Slender Burnished Brass

plate 48

Thysanoplusia orichalcea (Fabr.)
Immigrant; Adventive 73.004 (2433)



Field characters and similar species FW 17–20mm. Somewhat resembles Burnished Brass but has a narrower forewing, and distinguished by shape of brassy yellow area, which tapers to a point towards base. This varies little and is diagnostic. Individuals from hot, dry regions are paler brown than those from cooler climates. **Flight season** As an immigrant, usually recorded mid-Aug–Oct, but also in Jun and Nov. Mainly recorded at light-traps, but also visits flowers. **Life cycle** No evidence of breeding in the British Isles. Breeds continuously, with several generations per year. **Larval foodplants** A wide range of low-growing plants, including members of the daisy and cabbage families. **Status and distribution** Immigrant and adventive. About 100 recorded, the first at Dover, Kent, in 1820, with another around the same time in the London area. The next records are from 1943 onwards, since when it has been recorded every few years, with ten in 1969 and 1983, and five in 2006. Most are in the southern coastal counties of England, but also seen in Glamorgan, Gloucestershire, Warwickshire, Oxfordshire, Bedfordshire, Surrey, Norfolk, Ireland and the Channel Islands. Of the 20 or so since 2000, 16 were in West Cornwall and Scilly. Larvae are occasionally imported with chrysanthemums. Resident in much of Africa, and possibly on Malta and around the Mediterranean, where adults are seen in most months of the year.

Boathouse Gem

plate 48

Thysanoplusia daubei (Boisd.)
Immigrant 73.0041 (–)

Field characters FW 12–14mm. Quite distinctive and smaller than most related species. Forewing brown with an ornate pattern of lighter markings and silvery lines, and a pink or purple suffusion. Central silver mark relatively large, elongated and tapered, roughly sock-shaped. Dark area beyond it clearly demarcated by silvery lines. Fringes pale with a very fine, dashed dark line. **Similar species** See Accent Gem. See also the larger Essex Y, which may be pinkish and also with somewhat a similar, but shorter, central mark. **Flight season** Several generations, May–Nov. Visits flowers at dusk and comes to light. **Larval foodplants** A wide variety of herbaceous plants, including mints, sow-thistles and *Chondrilla* spp. **Habitat** Breeds in garrigue scrub, coastal dunes and on rough ground. **Status and distribution** A single record, one in a light-trap at Church Cove, the Lizard, Cornwall, on 10 Nov 2014, during a prolonged period of favourable conditions for immigration from southern Europe and North

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

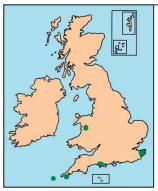
Africa, when a number of rare migrants were recorded. An African species. In Europe, restricted as a resident to Mediterranean coasts, from southern Spain eastwards to Turkey.

Scar Bank Gem

plate 48

Ctenoplusia limbirena (Guen.)

Immigrant 73.005 (2430)



Field characters and similar species FW 15–18mm. Most similar to Ni Moth, Silver Y or Scarce Silver Y, but with a small violet, lilac, pinkish or red-brown ellipse, or tear-drop shape, roughly midway along outer edge of forewing. Central spots usually fused. Forewing brown to almost black, often with a purple tinge. Silver Y has a less ornate forewing pattern. See also Scarce Silver Y. **Flight season** Recorded Jun–Oct but mostly Sep, always at light. **Life cycle** No evidence of breeding in the British Isles. Continuous generations in the tropics and sub-tropics. **Larval foodplants** In Africa, recorded from Sage, mulleins, Potato, and tobacco and other plants. **Status and distribution** Rare immigrant. Twenty-one records, the first on 13 Sep 1947 at Swanage, Dorset. Subsequently recorded in Scilly, Cornwall, Dorset, Hampshire, the Isle of Wight, Berkshire and Essex, and once on Jersey, in 1997. Recent records include Kent (Ramsgate, 2010), Cornwall, Scilly (2011) and Dorset, and Commins Coch, Montgomeryshire (2014). Resident in much of Africa, the Canary Islands and Madeira. In mainland Europe, only regular as an immigrant in Spain and Portugal, but has also reached Denmark.

Accent Gem

plate 48

Ctenoplusia accentifera (Lefeb.)

Immigrant 73.006 (2431)

Field characters and similar species FW 11–14mm. Quite distinctive, and much smaller than most related species recorded in the British Isles. Forewing reddish brown or darker greyish brown, clouded darker brown beyond central mark. Central mark roughly sock-shaped and gold-outlined (sometimes only partly). Has a black bar near base of trailing edge and one or two small, white-edged black or arrowhead marks one-third from trailing edge. Fringes have a dark spot near middle. Boathouse Gem is more ornate, with a network of silvery lines and a longer, more pointed central mark, and lacks dark spot in fringes. See also Essex Y (larger and less brownish). **Flight season** In Africa and the Mediterranean, Feb–Dec in several generations. **Larval foodplants** Mints, coleus (*Solenostemon* spp.) and Wild Chicory. **Status and distribution** Suspected rare immigrant. Two records. One in a light-trap at Halstead, Kent, on 10 Sep 1969 and one on 28 Oct 2014 at Exmouth, South Devon. Both were caught during periods when many other immigrant moths were recorded. Widespread in Africa. Frequent and probably a transitory resident on the Mediterranean coasts of France and Spain.

Streaked Plusia

plate 48

Vittaplusia vittata (Wall.)

Suspected immigrant 73.007 (2432a)

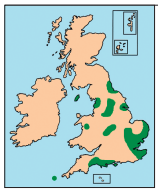
Field characters and similar species FW 15–18mm. Forewing grey as in many Silver Ys, but not metallic and with a long creamy-coloured central streak. Central area generally darker and outer area rather plain, with a very fine, jagged black cross-line. **Flight season** Several generations throughout the year in Africa. **Larval foodplants** In Africa, recorded on Potato Tree and *Erigeron albidus* (Asteraceae). **Status and distribution** Suspected immigrant. One record, a male in a light-trap at Rye Harbour NR, East Sussex, on 31 Jul 1995. Not previously recorded from Europe. Widespread in Africa.

Golden Twin-spot

plate 48

Chrysodeixis chalcites (Esp.)

Immigrant; Adventive 73.008 (2428)



Field characters and similar species FW 15–18mm. Forewing dark pinkish brown with metallic gold blotches, the largest in central area (best seen from in front or above). Has two silver central spots, sometimes joined. Black spot midway along outer fringe of forewing is usually much more prominent than in related species. In male, tufts on underside of abdomen at tip are black. A single adult considered to be Green Garden Looper *Chrysodeixis eriosoma* (Doubl.) was reared from a larva found in chrysanthemums, in Brockenhurst, Hampshire, in 2002. This species is found in Asia, Australasia and the Pacific, where Golden Twin-spot is thought to be absent, and is stated to be almost identical to Golden Twin-spot, but tends to be darker, richer brown and with fewer gold blotches. The genitalia are not clearly different, but there are stated to be genetic differences. It has also been found imported into Britain three times on plant material from its native range, in 1997–2014, and in Germany and Sweden. Golden Twin-spots, especially if thought to be accidentally introduced, should be examined critically. Green Garden Looper records are unlikely to be accepted without a specimen. See also Tunbridge Wells Gem and Dewick's Plusia. **Flight season** Breeds continuously in several generations. Recorded as an immigrant Jul–Nov, but mainly Aug–Oct. Mostly seen at light, but also reported visiting flowers of Ivy and Red Valerian after dusk. Adults occasionally emerge indoors from larvae imported with cut plants and other produce. **Life cycle** A larva was found on the leaves of Tomato in Essex in Sep 1984. **Larval foodplants** Sage, Viper's-bugloss, chrysanthemums,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

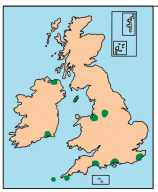
Celery, tobacco and other plants. **Status and distribution** Immigrant and occasional import. Over 320 recorded, the first in 1943. Increasing, with more records in the 1990s than in any previous decade, and over 100 since 2004, with 61 in 2006. Mainly recorded on the coasts of south-east England, with widely scattered records inland and further north to Inverness-shire. Local breeding is strongly suspected in south-east England in some summers. Resident in North Africa and the Canary Islands, and probably on a temporary basis in southern Europe. In some parts of Europe it can be a greenhouse pest, and the early stages are occasionally found on imported plants. As an immigrant, recorded north to Denmark.

Tunbridge Wells Gem

plate 48

Chrysodeixis acuta (Walk.)

Immigrant 73.009 (2429)



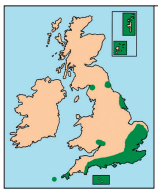
Field characters and similar species FW 14–18mm. Very similar to Golden Twin-spot, but with a distinct black crescent mark near tip of forewing (visible only at certain angles, so turn the moth to see it). A short dark mark may be present here in Golden Twin-spot, but it is weak. Forewing generally duller than in Golden Twin-spot and blotches bronze rather than gold, but light can be deceptive, and colour can be influenced by temperatures experienced by the early stages. In male, tufts at tip of abdomen are entirely brown. See also Dewick's Plusia. **Flight season** Mainly recorded in Oct, also in May, Jun, Sep, Nov and Dec. **Life cycle** No evidence of breeding in the British Isles or elsewhere in Europe. Continuous generations in the tropics and sub-tropics. **Larval foodplants** Thorn-apple, Tomato, tobacco and banana plants, *Canna* lilies and many other plants where resident. **Status and distribution** Rare immigrant, with occasional small influxes. About 30 recorded, the first at Tunbridge Wells, Kent, in May 1870. Six on 14–26 Oct 1995 in Cornwall, Dorset and the Isle of Wight. Then seven in 2005, five on the Lizard, Cornwall, and one on Scilly, all on 11 Oct, and one at West Bexington, Dorset, on 13 Oct. In 2008, one at Lydd, Kent, in Jun, one on the Lizard in Sep and one at West Bexington in Oct. Also recorded from Hampshire, Surrey and Yorkshire. Two in Ireland, in Cos. Waterford (2011) and Londonderry (2013). Several in 2015, including the first for Man. Those in 1995 were accompanied by other rare immigrants, such as Crimson Speckled, Dark Mottled Willow, Silver-striped Hawk-moth and Golden Twin-spot. Meteorological backtracking suggests the source was North Africa. The only other record for mainland Europe appears to be from Brittany in Sep 1991. The known range includes North Africa and the Canary Islands.

Dewick's Plusia

plate 48

Macdunnoughia confusa (Steph.)

Immigrant; possible recent colonist 73.010 (2436)



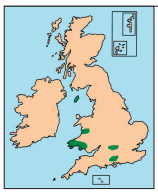
Field characters FW 12–17mm. Easily recognised by large metallic silver 'dog-leg' mark in centre of rather plain, dull pinkish-brown or pinkish-grey forewing, consisting of a thick central bar with a thin silver line extending to trailing edge along the inner edge of a roughly rectangular, rather shiny orange-brown area. **Similar species** Golden Twin-spot and Tunbridge Wells Gem may have the two metallic spots merged, but the mark formed is seldom as large as in Dewick's Plusia, and they are generally more variegated. See also Silver Y. **Flight season** Recorded in May and Jul–Oct, although most records are Aug–Oct. The majority of British records have been at light, although moths have also been found at rest. In mainland Europe, Apr–Nov, sometimes seen flying by day. **Life cycle** In mainland Europe, overwinters as a small larva. **Larval foodplants** Common Nettle, Yarrow, mayweeds, Chamomile, wormwoods and other herbaceous plants. **Status and distribution** Immigrant. Over 375 records, mainly from coastal counties of southern England. Increasing in frequency, with 24 reported in 2005, 25 in 2006, 79 in 2008 and 44 in 2011. Numbers probably bolstered by transitory breeding in Hampshire, Surrey, Sussex and Essex. Recorded more rarely north to Cumbria, Orkney and Shetland, and several times from the Channel Islands, the first in 1991. Widely distributed in Europe and has been expanding westwards since the end of the 19th century.

Scarce Burnished Brass

plate 48

Diachrysia chryson (Esp.)

Na 73.011 (2435)



Field characters FW 20–24mm. Unmistakable. Broad, hooked reddish-brown forewing has a single brassy golden patch near tip, bisected by a thin, wavy brown line. **Flight season** One generation. Jul–Aug. Occasionally flies in sunshine. Recorded visiting flowers after dark, including those of Meadowsweet, Honeysuckle and the larval foodplant. Comes to light but apparently not to sugar. **Life cycle** Overwinters as a larva among the stems of the foodplant and other rank vegetation. Larva late Aug–late May or early Jun. Pupates in a whitish oval cocoon spun under or near a leaf of the foodplant. **Larval foodplants** Hemp-agrimony. Larvae are seemingly more frequent on plants growing in the shade of trees and shrubs rather than in the open. **Habitat** River valleys, canal banks and associated marshes, fens and damp open woodland.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Scarce Burnished Brass.

Larva of Burnished Brass.

Also coastal undercliffs in Pembrokeshire and formerly in Kent. **Status and distribution** Resident. Nationally Scarce A. Found locally in southern England and Wales, breeding in the valleys of the Test and Itchen in Hampshire, in Berkshire along the Kennet and at Cothill Fen NNR, and at College Pond Fen, Oxfordshire. Also in a number of localities on and near the coast in Pembrokeshire, Carmarthenshire and west Glamorgan, and in Cardiganshire near New Quay and along the banks of the Afon Teifi, near Llechryd. A number of singletons, presumed wanderers, have been recorded away from these areas, including the first record for Man, on 20 Jul 2015. Formerly known from Chippenham and Wicken fens, Cambridgeshire, and reported from Kent, Devon, Dorset and Gloucestershire in the 19th century, and from certain riverbanks in Norfolk until the 1950s.

Burnished Brass

plate 48

Diachrysia chrysitis (L.)

Common 73.012 (2434)

Field characters FW 16–19mm. Unmistakable. Forewing broad and hooked, with a bold, shiny metallic, brassy yellow or brassy greenish-yellow pattern. There are two forms, both frequent. In f. *aurea* Huene, the broad brown central cross-band is entire. In f. *tutti* Kostrowicki, it is broken into two blotches (but see below). Moths of the second generation are usually smaller. **Similar species** A further species is recognised by most European authorities, Cryptic Burnished Brass *Diachrysia stenochrysis* (Warr.), in which the central brown band across the forewing is well broken by a belt of the brassy background colour. Research is ongoing and not all is published, but differences in mitochondrial DNA are found in moths with this belt of brassy green, which joins the two brassy bars and is at least 3mm wide from front to rear. These differences are stated to be strongly correlated with slight differences in the genitalia and biology found in Continental material. Moths with a bar of less than 3mm were found to be f. *tutti* of Burnished Brass. Full acceptance of Cryptic Burnished Brass in the British and Irish list may occur when further findings are published. In the meantime, readers may wish to record and photograph examples on which the external features conform to Cryptic Burnished Brass, and/or ensure that candidates are retained for expert determination. The genitalia differences are not easy to appreciate, and are beyond the scope of this book (but see Plant 2010). See also Slender Burnished Brass. **Flight season** In southernmost counties of England, two generations, Jun–Jul and Aug–early Oct. Further north and into northern England, the second generation is partial, but recently in favourable years it has increased in numbers and extended further north. Normally one generation in Scotland and Ireland, Jun–early Aug. Flies at dusk, when it feeds at flowers, including those of Red Valerian, buddleias and Honeysuckle, and later in the night comes regularly to light. **Life cycle** Overwinters as a small larva, near the ground among vegetation. Larva Jul–May or Jun, feeding at night and hiding low down on the foodplant by day. In the south, may become fully grown in Aug. Pupates in a loose cocoon formed on the underside of a leaf of the foodplant. **Larval foodplants** Most frequently Common Nettle, but also other herbaceous plants, including White Dead-nettle, Wild Marjoram, Lesser Burdock and Spear Thistle. **Habitat** Gardens, hedgerows, ditch-banks, marshes, fens, wood edges and other rough swards. **Status and distribution** Resident. Common. Well distributed and fairly frequent, and found throughout the British Isles.

Purple-shaded Gem

plate 48

Euchalcia variabilis (Pill.)

Uncertain 73.013 (2438)

Field characters and similar species FW 17–19mm. Unmistakable among moths recorded in the British Isles (although several species found in mainland Europe are similar). Forewing olive brown with whitish markings, the inner and outer central cross-

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

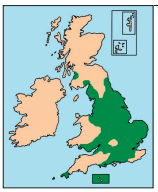
lines and kidney mark edged with pink. **Flight season** In mainland Europe, Jun–Aug. **Larval foodplants** French Meadow-rue and Monk's-hood. **Habitat** Clearings and other open areas in broadleaved and mixed woodland. **Status and distribution** Rare immigrant or accidental import. Placed on the British list in 1809 on the basis of a specimen allegedly collected in Wales. There is also a vague and unsubstantiated 19th-century record of several by day on Salisbury Plain, Wiltshire, over a number of years. However, for various reasons (not least the absence of the foodplants) this seems unlikely. The last record was in Aug 1887, one feeding at Bramble flowers at Castle Kevin, Co. Wicklow, Ireland. This record is documented and appears genuine, and the specimen exists in the National Museum in Dublin, but it could have been accidentally introduced, perhaps with plant stock. Resident mainly in mountainous areas of mainland Europe.

Golden Plusia

plate 48

Polychrysia moneta (Fabr.)

Common 73.014 (2437)



Field characters FW 17–20mm. Combination of fine pattern on broad golden-yellow forewing, large kidney mark outlined in silvery white, and large fan-like scale tufts on thorax is diagnostic. Pattern is very constant, but intensity of gold colour varies: some examples are paler and greyer, others darker and browner. The very rare f. *maculata* Lempke has a brown forewing with large black spots near outer edge. **Flight season** Usually one generation, late Jun–early Aug. Sometimes a partial second generation in southern England, in Sep. **Life cycle** Overwinters as a very small larva. Larva Aug–Jun. Lives in a web when small, and later rests on the underside of a leaf. In the south, some feed up rapidly and become fully grown in late Aug or Sep. Pupates in a yellow cocoon formed under a leaf of the foodplant. **Larval foodplants** The leaves, flower buds and unripe seeds of cultivated delphiniums and Larkspur. In captivity, reared on Wormwood and Mugwort. **Habitat** Mainly gardens and parks, but wanders into other habitats. **Status and distribution** Resident. Common. Recent colonist since the late 19th century, following a northward expansion of its range in mainland Europe. It spread rapidly over most of mainland Britain, reaching Inverness-shire and Aberdeenshire by the 1950s. It then retreated south and is now very infrequent in Scotland (and only in the south), and less frequent (although still quite widespread) in the rest of Britain. Old records from Man. Recorded locally in Ireland in Co. Dublin, but not since 1963. Recorded rarely on Alderney.

Silver Y

plate 48

Autographa gamma (L.)

Immigrant 73.015 (2441)

Field characters FW 13–21mm. Plusiine moths with a conspicuous unbroken, clear metallic silver Y mark and metallic sheen (especially in outer half) on brown and grey marbled forewing, sometimes tinged purplish, are most likely to be this species. Size and shade of forewing vary greatly, and may be affected by developmental temperature. Pale f. *pallida* Tutt results from a hot climate, and spring immigrants are often of this form. The small f. *gammina* Stdgr. is thought to result from starvation in the larval stage, while dark examples may reflect growth in cooler climates such as the British Isles. The overall forewing pattern varies little, but occasionally individuals are encountered with the central mark broken (f. *bipartita* Orstadius), reduced, greatly enlarged (f. *gartneri* Skåla), triangular or otherwise different (even between wings on the same moth). The rare f. *nigricans* Spul. is black. **Similar species** In cases where the silver mark is abnormal, confusion with a number of species, including rare immigrants, is possible. The most likely are Ni Moth, Essex Y, Scar Bank Gem, Plain Golden Y, Beautiful Golden Y (generally redder), Scarce Silver Y (blacker and more ornate) and Dewick's Plusia. **Flight season** Several generations. Recorded during every month of the year, but most frequently May–Sep. Winter records are uncommon and generally coincide with mild southerly winds. Often flushed from low vegetation during the day, when it flies a short distance, and frequently seen flying in abundance during sunny weather, usually visiting flowers. Comes to light, sometimes in large numbers. Often has a well-defined feeding flight at around sunset, well before most other moths. **Life cycle** Winter survival is probably rare, but larvae have occasionally been found in Feb (e.g. in Bedfordshire and Yorkshire) after hard frosts. Larva any time from spring to autumn, initially resulting from immigrant adults, later from further influxes supplemented by locally bred generations. **Larval foodplants** Many low-growing wild and cultivated herbaceous plants, from bedstraws, clovers and Common Nettle to crops such as Garden Pea, Cabbage and Runner Bean. Sometimes an agricultural and horticultural pest, more especially in southern Europe. **Habitat** Adults invade most habitats, coastal and far inland, including gardens, in search of nectar. Tends to breed on plants in unshaded situations, including wide woodland rides. **Status and distribution** Immigrant. Breeds every summer. Numbers vary greatly from year to year, but it is seldom less than frequent, and sometimes occurs in huge abundance, especially at the coast. 1996 was exceptional, when it was abundant everywhere, and coastal swarms estimated at many millions were observed as far north as

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

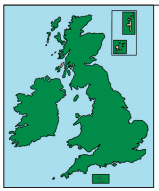
Shetland. Recorded throughout the British Isles. Widespread and usually abundant throughout Europe and parts of Africa and Asia.

Beautiful Golden Y

plate 48

Autographa pulchrina (Haw.)

Common 73.016 (2442)



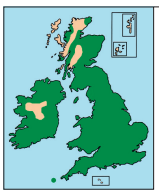
Field characters FW 17–20mm. When fresh, this moth really lives up to its name. Forewing dark reddish brown or purplish brown, extensively marbled with pink or light purplish brown, with a metallic grey-green blotch near outer edge towards trailing corner. A key feature is the kidney mark, sharply pinched and finely edged in gold. Central golden mark is in fact very variable, and usually split into a 'V' and an oval spot, but is sometimes complete (f. *percontatrix* Aurivillius). Occasionally it is reduced to a small dot, and very rarely expanded to form a large wedge (f. *gloriosa* Cock.). **Similar species** See Plain Golden Y and Silver Y. **Flight season** One generation. Late May–late Jul in southern Britain, Jun–Aug or early Sep in the north. Feeds at flowers at dusk and comes frequently to light. **Life cycle** Overwinters as a small larva among leaf litter. Larva Jul or Aug–May. Feeds mainly at night, hiding low down on the foodplant by day. Pupates in a cocoon formed in a folded leaf of the foodplant. **Larval foodplants** Herbaceous plants, including Common Nettle, Hedge Woundwort, Common Ragwort and Wood Avens; also Honeysuckle. **Habitat** A wide range of upland and lowland habitats, including woodland, hedgerows, gardens, scrubby pasture, moorland and heathland. More frequent on acid soils but also occurs on calcareous grassland. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout Britain, Man and Ireland. More numerous in northern Britain. Rare in the Channel Islands.

Plain Golden Y

plate 49

Autographa jota (L.)

Common 73.017 (2443)



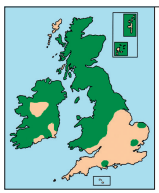
Field characters and similar species FW 17–21mm. Similar to Beautiful Golden Y but slightly larger on average. Key differences are lighter, redder forewing (although a duller, brown form occurs infrequently), more uniform and less ornate coloration, and indistinct or absent kidney mark. Forewing dark to light reddish brown, rather softly marbled with pink or pinkish brown. Central golden mark is usually broken, but sometimes complete (f. *percontationis* Ochs.); infrequently, it is reduced to a small dot (f. *inscripta* Esp.) and very rarely expanded to form a large wedge. See also Silver Y. **Flight season** One generation. Jun–early Aug in southern Britain, Jul–Aug in the north. Feeds at flowers at dusk and comes regularly to light. **Life cycle** Overwinters as a small larva among leaf litter. Larva Aug–May or Jun. Feeds mainly at night, hiding low down on the foodplant by day. Pupates in a cocoon formed on the underside of a leaf of the foodplant. **Larval foodplants** Herbaceous plants, including Common Nettle, White and Red dead-nettles, and reportedly Hogweed; also Honeysuckle. In captivity, will feed on other woody plants, including Hawthorn and sallows. **Habitat** A wide range of habitats, including woodland, downland, hedgerows and gardens. Usually more frequent than Beautiful Golden Y in suburban gardens and urban areas, but less frequent on acid soils. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout most of Britain, Man and Ireland, but local in north-western parts of Scotland. Occasionally recorded from Orkney. Rare in the Channel Islands.

Gold Spangle

plate 49

Autographa bractea ([D. & S.])

Common 73.018 (2444)



Field characters FW 18–21mm. The large, metallic golden central mark, like a bent triangle, on rather broad, plain, dark reddish-brown forewing clouded with dull pinkish brown and sometimes greyish brown is a diagnostic combination. Little variation, although golden mark varies slightly in shape. **Flight season** One generation. Jul–Aug. Feeds at flowers at dusk and comes to light, usually in small numbers. Sometimes flies by day. **Life cycle** Overwinters as a small larva. Larva Aug–May or early Jun. Pupates in a cocoon formed under a leaf of the foodplant. **Larval foodplants** A wide range of herbaceous plants, including Common Nettle, White Dead-nettle and Ground-ivy; also Bilberry and Honeysuckle. **Habitat** Moorland, upland pasture, woodland rides and edges, hedgerows and gardens. **Status and distribution** Resident and suspected immigrant. Common. Well distributed and fairly frequent in Wales, the west and north Midlands, northern England, Man, Scotland (except Shetland, where it is considered vagrant) and Ireland, where it is most widespread in the north. The southerly extent of its distribution in Britain fluctuates periodically. In the first half of the 20th century it became rare south of Cumbria, then during the 1970s it became frequent as far south as Gloucestershire and Warwickshire, but it is now rarer in these counties again. Possible immigrants, or wanderers from the north, are occasionally recorded in East Anglia and eastern, southern and south-west England.

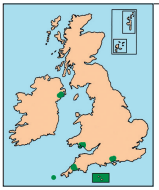
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Stephens' Gem

plate 49

Megalographa biloba (Steph.)

Suspected immigrant 73.019 (2445)



Field characters and similar species FW 15–18mm. Distinguished from all related species by unmistakable large double-lobed silver central marking on forewing, which is dark reddish brown, clouded with pinkish brown and with orange-brown patches. Kidney mark has a wavy silver hieroglyph and cross-lines are partly edged silvery. **Flight season** Mar–Nov in North America. **Life cycle** Probably breeds continuously in the south, but a migrant only in the northern half of its range. **Larval foodplants** A wide range of herbaceous plants. **Habitat** A wide range. **Status and distribution** Suspected rare immigrant. A North American species, described in 1830 and included as British on the basis of a specimen found in a collection, the origin of which was unknown. Ten substantiated records, either the result of transatlantic immigration or accidental importation. The first, very worn, at light on 19 Jul 1954 at Trawscoed, Cardiganshire, after prolonged transatlantic winds; the second in good condition at light on 1 Oct 1958 at Maidencombe, Devon, at a time when seven species of North American birds were reported in Britain, again after an unusually prolonged westerly airstream. Three in 2001, two on Guernsey in garden light-traps, on 13 and 17 Aug, and one on 27 Oct near Sparsholt, Hampshire, but weather conditions at the time were not suggestive of unassisted transatlantic crossing, making accidental importation more likely. Two in 2002, on Scilly on 9 Jul, and on Gower, Glamorgan, on 20 Sep. Three in 2012: on Scilly on 13 Jul; at Luckett, Cornwall, on 20 Sep (a forewing found in a bat roost); and in Ireland at Murlough NNR, Co. Down, on 7 Nov. Not recorded as an immigrant elsewhere in Europe. Abundant in North America, where it is known as the Bilobed Looper, and is sometimes a pest of Cabbages, clovers, tobacco plants and other crops.

Essex Y

plate 49

Cornutiplusia circumflexa (L.)

Suspected immigrant 73.020 (2448)

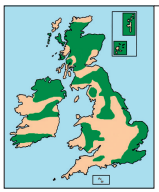
Field characters and similar species FW 16–21mm. Similar to Silver Y, but forewing less metallic, with more ornate markings. Silver central mark is broader, and rather like an oblique, distorted 'U'. Inner central cross-line noticeably pale, and there is a pale, jagged-edged band along outer edge. Forewing often tinged with lilac or violet when fresh. See also Accent Gem and Boathouse Gem, both with a somewhat similar central mark, but smaller. **Flight season** Several generations per year, and often active by day where resident abroad. **Life cycle** Breeds more or less continuously. **Larval foodplants** No record of breeding in the British Isles. Reported elsewhere on Potato, Garden Pea, members of the cabbage family and other low-growing plants. **Status and distribution** Suspected rare immigrant. The only recent record is of one at a light-trap at Sway, Hampshire, on 29 Jul 1979, coinciding with a large influx of Silver Ys in Sussex and a Spurge Hawk-moth in Essex. The only other plausible British record is of one captured in Essex prior to 1807, although other specimens were present in British collections at that time. Widely resident in Africa, the Canary Islands and Madeira. Also recorded from the Mediterranean and south-east Europe (but not certainly resident there), and has reached Finland as an immigrant.

Scarce Silver Y

plate 49

Syngrapha interrogationis (L.)

Local; Immigrant 73.021 (2447)



Field characters FW 15–18mm. Forewing blackish, extensively marbled and clouded with light, silvery grey (sometimes darker grey or tinged mauve), and with a silver central mark. This combination is diagnostic. Central mark is irregular and extremely variable, usually split into a 'V' and an oval, but sometimes forming a 'Y' or a meandering blotch, or thin and reduced. Most immigrant examples are small, marked with dull grey, and have a paler hindwing, which is brown with a darker border. **Similar species** Ni Moth is brownish grey, marbled with brown, and silver central mark is duller and less irregular. See also Silver Y and Scar Bank Gem. **Flight season** One generation. Late Jun–Aug. Immigrants occur in late Jul and Aug. Feeds at flowers from dusk and comes to light. Sometimes active by day, flying in sunshine. Easily flushed from Heather. **Life cycle** Overwinters as a small larva. Larva late Jul–early Jun. Rests on the foodplant. Pupates in a white cocoon formed on the foodplant. **Larval foodplants** Heather, Bilberry and Bog Bilberry. **Habitat** Moorland. **Status and distribution** Resident and occasional immigrant. Local. Fairly frequent in suitable habitat in the north Midlands, Wales, northern England, most of mainland Scotland, the Hebrides and Ireland. A few older records from Devon and Cornwall, but no evidence of breeding despite there being extensive moorland in that area. Immigrants have mainly occurred in south-east England, East Anglia, along the east coast to north-east Scotland, north-west Scotland, Orkney and Shetland. Occasional influxes are recorded (including 18 in Aug 2004 and an unprecedented 98 in Aug 2006), often as part of a larger migration elsewhere in north-west Europe.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Gold Spot plate 49

Plusia festucae (L.)

Common 73.022 (2439)

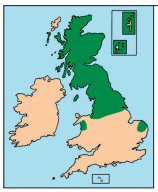
Field characters FW 14–19mm. Forewing reddish brown or rich brown, with golden-yellow blotches dusted with brown. Two silvery-white central marks, occasionally joined, are the most conspicuous features. These vary in shape, but outermost is always smaller and elliptical or tear-shaped. There are three small, narrow golden-yellow blotches between dark veins near wing tip (the smallest at tip), next to an elongated silvery-white mark that usually tapers to a point away from outer edge. Sometimes the third blotch is also silvery. Fine brown cross-lines unclear in places, notably between the two sets of silvery marks. **Similar species** See Lempke's Gold Spot. **Flight season** Two generations in southern Britain, late May–Jun and late Jul–Sep (the second much larger), the two probably overlapping further north and in Ireland. One generation in northern Britain, late Jun–Aug. Flies from dusk, when it feeds at flowers, including those of Red Valerian, buddleias and Water Mint. **Life cycle** Overwinters as a small larva. Larva Sep–May, also Jul–Aug in southern Britain. Pupates in a transparent white cocoon spun vertically between leaves or the stems of rushes, and somewhat resembles the egg cocoon of a spider. **Larval foodplants** Tufted-sedge, Glaucous Sedge and other sedges; also Yellow Iris, Branched Bur-reed and Water-plantain. In captivity, reared on grasses, Grey Willow and Common Nettle. **Habitat** A range of mostly damp places, including ditch-banks, canals and rivers, fens, marshes, woodland rides, heathland, moorland and upland pasture. **Status and distribution** Resident. Common. Quite well distributed and fairly frequent in suitable habitat throughout the British Isles.

Lempke's Gold Spot plate 49

Plusia putnami Grote

ssp. *gracilis* Lempke

Local 73.023 (2440)



Field characters and similar species FW 14–15mm. Very similar to Gold Spot, but slightly smaller on average and forewing usually orange-brown. Fine brown cross-lines are distinct, notably between central marks and series of blotches near tip. Elongated silvery mark near tip ends fairly bluntly at cross-line, rather than in a point as in Gold Spot. Outermost of the two silvery central blotches is smaller and more rounded than in Gold Spot. However, both species vary in colour and Gold Spot in particular is quite variable in detail of markings, with some individuals resembling Lempke's Gold Spot. Therefore, for confirmation of records, examination of the genitalia (which are distinct in both sexes) is likely to be required. **Flight season** One generation. Jul–Aug. Flies at dusk, when it feeds at flowers, including those of comfreys. Comes to light. **Life cycle** Overwinters as a small larva. Larva Aug–May. Pupates in a cocoon spun among the foodplant. **Larval foodplants** Wood Small-reed, Purple Small-reed, Yorkshire-fog and probably other grasses. **Habitat** Fens, marshes and other damp open places, including upland pasture. **Status and distribution** Resident. Local. Frequent in the East Anglian fens, and recorded very locally in the northern half of Wales. Widespread but local in northern England, but possibly increasing. Formerly very scattered and local in Scotland, but has recently expanded and now widespread throughout the mainland and the Hebrides, and recently recorded from Orkney and Shetland. Confirmed from various sites on Man, but only a single record from Ireland, from Co. Cork in 1994.

Eustrotiinae

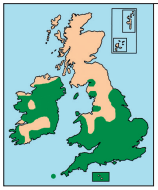
Marbled White Spot

Silver Hook

Marbled White Spot plate 49

Deltote pygarga (Hufn.)

Common 73.024 (2410)



Field characters FW 11–12mm. Diagnostic feature is a distinct whitish patch toward trailing corner of blackish-grey and brown forewing, not reaching leading edge, and usually marked with grey along its outer margin. It varies in width and in the uncommon f. *albilinea* Haw. is reduced to white edging on outermost cross-line. **Similar species** See Pretty Marbled. **Flight season** One generation. Late May–Jul. Rests on tree trunks and fences by day, and flies when disturbed. Comes to light regularly and occasionally to sugar. **Life cycle** Overwinters as a pupa in a cocoon just below ground. Larva Jul–Sep. Feeds mainly at night. **Larval foodplants** Grasses. Recorded from Purple Moor-grass and False Brome, but probably also uses others, such as Tufted Hair-grass. **Habitat** Woodland, grassy heathland and moorland, most frequently on acid and neutral soils. **Status and distribution** Resident. Common. Well distributed and locally frequent in most of the southern half of England, and in south, west and

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

north-west Wales. More local in the south Midlands, but after recent expansion extends north-west to Lancashire (since 2004) and Cumbria, the east Midlands, Lincolnshire and extensively into Yorkshire. First recorded on Man in 2004. In Ireland, formerly local in the south, but after recent expansion now found in most parts and locally frequent. Widespread in the Channel Islands.

Pretty Marbled

plate 49

Deltote deceptoria (Scop.)

Immigrant; probable transitory resident

73.025 (2411)

Field characters and similar species FW 12–13mm. Superficially resembles Marbled White Spot in size, shape and colour, but has white patches at base of forewing as well as near outer edge. Oval and kidney mark white in outline against black central band. **Flight season** One generation in central Europe, May–Jun. A second generation further south, Jul–Aug. British records May–Jun, mostly at light, but one caught by day. **Life cycle** In mainland Europe, overwinters as a pupa. Breeding unconfirmed in the British Isles. **Larval foodplants** Grasses, especially Timothy and cat's-tails. **Habitat** British records are mainly from woodland and open coastal habitats. In mainland Europe, found in damp, wooded places and on open grassland. **Status and distribution** Immigrant and probable transitory resident. Sixteen records between 1948 and 1986. Two in 1998, at Icklesham, Sussex, and Greatstone, Kent, and one in 2006 near Arundel, West Sussex. Also recorded from Surrey, Hampshire, Gloucestershire and Norfolk. A cluster of records from the Hamstreet/Orlestone woodlands, Kent, between 1948 and 1956 suggests a resident population may have been established temporarily. Widely distributed in central Europe, and thought to be expanding its range.

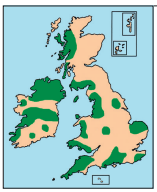
Silver Hook

plate 49

Deltote uncula (Cl.)

Local

73.026 (2412)



Field characters FW 11–12mm. Unmistakable. Slender, with a unique, invariable pattern. Diagnostic feature is a creamy-white streak running close to leading edge of olive-brown forewing, from which the oblique white kidney mark forms a hook-like projection. There are grey streaks along leading and trailing edges, which may be tinged pink. **Flight season** One generation. Late May–early Jul. Occasional adults in Aug may be a partial second generation. Flies by day when disturbed, and from dusk onwards. Comes to light, usually in small numbers. **Life cycle** Overwinters as a pupa, in a strong cocoon underground. Larva Jul–Sep. **Larval foodplants** Grasses and sedges, including Tufted Hair-grass and Wood-sedge. **Habitat** Fens, marshes, boggy heathland and high moorland. Sometimes wanders into other habitats. **Status and distribution** Resident. Local. In suitable habitat in south-west and central southern England, here mainly in Dorset, Hampshire, Surrey, and north to Oxfordshire and the south-east Midlands (where it appears to be in decline). Virtually absent from the rest of the Midlands (but discovered breeding very locally in Warwickshire in 2006). Also found in East Anglia, Wales, Lancashire, Cumbria, Man and very locally in central Yorkshire. In Scotland, found almost entirely in two discrete areas, in the south-west from southern Ayrshire to Kirkcudbrightshire, and further north from Mull through West Inverness-shire to Skye and West Ross. Very local in Ireland, but more widespread in the northern half.

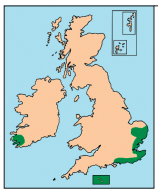
Silver Barred

plate 49

Deltote bankiana (Fabr.)

RDB; Immigrant

73.027 (2413)



Field characters FW 10–12mm. Unmistakable, with two roughly parallel, slanting silvery-white bars on otherwise plain brown forewing. Irish individuals tend to be slightly larger and redder than English specimens. **Flight season** Mainly one generation, early May–late Jul, with occasional individuals, possibly of a partial second generation, in mid-Aug. Easily disturbed by day, flying up from low swards, and active from dusk, coming to light. **Life cycle** Overwinters as a pupa, in a cocoon low in the sward. Larva Jun–Aug. Can be swept at night. **Larval foodplants** Reported from Purple Moor-grass (with which it is strongly associated across the English Channel) and Smooth Meadow-grass, but accepts Annual Meadow-grass in captivity. **Habitat** Fens, marshes and peat bogs. Also, a suspected transitory resident on a patch of damp grassland below chalk downs. May prefer rides and other annually cut areas to tall fen swards. **Status and distribution** Resident and immigrant. Red Data Book species. As a long-term breeding resident, confined in Britain to Chippenham and Wicken fens in Cambridgeshire. Present more widely in the wetlands of Huntingdonshire, Cambridgeshire and Norfolk in the 19th century, prior to their draining. Also resident in a small coastal marsh near Sandwich, Kent, from about 1980, as a result of immigration. A colony was observed at the foot of downland at Dover, Kent, in 1993, when the moth was regularly seen in double figures over a fortnight in Jun, but this has not persisted. Elsewhere there have been over 150 recorded as presumed immigrants, with a peak of 16 in 2006, mainly at coastal sites in the south-east and east (Kent, Sussex, Essex, Suffolk and Norfolk) from May to Aug, mostly at light. One reached Huntington, Yorkshire, on 8 Jun 1992. In Ireland, a long-term resident of peat bogs in the south-west, occurring locally in Co. Kerry and at Glengariff, Co. Cork. One on Guernsey in 2009.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Acontiinae

Spotted Sulphur

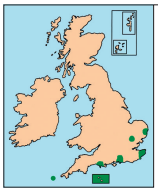
Pale Shoulder

Pale Shoulder

plate 49

Acontia lucida (Hufn.)

Immigrant 73.028 (2415)



Field characters and similar species FW 12–15mm. Distinctive, but rather variable. Forewing dark grey-brown with basal third white, often with grey blotches, this colour projecting towards centre of wing, forming the 'pale shoulders'. Has an angular, roughly rectangular or slightly pointed white blotch on leading edge roughly two-thirds from base. Fringes dark in leading half. Head and thorax white or grey. Hindwing varies from white with broad blackish borders to black with white central blotches. See Four-spotted, which is slightly smaller, with a more rounded blotch on forewing leading edge. **Flight season** Two generations in mainland Europe, May–Jun and Jul–Aug. As an immigrant, recorded Jun–Aug, mainly Aug. Visits flowers in sunshine and comes to light. **Life cycle** In mainland Europe, overwinters as a pupa just below ground. Larva Jun–Jul and Aug–Sep. **Larval foodplants** Reported from Ground-ivy, Field Bindweed, Common Mallow, Dwarf Mallow and Marsh-mallow. **Habitat** Hot, dry, open flowery places. **Status and distribution** Immigrant. Twenty-eight modern records. Approximately 15 were reported from south-east England during the 19th century, as suspected immigrants. No further records until 1994, when singletons were trapped at West Bexington, Dorset, and Dymchurch, Kent, both on 5 Aug. Another five up to 2001, from Scilly, Devon, Hampshire and Sussex, and including another at West Bexington. Occurred annually in 2003 (three), 2004 (six, including the first from Suffolk), 2005 (one) and 2006 (four), and one on Scilly in 2008. A further nine up to 2014, including one far inland, in Hertfordshire in 2012. Recorded erratically in the Channel Islands since the 1990s. Its range includes central and southern Europe and North Africa.

Spotted Sulphur

plate 49

Acontia trabealis (Scop.)

Former resident, presumed extinct; suspected immigrant 73.029 (2414)

Field characters FW 10–11mm. The intricate pattern of dark chocolate spots and stripes running along yellowish-cream forewing of this delicate moth, combined with its small size, is diagnostic. Hindwing uniform grey-brown with white fringes. **Flight season** One generation. Mid-Jun–early Jul, occasionally Aug. Easily disturbed and flushed by day near the larval foodplant, especially in dry, sunny weather. Flies naturally in late afternoon. Sometimes captured after dark in light-traps. **Life cycle** Overwinters as a pupa, among grass stems near the ground. Larva Jul and Sep. **Larval foodplants** Field Bindweed. **Habitat** Lightly vegetated open ground in the Breckland, including sandy heaths, fallow fields, other disturbed land, banks and verges. **Status and distribution** Former resident and suspected immigrant, now presumed extinct in the British Isles. Occasional captures in Kent from 1782 onwards. Discovered breeding in the Breckland of East Anglia in 1847 and recorded at various sites there until the early 1950s. Survived in a single plot planted with asparagus near Mildenhall, Suffolk, where it was last seen in Britain on 25 Jun 1960. One at light at Swanage, Dorset, on 20 Aug 1947. The decline and extinction of this species have been attributed to ecological changes resulting from large-scale afforestation and agricultural intensification in the Breckland. Also became extinct in other parts of north-west Europe at around the same time, and continues to decline in intensively farmed areas.

Aediinae

Sorcerer

plate 49

Aedia leucomelas (L.)

Suspected immigrant 73.030 (2464a)

Field characters and similar species FW 15–18mm. Similar to Alchymist, but smaller, usually with a short whitish or buff bar or roughly triangular mark in centre of forewing near kidney mark, and sometimes with more extensive sparse, pale variegation. This can include outermost area, but there is no clear jagged demarcation from black to a pale brown patch in trailing corner or pale brown band along outer edge, as in Alchymist. Black cross-lines less jagged and generally less distinct. Hindwing vey similar to that of Alchymist, with two white sections in fringe, but outer one does reach leading edge. **Flight season** In mainland Europe, May–Oct in two overlapping generations. **Life cycle** Overwinters as a fully grown larva in an underground cocoon, and pupates in the spring. **Larval foodplants** Bindweeds. **Habitat** Generally in open habitats. **Status and**

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

distribution Suspected rare immigrant. Two records. One at light at Totland, Isle of Wight, on 11 Sep 2006 and one at Brightlingsea, North Essex, on 12 Aug 2009. A resident of southern Europe, found from Spain and France to Turkey.

Druid

plate 49

Aedia funesta (Esp.)

Suspected immigrant 73.0301 (–)

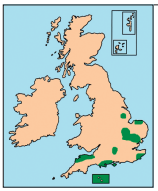
Field characters and similar species FW 15–16mm. Not unlike Sorcerer or Alchymist, with a broad blackish forewing and a blackish hindwing with a white base and white sections in fringes. However, easily distinguished by large, broad whitish or pale buff kidney-shaped blotch beyond the black kidney mark. **Flight season** One or two generations in mainland Europe, May–Jul and Aug–Sep. **Life cycle** Overwinters as a fully fed larva in an underground cocoon. Larva feeds in Jul and Aug. **Larval foodplants** Field Bindweed and Hedge Bindweed. **Habitat** Field margins, rough ground and gardens. **Status and distribution** Suspected immigrant. Three records, all at light. One on 13 Jun 2014 at Kingsdown, Kent, one at Durlston Country Park, Swanage, Dorset, on 1 Jul 2015 and one at Southsea, Hampshire, on 2 Jul 2015. Found mainly in central Europe, in eastern Spain, France and eastwards.

Four-spotted

plate 49

Tyta luctuosa ([D. & S.])

Na; suspected immigrant 73.031 (2465)



Field characters FW 12–13mm. The large, rather rounded white blotch, usually extending from two-thirds along leading edge of brownish-black forewing, combined with the white band on hindwing (which looks like a spot when moth alights with wings half open), is diagnostic. Fringes usually dark only in central section on forewing. **Similar species** See Pale Shoulder, which is slightly larger, with a white or grey forewing base, smaller and more angular white spot on leading edge, and dark fringes in leading half on forewing. **Flight season** Two generations on the Isle of Portland, Dorset, mid-May–late Jun and late Jul–late Aug, occasionally to mid-Sep, the second generation more numerous. Elsewhere the first generation is protracted, mid-May–early Jul, with only a partial, often small, second generation late Jul–late Aug. Very rarely at the end of Apr (as in 2003). Flies on sunny days. Male patrols, and female stays closer to the ground and often basks. Visits flowers for nectar, including those of Field Bindweed, Oxeye Daisy and clovers. Also flies after dark and comes to light, usually as singletons but often in large numbers at Portland. **Life cycle** Overwinters as a pupa. Larva late Jun–Aug, and again in Sep. Feeds by night, hiding on the lower stems of the foodplant by day. **Larval foodplants** Field Bindweed. Wild larvae have been found eating young leaves from the first instar onwards, although some authors have reported a preference for the flowers. **Habitat** Hot, well-drained open sites, often on south-facing slopes and with thin soils and sparse or collapsed vegetation, including unimproved calcareous grassland, field margins, commons, breckland, embankments and derelict ground. **Status and distribution** Resident and suspected immigrant. Nationally Scarce A. Formerly widespread and fairly frequent in England, roughly south of a line from the Wash to the Severn Estuary, including south-west England, but now much decreased and very local. The largest populations are near Portland Bill, Dorset, in field margins in the Littlebury area of Essex, extending into Hertfordshire and Cambridgeshire, and on land beside the main east coast railway line between Peterborough and Helpston, Northamptonshire. Other fairly recent records, often associated with railway lines and quarries, confirm populations elsewhere in Northamptonshire, and in Leicestershire, Lincolnshire and Oxfordshire. There is at least one colony in Bedfordshire, and probably one in Somerset. Colonies in Nottinghamshire and Surrey have recently died out. Now very rare or absent from the Breckland of East Anglia. Still occurs sporadically throughout the former range, particularly in south-east England, some probably from undiscovered colonies, others suspected immigrants such as that at Dymchurch, Kent, on 10 Jul 1999, the first Kent record since 1967. One was photographed in a field near St Mary's College, Durham, on 12 Jun 1994. In the Channel Islands, recorded from Jersey and regularly on Alderney since 2007.

Pantheinae

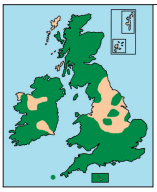
Nut-tree Tussock

Nut-tree Tussock

plate 49

Colocasia coryli (L.)

Common 73.032 (2425)



Field characters FW 14–17mm. A thickset furry moth. Forewing broad, rounded and usually predominantly dark grey-brown in basal half (although grey at very base), contrasting with light grey or pale brown in outer half. Male has feathered antennae. Form *medionigra* Vorbrodt is light grey (white in

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

parts of northern Scotland), with a very dark basal area. In f. *avellana* Huene, basal patch is faint or occasionally absent. The dark brownish-grey or blackish f. *melanotica* Haverkampf occurs in southern England, most frequently in Buckinghamshire, Oxfordshire and Hertfordshire. **Flight season** Two generations in southern Britain, Apr–May and Jul–Aug. Mainly one generation in northern England, Scotland and Ireland, May–Jun. Male flies from dusk and comes frequently to light; the rather sedentary female does so only rarely. **Life cycle** Overwinters as a pupa, in a cocoon formed either among leaf litter, under moss or at the base of a tree. Larva late May–early Jul and Sep–early Oct in the south, late Jun–Sep in the north. Feeds at night and hides between spun leaves by day. **Larval foodplants** Beech, Hazel, birches, oaks, Field Maple, Hornbeam and other broadleaved trees. **Habitat** Broadleaved woodland. **Status and distribution** Resident. Common. Well distributed and quite frequent in England north to Shropshire, Worcestershire, Oxfordshire, Buckinghamshire, Huntingdonshire and East Anglia, and in most of Wales. Very local and patchy in north Wales, the rest of the Midlands and most of northern England. Well distributed in Cumbria, Northumberland, throughout mainland Scotland, the Inner Hebrides and Ireland. Discovered on Man in 2000. Three on Jersey in 1999, with previous records from 1924, and recorded recently on Alderney.

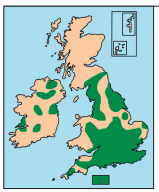
Dilobinae

Figure of Eight

plate 49

Diloba caeruleocephala (L.)

Common 73.033 (2020)



Field characters FW 15–19mm. Forewing grey, tinged with lilac and brown. The two darker-centred yellowish-white central marks on forewing are diagnostic, in that the innermost one resembles the number eight, and is often joined to its outer neighbour, which is more variable. Antennae of male are feathered. **Similar species** Figure of Eighty and Poplar Lutestring have somewhat similar central marks, but the outer one resembles the figure eight, their forewings are broader, their antennae are not feathered and they do not normally fly in late autumn. **Flight season** One generation. Late Sep–mid-Nov. Comes to light and can be numerous in scrubby habitat. **Life cycle** Overwinters as an egg, laid in small groups on twigs of the larval foodplant. Larva late Apr–mid-Jul. Most often found in open, sunny places, but also in shady situations. Pupates in a cocoon formed in soil or leaf litter. **Larval foodplants** Blackthorn, hawthorns, Crab Apple, wild roses and fruit trees, including Bullace, Cherry Plum, Cultivated Plum and Pear. **Habitat** Most habitats in which the foodplants grow, including gardens, hedgerows and woodland. **Status and distribution** Resident. Common, but declining. In the Rothamsted Insect Survey light-trap network, numbers reduced by 96% between 1968 and 2007. Formerly well distributed throughout most of England, extending into Devon and very locally into parts of eastern Wales and southern Scotland. Now much more local, especially in the southern half of the range, where it is very scarce in some areas, including East Anglia. The decline appears less in northern England, but in Scotland now restricted to the extreme south. Scattered and very local in Ireland. Local and rare in the Channel Islands.

Acronictinae Daggers

Grey Dagger

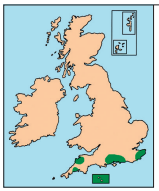
Coronet

Scarce Merveille du Jour

plate 49

Moma alpium (Osb.)

RDB 73.034 (2277)



Field characters FW 17–20mm. The only large, pale green and black (with long white streaks) noctuid flying in summer. Black markings on lichen-green forewing are largest near base and outer edge, and vary somewhat in extent. **Similar species** See Merveille du Jour (larger, flies in Sep–Oct and lacks white streaks. **Flight season** One generation. Early Jun–mid-Jul. A fresh adult on 27 Aug in the hot summer of 2006 appears to be the first record of a possible second generation in the wild, but this is not uncommon in captivity. Occasionally found at rest on oak trunks by day and seen feeding on aphid honeydew at night. Comes regularly to light and sugar, usually in small numbers. **Life cycle** Overwinters as a pupa, in a cocoon, usually on the ground among plant debris. Larva Jul–early Sep, occasionally beaten from foliage of large trees. **Larval foodplants** Pedunculate Oak and probably also Sessile Oak. A single larva was beaten from coppiced Sweet Chestnut in West Sussex in 2002, and an adult has been reared from a cocoon found among leaves of Turkey Oak. **Habitat** Oak woodland and scrubby oak. Usually, but not always, in large woods with mature oaks

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Scarce Merveille du Jour.

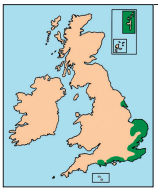
and woodlands managed for tall trees. May occur in smaller copses in well-wooded areas. **Status and distribution** Resident. Red Data Book species. Extremely southern in distribution, the majority of localities being within 40km of the south coast of England. In woodlands in South Wiltshire (e.g. Langley Wood, Redlynch, Whiteparish, Tytherley Forest), Hampshire (including the New Forest and woods to the north and east), West Sussex (Emsworth and near Arundel), East Sussex (including Beckley Wood), Kent (Hamstreet Woods NNR and the Orlestone Forest complex) and east Dorset (Verwood area). There are isolated populations in a wood in south-east Cornwall, and in the Great Torrington area of north Devon. Last seen in Essex in 1936 in a wood at Rettendon, which was clear-felled and replanted soon after.

Reed Dagger/ Powdered Wainscot

plate 49

Simyra albovenosa (Goeze)

Nb; suspected immigrant 73.035 (2290)



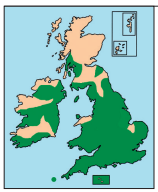
Field characters and similar species FW 16–20mm. Distinguished by very pointed, tapered, black-dusted straw-white forewing, with a long black streak from base and black or dark grey streaks in outer area, an absence of black dots other than those along the outer margin, and pure white hindwing. In f. *murina* Aurivillius, thorax and forewing dark brown with pale veins; hindwing white, outer area grey with white veins. **Similar species** See Striped, Southern, Large and Blair's wainscots (all with darker hindwing). **Flight season** Two generations. May–early Sep, but most numerous late Jul–early Aug. Hides by day among reed litter. Flies from dusk and comes to light, sometimes in large numbers, but does not feed. **Life cycle** Overwinters as a pupa, in a cocoon formed among living reed foliage or debris on or near the ground. Larva Jun–early Aug and late Aug–Sep. Feeds mainly by night, but can be swept from tall marshland vegetation by day. **Larval foodplants** Mainly Common Reed. Occasionally, wild larvae have been observed feeding on Yellow Loosestrife, Water Dock, Greater Tussock-sedge and Great Fen-sedge, and have been reared to adult on these. Also reported from Grey Willow, Whorl-grass and Tufted-sedge. **Habitat** Wetlands, near the coast and inland, including grazing marsh ditches, and both neglected and commercially harvested reed-beds. **Status and distribution** Resident and suspected immigrant. Nationally Scarce B. Locally widespread in East Anglia (particularly the Norfolk Broads and the Southwold/Walberswick area of the Suffolk coast), Essex, the Thames Estuary, the north Kent marshes, East Kent, East Sussex and Hampshire. Formerly in Huntingdonshire and the Isle of Wight. Recorded as a suspected immigrant from South Devon, Dorset and Hampshire, and also Spurn, Yorkshire (16, from 1970 to 2008), and Shetland (2008). Three British records of f. *murina* are known, two near the Essex coast (2005, 2008) and at Bawdsey, Suffolk, on 26 Jul 2014. The latter came during a period when several unusual migrants were recorded and was most likely an immigrant, but the previous two were not associated with known migrants. It is otherwise known from Scandinavia.

Alder Moth

plate 49

Acronicta alni (L.)

Local 73.036 (2281)



Field characters FW 16–19mm. Uniquely marked. Blackish clouding (variable in extent) on forewing, covering all or most of trailing half and extending to leading edge through and around kidney mark, is diagnostic. Has a thick black bar at base and long, thick black dagger mark from trailing corner. Only minor variation in other markings. Darker brownish-grey f. *suffusa* Tutt comprises up to half the population in the London area and occurs elsewhere. **Flight season** One generation. May–Jun. Comes to light and occasionally to sugar. **Life cycle** Overwinters as a pupa, burrowing into rotten wood. Larva Jun–Aug. Rests on the upper side of a leaf. **Larval foodplants** A range of broadleaved trees, including

Larva of Alder Moth.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

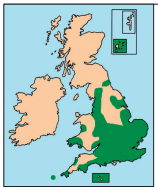
Downy Birch, Alder, Goat Willow, oaks and elms. **Habitat** Broadleaved woodland and scrub, often on poorly drained ground. **Status and distribution** Resident. Local. Quite well distributed and locally frequent in most of England and Wales. Local in Northumberland and south-west Scotland, but recently expanding and recorded north to Argyll. Found on Man and widely distributed but local in Ireland.

Dark Dagger

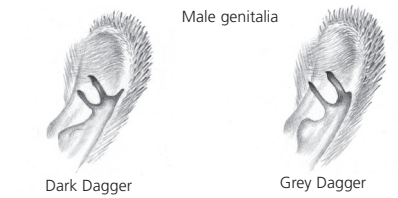
plate 50

Acronicta tridens ([D. & S.])

Common 73.037 (2283)



Field characters and similar species FW 17–20mm. See Grey Dagger, which is virtually identical. The two are clearly distinguished from all other species by the clear black markings on grey forewing, including a long dagger mark near trailing corner, a long, straight, branched streak at base, and black edging between pale kidney mark and oval. This pattern varies only in minor detail. Forewing sometimes slightly tinged brownish, or pink (f. *rosea* Tutt). See also under Grey Dagger. **Flight season** Mainly one generation. Mid-May–Aug. Sometimes a very small second generation in Sep–Oct. Comes regularly to light, less often to sugar and flowers. **Life cycle** Overwinters as a pupa, in a cocoon spun under loose bark or in a crevice in wood. Larva Jul–Oct. **Larval foodplants** A range of broadleaved trees and shrubs, including Hawthorn, Blackthorn, roses and cotoneasters, Goat Willow and oaks, with a preference for species of the rose family. **Habitat** A wide range of habitats, particularly woodland and fens, but also suburban gardens.



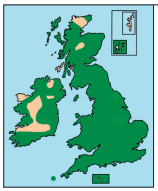
Status and distribution Resident. Common. Almost always less numerous than Grey Dagger, although probably under-recorded. Widespread and found in most parts of England and Wales, but more local in northern England. A handful of very scattered records from Scotland, including Orkney. Widespread and frequent in the Channel Islands.

Grey Dagger

plate 50

Acronicta psi (L.)

Common 73.038 (2284)



Field characters and similar species FW 17–20mm. Virtually identical to Dark Dagger and impossible to distinguish with certainty from external features. There are trends within each species. Dark Dagger tends to have a slightly shinier forewing, and male is often slimmer than male Grey Dagger, with a comparatively narrow forewing and pure white hindwing. Both the very lightest and darkest individuals tend to be Grey Dagger, especially warm, dark grey examples (f. *suffusa* Tutt). However, inspection of the genitalia is necessary for confirmation. With males this is quick and easy (see text figure), and with practice can be done on the live moth using a hand-lens. Clasper has three sharp teeth in Dark Dagger, whereas Grey Dagger has only two. In female Grey Dagger, sperm receptacle (corpus bursa) has a small additional sac (appendix), while in female Dark Dagger, the appendix is large (see Townsend *et al.* 2010). **Flight season** Mainly one generation. Mid-May–Aug, sometimes a small second generation in Sep–Oct. Comes regularly to light, sugar and flowers. **Life cycle** Overwinters as a pupa in a silk cocoon under loose bark, in a crevice or in rotten wood. Larva late Jul–early Oct when there is one generation, Jul–early Sep and Sep–early Nov when there are two generations. **Larval foodplants** A wide range of broadleaved trees and shrubs, including Blackthorn, hawthorns, Apple, birches, Sweet Chestnut, limes, elms and Rowan. **Habitat** Most habitats, particularly woodland, hedgerows and gardens, and scrub in many situations, including heathland, calcareous grassland and fens. **Status and distribution** Resident. Well

Larva of Dark Dagger.

Larva of Grey Dagger.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

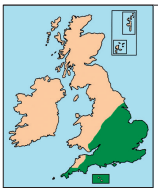
distributed and frequent throughout England, Wales, Man, Scotland (including the Hebrides and Orkney), Ireland and the Channel Islands.

Sycamore

plate 50

Acronicta aceris (L.)

Local 73.039 (2279)



Field characters FW 18–22mm. Forewing broad, rather narrower in male; cold, light grey (or darker), finely dusted with dark grey and slightly freckled with brownish grey. Similar to Poplar Grey, but with a less mottled appearance and area beyond kidney mark not distinctly paler. The most frequent form is distinctly paler overall, with clearer markings. In addition, the dark-edged pale outer central cross-line forms a curved question mark, there is usually a long, wavy, branched black basal streak, and usually a paler band along outer edge, divided into blocks by black veins. Hindwing whitish in male, greyish white in female, with dark veins. Form *infuscata* Haw. is darker grey. First found in London in late 19th century and rare until the 1950s, this form, and forms approaching it, now predominate in the London area and have occurred elsewhere. **Similar species** See Poplar Grey and Sweet Gale Moth. **Flight season** One generation. Mid-Jun–early Aug. Comes to light, sugar and flowers, and is sometimes found at rest by day on tree trunks or fences. **Life cycle** Overwinters, sometimes more than once, as a pupa in a double-layered cocoon in a bark crevice or among moss or leaf litter. Larva Jul–Sep. **Larval foodplants** Sycamore, Field Maple, cultivated maples and Horse-chestnut; also reported from oaks, birches, plums, roses, London Plane and Laburnum. Found on small saplings to mature trees. **Habitat** Most frequent in urban areas, in parkland and gardens, where the non-native Horse-chestnut is often apparently the main foodplant. Also in woodland and scrub. **Status and distribution** Resident. Local. Well distributed and fairly frequent in most of England north to Shropshire, Staffordshire, South-east Yorkshire and Lincolnshire. More local in south-west England, south Wales and north to Cheshire and in Yorkshire, where it is increasing. Formerly more restricted but spread slowly from south-east England in the 20th century. Widespread in the Channel Islands.

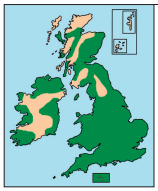
Larva of Sycamore.

Miller

plate 50

Acronicta leporina (L.)

Common 73.040 (2280)



Field characters FW 16–21mm. The fine, rather sparse black markings on quite pointed, grey-dusted or white forewing are diagnostic. Most noticeable and consistent feature is a black crescent forming the inner edge of the faint kidney mark. There is a short black streak at base, an arrowhead mark nearby, and outer cross-line is thickened towards trailing edge, sometimes forming a short dagger mark. Female is generally larger, with a broader forewing. The whitish-grey f. *grisea* Cochrane is most frequent in most of Britain and Ireland. A form with pure white ground colour predominates in parts of Scotland, and the dark grey f. *melanocephala* Mansbridge occurs regularly in the Midlands and northern England, and occasionally elsewhere. **Flight season** One generation. Late May–early Aug. Comes to light, sugar and flowers. **Life cycle** Overwinters as a pupa, burrowing into rotten wood. Larva Jul–early Oct. **Larval foodplants** Usually Downy Birch, Silver Birch and Alder, but also Grey Willow, and recorded on Aspen, Black-poplar and oaks. **Habitat** Broadleaved woodland, heathland, moorland, fens and, increasingly, urban areas, especially where the main foodplants have been planted. **Status and distribution** Resident. Well distributed and fairly frequent in England and Wales. Widespread but rather local in mainland Scotland north to Ross-shire, the Inner Hebrides, Man and Ireland. Widespread but not frequent in the Channel Islands.

Marsh Dagger

plate 50

Acronicta strigosa ([D. & S.])

Suspected immigrant;
former resident, probably extinct 73.041 (2285)

Field characters FW 13–15mm. Forewing with three heavy black bars in trailing half, including a basal streak and dagger at trailing corner. A small yellowish-orange patch at base of trailing edge. These markings are diagnostic of this small dagger moth. **Flight season** One generation. Late Jun–early Jul. Comes to sugar and light. Occasionally found on tree trunks by day. **Life cycle** Overwinters as a pupa, sometimes in rotten wood. Larva Aug–early Sep. **Larval foodplants** Hawthorns and occasionally Blackthorn. **Habitat** Mature hawthorn scrub and overgrown hedgerows in damp locations, including river valleys, edges of fens and marshes, arable fields and rough pasture. **Status and distribution** Former resident, now probably extinct. Five records of suspected

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

immigrants. A male at light at Rye Harbour NR, East Sussex, in 1996, followed by two in West Sussex in 2010 (one at Pagham and one at Woods Mill), one at Dymchurch, East Kent, in 2013 and one at Ventnor, Isle of Wight, in 2015. Formerly recorded locally in Huntingdonshire and Cambridgeshire, but last seen there in 1933. Light-traps have been operated frequently in recent decades in many of the places where the moth was previously found, including Monk's Wood, Wicken Fen, Fulbourn, Mepal and Chatteris. There were also scattered colonies in the Severn Valley near Gloucester and Tewkesbury, where the last records are two seen in Jul 1905. Two were reported at Castlemorton, Worcestershire, in Jul 1904.

Light Knot Grass

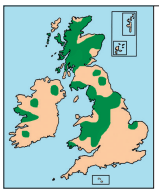
plate 50

Acronicta menyanthidis menyanthidis (Esp.)

Local 73.042 (2286)

ssp. *scotica* (Tutt)

Local



Field characters FW 16–20mm. Ssp. *menyanthidis* is thickset, with a rather broad, rounded grey forewing with blackish markings, the most conspicuous of which are kidney mark and cross-lines, the outermost white or whitish, scalloped, with black edging. Oval very small. Some examples are diffusely banded and clouded with dark grey, and in f. *suffusa* Tutt, which occurs in northern England and Norfolk, the ground colour is blackish grey. Ssp. *scotica* is generally larger than ssp. *menyanthidis*, and generally with a more strongly marked, paler forewing and more brownish hindwing. **Similar species** See Scarce Dagger. **Flight season** One generation. Late May–mid-Jul. Comes to light, sugar and flowers, and rests by day on rocks and posts. **Life cycle** Overwinters as a pupa, in a cocoon among leaf litter. Larva Jun–Sep. **Larval foodplants** Mainly low-growing woody plants, including Bog-myrtle, Heather, Bilberry and sallows; also Bogbean. **Habitat** Acid moorland, bogs and heathland, especially the damper parts. **Status and distribution** Resident. Local. Ssp. *menyanthidis* is quite well distributed in England, from Staffordshire and North Lincolnshire northwards, and in Wales and south-east Scotland. Very local in north-west Norfolk and old records from Man. Widespread but very local in Ireland, mainly in the west from Cos. Sligo to Clare and in Northern Ireland. Ssp. *scotica* is well distributed in mainland Scotland (except the south-east) and the Hebrides.

Scarce Dagger

plate 50

Acronicta auricoma ([D. & S.])

Immigrant; former resident, presumed extinct 73.043 (2287)

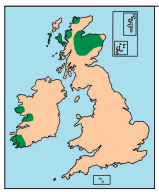
Field characters and similar species FW 16–17mm. Similar to darker forms of Light Knot Grass, but slimmer and distinguished by larger oval on forewing, with a black central spot. Knot Grass lacks dagger mark in trailing corner and has a conspicuous white spot two-thirds of the way along trailing edge of forewing. **Flight season** Two generations in southern Europe, May–early Jun and mid-Jul–Aug. One generation further north, May–Jun. Comes to sugar and light, and rests by day on tree trunks. **Life cycle** Overwinters as a pupa, in a cocoon on the foodplant or in leaf litter. Larva Jun–early Jul and Sep. **Larval foodplants** Oaks; also reported from wild Raspberry. Accepts birches, Bramble and Bilberry in captivity. **Habitat** Lowland oak woodland. In coastal habitats as a suspected immigrant. **Status and distribution** Rare immigrant and former resident, now presumed extinct. Well established in parts of Surrey, East Sussex and East Kent from the early 19th century but in decline by the 1870s. Continued to be found occasionally, including larvae, until the First World War. Since then recorded as single adults, presumed immigrants, at light on about 20 occasions from the 1930s to the present, scattered widely over Hampshire, the Isle of Wight, Sussex and Kent, including coastal sites such as Folkestone and Dungeness (singles in 2002 and 2005), Kent. One at New Romney, Kent, and one at Spurn, Yorkshire, both in Jul 2008. One recorded on Guernsey in 1995. Widely distributed and locally frequent throughout most of mainland Europe.

Sweet Gale Moth

plate 50

Acronicta cinerea (Hufn.)

Na 73.044 (2288)



Field characters and similar species FW 14–16mm. Forewing grey, lacking strong black markings at base (present in most daggers), and lacks white spot near trailing corner of forewing (conspicuous in Knot Grass). Cross-lines wavy, with fine, deeply scalloped black edging on outer central cross-line. Reminiscent of a dark, diminutive Sycamore, a southern species. Hindwing white in male, grey in female. **Flight season** Mainly one generation. Late Apr–early Jun, but often not until late May. In Ireland, a second generation occurs in Jul–Aug. Rests by day on rocks, stone walls and posts. Visits flowers after dusk and comes to sugar and light. **Life cycle** Overwinters as a pupa in a cocoon on the ground, attached to rocks or in crevices in drystone walls; reported to require humid conditions. Larva Jul–Sep, with a

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

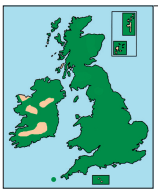
second generation Sep–Oct in Ireland. **Larval foodplants and habitat** In moorland habitats on Bog-myrtle, Heather and probably other moorland plants. In the Inner Hebrides, has been found on birches and sallows, including Creeping Willow and Eared Willow. Has also been found on roadsides in farmland near the coast in east Aberdeenshire, away from Heather, on Ribwort Plantain. Sea Plantain, Common Sorrel, Meadowsweet, Bramble and Common Ragwort are also reported. Sea Campion is an additional confirmed foodplant in Ireland. **Status and distribution** Resident. Nationally Scarce A. Local in the Highlands of Scotland, from Perthshire and Aberdeenshire north to West Sutherland and in the Hebrides, south to Islay. Old record from Shetland. In Ireland, widely in the Burren, Co. Clare, and in Co. Galway, locally west in Cos. Kerry and Cork, and historical records from Cos. Sligo and Donegal.

Knot Grass

plate 50

Acronicta rumicis (L.)

Common 73.045 (2289)



Field characters FW 16–20mm. Forewing grey with a grainy appearance, irregularly dusted and indistinctly marked with blackish. Presence of a rather small but distinct chalky-white spot (sometimes two) near trailing corner of forewing and absence of a black dagger mark in that area, and usually a distinct but broken white cross-line near outer margin, are the diagnostic features. Basal streak absent or short and ill-defined. Amount of blackish clouding variable. Hindwing greyish brown. In f. *salicis* Curt., ground colour of forewing is sooty. **Similar species** Scarce Dagger has a dagger mark near trailing corner and a distinct basal streak, and although a whitish spot may be present near trailing edge it is no brighter than the other markings. See also Poplar Grey, Sweet Gale Moth and Coronet. **Flight season** Two generations in southern Britain, late Apr–Jun and Jul–Aug. Mainly one generation from the Midlands northwards, May–Jul, but a small second generation can occur north to Scotland. Comes to light, sugar and flowers. **Life cycle** Overwinters as a pupa, in a cocoon among leaf litter. Larva Jun–Sep, and also Sep–Oct in the south. **Larval foodplants** A wide variety of herbaceous and woody plants, including Broad-leaved Dock, Common Sorrel, plantains, Water Mint, Bramble, Hop, Hawthorn, Burnet Rose, birches and sallows. **Habitat** Most open habitats, including gardens, grassland, heathland, wetlands and some woodlands. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout most of Britain (recorded north to the Outer Hebrides, Orkney and Fair Isle), Man, Ireland and the Channel Islands.

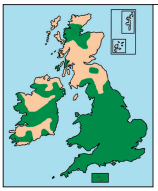
Larva of Knot Grass.

Poplar Grey

plate 50

Subacronicta megacephala ([D. & S.])

Common 73.046 (2278)



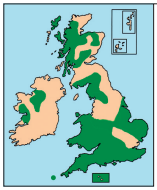
Field characters FW 17–20mm. Forewing quite broad, especially in female, and rather rounded. Ground colour greyish white, heavily and coarsely dusted with black or blackish grey, giving a rather mottled appearance and making the markings generally rather obscure. A small area beyond kidney mark is often pale, and a pale outer central cross-line is usually evident, shaped roughly like a question mark. In f. *nigra* Shaw, forewing ground colour is blackish, often with the oval outlined. Hindwing whitish in male, grey or greyish white in female, sometimes with grey banding towards outer edge and with blackish-grey veins, these stronger in female. **Similar species** See Sycamore (area beyond kidney mark not distinctly paler). Knot Grass has greyish-brown hindwing and a clear white spot near forewing trailing edge, two-thirds along from base, and is usually smaller, with sharper markings. See also Coronet (dark forms). **Flight season** One generation. Late May–early Aug. Possibly a small second generation in some years. Reared wild-caught larvae sometimes produce adults in late summer. Comes regularly to light, sugar and flowers, and is sometimes found at rest by day on tree trunks or fences. **Life cycle** Overwinters as a pupa, in a flimsy cocoon under loose bark or in a suitable crevice. Larva Jul–Sep. Rests on a leaf in the shape of a question mark. **Larval foodplants** Black-poplar, Aspen, White Poplar, Lombardy-poplar and other poplars; less frequently willows. **Habitat** Woodland, fens, parkland, gardens and many other places where the foodplants occur. **Status and distribution** Resident. Common. Well distributed and fairly frequent in England, Wales and the Channel Islands. Very local in Scotland, on Aspen and mainly in the south, the Highlands (in particular the Spey Valley) and north to East Ross. Found in most parts of Ireland, but not frequent.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Coronet plate 50

Craniophora ligustri ([D. & S.])

Local 73.047 (2291)



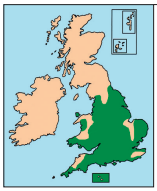
Field characters FW 17–19mm. Quite distinct from other members of the group, with a smooth appearance and (normally) fine white marbling on forewing and thorax, forming a patch beyond kidney mark said to resemble a crown. Ground colour of forewing appears blackish, but on closer inspection is found to be a subtle pattern of brownish purple and dark olive green, with numerous black cross-lines and blotches. Forms with the white markings reduced or completely absent, but with the crown usually apparent in purplish green, are most frequent in the Midlands but have been recorded from the London area and more widely. **Similar species** Dark forms with only faint purple and green tints can be confused with those of Poplar Grey and Knot-grass, which have a rougher appearance. **Flight season** One generation. Late May–early Aug. Comes regularly to light and sugar. **Life cycle** Overwinters as a pupa, in a strong cocoon, usually under moss on a tree trunk. Larva Jul–Sep. **Larval foodplants** Ash and Wild Privet. Also recorded from Alder and Hazel. **Habitat** Woodland, scrub on calcareous grassland, and fens, mountain stream-sides and open hillsides with well-spaced Ash trees. **Status and distribution** Resident. Local. Appears to be increasing in some areas but remains quite scarce and localised in others. Well distributed and locally frequent in southern, south-east and south-west England, the south-west Midlands, most of Wales and in the Channel Islands. More local and patchy elsewhere, but apparently more widespread in eastern and north-west England. Widespread but local in Scotland, including the Inner Hebrides, north to Sutherland. Very local in western Ireland, found from Co. Clare to Cos. Fermanagh and Cavan.

Metoponiinae

Small Yellow Underwing plate 51

Panemeria tenebrata (Scop.)

Local 73.048 (2397)



Field characters FW 8–10mm. Unlike any other British or Irish macro-moth. Combination of size, dark brown forewing dusted with grey, and black hindwing with a broad yellow central band is unique. Shows little variation, but some examples have a slightly reddish forewing. **Similar species** In *Pyrausta aurata* (Scop.), a frequent day-flying micro-moth, forewing is dull brown when worn (bright purplish red when fresh) and blackish hindwing has a somewhat narrower yellow band, but forewing is somewhat narrower with at least one orange-yellow spot. **Flight season** One generation. May–early Jun. Flies in sunshine and feeds at flowers, often with hindwings exposed. Mating pairs are sometimes seen in swards in late afternoon. **Life cycle** Overwinters as a pupa, in a cocoon underground. Larva Jun–Jul. **Larval foodplants** The seed capsules of Common Mouse-ear and Field Mouse-ear. **Habitat** Flower-rich grassland, including hay-meadows, calcareous grassland, roadside verges and soft-rock sea-cliffs. **Status and distribution** Resident. Local. Widespread but local in much of England and Wales, and formerly very local in southern Scotland, north to Lanarkshire. Recorded once on Man, in 1903. No confirmed records from Ireland. Easily overlooked owing to its small size and non-appearance in light-traps.

Goldwing plate 51

Synthymia fixa (Fabr.)

Suspected immigrant 73.049 (2395)

Field characters and similar species FW 14–18mm. Somewhat like Burnet Companion in shape, and like that species is orange underneath, but larger and forewing grey-green or brown, with white banding and dusting. Kidney and oval whitish, often linked by a thin whitish line. Hindwing orange-yellow with broad brown border. **Flight season** In southern Europe, Apr–Jul. **Larval foodplants** Pitch Trefoil. **Habitat** Warm, dry, open, scrubby places. **Status and distribution** Rare immigrant. Two records of this mainly day-flying species. Both were taken at Start Point lighthouse, South Devon, in 1937. One is now in the Natural History Museum, London, with no indication of exact date. A second has recently been discovered in a collection held at a National Trust property near Salcombe, Devon, some 10km from Start Point. The label indicates that it was taken on 23 Jun 1937. Evidence suggests that these records are genuine. In Europe, found in Portugal, Spain, southern France, Sardinia and Italy.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Cuculliinae Sharks

Shark

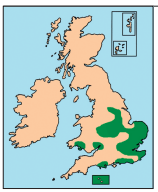
Mullein

Wormwood

plate 51

Cucullia absinthii (L.)

Nb 73.050 (2211)



Field characters and similar species FW 16–19mm. Bold black forewing markings distinguish this moth from Cudweed and Scarce Wormwood, which are also grey and similar in size. Has black spots in kidney mark and in doubled figure-of-eight-like oval, thick dashes along outer edge, and extensive black edging and blotches beside pale central cross-lines. **Flight season** One generation. Mainly Jul, occasionally to mid-Aug. Occasional at light, and reported at flowers of Red Valerian just after dusk; sometimes found by day at rest on fences. **Life cycle** Overwinters as a pupa, in a tough cocoon of silk and earth, usually among surface debris but sometimes underground. Larva Aug–Sep. Rests by day and often basks among flowers of the foodplant. This is the most productive stage at which to seek this species. **Larval foodplants** The flowers and seedheads of Wormwood; sometimes also Mugwort. **Habitat** Wherever the foodplants grow, particularly in warm, dry, sunny, often sheltered situations, usually with bare, hard surfaces, from cliffs, cuttings and quarries to railway ballast, slag heaps and even among broken tarmac in car parks, dockyards and derelict airfields. **Status and distribution** Resident. Nationally Scarce B. Until the 1940s, largely confined to coastal habitats in south-west Britain, Suffolk and Co. Cork, Ireland, but in the late 1940s and 1950s, it started to colonise bombed urban sites and industrial wasteland, especially in the Midlands, Essex and the London area, where it is still locally well established, although tidying up and development of derelict land has removed some breeding areas. Recent records extend locally from Portland, Dorset, east to Kent and north through the London area, East Anglia and the Midlands into west Yorkshire, and west to south Wales. Older records from south-west England, north Wales and north-west England. Not recorded in Ireland since 1901. Present on Jersey, where it was first recorded in 1995.

Scarce Wormwood

plate 51

Cucullia artemisiae (Hufn.)

Suspected immigrant 73.051 (2213)

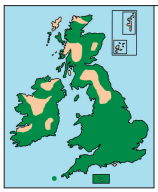
Field characters FW 16–19mm. Similar to Wormwood, but less boldly marked. Spots in kidney and oval, dark edging and dark blotches all brownish and less bold, and dashes along outer edge finer. **Similar species** See Wormwood and Cudweed. **Flight season** In mainland Europe, Jun–Jul. **Life cycle** In mainland Europe, overwinters as a pupa underground. Larva late Jul–Sep. **Larval foodplants** Mugwort and wormwoods. **Habitat** Warm, dry, open places. **Status and distribution** Suspected rare immigrant and possible import. A larva was found on Mugwort at Nazeing, Essex, on 4 Sep 1971, from which a male was reared. The only other possibly British records are of six adults from the 19th century. Two were reportedly found on a fence at Starcross, Devon, on 21 Aug 1885. Four others were reported in 1900, found in different collections among rows of Wormwood, but without data. Found widely through central and southern Europe.

Shark

plate 51

Cucullia umbratica (L.)

Common 73.052 (2216)



Field characters and similar species FW 22–26mm. Similar in shape, markings and resting posture to Chamomile Shark, but usually larger and greyer, and has a later flight period. Also, black streaks do not extend into fringes of forewing outer margin, there is a distinct pale brown streak running through the faint oval and kidney mark, and male has whitish hindwing with brown veins. **Flight season** One generation. Late May–Aug. Comes to light and feeds at flowers such as Honeysuckle, Red Valerian and Rhododendron. **Life cycle** Overwinters as a pupa underground in a strong cocoon. Larva Jul–early Sep. Feeds at night and hides under the lower leaves of the foodplant by day. **Larval foodplants** The flowers and leaves of sow-thistles, wild lettuces, hawk's-beards and hawkweeds. **Habitat** Usually rather open country, including urban gardens and rough ground, chalk and limestone grassland, marshes, coastal sand-dunes and shingle beaches. **Status and distribution** Resident. Common. Well distributed in England, Wales, Man and the Channel Islands. Widespread but not frequent in Scotland, including the Hebrides, and in Ireland.

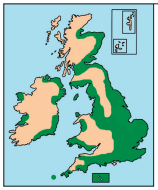
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Chamomile Shark

plate 51

Cucullia chamomillae ([D. & S.])

Local 73.053 (2214)



Field characters FW 19–23mm. Like other members of this group, rests with wings closed tightly against body, with collar raised into a pointed projection, reminiscent of a shark's dorsal fin. Forewing long and narrow, strongly arched before tip, with outer edge strongly angled. Grey-brown, tinged and streaked to a varying degree with pale brown, grey and blackish, especially at outer edge. Fine blackish streaks near outer edge extend into the fringes. Female is generally darker. Hindwing grey in male, darker brownish grey in female. **Similar species** See Shark. **Flight season** One generation. Apr–early Jun. Comes to light in small numbers and feeds at flowers. Occasionally found by day on posts and tree trunks. **Life cycle** Overwinters, sometimes for more than one year, as a pupa underground in a strong cocoon. Larva late May–mid-Jul. Feeds by day and night, and rests on the foodplant, on the flowers when smaller. **Larval foodplants** The flowers of Scentless Mayweed, Chamomile, Corn Chamomile, Stinking Chamomile and Feverfew. **Habitat** Open grassy places, often with disturbed ground, including arable field margins and some gardens, most frequently in calcareous areas. **Status and distribution** Resident. Local. Widespread but somewhat local in most of England, north to Yorkshire and Lancashire, and more local and coastal in the south-west and in northernmost counties, Wales, Man, Ireland and the Channel Islands. In Scotland, formerly very local, mainly in the south and Central Belt, but since 2003 has expanded, particularly in the east and north-east and along the Moray Firth to East Ross.

Larva of Chamomile Shark.

Cudweed

plate 51

Cucullia gnaphalii (Hb.)

ssp. *occidentalis* Bours.

Former resident; presumed extinct 73.054 (2218)

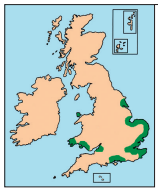
Field characters and similar species FW 17–19mm. Somewhat similar to Wormwood and Scarce Wormwood, but forewing broader and more streaked than banded, grey marked with darker grey. Long, thin black streak along trailing edge, and scythe-shaped mark and short black bar near trailing corner, are diagnostic. Oval and kidney mark distinct, pale, marked inside with brown and grey. **Flight season** One generation. Late May–mid-Jul. The adults were seldom seen except occasionally at light. Reported visiting flowers of Honeysuckle and Fragrant Orchid after dark. **Life cycle** Overwinters as a pupa, in a tough earthen cocoon on the surface or just below ground. Larva late Jul–Aug. Feeds and basks in sunshine. **Larval foodplants** The flowers and leaves of Goldenrod. **Habitat** Woodland clearings and rides, the larvae requiring a very warm microclimate. **Status and distribution** Former resident, now presumed extinct. Prior to about 1960, found very locally in Kent, Sussex, Surrey and Hampshire, but then became restricted to the former two, with a single record from Bloxham, near Banbury, Oxfordshire, in 1966. Last recorded in Britain (a single larva) on 11 Aug 1979 at Beckley Woods, on the East Sussex/Kent border.

Star-wort

plate 51

Cucullia asteris ([D. & S.])

Nb 73.055 (2217)



Field characters FW 19–23mm. One of the larger sharks, and quite distinctive. Forewing has a distinct oval and kidney mark, and a contrasting pattern of deep reddish brown and grey. **Similar species** See Mullein, which flies earlier in the year and lacks oval and kidney mark. **Flight season** One generation. Jun–early Aug. Most records are singletons at light, but has been seen at dusk feeding on the wing at Honeysuckle, campions and non-native plants, including tobacco plants, Red Valerian and evening-primroses, and has occasionally turned up at sugar. **Life cycle** Overwinters as a pupa, in a tough earthen cocoon on the surface or just below ground. Larva late Jul–late Aug in woodland, until late Sep or even mid-Oct on the coast. Feeds by day and basks in sunshine. **Larval foodplants and habitat** On coastal saltmarsh, the flowers and sometimes the leaves of Sea Aster, with occasional reports from Sea Wormwood. Also, in woodland clearings and rides, the flowers of Goldenrod. Has been recorded in gardens on the flowers of Michaelmas-daisies and China Aster, but in captivity will not feed on the naturalised Canadian Goldenrod. **Status and distribution** Resident.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Star-wort.

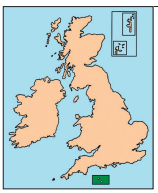
Nationally Scarce B. Found mainly along the south and east coasts of England, from Hampshire and the Isle of Wight east to Kent, the Thames Estuary, extensively in Sussex and Kent, East Anglia, and more locally in Lincolnshire and at Spurn, Yorkshire. Also on the coast of south and west Wales, north to Anglesey. Inland, locally in woodland in Sussex, Kent and south Wales. Occasional elsewhere, such as Bentley Wood, South Wiltshire, in 1983; Nether Stoney, South Somerset, in 1984; and larvae near Bude, Cornwall, in 1984. May have been more widespread in the past, with old records from Dorset, north-west England and Guernsey (larvae in 1889).

Water Betony

plate 51

Cucullia scrophulariae ([D. & S.])

Rare immigrant; possible resident 73.056 (2220)



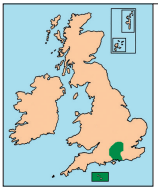
Field characters and similar species FW 18–22mm. Very similar to Mullein and Striped Lychnis, from which it can only be reliably distinguished by examination of the genitalia. **Flight season** Late May–Jul. **Life cycle** In mainland Europe overwinters as a pupa. Larva Jun–Jul. **Larval foodplants** The flowers and seeds of figworts and mulleins. **Habitat** Damp, open places such as in open woodland. **Status and distribution** Immigrant, although may be overlooked due to identification difficulties. There are two authenticated records from mainland Britain of single adults, both at Swanage, Dorset, on 12 Jun 1949 and 18 May 1994. In the 19th century, larvae were reported on figworts in East Anglia, Kent and other localities in southern England. However, subsequent examination of specimens in collections has usually revealed them to be Mullein or Striped Lychnis, even the widely reported specimens found and reared by the knowledgeable J.W. Tutt. The few confirmed 19th-century specimens are of unreliable origin. First recorded in the Channel Islands in 2005, three at light at St Peters, Guernsey (confirmed from genitalia). A group of larvae on Guernsey on 14 Jul 2009. Records of Striped Lychnis on Guernsey in 1971 and 1989 are now thought more likely to have been Water Betony. Widespread in western and central Europe.

Striped Lychnis

plate 51

Cucullia lychnitis Ramb.

Na 73.057 (2219)



Field characters and similar species FW 18–21mm. Similar in appearance and resting posture to Mullein, but on average smaller and lighter in colour. Central spot on underside of hindwing generally smaller and fainter than in Mullein, particularly in male, in which it may be absent. Oval and kidney mark may be discernible. Mullein flies earlier in year. **Flight season** One generation. Jun–Jul. Occasional at light, otherwise rarely seen as an adult. **Life cycle** Overwinters as a pupa, often for two winters and occasionally longer, in a tough earthen cocoon on the surface or just below ground. Larva mid-Jul–early Sep. Feeds and basks among the flower-heads of the foodplant by day. **Larval foodplants** Dark Mullein is the main foodplant. Also reported from White Mullein and has been found on ornamental mulleins in garden centres (but not outside the normal breeding range). Normally eats the flowers, but will resort to leaves if the plant has gone to seed. **Habitat** On open ground on calcareous soils, verges and embankments, rough downland, fallow fields, and in woodland rides and clearings. **Status and distribution** Resident. Nationally Scarce A. Confined to southern England, where it is very local but sometimes appears in large numbers as larvae, in Hampshire, Berkshire, Buckinghamshire, Oxfordshire and West Sussex. Found on a total of 80 separate sites in 1999–2004, but many are very small, with larvae only in some years. Formerly found in Dorset, Wiltshire, Gloucestershire, Surrey and East Anglia. Adults recorded from Guernsey in 1971 and 1989 are suspected to have been Water Betony.

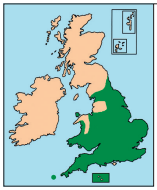
Larva of Striped Lychnis.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Mullein plate 51

Cucullia verbasci (L.)

Common 73.058 (2221)



Field characters FW 19–24mm. Resembles a piece of dead plant stalk when at rest, as do related species. Forewing buff, with dark brown stripes along leading and trailing edges, the latter cut by a thin, wavy pale line. Darker examples, with wider brown stripes, are generally females. Hindwing of male greyish white with dark veins and a diffuse dark border, that of female uniformly blackish grey or slightly paler near base. Fringes of both wings scalloped. **Similar species** In Star-wort, fringes are not scalloped, forewing is grey with reddish-brown stripes, and pale oval and kidney mark are distinct. See also Striped Lychnis and Water Betony. **Flight season** One generation. Apr–May. Comes to light in small numbers, and feeds at flowers. **Life cycle** Overwinters, sometimes for up to five years in captivity, as a pupa underground in a strong cocoon. Larva late May–Jul. Most often encountered as a larva, feeding by day and night. **Larval foodplants** Wild and cultivated mulleins, Common Figwort, Water Figwort and buddleias, usually on the leaves. **Habitat** Usually calcareous habitats, often with disturbed ground, including dry grassland and breckland, recently cleared woodland and scrub, woodland rides, roadside verges and ditches, marshes, shingle beaches, quarries, parks and gardens. **Status and distribution** Resident. Common. Well distributed in most of England, north to Yorkshire and Cheshire, and in southern Wales. Very local in the remainder of Wales and northern England. In Ireland, recorded locally in Co. Cork, but not since 1952. Widespread and fairly frequent in the Channel Islands.

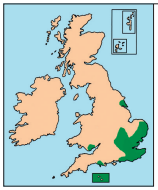
Larva of Mullein.

Oncocnemidinae

Toadflax Brocade plate 51

Calophasia lunula (Hufn.)

RDB; suspected immigrant 73.059 (2223)



Field characters FW 14–15mm. Quite distinctive. Forewing broad, marbled with shades of brown and whitish grey, and with banded fringes. Usually has three white central marks, a thin kidney mark, a tiny oval (may be absent) and a bullet mark, continuous with black basal streak. Outer area has blackish streaks. Thorax has a forward-pointing grey frontal crest and a grey or blackish crest to rear. Shows little variation. **Flight season** Two generations. Late May–Jun or even Jul, and late Jul–Aug, although pupae may sometimes overwinter. Comes to light in small numbers, often soon after dark; otherwise seldom seen. Reported at flowers of Red Valerian. **Life cycle** Overwinters as a pupa within a tough oval cocoon, sometimes among the drying seedpods of the larval foodplant, which it resembles, but also found attached to stones, posts, walls and other objects. Larva late Jun–Jul, sometimes early Aug, and late Aug–Sep. Feeds and rests among the flower-heads by day, basking and growing quickly. **Larval foodplants** A national survey in 1999 found most larvae on the introduced Purple Toadflax. Common Toadflax is also used regularly, and reported on Small Toadflax and Pale Toadflax. **Habitat** Vegetated coastal shingle, and other coastal situations with much bare ground. Inland, on railway embankments, verges, derelict land and in gardens. **Status and distribution** Resident, expanding its range, and suspected immigrant. Red Data Book species. First confirmed in Britain as an adult at Shoreham, West Sussex, in 1939, and as a larva at Dungeness, Kent, in 1952, with further colonisation from the 1950s onwards in Sussex, Kent and Essex. Since 1990, larvae have been found on the coast from Pagham Harbour, West Sussex, to East Kent, with a handful of records from Hampshire (Southsea, 1992, Gosport, 1996) and Dorset (1990, 1998, 2004). The 1999 survey confirmed breeding in nine 10km squares. In the early 2000s, it started to appear in the London area, and in 2003 larvae were found at Mile End Cemetery, east London. Found in Wembley, Middlesex, in 2002, and has since become established across a wide area of north London, from Ealing east to the Lea Valley. Larvae were found in a Barnet garden, south Hertfordshire, in 2006, and further west in gardens at Radnage, Buckinghamshire, in 2008. Established locally on the Suffolk coast since 2002, and three adults in East Norfolk in 2004. One at Spurn, south Yorkshire, in 2007. Recorded annually in the Peterborough area since 2010, and larvae in Cambridgeshire,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Bedfordshire and Huntingdonshire. First record for Wales on the coast at St Brides, near Newport, Monmouthshire, on 26 May 2015.

Antirrhinum Brocade plate 51

Calophasia platyptera (Esp.)

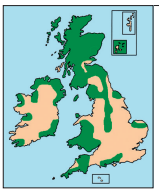
Suspected immigrant 73.060 (2224)

Field characters and similar species FW 12–15mm. Like Toadflax Brocade in shape, and with similar crests on thorax, but slightly smaller, and forewing narrower and grey with a pattern of fine dark streaking. No central marks, and cross-lines apparent only near centre of trailing edge, along with a dark blotch. Strength of dark markings varies, and thorax may be grey without black stripe. **Flight season** In mainland Europe, two or three generations, Apr–Oct. **Larval foodplants** Toadflaxes and Snapdragon. **Habitat** Warm, dry places such as rocky slopes; also gardens. **Status and distribution** Suspected immigrant. Only one recorded, now in the Natural History Museum, London. Found while searching for shells near Brighton, Sussex, on 10 Sep 1896, a year in which very many immigrant moths were recorded. Resident in southern Europe.

Anomalous plate 51

Stilbia anomala (Haw.)

Local 73.061 (2394)



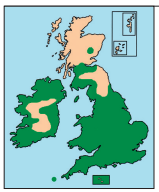
Field characters FW 13–17mm. Unmistakable. Rather slender. Forewing smooth and silky when fresh, narrow at base with a straight leading edge, broad in male. Ground colour slate grey, consistently blackish between oval and kidney mark, and generally paler towards trailing edge. Female has narrower blackish-grey forewing with fainter markings. Male varies in degree of contrast. **Similar species** Slim build and forewing shape, especially of male, are somewhat suggestive of some of the snouts, but these all have very long palps. **Flight season** One generation. Aug–Sep. Male flies at dusk and both sexes sit on low vegetation after dark. Male comes regularly to light, female less frequently. **Life cycle** Overwinters as a larva. Larva Oct–Apr. Pupates underground in a cocoon, after lying dormant within it for several weeks. **Larval foodplants** Wavy Hair-grass and Tufted Hair-grass. **Habitat** Moorland, grassy uplands, lowland heathland and some coastal grasslands, including dune-slacks. **Status and distribution** Resident. Local. Numbers declined by 94% between 1968 and 2007 in the Rothamsted Insect Survey network of light-traps. Local in south-west England, Hampshire, Dorset and Surrey, and scarce in Norfolk. Local in the north Midlands. Well distributed in Wales, on Man and in northern England, from Lancashire and west and North-east Yorkshire northwards, and through mainland Scotland, the Hebrides and Orkney. Local and mainly coastal in Ireland. Considered an occasional immigrant in the Channel Islands.

Amphipyrinae

Copper Underwing plate 51

Amphipyra pyramidea (L.)

Common 73.062 (2297)



Field characters and similar species FW 21–26mm. The two British species of copper underwing are very similar. The most reliable way to separate them is to examine the underside of the hindwing. This is difficult to see on a live moth due to the creasing of the wing, but can be done if the moth is anaesthetised (see Introduction for further details) by holding the thorax between first finger and thumb and spreading the wings. On Copper Underwing, copper colour is limited to outer third, and ends abruptly at dark cross-band, and basal two-thirds is largely straw-coloured (apart from speckled grey-brown streak along leading edge), making a sharply contrasting effect. On Svensson's, copper extends towards base in trailing half, and grey-brown speckling is more extensive, so that the basal third is either not, or only slightly, paler. Several characters can be used as initial indicators. On upperside, forewing markings of Copper Underwing are generally brighter and more sharply defined than in Svensson's, which looks duller by comparison, especially in torchlight (early suggested English names for it were the Dusky or Drab Copper Underwing). On forewing of both species, inner central cross-line is very jagged, and forms two distinct 'V' marks in trailing half. Usually, in Copper Underwing the points of these are roughly level, but in Svensson's, 'V' nearer trailing edge usually protrudes further. A dark brown form, still with sharp pale markings, seems to occur only in Copper Underwing. Characters on the palps are not recommended as distinguishing features. It is true that Copper Underwing tends to have a more well-defined pale stripe down the front, whereas in Svensson's the stripe tends to be more diffuse or absent. However, this is not reliable, and scales are easily lost, giving a misleading impression. In all characters intermediates occur, making interpretation difficult, and it is important that all are taken into account for each individual. Examination of undersides (and in some cases genitalia) is likely to be required for acceptance of site records. **Flight season** One generation. Late Jul (Aug in Scotland and Ireland)–early Oct. Comes very readily to tree sap, sugar and wine ropes, and in reasonable numbers to light. Sometimes found by day hiding in groups, often accompanied by Svensson's Copper Underwing, in hollows in tree trunks or behind bark, in empty oil drums, pheasant feeders and in

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Svensson's Copper Underwing (above) and Copper Underwing (below).

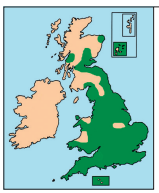
outbuildings. **Life cycle** Overwinters as an egg. Larva mid-Apr–early Jun. Pupates underground. **Larval foodplants** Hawthorn, Midland Hawthorn, Blackthorn, Crab Apple, Hazel, Honeysuckle and Downy Birch. Also a wide range of other broadleaved trees and shrubs, including Wild Privet, Garden Privet and Grape-vine. Seems to prefer low-growing and understorey shrubs to mature trees. **Habitat** Most abundant in woodland, but occurs in open scrub, hedgerows, urban plantings, gardens and parks. **Status and distribution** Resident. Common. Well distributed throughout England and Wales northwards to Yorkshire, where it has increased and expanded greatly since about 2005, and more locally to Northumberland and Cumbria. Local on Man. Formerly rare in Scotland, but now widespread in the south-west and Central Belt. Widespread in Ireland and the Channel Islands.

Svensson's Copper Underwing plate 51

Amphipyra berbera Rungs

ssp. *svenssoni* Fletch.

Common 73.063 (2298)

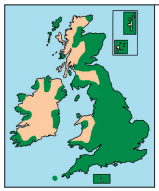


Field characters and similar species FW 21–26mm. See Copper Underwing. **Flight season** One generation. Jul (Aug in Scotland and Ireland)–late Sep. Comes very readily to tree sap, sugar and wine ropes, and in reasonable numbers to light. Roosting habits as for Copper Underwing. **Life cycle** Overwinters as an egg. Larva mid-Apr–late May. Pupates underground. **Larval foodplants** Sometimes frequent in the canopy of Pedunculate Oak; also reported from limes, Hornbeam, willows and even Rhododendron. Much less frequent than Copper Underwing on shrubs and coppice regrowth, at least in some sites studied in southern England. **Habitat** Most abundant in woodland, but occurs in open scrub, hedgerows, urban plantings, gardens and parks. **Status and distribution** Resident. Common. Well distributed in England and Wales, extending north to Northumberland and Cumbria. Expanding northwards and started colonising Yorkshire in the late 1970s. Formerly rare in Scotland, but now widespread in the south-east and Central Belt, local in the south-west and occasional records further north. No confirmed records from Ireland. Recorded from the Channel Islands.

Mouse Moth plate 52

Amphipyra tragopoginis (Cl.)

Common 73.064 (2299)



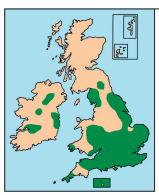
Field characters FW 16–18mm. The English name of this drab but unmistakable moth is highly appropriate: the forewing is mousy brown and the moth often runs rapidly, mouse-like, towards cover when exposed to light. Forewing shiny when fresh, almost plain apart from a small dark oval and kidney mark, the latter represented by two small dark spots. Ground colour varies somewhat, and sometimes a dark outer cross-band is discernible, with a paler area beyond it. **Flight season** One generation. Jul–Sep, with stragglers into Oct. Comes regularly to light, sugar and flowers, and can be found by day roosting under bark and in outbuildings, sometimes in numbers. **Life cycle** Overwinters as an egg. Larva Apr–Jun. Feeds at night and hides low down on the foodplant by day. Pupates in a cocoon at or just below ground. **Larval foodplants** Leaves and sometimes flowers of a wide range of wild and cultivated herbaceous plants, including Salad Burnet, teasels, Mugwort, Fennel and Californian Poppy; also sallows and hawthorns. **Habitat** A wide range, including gardens, woodland, sand-dunes, moorland and fens. **Status and distribution** Resident. Common. Well distributed and frequent throughout England, Wales and Man. In Scotland, widespread in the east, less so in the west and considered to be in decline. Recorded from the Hebrides, Orkney and Shetland. Widespread in coastal counties in Ireland, and generally local. Local in the Channel Islands.

Psaphidinae

Sprawler plate 52

Asteroscopus sphinx (Hufn.)

Common 73.065 (2227)



Field characters FW 17–22mm. Stout and very furry thorax, broad forewing, streaky pattern and very late flight period make this an unmistakable moth. Antennae feathered in male. Shows minor variation in markings, but long black basal streak is a constant feature. In the normal form,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Sprawler.

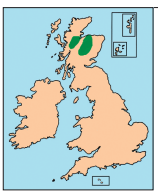
forewing is light or cold, brownish grey. The dark, olive brown f. *fusca* Cock., first recorded in 1953 in the Chilterns, is now frequent in Hertfordshire, Buckinghamshire and Oxfordshire, and is increasing elsewhere. **Flight season** One generation. Mid-Oct–early Dec. Comes frequently to light, male usually from around midnight, female earlier. Does not feed. **Life cycle** Overwinters as an egg, laid in small batches in a crevice on a tree trunk. Larva Apr–early Jun, most active at night. Pupates in a cocoon well below the soil surface. **Larval foodplants** A wide range of broadleaved trees, including Pedunculate Oak, Hawthorn, Blackthorn, Hazel, Goat Willow, Small-leaved Elm and limes. **Habitat** Broadleaved woodland and other well-wooded areas, including some gardens. **Status and distribution** Resident. Common. Well distributed in the southern half of England, as far north as the Wash, and in eastern Wales. More local in the remainder of Wales and further north, to Cumbria and Northumberland. Scarce in Ireland, recorded from Co. Cork north to Co. Fermanagh. Rare on Alderney, and recorded on Jersey in 1903 and 1977.

Rannoch Sprawler

plate 52

Brachionycha nubeculosa (Esp.)

RDB 73.066 (2228)



Field characters FW 20–24mm. A large, thickset moth with heavy black markings and a diagnostic black-edged white slit-like mark on trailing edge of large, slightly distorted kidney mark, running along central vein of forewing. In the Aviemore area, forewing ground colour varies from grey to blackish grey or brown. Individuals from Rannoch and Glen Affric tend to be the darker brownish form. **Flight season** One generation. Mar–mid-Apr. Can be found freshly emerged by searching birch trunks by day, but this can take about six hours per moth on average. Comes to light from about 10pm onwards. Recorded feeding at sap and sugar. **Life cycle** Overwinters as a pupa underground, sometimes for more than one year – in captivity at least. Larva May–late Jun or early Jul. Occasionally beaten from lower branches of old birches by day. **Larval foodplants** Birches, on mature trees. It is not clear whether there is a preference for Silver Birch or Downy Birch, or whether both are used, but the former predominates in the breeding area on Speyside and the latter at Rannoch. Captive larvae have reportedly shown little interest in eating leaves from small saplings. **Habitat** Long-established birch woodland and smaller groups of birch in which the trees are mature and the trunks are large in girth. **Status and distribution** Resident. Red Data Book species. Occurs in four apparently discrete areas of the Scottish Highlands, all of which have recent records, namely the Loch Rannoch area in Mid Perthshire; the Spey Valley area in East Inverness-shire and Morayshire; Glen Moriston, Strathglass and Glen Affric in East Inverness-shire; Strathconan in East Ross; and Braemar in Aberdeenshire. The area to the north of Fort William should be searched, as it has similar habitat.

Double-spot Brocade

plate 52

Meganephria bimaculosa (L.)

Uncertain 73.067 (2244)

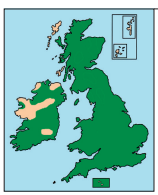
Field characters FW 22–26mm. A rather large, distinctive noctuid. Forewing broad and straw-coloured, with a large bulbous kidney mark (like that of Green-brindled Crescent) and curved leading edge. Hindwing dirty grey with two dark blotches, one fairly central and one near trailing edge. **Flight season** One generation. Sep–Oct. **Life cycle** Overwinters as an egg. Larva Apr–Jun. **Larval foodplants** Elms, also Peach and related species. **Habitat** Woodland, parkland and gardens. **Status and distribution** Uncertain. Unlikely as an immigrant, more probably an accidental import. The most recent record is of a slightly worn male at rest on a tree trunk in Leigh Woods, near Bristol, Somerset, in mid-Jul 1949. Two other specimens have British data, one of which was also taken 'near Bristol', in Jul 1815, and the other on Southsea Common, near Portsmouth, Hampshire, in 1892. The ports of Bristol and Portsmouth offer many opportunities for assisted immigration. Found widely across the southern half of Europe, but not known to have migratory tendencies.

Green-brindled Crescent

plate 52

Allophyes oxyacanthae (L.)

Common 73.068 (2245)



Field characters FW 17–20mm. There are two distinct forms of this unmistakable moth, although intermediates occur. The paler form has a brown forewing, streaked and dusted to a variable extent with bright metallic green. In f. *capucina* Mill., forewing is dark brown marked with tawny

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

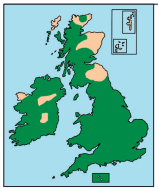
brown and lacks metallic green scales. Both forms have a crescent-like white mark on outer central cross-line in trailing half, and black basal streak and first cross-line together often form a mark like a loaded crossbow. Form *capucina* is unknown outside Britain. It is most frequent in industrial areas, such as London, the Midlands and northern England. **Flight season** One generation. Late Sep–early Nov (slightly earlier in northern Britain). Comes regularly to light and sugar. Often found after dark feeding at Ivy flowers, overripe blackberries and other autumn fruit. **Life cycle** Overwinters as an egg, laid singly on twigs of the foodplant. Larva Apr–Jun. Constructs a strong underground cocoon, pupating several weeks later. **Larval foodplants** Hawthorn, Midland Hawthorn, Blackthorn, Crab Apple, Dog-rose, plums, cotoneasters and (in the north) Rowan. **Habitat** Broadleaved woodland, scrub, hedgerows and gardens. **Status and distribution** Resident. Common. Well distributed and frequent throughout England, Wales, Man and Scotland, including the Inner Hebrides. Widespread and locally frequent in most of Ireland. Local in the Channel Islands.

Early Grey

plate 52

Xylocampa areola (Esp.)

Common 73.069 (2243)



Field characters FW 15–18mm. Forewing ash grey, rough in appearance and marbled with blackish grey. Oval and kidney mark are pale, and there is an additional oval joined to the first, and also to the kidney mark in most cases. This pattern is diagnostic. Ground colour varies, and some examples are quite dark. Others have a delicate pinkish flush, especially on fringes but sometimes more extensively. **Similar species** Shears can be superficially similar but lacks extra oval and has a later flight period. **Flight season** One generation. Mar (sometimes from late Feb)–May. Comes to light, sometimes in numbers, often settling on nearby trees or fences rather than entering a trap. Feeds at sallow catkins, but only rarely at sugar. Sometimes found by day on fences or trees. **Life cycle** Overwinters as a pupa underground, in a strong cocoon. The egg is laid singly on a stem of the foodplant. Larva Apr–Jun. Feeds at night and rests along a woody stem by day. **Larval foodplants** Honeysuckles, both cultivated and in the wild. **Habitat** Broadleaved woodland, scrub, hedgerows and gardens. **Status and distribution** Resident. Common. Well distributed in England (including northern England, where it has increased), Wales, on Man and in most of Ireland. Widespread in Scotland, mainly in the south-west, Central Belt, west coast, Hebrides and around the Moray Firth, but absent from most of the east. Widespread in the Channel Islands.

Heliothinae Straws and clovers

Bordered Sallow

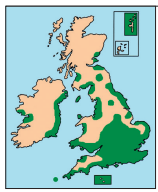
Marbled Clover

Bordered Sallow

plate 52

Pyrrhia umbra (Hufn.)

Local 73.070 (2399)



Field characters FW 16–19mm. Unmistakable. Quite thickset. Forewing with clearly defined, rather invariable markings. Ground colour orange or orange-yellow (less often orange-brown) from base to the sharply diagonal, slightly curved cross-line beyond kidney mark; pinkish brown beyond this line, including fringes. This sharp demarcation is diagnostic and is always present, although degree of contrast varies somewhat. Hindwing yellowish white, with a broad blackish outer band and usually a large, dark, rather blurred crescent mark. **Flight season** One generation. Late May–early Aug. Comes to sugar, and also to light in small numbers, and feeds at flowers at dusk. **Life cycle** Overwinters as a pupa, just beneath the soil surface. Larva Jul–Aug, most active at night. **Larval foodplants** Frequently the flowers, seeds and shoots of Common and Spiny restharrows, but also those of Henbane and Sea Sandwort. Also the leaves of Hazel, oaks and willows, particularly low coppiced growth. **Habitat** Calcareous grassland, coastal sand-dunes and shingle. Less often open woodland, in which larvae have been found on low regrowth of coppiced Hazel and oak, several larvae per stool. **Status and distribution** Resident. Local. Widespread in most of England north as far as the Wash and Staffordshire. Largely coastal (but still fairly widespread) in south-west England, Wales, the northern half of England and on Man. Local in southern Scotland, mainly on or near the coast north to Renfrewshire and Kincardineshire. Vagrant on Shetland. In Ireland, recorded very locally on the coast from Co. Kerry to Co. Down, and in Cos. Clare and Galway. Local and occasional in the Channel Islands, recorded from Guernsey and Alderney.

Spotted Clover

plate 52

Protoschinia scutosa ([D. & S.])

Immigrant 73.071 (2405)

Field characters FW 15–16mm. Has a distinctive chequered, dull grey-brown and white appearance,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

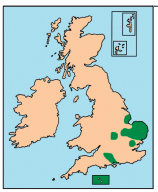
with noticeable whitish veins, and a large brown kidney mark oval and tooth-mark. Also extensive dark shading on whitish forewing. Hindwing white, with a brown border with white spots near outer edge, and a dark central spot. **Flight season** Two generations in mainland Europe. As an immigrant, recorded May–Sep but most frequently Jun–Aug. Most records from the British Isles are of moths flying around flowers by day or at dusk, occasionally at light. **Life cycle** In mainland Europe, overwinters as a pupa underground, with larva Jun–Jul and Aug–Sep. Larvae not recorded in the British Isles. **Larval foodplants** Field Wormwood, Pineappleweed and goosefoots. **Habitat** In mainland Europe, breeds in dry, open places. **Status and distribution** Immigrant. Scarce and erratic. Usually seen on the coast, but has occurred inland. Around 60 were recorded between 1835 and 2002, but apparently none since, even in the major immigrant years of 2003 and 2006. Some records are of a number of moths, including more than 30 seen by day between Bude and Boscastle, Cornwall, on 30 May 1943, with a large influx of Striped Hawk-moths. Only six records since 1969, including one in Suffolk in 2002 and one in Worcestershire in 2014. Also recorded from Cornwall, Devon, Somerset, the Isle of Wight, Surrey, Kent, Cambridgeshire, Norfolk, Lincolnshire, Yorkshire, Cumbria, Aberdeenshire, Inverness-shire, Man and Co. Donegal. Many records are from eastern England, particularly East Anglia, suggesting that immigrants are often eastern in origin. Found across much of mainland Europe.

Marbled Clover

plate 52

Heliothis viriplaca (Hufn.)

RDB; suspected immigrant 73.072 (2401)



Field characters and similar species FW 13–15mm. Forewing yellowish brown. Distinguished from Shoulder-striped Clover by absence of basal streak on forewing, and less oblique inner edge to dark central cross-band. Intensity of colour and markings variable. Hindwing black, with irregular central white blotch and small white blotch near outer edge. **Flight season** One main generation, mid-Jun–Jul, with a partial second generation at the end of Jul–Aug in early seasons. Flies rapidly in sunshine, darting from place to place and visiting flowers, including Viper's-bugloss, clovers and many others. Also flies at night and comes to light. **Life cycle** Overwinters as a pupa, in a flimsy cocoon on or below the ground. Larva Jul–Sep, sometimes with a partial second generation into Oct. **Larval foodplants** The flowers and unripe seedheads of many unrelated plants, including Common Restharrow, Common Toadflax, White Campion, Bladder Campion, Chicory, Wild Carrot, Smooth Hawk's-beard, Red Clover, Sticky Groundsel, and various scabiouses, hawkweeds and knapweeds. **Habitat** Open breckland, flowery chalk downland, sand or shingle beaches, marginal and set-aside farmland, wide flowery rides and large temporary clearings in breckland plantations, other disturbed calcareous ground, and sometimes fields of clover and Lucerne. Singletons have been light-trapped in many open situations, including gardens. **Status and distribution** Resident and suspected immigrant. Red Data Book species. As a long-term resident, the main breeding area is East Anglia, in particular the Breckland of Norfolk and Suffolk, and the Suffolk coast between Thorpeness and Aldeburgh. Also locally in Wiltshire and formerly (and possibly still) in North Hampshire. In previous decades, bred more widely, e.g. at Dungeness, Kent (1930s–1950s). Such coastal colonies may be temporary establishments resulting from immigration. A wide scatter of single records, usually at light, in southern and eastern England, may be immigrants or wanderers from resident populations. These often coincide with influxes of known immigrant species, and it is well known as an immigrant elsewhere in Europe. A singleton on Guernsey in 1949, and recorded on Jersey since 2000.

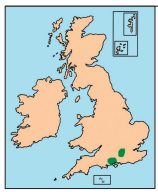
Shoulder-striped Clover

plate 52

Heliothis maritima Grasl.

ssp. *warneckei* Bours.

RDB; rare immigrant 73.073 (2402)



Field characters and similar species FW 13–17mm. British populations of Shoulder-striped Clover are ssp. *warneckei*. Distinct shoulder stripe (i.e. dark basal streak) on forewing and more oblique inner edge of dark band across forewing distinguish it from Marbled Clover. Hindwing has a similar pattern to that of Marbled Clover. **Flight season** One generation. Late Jun–Jul. Flies fast in sunshine and visits the flowers of heathers and heaths, favouring plants on south-facing slopes above boggy and bare ground. Also comes to light. **Life cycle** Overwinters as a pupa in a flimsy cocoon on or below the ground. Larva Aug–early Sep, sometimes until late Sep. Feeds at night. **Larval foodplants** Mainly the flowers of Cross-leaved Heath, but also recorded from Heather and the seedheads of Bog Asphodel. **Habitat** Large tracts of damp, acid heathland where Cross-leaved Heath is abundant. **Status and distribution** Resident. Red Data Book species. Very local and declining, in Dorset (Wareham and Studland heaths), Hampshire (some of the New Forest heaths) and Surrey (e.g. Thursley and Chobham commons). Also recorded from a small section of heathland on the Lizard NNR at Goonhilly Downs, and just north of Erisey Barton, Cornwall, but the last definite sighting was in 1981. A rather worn adult was reported from Porthleven, Cornwall, on 23 Jul 1984, and the moth has also been reported from Haldon Moor, Devon. A single female, presumed to be an immigrant, was captured in a Lucerne field at St Nicholas-at-Wade on the Isle of

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

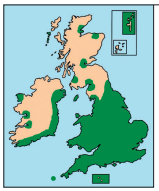
Thanet, Kent, on 20 Aug 1947, flying with immigrant Clouded Yellow butterflies. It was originally identified (by Boursin) as the east European ssp. *bulgarica*. The consensus now is that the Thanet moth is Shoulder-striped Clover, but most closely resembles the nominate Continental subspecies, with a slightly broader, plainer forewing. Abroad, ssp. *warneckei* is found from northern France to Denmark and ssp. *maritima* in western France. **Note** This species was not recognised as distinct from Marbled Clover until the late 1930s, and some of the literature up to the 1980s continued to confuse the two species.

Bordered Straw

plate 52

Heliothis peltigera ([D. & S.])

Immigrant 73.074 (2403)



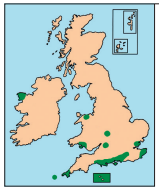
Field characters FW 16–19mm. Generally plainer and more cleanly marked than similar species. Bold grey kidney mark, with a diffuse, sometimes faint brown blotch adjacent on leading edge, and darker outer band, further darkened at leading edge to form a roughly triangular blotch, are diagnostic. Outer edge usually plain, or with a row of tiny black dots. Has a bold black dot at trailing corner. Ground colour is strongly affected by the temperatures experienced by early stages. Thus, primary immigrants early in the season from hot climates are straw yellow and their offspring are darker orange-brown. Hindwing has a thick, dark brown or blackish band along outer edge, often with a white blotch within it. **Similar species** See Scarce Bordered Straw and Eastern Bordered Straw. **Flight season** Has been recorded in every season. Winter records are rare, but exceptionally there were 15 in Dec 2015. Most frequent Jun–Aug. Two generations in southern Europe. Comes to light and sugar; also flies at dusk and during sunshine, visiting flowers and laying eggs. **Life cycle** Larvae occur in some years, occasionally in abundance, Jun–Oct. A late-summer/autumn generation may result from eggs laid early in the season. The species is unlikely to survive the winter in the British Isles, but a freshly emerged moth was found on Alderney on 23 Dec 2015. **Larval foodplants** The flowers of Common Restharrow, Ploughman's-spikenard, Scentless Mayweed, Sticky Groundsel and garden marigolds. **Habitat** Primarily coastal, but also occurs inland. **Status and distribution** Immigrant. Recorded in most years, but in greatly varying numbers. Occurs primarily in southern England and Wales, but recorded north to Shetland, and also from Man, Ireland and the Channel Islands. Notable years were 1996, with 2,500+ and thousands of larvae in the south; 2003, with 1,200+; and 2006, with 2,700+. In contrast, only six adults were reported in 2008. Resident in southern Europe and North Africa. Sometimes reported as a pest.

Eastern Bordered Straw

plate 52

Heliothis nubigera (H.-S.)

Immigrant 73.075 (2404)



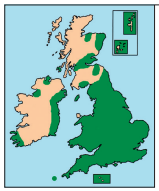
Field characters and similar species FW 16–20mm. Very like a pale form of Scarce Bordered Straw, with forewing whitish straw to light reddish brown, sometimes with white on veins and cross-lines. Has three or more distinct black dots on outer edge, a larger one at trailing corner, and two distinct notches on outer edge of dark outermost cross-band, one in leading half and the other (smaller) near trailing edge. See also Bordered Straw. **Flight season** In Britain, most often recorded in May and Jun. Also in Aug, and occasionally in the winter (e.g. five in Dec 2015). In southern Europe, two generations, Apr–Jul and Sep–Oct. **Life cycle** Larvae not recorded in the British Isles. **Larval foodplants** Various wild and cultivated plants, including chrysanthemums and Tomato. **Status and distribution** Immigrant. Over 30 records. Up to 2002, only five, the first three in 1958, in Norfolk and Dorset (two). Five in 2003 and 19 in 2006 (which remains the peak year). Records are scattered, from Scilly and southern coastal counties from Devon to Kent, Isle of Wight, Essex and Norfolk, inland in Berkshire and Warwickshire. Also, in Glamorgan, south Wales. Recorded once in Ireland, one at light, Mullet Peninsula, Co. Mayo, on 4 Jun 2006. Resident around the Mediterranean and in the Canary Islands. Sometimes reported as a pest.

Scarce Bordered Straw/ Old World Bollworm

plate 52

Helicoverpa armigera (Hb.)

Immigrant 73.076 (2400)



Field characters FW 16–19mm. A variable species. Forewing dark purplish brown through reddish brown to pale sandy shades. Markings often rather obscure but usually discernible. Oval and kidney mark have a fine dark outline and dark central spot. Has wavy dark cross-lines and a dark outer band, with a more or less central indentation on its inner edge. Any dark dots on outer edge and in trailing corner are minute and hard to see. **Similar species** See Eastern Bordered Straw and Bordered Straw. **Flight season** Has been recorded throughout the year. Winter records are rare (20 in Dec 2015). Most frequent in late summer and early autumn, particularly Sep–Oct. Comes to light and sugar, and visits flowers by day or at dusk. **Life cycle** Larvae rarely found in the wild in the British Isles. In southern Europe, three or four overlapping generations, May–Oct or later,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

overwintering as a pupa. Continuous generations in tropical and sub-tropical regions. **Larval foodplants** In Britain, has been found in the wild on Scarlet Geranium, Tree-mallow and Yellow-rattle. Recorded from over 200 species worldwide, including cotton plants, Maize, Tomato and carnations. **Habitat** Mainly seen on coasts but also occurs inland, particularly during years of abundance. **Status and distribution** Immigrant. Occurs almost annually in greatly varying numbers, and probably more numerous since the mid-1990s. Over 300 were recorded in 1996, 1,030 in 2003 and 11,700+ in 2006. The 2006 total was unprecedented and has not been repeated since, and the influx that year was well distributed in Britain, but there were very few in 2007 and 2008. Most frequently noted in the southern half of Britain, particularly south-west England, but has occurred as far north as Shetland and occasionally on Man, in Ireland (mainly on the eastern side) and in the Channel Islands. Larvae are frequently imported with vegetables and flowers. Resident in southern Europe and Africa. Globally, a very widespread species and a major agricultural pest, damaging a wide variety of crops.

Pease Blossom

plate 52

Periphanes delphinii (L.)

Uncertain 73.077 (2398)

Field characters FW 14–15mm. Beautiful purplish-pink shading on forewing, dark kidney mark and sinuous cross-lines are diagnostic. **Flight season** One generation. The dates of British records range from early Apr to Jun. In mainland Europe, mainly May–Jun, often flying by day. **Life cycle** Overwinters as a pupa underground. Larva Jul–Aug. **Larval foodplants** Reportedly Monk's-hood and the related naturalised Larkspur. **Habitat** In Britain, recorded mainly in gardens and coastal locations. **Status and distribution** Possibly an extinct resident, a rare immigrant or a deliberate or accidental import. About 20 have been reported, all prior to 1900. Contemporary accounts indicate that set specimens or livestock were being imported from southern Europe for collections from at least the early 19th century. Records of apparently wild-caught individuals include a wing in a spider's web at Bulstrode, Buckinghamshire, prior to 1794, one in a Chelsea garden before 1802, several from Windsor, Berkshire, in Jun about 1815, and two in a garden near Petersfield, Hampshire, in about 1890. Reports are mainly from the London area (possibly garden imports) or the south coast of England (possibly immigrants), the last from Dover, Kent, in 1893. However, 19th-century authors regarded the species as a resident. It seems possible that it was in decline and on the edge of its range, which has contracted southwards in mainland Europe since the 19th century.

Condicinae

African

plate 52

Condica capensis (Guen.)

Suspected immigrant 73.0771 (2390)

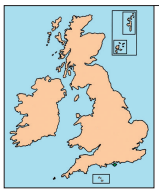
Field characters and similar species FW 12–17mm. Not strikingly marked, but unlike any resident British species. Forewing quite broad, grey-brown or quite dark, rich brown. Oval and kidney mark whitish, the latter with a pair of white spots close to its outer edge. **Flight season** In southern Spain, mainly May–Oct, in several generations. Breeds more or less continuously further south. **Larval foodplants** Species of *Acanthus* (Acanthaceae) and Asteraceae. **Habitat** Semi-desert and open steppes. **Status and distribution** One British record, at light on 3 May 1958 at Bodinnick, East Cornwall, in association with a large influx of known migrant moths from the south, including Striped Hawk-moths and large numbers of Silver Y. In Europe, resident only locally in Andalusia, southern Spain. Widespread in North Africa, the Canary Islands and Madeira.

Reddish Buff

plate 52

Acosmetia caliginosa (Hb.)

RDB (protected species) 73.078 (2393)



Field characters FW M 13–15mm F 9–12mm. Quite distinctive, with a slender build and broad forewing. Ground colour varies from brick red through pinkish buff to greyish with pink. Intensity of markings varies, but normally has two fine, irregular dark cross-lines. The only noctuid in the British Isles of slight build with the above characteristics. Female much smaller than male, with a narrower forewing. **Flight season** One generation. Mid-May–late Jun, occasional individuals recorded to mid-Jul. Sometimes the male, and rarely the female, flies up when disturbed from vegetation by day, particularly in late afternoon. Male comes to light from soon after dark, arriving throughout the night, with the best catches obtained by operating all night. Females are rare at light, occurring mainly towards the end of the flight season when they have laid most of their eggs. In captivity, they spend much time walking about below the leaves of Saw-wort plants, laying eggs. Both sexes bask on the upper surfaces of leaves in the early-morning sunshine. **Life cycle** Overwinters as a pupa underground. Larva Jul–early Aug. Feeds mainly at night, resting on the undersides of leaves of the foodplant by day. **Larval foodplants** Saw-wort. **Habitat** Open heath-like vegetation, where the larval foodplant grows abundantly, and in unshaded conditions. Previous reports from woodland rides and clearings were from sites where conifer plantations had been established on the original open habitat and the moth was in

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Reddish Buff.

decline. **Status and distribution** Resident. Red Data Book species. Confined to a single British locality consisting of two adjacent fragments of once more extensive open habitat in the west of the Isle of Wight. Formerly occurred in at least three nearby sites, now conifer plantations, where it was last seen in the 1950s, 1979 and 1987, respectively. Occurred at several places in the New Forest, Hampshire, in the 19th century, and in wood and wood-pasture near Fareham, Hampshire, where it was discovered in 1931 and survived until 1961. These records from former sites cover at least five 10km squares. In addition, one was recorded at light at Freshwater, Isle of Wight, in 1956. In recent years, much of the occupied habitat has been protected and managed to favour the moth, and its population is currently stable.

Silvery Gem

plate 52

Eucarta virgo (Treit.)

Rare immigrant; probable adventive

73.079 (2310a)

Field characters FW 13–15mm. Forewing olive brown with extensive pale pink clouding. Whitish central cross-lines oblique, nearly meeting, or joined at trailing edge, therefore more or less forming an 'X' across the forewings when moth is at rest. Has dark brown blocks either side of pale, oblique oval. **Similar species** Cumberland Gem *Eucarta amethystina* (Hb.) (plate 52) is similar, but cross-lines meet trailing edge at 90°. There is no confirmed record of it in the British Isles, but Meyrick (1928) states 'Cumberland, once, probably a casual immigrant'. No specimen or further details have been traced. **Flight season** Two generations in mainland Europe. Late May–early Jul and Aug–Sep. Comes to light and sugar. **Larval foodplants** Herbaceous plants, including Mugwort, Dandelion, Tansy and mints. **Habitat** In mainland Europe, open or scrubby grassland, wetland and riverbanks. **Status and distribution** Immigrant, probable adventive. Three British records. The first on 29 Jun 2006, at light at Bodenham, Herefordshire, thought possibly to have arrived with pots of soft fruit plants from eastern Europe (grown extensively in the local area – see also under Shining Marbled and Orache Moth). However, two in 2014, on 23 Jul at Weybourne, East Norfolk, and 24 Jul at Blythburgh, East Suffolk, were both associated with a substantial immigration of other moths from the east. Mainly found in eastern Europe, but has recently expanded into the north-west, with first records for Germany in 1998, Finland in 2000 and Sweden in 2002.

Eriopinae

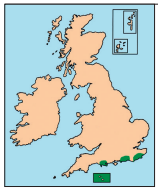
Latin

plate 52

Callopistria juventina (Stoll)

Immigrant

73.080 (2308)



Field characters FW 14–17mm. An intricately marked and distinctive species. Forewing quite broad and rich brown, with a hooked tip and central projection at outer edge. Conspicuous features include cream veins, central marks and flashes near tip, and thick pink edging on cross-bands. Like Latreille's Latin, male has unusually hairy legs, especially the middle pair, which, when the moth is at rest, are often outstretched. **Similar species** Campion has pink cross-bands on forewing, but outer edge is curved and legs are not unusually hairy. See also Purple Cloud. **Flight season** Mainly one generation in mainland Europe, Jun–Jul. Occasionally a second generation in Oct. Comes to light and especially to sugar. **Life cycle** Overwinters as a fully grown larva and pupates in spring. Larva Aug–spring. **Larval foodplants** Bracken. **Habitat** Mainly woodland. **Status and distribution** Rare immigrant. Eight records, all at light: Sussex, 16 May 1959; Kent, 27 Jul 1962; Guernsey, 29 Jul 1995, 30 Jun 2006 and 9 Aug 2010; Dorset, 7 Jul 2004; West Sussex, 10 Aug 2012; and two in Kent in 2015, one on 10 Jul at Orlestone Forest and one on 16 Jul at Dungeness. Found in most of mainland Europe north to northern France, Belgium, Holland, Denmark and Poland.

Latreille's Latin

plate 52

Callopistria latreillei (Dup.)

Immigrant

73.081 (2309)

Field characters FW 12–14mm. Fairly unmistakable. Rather slim. Forewing rather narrow, especially near base, with dark olive-green ground colour when fresh, fading to dull grey. Combination of one to three orange-brown arrowheads in outer half and orange or white spot near base is diagnostic. Has fine white-edged cross-lines, whitish marbling and dusting. Kidney mark whitish, usually with small white spots nearby. Some examples are more ornately marked than others. When fresh, has orange-brown crests on thorax. In male, upper parts of legs are unusually hairy, especially the middle pair (as if it is wearing baggy trousers!), and when at rest these are often outstretched. The effect is much less pronounced in female.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Flight season In mainland Europe, two or three generations, Jun–Nov. Comes to light and sugar. **Larval foodplants** Ferns, including Rustyback. **Habitat** Dry, open grassy, scrubby or rocky places. **Status and distribution** Suspected rare immigrant. Three confirmed British records. One at light on 27 Oct 2006 at Samphire Hoe, between Dover and Folkestone, Kent. The proximity of ferry terminals and the Channel Tunnel might suggest accidental importation. However, a single Purple Marbled was also trapped, and a Crimson Speckled was found by day at the site on 26 Oct, both known as immigrants. One found on a ship at sea off southern Ireland on 29 Aug 2007 (possibly transported from southern Europe) and one at Hurst Green, East Sussex, on 7 Oct 2013. Formerly regarded as doubtfully British, but included on previous checklists on the basis of a single 19th-century specimen reared from a larva but without a locality label. Resident in central southern Europe, around the Mediterranean, Spain, Portugal and south-eastern Europe.

Bryophilinae

Tree-lichen Beauty

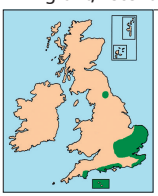
Marbled Beauty

Tree-lichen Beauty

plate 53

Cryphia algae (Fabr.)

Immigrant; recent colonist 73.082 (2292)



Field characters FW 10–13mm. Varies from pale to dark green, sometimes tinged brownish or greyish, with a broad, darker central band. Inner central cross-line on forewing complete, usually with a blackish smudge on its outer edge, more extensive in trailing half. Cross-band near base usually distinctly paler, lichen green, yellow (f. *calligrapha* Borkh.) or at least marked with these colours, and base is usually darker. Oval and kidney mark usually indistinct. **Similar species** Most like Marbled Green in shape (but slightly smaller), plainer examples of which (e.g. f. *impar*, which can have dark edging on inner central cross-line) can be distinguished by incomplete inner central cross-band. **Flight season** One generation. Mid-Jul–early Sep. Comes to light. **Life cycle** Overwinters as a larva among lichens. Larva Sep–Jun in mainland Europe. **Larval foodplants** Lichens on trees and probably other substrates. **Habitat** Open habitats, including urban areas. **Status and distribution** Immigrant and recent colonist. Until 1991, only three were reported, two from Disley, Cheshire, in Jul 1859, and one from Hastings, East Sussex, in 1873. In 1991, singletons were captured in Hampshire and West Sussex, and by 2001 over 45 probable immigrants had been recorded, spread over a number of years, mainly from Kent but also west to Dorset and north to Hertfordshire. Since then, it has established large resident populations in the south-east in Kent, Surrey, Essex and Middlesex (including central London). Continues to spread and has extended west to Buckinghamshire, Berkshire and Oxfordshire (first record 2015), and further north and east to Suffolk, Norfolk, Cambridgeshire, Huntingdonshire, Bedfordshire and Northamptonshire, with numerous records along the south coast to Dorset and Devon, and one at Hexham, Northumberland, in 2015. In the Channel Islands, first recorded on Guernsey in 1990 and since recorded widely. Widespread in western Europe.

Marbled Grey

plate 53

Bryophila raptricula ([D. & S.])

Immigrant 73.083 (2294)

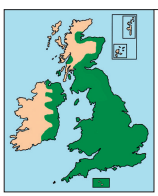
Field characters FW 12–14mm. Has a longer, narrower forewing than in closely related species. Highly variable. Often dark grey but sometimes paler grey with well-defined markings. Outer central cross-line strongly curved, edged with white in trailing half, forming a crescent mark. This often has a black streak running through it, which usually curves to outer edge and sometimes extends to base. Forms marbled or streaked with reddish brown occur in southern Europe, but immigrants in Britain tend to be dark grey. **Flight season** One generation in northern Europe. Jul–Aug, occasionally late Jun. Comes to light. **Life cycle** Overwinters as a larva among lichens. Larva Sep–Jun in northern Europe. Reported to bask in sunshine, but not yet found in Britain. **Larval foodplants** Lichens such as *Sticta pulmonacea* on walls, rocks and tree trunks. **Habitat** Open habitats. **Status and distribution** Immigrant. First recorded in the British Isles on 12 Aug 1953 at Arundel, Sussex. About 20 subsequently, mostly since 1990 and mainly from the coast of south-east Kent (14 records), and also Hampshire and Suffolk. Most recently, singles at Dungeness, Kent, in 2004; Pegwell, Kent, in 2006; and Landguard, Suffolk, in 2009. Apparently expanding northwards in mainland Europe.

Marbled Beauty

plate 53

Bryophila domestica (Hufn.)

Common 73.084 (2293)



Field characters and similar species FW 12–14mm. Diagnostic feature of the delicately marbled, rather narrow and somewhat tapered forewing is the inner central cross-line, which extends fully from leading to trailing edges. Outer edge of

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

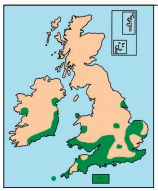
forewing is curved and strongly angled. Ground colour is greyish or greenish white, with pastel green, greyish-green or dull orange marbling, or less often extensively green (f. *suffusa* Tutt). Most examples are well marked, but sometimes marbling is reduced. See the similar Marbled Green, in which inner central cross-line fails to meet trailing edge and forewing is broader and less rounded. **Flight season** One generation. Jul–Aug. Comes frequently to light and also to sugar and flowers, and often rests by day on walls. **Life cycle** Overwinters as a small larva, among the foodplant. Larva Sep–May or early Jun. Feeds at night and hides in a silken retreat, in which it pupates. **Larval foodplants** Lichens growing on rocks, walls, roofs and trees. **Habitat** Often associated with old buildings and frequent in urban areas, but also in open country, orchards, calcareous woodland and coastal cliffs, particularly where there are stone walls, rocks, gravestones, old hedge-banks or lichen-covered trees. **Status and distribution** Resident. Common. Well distributed and often frequent throughout southern Britain, north to the southern half of Scotland. Extends locally into north-east Scotland, mainly in coastal areas, and around the Moray Firth to East Ross. Widespread and frequent on Man, in the east of Ireland and in the Channel Islands.

Marbled Green

plate 53

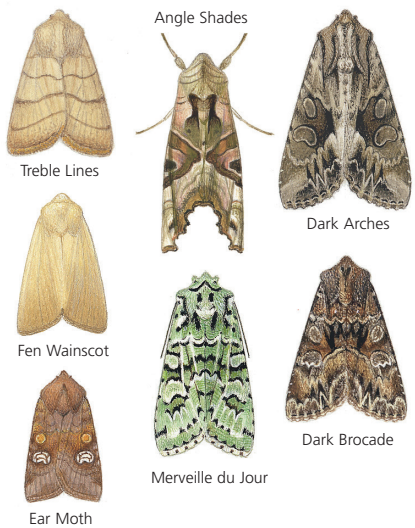
Nyctobrya muralis (Forst.)

Local 73.085 (2295)



Field characters and similar species FW 12–15mm. Often very similar to Marbled Beauty. The main distinguishing feature is the inner central cross-line on forewing, which is incomplete, failing to reach trailing edge. Instead, basal cross-line curves around to almost meet it, sometimes forming a pale clover-leaf-shaped blotch. Usually larger than Marbled Beauty, with broader, less tapered forewing. Ground colour greenish white, pastel green, bright lichen green or olive green. Black cross-lines vary from strong to faint. See also Tree-lichen Beauty. Form *impar* Warr. has a greyish-brown or greyish-green forewing, coarsely and irregularly dusted and blotched blackish. Markings obscure and cross-lines rather faint, the second often with an incomplete dark band or block on its outer edge. Form *westroppi* Cock. & Will. refers to the Irish populations. On average, these are smaller moths than those from Britain, sometimes with rather indistinct markings, but extremely variable in both respects. A very dark grey-brown form, f. *castanea* Cock. & Will., also occurs occasionally in Ireland. **Flight season** One generation. Jul–Aug. Comes to light, sugar and flowers, and rests by day on walls, roofs and rocks. **Life cycle** Overwinters as a small larva among the foodplant. Larva Sep–early Jun. Feeds at night and hides in a silken retreat, in which it pupates. **Larval foodplants** Lichens such as *Xanthoria* and *Caloplaca* species growing on walls, rocks and, occasionally, trees. **Habitat** Rocky places by the sea; also inland in towns and open country on calcareous soils, especially where there are stone walls. **Status and distribution** Resident. Local. Well distributed and fairly frequent on and near the south and south-western coasts of England and Wales, from Pembrokeshire to Kent; also Scilly and the Channel Islands. Very local on the west coast of Wales, north to Anglesey, and also found in North Essex, Suffolk and Cambridge, with scattered records further north, including two at Spurn, south Yorkshire. Occurs widely inland in south-west England, south Wales, Gloucestershire, and east to Oxfordshire and Berkshire. Form *impar* is considered an urban colour form, which sometimes predominates locally and has been reported from Cambridge and Gloucester. Form *westroppi* is local on the south and east coasts of Ireland, from Co. Cork to Co. Louth, and very local in Cos. Kerry and Galway.

Xyleninae



Shining Marbled

plate 53

Pseudeustrotia candidula ([D. & S.])

Immigrant; possible adventive 73.086 (2413a)

Field characters FW 10–13mm. Distinctive, with large, roughly triangular blackish blotch on leading edge of whitish forewing. Has small blackish blotches at base, and roughly triangular grey-brown blotch on trailing edge, extending into basal marks. Markings vary in strength; sometimes trailing edge blotch is faint, or there may be more extensive grey-brown clouding. **Flight season** In mainland Europe, generally two generations, May–Sep. **Life**

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

cycle In nearby mainland Europe, larvae reported Jul–Sep. **Larval foodplants** Various grasses, bur-reeds, docks and sorrels, feeding internally in the main stems. **Habitat** In mainland Europe, damp lowland meadows, field margins, woodland edges and clearings, wetland and riverbanks. **Status and distribution** Rare immigrant. Six British records, the first at light on 28 Oct 2006, an unusually late date, at Bodenham, Herefordshire, possibly an accidental import (see under Silvery Gem). However, it was an exceptional year for immigration, so a natural origin also seems possible. Four on 18–19 Aug 2012, in East Cornwall, South Devon, West Sussex and East Kent, followed by one on 25 Aug 2013 at Portland, Dorset. Found in central Europe, reaching the western French coast and the Pyrenees. Also eastern Europe, north to Finland and southern Sweden, generally scarce and localised but apparently expanding its range westwards.

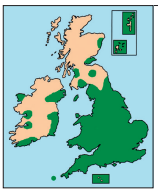
Small Mottled Willow

plate 53

Spodoptera exigua (Hb.)

Immigrant; resident in Channel Islands

73.087 (2385)



Field characters FW 13–14mm. Quite distinctive. Slender, with forewing narrow at base. Grey-brown, sometimes marbled with brown. Oval and kidney mark pale pink or orange. Oval quite small. When fully at rest, holds forewings at a steep angle, sometimes wrapped around the body. **Similar species** See Dark Mottled Willow. Pale Mottled Willow has a much broader forewing, with four conspicuous black dots along leading edge, and oval and kidney mark are never orange or pink. **Flight season** Recorded in every month of the year, but chiefly Jun–Oct. Winter and early-spring records are scarce but always possible during periods of mild weather and southerly winds. Exceptionally, 147 were recorded in Dec 2015. Comes to light and visits buddleias and Ivy flowers. Also recorded at honeydew and disturbed by day. **Life cycle** In the British Isles, successful breeding as yet unconfirmed but likely. Larvae should be expected within one month of arrival of immigrants, producing adults before autumn, based on observations in captivity. **Larval foodplants** A wide range of herbaceous plants accepted, including Dandelion, Groundsel, docks and Common Restharrow. **Status and distribution** Immigrant. Recorded annually in numbers in most recent years. Occasionally has years of abundance, when thousands are reported, including 1996 (2,500+), and 2003 and 2006 (both 5,000+), but also quiet seasons such as 2007 (18) and 2008 (25). Early immigrants might produce offspring during the summer. Most frequently recorded along the south coasts of England and Wales, but also widely over the southern half of Britain, with inland records not unusual. Also recorded in north-west England and on Man, and north to the Hebrides and Shetland. Fairly regular in Ireland. Resident and occasional immigrant in the Channel Islands. Distributed worldwide and a pest of herbaceous crops in some regions.

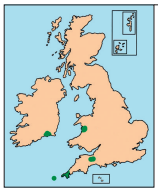
Dark Mottled Willow

plate 53

Spodoptera cilium (Guen.)

Immigrant

73.088 (2386c)



Field characters and similar species FW 13mm. Not unlike Small Mottled Willow in general shape and pattern, but forewing broader, blackish brown or light grey-brown, sometimes mottled with brown. Females are generally darker and males are lighter, but the difference is not clear-cut. Kidney mark dark grey-brown with whitish outline. Oval usually straw white but may also be dark in centre. In male, antennae have pronounced hair-like projections, best seen under a low-power microscope (much shorter in Small Mottled Willow). When fully at rest, sits with wings held tent-like, but not wrapped around the body. See also Pale Mottled Willow, which has a dark oval, and dark kidney mark with chalky-white dots and blackish spots on leading edge. **Flight season** Mainly recorded in Sep and Oct. In southern Europe, several generations. **Larval foodplants** Grasses. **Habitat** In Africa, larvae are often numerous in short swards such as regrowth after fire or on closely mown lawns and golf courses. **Status and distribution** Immigrant. About 30 British records, mainly at coastal sites in the far south-west of England and mainly in late Sep and Oct. The first was on 29 Sep 1990, at Coverack, Cornwall. Eight more up to 1998, all at light in Cornwall and Dorset, all in Oct. Then in 2005, two on Scilly and one in Cornwall, and in 2006, two on Scilly, again, all in Oct. Increasing in frequency. In Ireland, one on 13 Sep 2008 at Brownstown Head, Co. Waterford. Primarily an African species, sometimes reaching pest status there. Also occurs in the Canaries and in parts of southern Europe.

Mediterranean Brocade/ African Cotton Leafworm

plate 53

Spodoptera littoralis (Boisd.)

Immigrant; Adventive

73.089 (2386)

Field characters FW 14–19mm. Fairly distinctive. Male has a prominent diagonal cream flash through oblique oval; female lacks this but has oblique oval. Forewing rather angular and somewhat tapered, and brown, often with a violet tint, especially on outer cross-band. Veins highlighted in creamy white, especially centrally. Hindwing very white, with a faint brown line just inside fringe. **Similar species** Asian Cotton Leafworm *Spodoptera litura* (Fabr.), found only as an occasional import, is indistinguishable from Mediterranean Brocade on external features. Geographical origin of imported material may indicate

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

this species as a possibility. Bordered Gothic has more extensive cream venation and cross-lines, and a grey hindwing. **Flight season** Immigrants recorded in Jun, Sep and Oct. Several generations in tropical and sub-tropical regions. **Larval foodplants** A wide range of plants abroad. Often a pest on vegetables, fruits, flowers and other crops, including Potato, Tomato, Cabbage, beans, Peanut, Maize and bananas, with which it is occasionally imported. **Status and distribution** Suspected rare immigrant and import. Eight records of suspected immigrants in England, the first in 1960 on the north Norfolk coast at West Runton. Singles at Stoborough, Dorset, and Lymington, Hampshire, both on 13 Oct 1978 at a time of high immigrant activity, and at Studland, Dorset, on 13 Oct 1979. One at Longworth, Berkshire (modern Oxfordshire), in Jun 1983; one at Carshalton, Surrey, in Jun 2003; one at the Wetland Centre, Barnes, London, on 22 Jun 2007; and one at Misterton, Nottinghamshire, on 18 Oct 2014. In 1963, the early stages were imported with cut chrysanthemums from the Canary Islands and became a greenhouse pest, and they continue to be found in imported produce. Twice recorded on Guernsey, in 1963 and 1999, on imported plants. Breeds widely in Africa and Mediterranean Europe, with adults occasionally reaching central and northern Europe.

Wedgeling

plate 53

Galgula partita Guen.

Suspected immigrant; Adventive 73.090 (–)

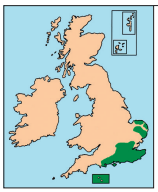
Field characters and similar species FW 10–13mm. Rather slender. Forewing in male light brown to dark reddish brown, and in female dark brown to blackish and fairly plain. Has an oblique, dark-edged pale outer central cross-line, often with a very small whitish triangle where it meets trailing edge. Pale-outlined oval and kidney mark have a dark blotch between, extending to leading edge. **Flight season** Mar–Oct, in several generations. **Larval foodplants** Species of wood-sorrel. **Status and distribution** Rare suspected immigrant. Two records, one at light on 6 or 7 Oct 2008 at Marazion, Cornwall, and one at Merriot, South Somerset, on 21 Aug 2015. Also one adventive record, one imported to south Wales in 2007 in packaging from North America. A widespread and frequent North American species established in the Azores and Canary Islands, and has occurred in southern Spain.

Rosy Marbled

plate 53

Elaphria venustula (Hb.)

Nb 73.091 (2396)



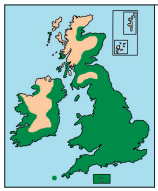
Field characters FW 10–11mm. A rosy-pink stripe runs parallel to leading edge of pinkish-white forewing, in leading half. The small dark central block and roughly triangular brown blotches on trailing and outer edges are also diagnostic. Rests with wings held at a rather steep angle, tent-like, and could easily be mistaken for a micro-moth. **Flight season** One generation. Late May–mid-Jul. Sometimes disturbed from vegetation by day. Both sexes fly from just before dusk, and male especially comes to light after dark. **Life cycle** Overwinters as a pupa, in a cocoon on or below the ground among roots. Larva late Jun–Aug. **Larval foodplants** Probably the flowers of Tormentil and Creeping Cinquefoil, although this has not been confirmed recently. In captivity also reared successfully on the flowers of Silverweed, Bramble, roses, Garden Strawberry and Field Bindweed. **Habitat** Mainly dry, open woodland on warm acid soils, particularly where Bracken grows; also heathland, roadside verges and other open places with Tormentil and similar flora. **Status and distribution** Resident. Nationally Scarce B. Found in central southern and south-east England, from Dorset, Hampshire and the Isle of Wight to Kent, and north to Surrey, Berkshire and Buckinghamshire. Also in Essex, Norfolk (mainly in Breckland, since the 1980s) and Suffolk. Records of singletons further from the core distribution, assumed to be wanderers, include Steeple Ashton, South Wiltshire, on 8 Jun 1982; Baston Fen, Lincolnshire, on 14 Jun 1986; south Worcestershire on 26 Jun 1986; and Lundy Island, Devon, also in 1986.

Mottled Rustic

plate 53

Caradrina morpheus (Hufn.)

Common 73.092 (2387)



Field characters and similar species FW 13–16mm. Kidney mark and oval broad, dark and rather blurred, without any crisp lighter edging. Otherwise markings somewhat similar to Uncertain, Rustic and Vine's Rustic. Forewing brown or dark brown, rapidly broadening in male, slightly narrower and shorter in female. Leading edge slightly curved. When fresh, has a distinct silky appearance. Inner margin of dark outer forewing band is well defined and smooth. Hindwing whiter than in Uncertain and Rustic. **Flight season** Usually one generation, Jun–mid-Aug. Sometimes a very small second generation in southern Britain in Sep and Oct. Comes frequently to light, less often to sugar and flowers. **Life cycle** Overwinters as a fully grown larva in a cocoon underground, in which it pupates in the spring. Feeds at night Jul–Nov, hiding at ground level by day. **Larval foodplants** A wide range of herbaceous plants, including Common Nettle, docks, goosefoots, teasels and Hedge Bedstraw; also Hop and Goat Willow. **Habitat** Most lowland situations, including gardens, farmland, grassland, heathland, scrub, woodland and many coastal habitats. **Status and distribution** Resident. Common. Well distributed and frequent to abundant throughout England, including Scilly, lowland Wales, Man and the Channel Islands. Widespread in the

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

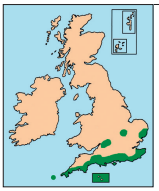
southern half of Scotland, local north to Perthshire, the north-east and the Moray Firth. Scarce or absent further north and west. Locally frequent in Ireland, more especially in the east.

Clancy's Rustic

plate 53

Caradrina kadenii (Freyer)

Immigrant; resident (recent colonist) 73.093 (2387a)



Field characters and similar species FW 13–15mm. Superficially similar to Pale Mottled Willow, but more thickset, ground colour of forewing pale grey when fresh, and dark band along outer edge absent. On leading edge, three distinct black spots between base and kidney mark (four in Pale Mottled Willow). Has a thin, broken whitish cross-line near outer edge, the central section of its inner edge with brown marks, these sometimes weak. Oval and kidney are contrastingly dark. Oval very small, dark and easily lost, and cross-lines weak. On the underside, dark cross-line in outer half usually with distinct kink at the leading edge (straighter in Pale Mottled Willow) (see figure below). **Flight season** Two generations. In Britain, recorded Jun–Jul and Sep–Oct, the autumn generation much larger. Comes to light. **Larval foodplants** In mainland Europe, a wide range of low-growing herbaceous plants. **Status and distribution** Immigrant and resident (recent colonist). First recorded in Britain on 3 Oct 2002, one at light in a garden at New Romney, Kent. Six in 2003, in south-east Kent (four), Sussex and Hampshire. Three in 2004, in south-east Kent (two) and Sussex. In 2005, a total of 160, with 97 in Kent (85 in the Dungeness area) and others in Suffolk (one), Sussex, (29), Hampshire (20), Isle of Wight (seven), Dorset (five) and Devon (one). Three in Cornwall in 2006. Recorded in these areas since, with large numbers again in places, and probably resident in southern coastal counties from Devon to Suffolk. First recorded in the Channel Islands in 2003, and now resident there. Elsewhere resident mainly in southern Europe, from France eastwards.

Lorimer's Rustic

plate 53

Caradrina flavirena Guen.

Suspected immigrant 73.094 (2388)

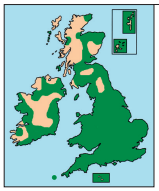
Field characters and similar species FW 13–15mm. Very similar to Pale Mottled Willow, but forewing smoother looking, more uniform and distinctly grey. Kidney mark usually with a yellow spot in addition to chalky-white spots. No tawny-brown outer cross-band or blocks, but dark band along outer edge may have a pale, broken line along its inner edge. **Flight season** Two generations, Mar–Oct. **Larval foodplants** A variety of herbaceous plants. **Status and distribution** Suspected rare immigrant. Recorded once, a female at light at Totteridge, Hertfordshire, on 8 Oct 1967, a night when other more familiar immigrant moths were recorded widely in southern England. Occurs widely across southern Europe, extending north to western France.

Pale Mottled Willow

plate 53

Caradrina clavipalpis (Scop.)

Common; suspected immigrant 73.095 (2389)



Field characters FW 12–15mm. Rather slim with a pale to dark brownish-grey forewing, noticeably narrow near base, and three or four small black dots along leading edge between base and kidney mark. Kidney mark dark-outlined, rather small and narrow, and invariably edged with small white spots. A dark grey band runs along outer edge, with an adjacent narrow tawny-brown band, sometimes broken into blocks. Hindwing white or greyish white with a slight pearly sheen, and a narrow grey outer band, this colour extending inwards along the veins. **Similar species** Vine's Rustic and some Rustics are similar in size and coloration, but are stouter and lack white spots on kidney mark, black dots on leading edge and dark band along outer edge. See also Small Mottled Willow, Dark Mottled Willow, Lorimer's Rustic and Clancy's Rustic. **Flight season** Probably two generations, mainly May–Jul and late Aug–Oct, but occurs Feb–Nov. Comes to light, sometimes in numbers, and to sugar and flowers. **Life cycle** Overwinters as a larva underground in a cocoon, in which it pupates in spring. Larva Sep–spring and through summer. **Larval foodplants** Grass seeds, including cereal grains, both growing and stored after harvest. Also recorded on seeds of plantains and Garden Pea. **Habitat** Grassland, farmland (especially around farm buildings) and urban gardens. Also formerly recorded in coal mines, living on the fodder of pit ponies. **Status and distribution** Resident and suspected immigrant. Common. Well distributed and frequent throughout England, Wales, Man and the Channel Islands. Recorded sparsely from most parts of Scotland, and possibly declining. Widespread but local in Ireland. Unusually large numbers are sometimes recorded on nights coincident with arrivals of known immigrant species.

Clancy's Rustic Pale Mottled Willow

View of undersides

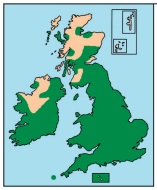
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Uncertain

plate 53

Hoplodrina octogenaria (Goeze)

Common 73.096 (2381)



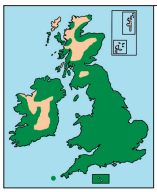
Field characters FW 14–16mm. Forewing rich brown or tawny brown, generally darker in female and shinier, sometimes dusted with grey, especially along cross-lines, the inner central one wavy, the outer central one finely scalloped. Oval and kidney mark slightly darker than ground colour, with pale outlines. Oval fairly small, kidney mark fairly narrow, straight or slightly bent. A dark, rather diffuse, narrow cross-band, sometimes indistinct, runs through kidney mark. Hindwing in male dirty brownish grey, and in female darker and more uniformly grey. **Similar species** See Rustic. See also Mottled Rustic and Vine's Rustic, which have much whiter hindwings, and the rare immigrant Powdered Rustic. **Flight season** Usually one generation. Mid-Jun–mid-Aug. A very small second generation in some years in southern Britain, Sep–early Nov. **Life cycle** Overwinters as a larva. Larva Jul–Apr. Pupates in a strong cocoon underground. **Larval foodplants** A range of herbaceous plants, including chickweeds, docks, dead-nettles and Primrose. **Habitat** Most lowland habitats, from woodlands and open meadows to gardens, including urban areas. **Status and distribution** Resident. Common. Well distributed and often abundant throughout England, Wales, Man and the Channel Islands. Local in Scotland, mainly found in the southern half. Well distributed throughout most of Ireland, but very local in the north-west.

Rustic

plate 53

Hoplodrina blanda ([D. & S.])

Common 73.097 (2382)



Field characters and similar species FW 13–16mm. The similarity between this species and Uncertain has long been a source of confusion (hence the English name of the latter!), but there are several differences that can be used, with care, to identify most examples. Rustic is more variable in colour, and usually greyer. Forewing pale to dark greyish brown through to sooty brown, heavily dusted with grey, or almost blackish. Usually blander, with fine cross-lines and central band usually faint, and outer central cross-line usually reduced to a series of dots. Forewing may be smoother and shinier than worn examples of Uncertain, which emerges earlier, but not compared with fresh ones, especially the darker females, so this often quoted character can be misleading. Hindwing greyish white to uniformly grey, browner in Uncertain. Worn Uncertains tend to retain cross-lines, whereas Rustic appears more washed out. However, some moths show characters of both species, and in these cases the genitalia should be examined for confirmation. See also Vine's Rustic, Mottled Rustic and the rare immigrant Powdered Rustic. **Flight season** Usually one generation, late Jun–mid-Aug. Starts emerging about two weeks later than Uncertain. Occasionally, a partial second generation in southern England in Oct. Comes to light, sugar and flowers. **Life cycle** Overwinters as a larva. Larva Jul–Apr. Pupates in a strong cocoon underground. **Larval foodplants** A wide range of broad-leaved herbaceous plants, including chickweeds, docks and plantains. **Habitat** Most lowland habitats, including urban areas. **Status and distribution** Resident. Common. Well distributed throughout most of England, Wales, Man, Ireland and the Channel Islands. Widespread (and more numerous than Uncertain) in Scotland, and more frequent on the coast but more local in the north.

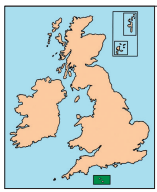
Powdered Rustic

plate 53

Hoplodrina superstes (Ochs.)

Immigrant; possible transitory resident

73.098 (2383)



Field characters FW 13–15mm. Forewing is a lighter brown, tinged with grey, than related moths, with brown speckling and outer cross-line consisting of black dots. Oval and kidney mark light-edged, large and distinct. **Similar species** Vine's Rustic has a greyer, narrower, more angular forewing, a less speckled appearance and a whiter hindwing. Middle sections of male antennae in Powdered Rustic have short projections, the length being only half the diameter of the shaft, whereas in Vine's Rustic these are almost equal to the diameter of the shaft (this is best seen under a microscope). Uncertain and Rustic are also very similar, but not speckled, and Uncertain is browner, with a darker hindwing. Retention of a specimen (and for females, examination of genitalia) is desirable for acceptance of records. **Flight season** Single generation. Jun–Aug. **Life cycle** In mainland Europe, overwinters as a larva, feeding Sep–Apr or May. **Larval foodplants** Dandelion, plantains and other herbaceous plants. **Habitat** Favours warm, open, well-drained sites, including gardens. **Status and distribution** Rare immigrant. Seven British mainland records, all on or near the south or south-east coasts of England. The first were two at Deal in 1886. Singles at Brentwood, Essex, on 18 Aug 1890; Dawlish, Devon, in Aug 1901; and Torcross, Devon, in 1902. Two males at Clyst Honiton, South Devon, on 9 and 11 Jun 1945. Reported from Guernsey in 1893 in some numbers, but not recorded since. One on Alderney in 1899, and reported as 'fairly common, possibly a transitory resident' in 2006. One on Herm in 1904. Widely recorded in central and southern Europe.

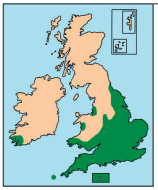
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Vine's Rustic

plate 53

Hoplodrina ambigua ([D. & S.])

Common; suspected immigrant 73.099 (2384)



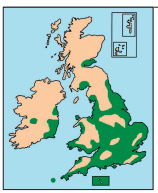
Field characters and similar species FW 13–15mm. Forewing pale to dark brownish grey with pale grey dusting, or silvery grey, and an almost straight leading edge. Markings similar to Rustic and Uncertain, but with a usually faint central band, and larger and more rounded kidney mark and oval. Hindwing whitish with a faint pearly sheen, often with a narrow grey outer band, especially on examples with darker forewings. Some individuals, especially darker ones, quite closely resemble Rustic (and are often mistaken for it, especially the second generation), which is a little larger, with a broader and slightly blunter forewing and less whitish hindwing. See also Powdered Rustic, which is very similar. Has also been mistaken for Common Quaker, which has a more rounded, brownish forewing. **Flight season** Two generations. May–Jul and Aug–Sep, the second more numerous. Comes frequently to light, and to sugar and flowers. **Life cycle** Overwinters as a larva. Larva Sep–Apr and May–Aug. Pupates in a cocoon underground. **Larval foodplants** A wide range of herbaceous plants, including docks, Dandelion, Prickly Lettuce and Primrose. **Habitat** Grassland, heathland, woodland rides and weedy places, including gardens. **Status and distribution** Resident and suspected immigrant. Common. Regarded as an immigrant in the 19th and early 20th centuries. Temporarily established along the south coast, it then spread rapidly in the 1940s and became well distributed in southern Britain north to the Midlands, including south Wales, and more recently in the east Midlands, Lincolnshire and Yorkshire. Occasional records north to Northumberland and Lancashire, and in the south of Ireland, the latter most recently in 2010 (probably an immigrant). Widespread and abundant in the Channel Islands.

Silky Wainscot

plate 53

Chilodes maritima (Tausch.)

Local 73.100 (2391)



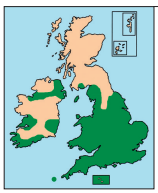
Field characters FW 13–15mm. Slender build and narrow, light greyish-straw forewing, with leading edge curved and outer edge quite angular with pointed tip, and silky white hindwing are diagnostic features. Most frequent form is rather plain, delicately streaked with grey and brown, and very finely dusted with black towards leading edge. Form *nigristriata* Stdgr. is black between veins in leading half of forewing. Form *bipunctata* Haw. has blackish oval and kidney mark, and a short, thin blackish streak at base. Form *wismariensis* Schmidt has a long, thick blackish streak from base. These strongly marked forms are regular in small numbers at some sites. **Similar species** The micro-moths *Chilo phragmitella* (Hb.) and *Calamotropha paludella* (Hb.) are superficially similar, but have very long palps. Female Brown-veined Wainscot can be somewhat similar in shape, but forewing is broader and hindwing greyish. **Flight season** One generation. Late May–early Sep. Flies weakly among reeds from dusk onwards and comes to light. **Life cycle** Overwinters as a larva. Larva Aug–Apr. Lives inside dead stems of the foodplant that have been broken or tunnelled into by other larvae. Pupation site apparently unknown, probably within broken reed stems. Possibly once reared from a cigar gall, a swollen reed shoot caused by a gall midge. **Larval foodplants** Omnivorous. Living and dead invertebrates and the inner tissues of dead Common Reed stems. In captivity, will eat animal fat. **Habitat** Reed-beds, especially drier areas where plant debris is allowed to remain. Frequently on the coast. May wander into other habitats. **Status and distribution** Resident. Local. England north to Lancashire and Northumberland, and mainly around the coast in Wales. Most widespread in southern England, East Anglia, the east Midlands, Yorkshire (where it is expanding) and Lancashire. Very local in Scotland, in Kirkcudbrightshire and around the rivers Forth and Tay. In Ireland, recorded very locally on the coast from Co. Meath to Co. Cork and inland in Cos. Kildare, Clare and Galway. Local in the Channel Islands.

Treble Lines

plate 54

Charanyca trigrammica (Hufn.)

Common 73.101 (2380)



Field characters FW 15–17mm. Quite thickset, with a fairly broad forewing. Has three fine, fairly straight, complete dark cross-lines, with a partial one at base; otherwise plain. This pattern is diagnostic. Ground colour pale (sometimes darker), rather milky greyish brown, or orange-brown. Some examples have dark shading outside central cross-line, less often extending to outer edge. The infrequent but regular f. *obscura* Tutt is dark greyish brown, with dark inner and outer cross-lines edged paler. **Flight season** One generation. May–Jun. **Life cycle** Overwinters as a small larva. Larva Jun–Apr. Feeds at night at ground level, hiding near the soil surface or in plant debris by day. Pupates underground. **Larval foodplants** A range of herbaceous plants, including knapweeds, Greater Plantain and Dandelion. **Habitat** Many open situations, including some gardens, grassland, grassy heathland, hedgerows, verges, sand-dunes, open woodland and rides. **Status and distribution** Resident. Common. Well distributed and often locally numerous in the southern half of

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

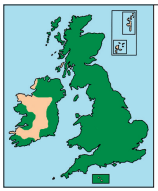
England and Wales. Locally frequent in lowlands in the north Midlands, north Wales, Yorkshire, Lancashire, southern Cumbria and Man. Rare further north, but very local in the far south-west of Scotland, in Kirkcudbrightshire. Locally frequent in various parts of Ireland and in the Channel Islands.

Brown Rustic

plate 54

Rusina ferruginea (Esp.)

Common 73.102 (2302)



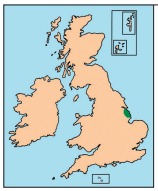
Field characters FW M 16–18mm F 14–16mm. Despite its rather drab colour and often obscure markings, not usually a difficult moth to recognise. Male has strongly feathered antennae and quite a broad brown or dark brown forewing, its outer edge roughly at right angles to trailing edge. Has five or six small whitish dots along leading edge, the largest at ends of the two irregular, fine, dark brown or blackish cross-lines. Female is smaller, with a narrower forewing and unfeathered antennae, and generally less strongly marked. **Similar species** Male is distinctive, but female can be puzzling and could be confused with dark form of Square-spot Rustic, which has a later flight period and lacks whitish spots along leading edge of forewing. **Flight season** One generation. May or Jun–Jul. Comes to light, the male frequently, and to sugar and flowers. **Life cycle** Overwinters as a larva, almost fully grown. Larva Aug–May. Feeds at night and hides in leaf litter by day. Pupates in an underground cocoon. **Larval foodplants** A wide range of herbaceous plants, including vetches, plantains, docks and bistorts. **Habitat** Most numerous in broadleaved woodland, but regular in suburban gardens and in many other open habitats, including calcareous grassland, heathland and moorland. **Status and distribution** Resident. Common. Well distributed and frequent throughout most of Britain, including the Inner Hebrides, also on Man and in much of Ireland. Widespread but infrequent in the Channel Islands.

Marsh Moth

plate 54

Athetis pallustris (Hb.)

RDB 73.103 (2392)



Field characters FW M 15–16mm F 9–11mm. Rather distinctive when seen alive. Male has a conspicuously light build and flappy flight as it arrives at light. Forewing rather elongated, in male with ground colour fawn to grey, leading edge straight and tip and outer edge rounded. Kidney mark and compressed oval small and dark. Has irregular dark inner and outer central cross-lines, and usually a rather diffuse narrow outer cross-band. Female has similar pattern, but is much smaller, with narrower, more rounded, darker brown forewing with very curved leading edge, and usually scuttles like a beetle rather than flying. **Flight season** One generation. Late May–Jun. Male comes readily to light and once recorded at sugar. Female has been reported several times flying in late afternoon in hot weather, but is otherwise rarely seen, except occasionally crawling under sheets used with light-traps, or by searching for freshly emerged individuals. **Life cycle** Overwinters as a fully grown larva on or near the ground. Larva Jun–Apr, feeding until Oct or later. **Larval foodplants** Ribwort Plantain confirmed in Lincolnshire. Apparently Meadowsweet in the East Anglian fens. Probably also other low-growing herbaceous plants. **Habitat** Fens, marshy meadows, dune slacks and mature sand-dunes, apparently preferring drier areas with more sparse vegetation. At the main Lincolnshire site, breeds in an open, herb-rich marshy meadow/dune slack on sandy soil. This is sometimes cut for hay, with average sward height of *c.* 10cm in early summer, with abundant Ribwort Plantain, just inland of sand-dunes. Since the late 1980s it has declined here, as the site has become wetter, with standing water in winter and invasion by sedges. Since 2005, found breeding in numbers in a nearby area of drier herb-rich vegetated sand-dune, not hay-cut, with sward <10cm high throughout the year, lightly cattle-grazed, and with abundant Ribwort Plantain. **Status and distribution** Resident. Red Data Book species. Currently known only from the Lincolnshire coast, where it still breeds at two sites, Saltfleetby NNR and Gibraltar Point NNR, but found consistently only at the former. Recorded in two inland sites in Lincolnshire in the 1970s, but these were recently searched without success. Found for many years at Chippenham and Wicken fens, Cambridgeshire, and Woodwalton and Holme fens, Huntingdonshire, but not seen since the 1960s. Others reported from Stoke Ferry Fen, Norfolk, in 1964 and 1966; near Norwich in 1869; on the outskirts of a wood near Carlisle, Cumbria, where two females 'were netted' on 30 May 1896 and 12 Jun 1897, and other adults shortly thereafter; near York, prior to 1855; and at Ringwood, Hampshire (a female museum specimen, taken flying by day in 1870).

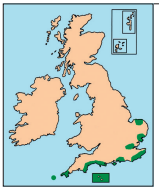
Larva of Marsh Moth.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Porter's Rustic plate 54

Athetis hospes (Freyer)

Immigrant 73.104 (2392a)

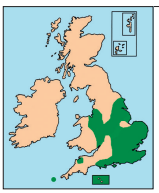


Field characters FW 11–13mm. A rather drab but unmistakable species. Forewing rather narrow and blunt-ended, dull grey-brown with indistinct markings and a shiny appearance, and a small dark kidney mark and oval. Sometimes has paler reddish-brown streaks and two very fine, dark central cross-lines. Hindwing whitish, with grey shading along leading edge. **Flight season** Two generations in southern Europe. Mar–Jun and Aug–Oct. In Britain, mainly recorded Aug–Oct. **Larval foodplants** In mainland Europe, various herbaceous plants, including plantains. The larva has not been recorded in Britain. **Status and distribution** Immigrant. Over 135 reported, the first in 1978, at Kynance Cove, Cornwall, on 26 Aug. Singles on Scilly on 14 Sep 1993, 31 Aug 1998, 5 Sep 2000 and 11 Oct 2001. Since 2003, over 130, on Scilly and on the coast of southern coastal counties from Cornwall to Suffolk. One at Chorleywood, Buckinghamshire, in 2008. Twenty-one in 2006. Highest total in 2008 (53), of which 13 were in the Dungeness, Kent, area, where local breeding was suspected. All records have been at light. Resident in southern Europe.

Bird's Wing plate 54

Dypterygia scabriuscula (L.)

Local 73.105 (2301)

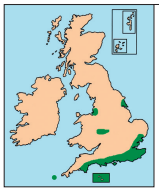


Field characters FW 16mm. Diagnostic feature of this unmistakable dark chocolate-brown moth is a conspicuous streaky, wavy-edged, pale brown patch, pinched in the middle, which cuts across trailing corner of forewing. When moth is at rest, these come together and resemble the wings of a bird. Shows very little variation. **Flight season** Mainly one generation, late May–Jul. Occasionally a small second generation in southern England, Aug–Sep. Comes to light and sugar. **Life cycle** Overwinters as a pupa underground. Larva late Jun–Aug, with an occasional second generation in Sep. **Larval foodplants** Docks, sorrels, Knotgrass and probably other herbaceous plants. **Habitat** Broadleaved woodland, parks, heathland and scrubby areas. **Status and distribution** Resident. Local. Well distributed in south-east and central southern England, East Anglia and the west Midlands. Recently expanded and now quite widespread in the east Midlands, Lincolnshire and Yorkshire. Scarce and very local in south-west England and Wales. Local in the Channel Islands.

Orache Moth plate 54

Trachea atriplicis (L.)

Immigrant; former resident, possible adventive, resident in Channel Islands 73.106 (2304)

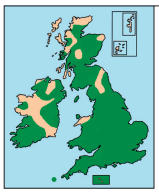


Field characters FW 20–22mm. Extensively green-marbled grey-brown forewing, with thick, oblique pinkish-white forked central streak, is diagnostic. Large oval and kidney mark partly outlined in white. Hindwing grey, darker near edges. **Flight season** One generation. Jun–early Jul. Immigrants also recorded in Aug. Attracted to sugar and light. **Life cycle** Overwinters as a pupa in a tough cocoon underground. Larva Jul–Sep. **Larval foodplants** Oraches, goosefoots, Knotgrass and other low plants. **Habitat** Fens, damp meadows and marshes. Immigrants mainly on the coast, occasionally inland. **Status and distribution** Immigrant and extinct British resident; resident in the Channel Islands. During the 19th century, resident in the fens of Huntingdonshire and Cambridgeshire, and in Norfolk, Suffolk, Essex and Hertfordshire, but last seen as a resident in 1915. Over 95 suspected immigrants recorded, the first in 1960, mainly along southern and south-eastern coasts, from Scilly to Suffolk, but also in Cheshire, Staffordshire and, in 2006, five at Bodenham, Herefordshire (possibly adventive). Highest annual total of 18 in 2010. Well distributed in the Channel Islands, having colonised in the 1980s. Found throughout most of Europe, and frequent in northern France.

Old Lady plate 54

Mormo maura (L.)

Local 73.107 (2300)



Field characters FW 30–36mm. An unmistakable large, dark brown moth with a very broad forewing. Varies little in general forewing pattern, but more so in colour and intensity of markings. Some examples are more uniformly dull brown. Form *virgata* Tutt has brighter, pale brown markings, sometimes pink-tinged, and a broad, darker central band. Undersides of fore- and hindwings have broad fawn borders, easily seen on moths at wine ropes. **Flight season** One generation. Jul–Sep. Comes to light in very small numbers (nine once recorded in one trap is exceptional), but sometimes lingers briefly around traps, without approaching closely. Comes to sugar in much greater numbers, and also to aphid honeydew and sap oozing from damaged trees. Can be found roosting in outbuildings, birds' nests or other suitable shelters by day. **Life cycle** Overwinters as a small larva, low down in the vegetation. Larva Sep–May. Feeds at night and hides in leaf litter or in

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

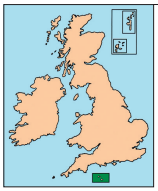
the ground by day. Pupates in a cocoon, which has been found behind bark, among Ivy, in crevices in walls and in loose earth. **Larval foodplants** In autumn, on herbaceous plants, including chickweeds and docks. In spring, usually on woody plants, including Ivy, Hawthorn, birches and spindles, but has also been found on Water Dock in the drier part of a reed-bed. **Habitat** Riverbanks, marshes, gardens, hedgerows, scrub and woodland. **Status and distribution** Resident. Local. Well distributed throughout most of England and Wales, and in the Channel Islands. Found on Man. Fairly widespread in Scotland, but not frequent. Widespread but local and infrequent in Ireland.

Guernsey Underwing

plate 54

Polyphaenis sericata (Esp.)

Resident on Channel Islands 73.108 (2302a)



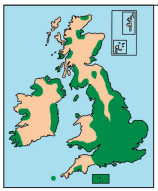
Field characters FW 17–20mm. Combination of greenish forewing and orange hindwing with broad, dark brown borders is diagnostic. Extent of whitish cross-lines and black markings on forewing varies. **Flight season** One generation. Mid-Jun–mid-Aug. **Life cycle** Overwinters as a larva, hatching in autumn and pupating about May. **Larval foodplants** Honeysuckle; also reported from oaks. **Habitat** Sheltered coastal valleys. In mainland Europe, in open scrubby areas. **Status and distribution** Locally frequent in the Channel Islands. Recorded from Guernsey in the 1870s, then not until 1986. First recorded on Jersey in 1989. In Europe, mainly southern.

Straw Underwing

plate 54

Thalpophila matura (Hufn.)

Common 73.109 (2303)



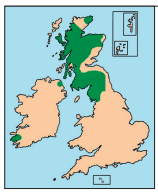
Field characters FW 17–20mm. Pale straw-yellow hindwing with brown border, together with broad, dark forewing, white outer cross-line and thickset build, are diagnostic. Forewing greyish brown, brown or dark brown, sometimes marked with reddish brown or dusted with white. General pattern varies in detail; sometimes a solid blackish bar joins central cross-lines. In north-east England, often dull and obscurely marked, and hindwing is dusted blackish. In western Ireland, forewing is more brightly marked, particularly with reddish brown. In the rare f. *trescoensis* Rich., known only from Scilly, kidney mark and outer cross-line are straw yellow. **Similar species** Hedge Rustic is superficially similar when at rest, but hindwing whitish or grey, not straw-coloured. **Flight season** One generation. Late Jul–Aug. Comes to light, sugar and flowers, including Common Ragwort and Marram. **Life cycle** Overwinters as a small larva. Larva Sep–early May. Feeds through winter at night, hiding low down by day. Pupates in an underground chamber. **Larval foodplants** Grasses, including Annual Meadow-grass, Mat-grass and Silver Hair-grass. **Habitat** Gardens, parks and most open habitats, including calcareous grassland, moorland and sand-dunes; also woodland rides and glades. **Status and distribution** Resident. Common. Well distributed in most of southern mainland Britain north to Lincolnshire, the Midlands, Lancashire and parts of Yorkshire, but very local in south-west England and much of Wales. Local and mainly coastal further north, including Man, most of mainland Scotland, the Inner Hebrides and in Ireland. Widespread and frequent in the Channel Islands.

Saxon

plate 54

Hyppa rectilinea (Esp.)

Nb 73.110 (2320)



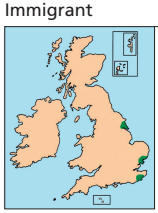
Field characters FW 16–19mm. Distinctive and rather invariable. Forewing grey, marbled with brown, especially in central band. Has one or two thick black bars at base, with pale area in leading half, sometimes also in trailing half. Cross-line before middle is very jagged in trailing half, and when moth is at rest, the two form a 'W'. Oval is small and compressed. Striking black central bar is also a consistent feature. **Flight season** One generation. Late May–Jun. Sometimes found at rest on tree trunks and posts, reportedly visits Raspberry flowers regularly, and comes readily to sugar and light, sometimes in numbers. **Life cycle** Overwinters as a larva. Hatches in Jul and feeds until Oct, then forms a silk-lined chamber just below ground, in which it pupates in spring. **Larval foodplants** A range of woody plants, including sallows, Bramble, Raspberry, Bearberry, Bilberry and Cowberry. **Habitat** Moorland, upland marshes, open woodland and recently established plantations. **Status and distribution** Resident. Nationally Scarce B. Widespread in Scotland, particularly in the Highlands, including the Inner Hebrides, and in the Southern Uplands. Local in northern England south to Cumbria and Co. Durham. Recorded from Yorkshire in the 19th century. Rare in Ireland, found very locally at Killarney, Co. Kerry, and one at Glenarriff, Co. Antrim, in 2012.

Purple Cloud

plate 54

Actinotia polyodon (Cl.)

Immigrant 73.111 (2097)



Field characters FW 13–15mm. Striking forewing markings, with purplish-pink stripe along leading edge, absence of cross-lines and brown ground colour are diagnostic. Conspicuous features are large ear-shaped kidney mark, two pale streaks and long,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

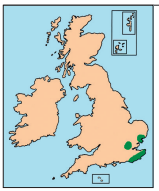
thin black streak at base, and pale area with zigzag edges near wing tip. Tip slightly hooked and outer edge with slight central bulge. Thorax with pinkish on crests. **Similar species** Latin is superficially similar, but has pink cross-bands and pale cross-lines, and very hairy legs. **Flight season** One generation in northern Europe, May–Jun, with a second generation in Aug further south. Comes to light and sugar. In mainland Europe, often seen visiting flowers. British records have been in May–Jun, and Aug. **Life cycle** Overwinters as a pupa underground. Larva Jun–Aug in northern Europe. No evidence of breeding in the British Isles. **Larval foodplants** The flowers, seeds and leaves of St John's-worts. **Habitat** In mainland Europe, a variety of open habitats, including open areas in woodland. **Status and distribution** Immigrant. Recorded about 26 times in the British Isles, the first at Great Yarmouth, Norfolk, in Jun 1839. Most from southern coastal counties from Hampshire to Kent, and in East Anglia, the majority at coastal sites. Recorded six times during the 1990s, all at light. Recent records include one in East Kent in 2002; two in Suffolk in 2008, one at Landguard Point and one at Westleton; one at Spurn, Yorkshire, in 2009; and one at Greatstone, Kent, in 2011. Found throughout most of southern and central Europe, including France and Belgium.

Pale-shouldered Cloud

plate 54

Chloantha hyperici ([D. & S.])

Immigrant 73.112 (2097a)



Field characters FW 12–16mm. Quite distinctive. Forewing marbled whitish, cold grey and blackish, with faint brown blotches, especially just beyond kidney mark, with long, thick, black basal streak and a large whitish patch in leading half of basal area. Shows little variation. **Flight season** Two generations in northern Europe, May–Jun and Aug. Three generations in the Mediterranean, Apr–Oct. Comes to light. **Life cycle** Overwinters as a pupa underground. Larva unrecorded in Britain. **Larval foodplants** Perforate St John's-wort and other St John's-worts. **Habitat** A variety of open habitats. **Status and distribution** Immigrant. Thirteen records, all at light, the first in 1996, one at Dungeness, Kent, on 20 Aug. Two at Landguard Point, near Felixstowe, Suffolk, in 2003, one on 6 May and one on 3 Jun. Two more at Landguard Point in 2004, on 20 and 26 Jul, suggesting possible temporary establishment. Two in 2007, one at Wembley, Middlesex, on 22 May, and one at Folkestone, Kent, on 14 Jul. Six more recently, including singles in Kent in 2011 and 2013 and three in 2015, and one in East Sussex in 2012. Widespread in Europe from France eastwards. Has expanded north-west in Europe (found breeding in Belgium during the 1990s following the first record there in 1987) and is a potential future colonist. The bluish-grey ssp. *svendseri* Fibiger occurs in parts of Scandinavia.

Angle Shades

plate 54

Phlogophora meticulosa (L.)

Common; immigrant 73.113 (2306)

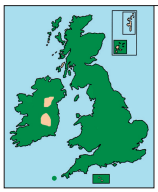
Field characters FW 21–25mm. Unmistakable. Rests like Small Angle Shades, but with deeper creases and folds. When fresh, most examples are olive green and pinkish brown, but these colours are inclined to fade. Pattern is very constant, but pale straw area beyond central band is variable in extent. In the uncommon f. *suffusa* Warr., the olive green is replaced by reddish brown and central cross-band is rusty brown or reddish. **Flight season** Recorded year-round, but mainly Apr–early Jul and late Jul–Nov, probably in two generations, the second larger and bolstered by immigrants. Comes to light, and feeds at sugar and flowers, including those of Common Reed and other grasses. Frequently seen by day, resting openly on walls, fences or vegetation. **Life cycle** Overwinters as a larva, feeding in mild weather. Larva year-round. Usually pupates in a cocoon just under the soil, but will use soft mortar in a wall if no suitable ground is readily available. **Larval foodplants** A wide range of wild and cultivated herbaceous and woody plants, including Common Nettle, Hop, Red Valerian, Broad-leaved Dock, Bramble, Hazel, birches and oaks. Very frequent on Barberry. **Habitat** Ubiquitous. Frequent in gardens, hedgerows, fens and woodland. **Status and distribution** Resident and immigrant. Common. Well distributed and frequent and found throughout the British Isles, but probably only immigrant in the Northern Isles and other parts of northern Scotland.

Small Angle Shades

plate 54

Euplexia lucipara (L.)

Common 73.114 (2305)



Field characters FW 14–17mm. Unmistakable. Shares an unusual resting posture with Angle Shades. When fully at rest, sits with forewings creased and held horizontally about 5mm from the surface, with leading edge folded under and front end pointing slightly downwards. In this position it closely resembles a dead leaf. Most conspicuous feature is golden-yellow kidney mark. Forewing varies little in pattern; area beyond dark central band is either pale brown or pinkish brown, except for an area beyond kidney mark, which is usually distinctly golden. On some examples, basal area is also pinkish. **Flight season** One generation, mid-May–Jul. Sometimes, very small numbers in the autumn, suggesting a partial second generation. Comes to light, sugar, honeydew and flowers. Usually rests under cover by day, but occasionally exposed, although highly cryptic. **Life cycle** Overwinters as a pupa

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

underground. Larva Jul–Sep, occasionally later. Feeds at night, resting by day under a leaf of the foodplant or in plant debris. **Larval foodplants** A wide range of herbaceous and woody plants, but particularly frequent on Bracken, Male-fern and other ferns. Also reported on Ivy buds, Foxglove, willowherbs, nettles, mallows, currants, birches, sallows and oaks. **Habitat** Gardens, parks, woodland, heathland and moorland. **Status and distribution** Resident. Common. Well distributed and fairly frequent, and found throughout most of the British Isles, except Shetland.

Berber

plate 54

Pseudenargia ulicis (Stdgr.)

Suspected immigrant 73.115 (2307)

Field characters and similar species FW 17–19mm. Quite distinctive. Forewing rather plain, light brown, reddish brown or olive brown. Cross-lines pale, strongly converging at trailing edge, kidney mark dark and rather narrow, and oval small. Pale Stigma and Dun-bar have convergent cross-lines, but the former is larger with a large, pale kidney mark, and the latter is smaller with a dark spot in pale kidney mark. Both have a more rounded forewing. **Flight season** In mainland Europe, Aug–Oct. **Larval foodplants** Gorse. **Habitat** Steppe and semi-desert. **Status and distribution** Suspected immigrant. One record, one at sugar near Brockenhurst, Hampshire, on 16 Aug 1935. In Europe, found only in Spain, Portugal and the extreme south-west of France. Also found on the Mediterranean coast of Africa.

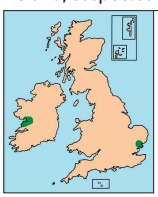
Burren Green

plate 54

Calamia tridens (Hufn.)

ssp. *occidentalis* Cock.

Ireland; suspected immigrant 73.116 (2366)



Field characters FW 17–18mm. The uniformly green thorax and forewing, with white oval and kidney mark, are diagnostic. Hindwing whitish, with grey dusting. **Flight season** One generation. Mid-Jul–Aug. Freshly emerged adults can be found at rest on grass stems, drying their wings, from an hour after dark. Flies from dusk and comes to light. **Life cycle** Overwinters as an egg. Larva Apr–late Jun. Pupates among the roots of the foodplant. **Larval foodplants** Has been found on Blue Moor-grass in the Burren. Accepts the stems and roots of this and other grasses in captivity. **Habitat** Open grassland and sheltered fissures in the limestone formations of the Burren. **Status and distribution** Resident. In the British Isles, as a resident known only from the Burren area, Co. Clare and Co. Galway, where it was first discovered in 1949 and is widespread and fairly frequent, and best known from central areas and north to the coast. A single, most likely immigrant, example was recorded at light at Frinton-on-Sea, Essex, on 25 Jul 2014, during a period when several unusual immigrant moths of north European origin were caught in East Anglia. The species is widespread in Europe.

Cameo

plate 54

Crypsedra gemmea (Treit.)

Suspected immigrant 73.117 (2252a)

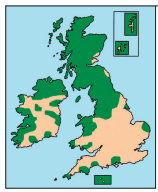
Field characters FW 17–20mm. Forewing olive brown with a greenish component, strongly variegated with white, showing little variation. Oval and kidney mark large and white, with dark lines within, and a hoof-shaped, dark-edged whitish mark adjoining outer edge of thick white inner central cross-line. **Similar species** White Spot is smaller, lacks greenish tint, has a white central block, the inner central cross-line fine, and lacks a hoof mark. **Flight season** One generation. In mainland Europe, Jul–Sep. **Life cycle** Overwinters as an egg. Larva Apr–Jun in mainland Europe. **Larval foodplants** Tufted Hair-grass, Timothy and probably other grasses. **Habitat** Various open grassy situations. **Status and distribution** Suspected immigrant. Recorded only once in the British Isles, at light in a garden at Cockpole Green, Berkshire, on 1 Sep 1979, at a time of much immigration activity. Widely distributed in central and northern Europe northwards to Finland, including northern France, and extending its range, but not a noted long-distance migrant.

Haworth's Minor

plate 54

Celaena haworthii (Curt.)

Local 73.118 (2367)



Field characters FW 10–14mm. Fairly unmistakable. Forewing blunt, rather square-ended, reddish brown (sometimes pinkish) or dark purplish brown. Kidney mark whitish and conspicuous, with two whitish streaks extending towards outer edge, and sometimes towards base. This combination is diagnostic. Worn examples may appear greyish. Individuals from southern England are, on average, larger, and those from the Norfolk Broads are more brightly marked. **Similar species** Crescent (especially f. *fibrosa*) has pale streaks extending from kidney mark, but is usually larger, with a more pointed forewing, has a clear-cut, pale outer cross-band and rarely flies by day. **Flight season** One generation. Aug–Sep. Comes to light, sugar and flowers such as ragworts. Male also flies on sunny afternoons, and again just before dusk. **Life cycle** Overwinters as an egg. Larva Apr–Jul. Feeds inside stems, changing to new ones as it grows. Pupates in a cocoon formed close to the ground. **Larval foodplants** Common Cottongrass. In some southern localities where this plant is absent, probably rushes and club-rushes, which are recorded foodplants abroad. **Habitat** Boggy acid moorland, fens and marshes.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Status and distribution Resident. Local. Very local in the East Anglian fens, Hampshire (Itchen and Test valleys), south-west England, south Wales, most of the Midlands and eastern England. Fairly well distributed in north Wales, the north Midlands, northern England and Man. Well distributed throughout Scotland. Widespread and locally frequent in Ireland. In the Channel Islands, recorded on Jersey and Guernsey.

Crescent

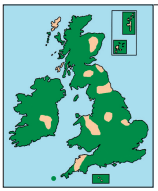
plate 54

Helotropha leucostigma leucostigma (Hb.)

Local; immigrant 73.119 (2368)

ssp. *scotica* (Cock.)

Local



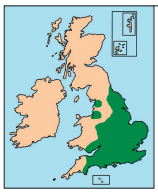
Field characters FW 14–17mm. In ssp. *leucostigma*, forewing dark chocolate brown or reddish brown and somewhat pointed. Kidney mark rather narrow and crescent-like, chalky white or pale buff. There are two forms, with intermediates. One is quite plain, apart from the kidney mark and a wavy blackish band along outer edge. Form *fibrosa* Hb. has a pale brown diagonal outer band with a straight inner edge, and kidney mark has one or more fine whitish lines extending from it along the veins. Ssp. *scotica* is smaller and darker than ssp. *leucostigma*, and is more brightly marked. Irish individuals are also dark, but are as large as those from southern Britain. **Similar species** Ear moths (see under Large Ear) have several fine, dark, wavy cross-lines. See also Haworth's Minor, Common Rustic and Lesser Common Rustic. **Flight season** One generation. Late Jul–Sep. Comes to light, sometimes in fair numbers, and to sugar and flowers, including those of Common Reed and rushes. **Life cycle** Overwinters as an egg. Larva Mar–Jul. Feeds inside leaves, stems and roots of the foodplant. Pupates in a flimsy cocoon in leaf litter. **Larval foodplants** Yellow Iris and Great Fen-sedge. Ssp. *scotica* has been observed laying eggs on Purple Moor-grass. **Habitat** Fens, reed-beds, marshy ground, carr and boggy moorland. **Status and distribution** Resident and occasional immigrant. Local. Ssp. *leucostigma* occurs in suitable habitat throughout England, Wales, Man, southern Scotland and Ireland. Local in the Channel Islands. Ssp. *scotica* is widespread in the northern half of mainland Scotland and the Hebrides. Both subspecies are recorded as immigrants to the Northern Isles (and probably in eastern Scotland). Exceptionally, over 350 were recorded in Shetland in 1996, a year in which an immigration of moths of unprecedented size and variety occurred to the islands, from mainland Europe.

Dusky Sallow

plate 55

Eremobia ochroleuca ([D. & S.])

Common 73.120 (2352)



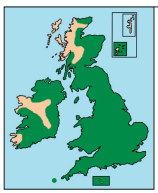
Field characters FW 14–16mm. Pretty unmistakable. Forewing variegated tawny or olive brown and straw, with a broad, whitish-edged dark central band, pinched or broken in the middle. Oval and kidney mark inconspicuous. Fringes chequered. Hindwing grey with a darker outer band. **Similar species** Viper's Bugloss is superficially similar, but with prominent oval and kidney mark. **Flight season** One generation. Jul–Aug. Comes to light, sugar and flowers. Often seen by day at rest on flowers, especially of knapweeds, sometimes actively feeding in hot weather. **Life cycle** Overwinters as an egg. Larva late Apr–early Jul. Active by day and night. Pupates underground in a cocoon. **Larval foodplants** The flowers and seeds of tall grasses, including Cock's-foot, False Oat-grass, Common Couch and sometimes cereal crops. **Habitat** Grassland and grassy places, especially but not exclusively on calcareous soils or shingle. Colonises woodland rides, roads and embankments. **Status and distribution** Resident. Common. Well distributed in central southern England, the south and east Midlands, south-east England, East Anglia and eastern England north to Yorkshire (the latter since the 1970s). Very local in south-west England (Devon), south Wales and the north-west Midlands, north to Lancashire. Recorded once from Jersey, in 1998, and once from Man, in 1996.

Frosted Orange

plate 55

Gortyna flavago ([D. & S.])

Common 73.121 (2364)



Field characters FW 16–19mm. The wide, striking golden-yellow central cross-band and yellow oval, kidney mark and tooth mark on broad, sharp-tipped greyish-brown forewing are diagnostic. Also has a golden band along outer edge, often rather faint except at wing tip, and a golden blotch at base. Variation is slight. **Similar species** See Fisher's Estuarine Moth. **Flight season** One generation. Late Aug–Oct. Comes to light, usually in small numbers, and rests on the foodplants at night. **Life cycle** Overwinters as an egg. Larva Apr–Aug. Feeds inside the lower part of a stem, where it also pupates, head upwards. **Larval foodplants** Robust herbaceous plants, particularly thistles, burdocks and Foxglove. Other recorded hosts include ragworts, Hemp-agrimony, mulleins and figworts. **Habitat** Rough grassland, woodland rides and edges, disturbed weedy places, ditch-banks, fens, marshes and some gardens. **Status and**

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

distribution Resident. Common. Well distributed throughout England, Wales and Man. Also in most of mainland Scotland (where it is expanding) and some of the Hebrides, but absent from most of the western Highlands. Widespread in most of Ireland and in the Channel Islands.

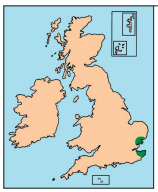
Fisher's Estuarine Moth

plate 55

Gortyna borelii (Pier.)

ssp. *lunata* Freyer

RDB (protected species) 73.122 (2365)



Field characters and similar species FW 21–24mm. Superficially like Frosted Orange, but noticeably larger. Oval, kidney mark and central tooth mark whitish (yellow in Frosted Orange), and golden central area with a strong, finely scalloped cross-line near its outer edge (weak in Frosted Orange). **Flight season** One generation. Early Sep–late Oct. Male sometimes seen from dusk, perching on stems before taking flight just before midnight. Female can be found resting or crawling about while egg-laying throughout the night. Does not appear to visit flowers or sugar, but both sexes come to light in small numbers. **Life cycle** Overwinters as an egg, usually between a stem and leaf-sheath of Sea Couch, False Oat-grass or other grasses near the foodplant rather than on it. Larva early May–late Aug. Feeds within stems and roots before pupating in a tunnel open to the earth. **Larval foodplants** Hog's Fennel. **Habitat** In Essex, on marshy open ground, fields and dyke-banks that are so low-lying they are in danger of being inundated by sea water if sea walls are breached. (Salt-water inundation can kill Hog's Fennel.) In Kent, on a steep grassy slope near shingle without any likelihood of inundation. The moth and its larvae are most numerous in the less dense stands of foodplant growing among tall grasses. **Status and distribution** Resident. Red Data Book species. First recognised in Britain in 1968, although the *Victoria County History for Essex* (Harwood 1903) refers to a large pale form of the Frosted Orange, which might have been this species. Thought to be confined to several places in the Walton-on-the-Naze Backwaters area of Hamford Water, North Essex, until 2001, when a second resident British population was confirmed, in Kent, where two additional sites are now known within 10km. A singleton, presumed vagrant, was taken at Dovercourt, on the Essex coast, in 1996. **Conservation** Efforts are underway to establish populations safer from inundation, near existing sites.

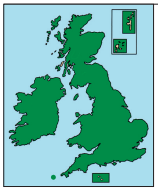
Larva of Fisher's Estuarine Moth.

Rosy Rustic

plate 55

Hydraecia micacea (Esp.)

Common 73.123 (2361)



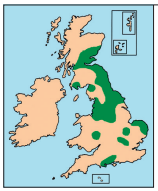
Field characters FW 14–21mm. Fairly unmistakable, but varies considerably in size, with some females particularly large and dark, especially in northern Britain. Quite pointed forewing usually pinkish brown, smooth and rather velvety in appearance when fresh, and generally darker between central cross-lines, the outer of which is oblique, gently curved or straight, then sharply bent just before leading edge. Ground colour pale to dark pinkish brown, purplish brown or, rarely, dull brown. Intensity of pink flush varies from quite bright, especially in pale moths, to dull and very faint in dark examples. **Similar species** See Butterbur. **Flight season** One generation. Aug–Oct, occasionally late Jul or Nov. Comes regularly to light, occasionally to sugar and flowers. **Life cycle** Overwinters as an egg. Larva late Apr–early Aug. Feeds at first in the stem of the foodplant and then later into the roots. Pupates underground, without a cocoon. **Larval foodplants** A range of low-growing plants, including Broad-leaved Dock, Ribwort Plantain, Field Woundwort, sea-lavenders, Potato, Garden Strawberry, Hop, Lesser Burdock, and reportedly horsetails and Yellow Iris. **Habitat** A wide range, including gardens, disturbed weedy places, hedgerow bases, pasture, fens, marshes and woodland rides. **Status and distribution** Resident. Common. Well distributed throughout the British Isles.

Butterbur

plate 55

Hydraecia petasitis Doubl.

Local 73.124 (2362)



Field characters and similar species FW 19–23mm. Somewhat similar to Rosy Rustic, but with a broader brown (not strongly pinkish) forewing, and normally substantially larger, up to almost twice the size. Also, outermost cross-line is more jagged, usually forming a distinct but shallow 'W' in centre, and leading edge is usually more curved. **Flight season** One generation. Aug–early Sep. Most easily found by searching patches of Butterbur soon

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

after dark with a bright light, when it can be seen flying over the plants and settling on, or disappearing under, the large leaves. Also comes to light-traps placed in or very close to stands of the foodplant. Seldom caught far from the foodplant. **Life cycle** Overwinters as an egg on the remains of the foodplant. Larva Apr–mid-Jul. Mines the stem and then the roots of the foodplant, pupating in the earth among the roots, or in a chamber in a root open to the surrounding soil. **Larval foodplants** Butterbur. **Habitat** Riverbanks, ditches, roadsides, damp fields and marshes, occurring both where the foodplant grows in the open and under trees. **Status and distribution** Resident. Local. Found mainly from the Wirral and the Humber northwards through northern England to the southern half of Scotland, then north to Perthshire and Kincardineshire, but also very locally in river valleys and floodplains in central southern England from Dorset and Hampshire north to Northamptonshire, Nottinghamshire, Hertfordshire and East Anglia, with a thin scattering of older records from the west Midlands. There are pre-1980 records from the Thames Valley/London area and elsewhere in south-east England, where it could still persist, and very old records from south Wales. Recorded on Man but not since the 19th century, when pupae were found.

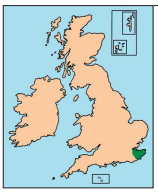
Marsh Mallow Moth

plate 55

Hydraecia osseola Stdgr.

ssp. *hucherardi* Mab.

RDB 73.125 (2363)



Field characters FW 18–20mm. Unmistakable. Broad, quite pointed, often slightly hooked straw-coloured forewing usually has a darker reddish-brown kidney mark and outer cross-band, but these may be faint. Hindwing off-white. **Flight season** One generation. Late Aug–early Oct, but peaking late Aug–early Sep. Flies from dusk, mainly low down around the foodplant. Mating pairs can be found at rest near the ground soon after dusk. Comes just after dark to light-traps placed by or in stands of the foodplant, and only occasionally wanders greater distances. **Life cycle** Overwinters as an egg on the foodplant or adjacent litter. Larva May–late Jul. Feeds in the stems and roots. Pupates underground, attached to a root. **Larval foodplants** Marsh-mallow. **Habitat** Both foodplant and moth favour open, damp, low-lying saline places near the sea, the banks of brackish rivers, and ditch-banks and marshy places in the associated grazing levels. **Status and distribution** Resident. Red Data Book species. First discovered in Britain in 1951. Only two breeding areas are known: Romney Marsh, Kent, extending to Rye, East Sussex; and the banks of the River Medway between Maidstone and Rochester, Kent. The two populations are about 40km apart. Stands of the foodplant at Minsmere, Suffolk, and on the Gower Peninsula, Glamorgan, have been investigated without success.

Ear moths

The four species of ear moth are very similar in appearance and range of variation, and where all four occur together they are reliably distinguishable only by examination of genitalia. They have a sharp-tipped or slightly hooked forewing, with a usually conspicuous white or orange kidney mark. They also have up to six fine, wavy dark cross-lines of varying intensity, which distinguish them from Crescent. See also Common Rustic. Within the group, Large Ear and Saltern Ear both tend to be larger than Ear Moth and Crinan Ear. The genitalia of male Large Ear and Saltern Ear are extremely similar, and where they occur together, such as in western Scotland and Ireland, a proportion of moths have intermediate genitalia, possibly indicating hybridisation. Here, it is necessary to examine a number of individuals to establish the nature of the resident population.

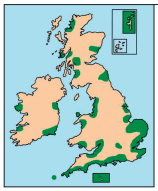
Saltern Ear

plate 55

Amphipoea fucosa (Freyer)

ssp. *paludis* (Tutt)

Local 73.126 (2358)



Field characters and similar species FW 14–16mm. Often the most abundant species of ear moth in coastal districts of southern Britain, although Ear Moth may also be present in numbers. Typical examples can be distinguished from Ear Moth by compressed crescent-like kidney mark and normally longer, narrower forewing, which is olive brown, pale brown or, less commonly, pale reddish brown. However, variation is considerable and many moths are indistinguishable. The possibility of vagrant or even immigrant Large Ear or Crinan Ear in southern Britain should not be discounted. See Large Ear for differences in the male genitalia. **Flight season** One generation. Aug–Sep. Comes to light, sugar and flowers. **Life cycle** Overwinters as an egg. Larva May–Jul. Pupates underground. Rarely seen in the wild. **Larval foodplants** In captivity, the stems and roots of grasses. **Habitat** Saltmarshes, sand-dunes and wet moorland. **Status and distribution** Resident. Local. In suitable habitat around the coasts of England and Wales, from the Humber to Morecambe Bay. Vagrants (or possibly immigrants) from the strong populations of the lower Thames marshes are fairly regular in the London area and occasional further west in the Thames Valley, to Oxfordshire, and also occur elsewhere inland, for example in East Anglia. Also recorded from Northumberland and found at a few, widely scattered sites in various parts of Scotland. Immigrant in Shetland. Very local and scattered in Ireland. Recorded widely in the Channel Islands.

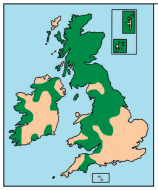
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Large Ear

plate 55

Amphipoea lucens (Freyer)

Local 73.127 (2357)



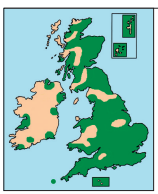
Field characters and similar species FW 14–17mm. Generally the largest species in the group and often richly coloured and marked, but very variable. No underside characters have been found that are completely reliable for distinguishing the four species, but individuals with strong bands on underside of fore- and hindwings are likely to be Large Ear. **Male genitalia** In Large Ear and Saltern Ear, clasper has two arms, one much longer than the other. In Large Ear, both arms are longer, the longer one curved at end. However, it is advisable to carry out a full dissection and make a slide preparation to see these and other differences (under a low-power binocular microscope), rather than viewing the extruded valvae *in situ*. Full dissection is necessary to distinguish the females of all four species (see Townsend *et al.* 2010 and the website mothdissection.co.uk for further details). **Flight season** One generation. Aug–Sep. Comes to light and flowers, notably of Heather and rushes. **Life cycle** Overwinters as an egg. Larva May–Jul. Feeds at first inside lower stems, and later among roots. Pupates on the ground in leaf litter. **Larval foodplants** Purple Moor-grass and Common Cottongrass. **Habitat** Wet acid moorland, marshes and rough pasture. **Status and distribution** Resident. Local. Often abundant where resident. South-west England, Wales, the north Midlands, northern England, Man, mainland Scotland, the Hebrides and Orkney. Immigrant in Shetland. Widespread in Ireland, but mainly in the west and north. Singletons recorded from Jersey in 1986 and Alderney in 1961.

Ear Moth

plate 55

Amphipoea oculea (L.)

Common 73.128 (2360)



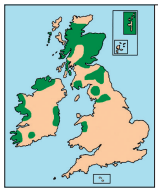
Field characters FW 12–15mm. Forewing quite broad, usually slightly pointed (as it often is in Saltern Ear) and with outer margin slightly concave below tip. Ground colour reddish olive brown, olive brown or dark olive brown. Kidney mark conspicuous, rounded, and white or orange. **Male genitalia** The clasper has two arms of roughly equal length. This is easily seen on the extruded valvae *in situ*. **Similar species** See Crinan Ear, Saltern Ear and Large Ear. Ear Moth is the most likely species inland in southern Britain. **Flight season** One generation. Late Jul–Sep. Comes to light, sugar and flowers, the latter sometimes by day. **Life cycle** Overwinters as an egg. Larva Apr–Jun. Rarely encountered in the wild. Pupates in an underground cell. **Larval foodplants** The insides of the lower stems and roots of grasses, including Annual Meadow-grass and Tufted Hair-grass; also Butterbur. **Habitat** Less restricted to damp habitats than the other ear moths. Sometimes recorded in gardens, but more frequently in unimproved grassland, woodland rides, marshes, moorland and saltmarshes. **Status and distribution** Resident. Common. In suitable habitat, sometimes at low density throughout much of Britain, Man and Ireland. Recorded from Orkney and vagrant in Shetland. Recorded widely in the Channel Islands.

Crinan Ear

plate 55

Amphipoea crinanensis (Burr.)

Local 73.129 (2359)



Field characters and similar species FW 13–15mm. Virtually indistinguishable from Ear Moth in shape and markings, but on average slightly larger and usually with an orange kidney mark and oval. Genitalia are distinct, and should always be checked. An unlikely species in southern and eastern Britain. See also Large Ear and Saltern Ear. **Male genitalia** The clasper is a serrated dome-like structure, with no arms, easily seen on the extruded valvae *in situ*. **Flight season** One generation. Aug–Sep. Comes to light, and to flowers, including those of ragworts and Heather, sometimes by day. **Life cycle** Overwinters as an egg. Larva May–Jul. Pupation site not known, but probably as for Large Ear. **Larval foodplants** Apparently unknown in the wild, but has been reared in captivity on Yellow Iris. **Habitat** Moorland, agriculturally unimproved damp pasture, coastal grassland, vegetated sand-dunes and dune-slacks. **Status and distribution** Resident. Local. Widespread in the west of Ireland (but very local elsewhere), mainland Scotland, the Inner Hebrides, the uplands of northern England, (also Lindisfarne) and in Wales. Vagrant in Shetland.

Dumeril's Rustic

plate 55

Luperina dumerilii (Dup.)

Immigrant 73.130 (2355)

Field characters and similar species FW 11–16mm. Very variable. Forewing yellowish or straw-coloured, or darker brown with a broad, plain pale outer band, or more uniform brown, grey-brown or dark grey-brown. Quite distinct from Flounced Rustic and Sandhill Rustic, with more angular forewing, small and obliquely elongated (usually pale) oval, and outer central cross-band generally more oblique in trailing half. Often has a dark central bar, and central veins often pale. Another form is plainer, without sharp contrast but with pale veins. Some forms could possibly be mistaken for Beautiful Gothic, which has a larger, rounded oval, a thin

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

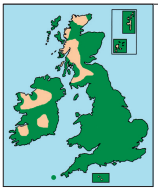
whitish band near outer edge of forewing and feathered antennae in male. **Flight season** One generation. The majority of British records have been at light in Sep, but has occurred in Aug. **Life cycle** In mainland Europe overwinters as a larva, feeding from autumn to spring. Immature stages unknown in Britain. **Larval foodplants** Roots of grasses. **Habitat** In mainland Europe, dry grassland. **Status and distribution** Immigrant. There have been 35 records, 23 since 1900, the most recent in Britain at Peacehaven, East Sussex, in 1997. Peak years were 1859 (six individuals) and 1961 (four). Recorded at various places along the south coast of England, from Cornwall to Kent, including the Isle of Wight, and twice inland, in Hertfordshire. Recorded on Jersey in 1997, and Guernsey in 1999 and 2011. In Europe, mainly Mediterranean and in the south-east.

Flounced Rustic

plate 55

Luperina testacea ([D. & S.])

Common 73.131 (2353)



Field characters FW 14–18mm. Rather thickset and variable in size and forewing breadth. Forewing usually coarsely marked but very variable in colour – dull straw, light or dark brown, often dusted with grey, or blackish brown. Sometimes a solid dark bar joins central cross-lines. Oval variable in size and shape, but usually quite large. Other markings vary in detail and intensity, but basic pattern is the same. Hindwing white or brownish white, occasionally grey. **Similar species** Sandhill Rustic is coastal, has a smaller oval and kidney mark is edged with white. Hindwing is generally pure silky white, rarely brownish at edges, except in ssp. *demuthi*. See also the rare immigrant Dumeril's Rustic. **Flight season** One generation. Aug–Sep. Comes to light, often in numbers, and rests on grasses at night, but does not feed. **Life cycle** Overwinters as a larva. Larva Sep–Jun. Lives in the soil among the roots of the foodplant, where it also pupates. **Larval foodplants** The roots and stem bases of grasses, including Common Couch, fescues and sometimes cereal crops. **Habitat** A wide range of grassy places, including arable fields and woodland rides, but most abundant on light calcareous soils, including coastal sand-dunes and cliffs. **Status and distribution** Resident. Common. Well distributed and often abundant throughout England, Wales, Man, Ireland and the Channel Islands. Widespread in southern, central and eastern Scotland, including Orkney, but much scarcer and local in the western Highlands. Vagrant on Shetland.

Larva of Flounced Rustic.

Sandhill Rustic

plate 55

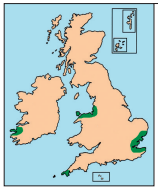
Luperina nickerlii (Freyer) 73.132 (2354)

ssp. *demuthi* Goater & Skinner
Na

ssp. *leechi* Goater
RDB

ssp. *gueneei* Doubl.
RDB

ssp. *knilli* Bours.
Ireland



Field characters FW 15–18mm. Similar to Flounced Rustic, but in all four subspecies oval is usually very small, and round or flattened, and may be hard to see, kidney mark is usually outlined with white, forewing is smoother-looking and hindwing is pure silky white. Ssp. *leechi* has a consistently silvery-white forewing with a darker grey-brown central band and other brown markings. Forewing ground colour in ssp. *knilli* is almost uniformly brown or dark brown. Forewing of ssp. *gueneei* is quite variable, finely marked with shades of light brown and light grey. Ssp. *demuthi* is the most variable, its forewing ranging from predominantly straw-coloured to sandy red or dark brown, and hindwing may have brownish edges. **Similar species** Flounced Rustic has a larger oval, kidney is not marked with white, and forewing has a rougher appearance. Hindwing dirtier brownish white, notably darker at edge. See also Dumeril's Rustic. **Flight season** One generation. Late Jul–late Sep, but peak numbers late Aug, especially for ssp. *leechi*. Male in particular comes readily to light, especially after dark, while female can be found after dark at rest on stems of the foodplant. **Life cycle** Overwinters as a part-grown larva within the foodplant. Larva Sep–early Jul. Pupates in a flimsy cocoon in tussocks of the foodplant or loose in sand. **Larval foodplants** Sand Couch in north Wales and Cornwall; Common Saltmarsh-grass, Borrer's Saltmarsh-grass, Bulbous Meadow-grass and other saltmarsh-grasses in Essex and Kent; and probably Sand Couch or Red Fescue in Ireland. **Habitat** Restricted to coastal situations and can survive salt-water inundation or spray. Predominantly sandy beaches in north Wales and north-west England, a sparsely vegetated sand-bar in Cornwall, the drier parts of saltmarshes in south-east England

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

and grassy coastal cliffs in Ireland. **Status and distribution** Resident. Ssp. *demuthi* is Nationally Scarce A; the other subspecies merit Red Data Book status. Ssp. *gueneei* has a very large population at Newborough Warren, Anglesey, and occurs locally along the coast of north Wales to Point of Ayr, Flintshire, and on the Cheshire and Lancashire coast, particularly around St Annes-on-Sea, Formby, and near Birkdale, Southport. Ssp. *demuthi* was first seen in 1963, but was not recognised as Sandhill Rustic until 1973, and not named as a distinct subspecies until 1995, and occurs in numbers from Faversham and the Isle of Sheppey, Kent, along the Thames Estuary, and at many places on the Essex coast north to Aldeburgh, Suffolk. Ssp. *leechi* is known only from one sandy shingle beach in south Cornwall, where it was discovered in 1974. Ssp. *knilli* occurs along the south coast of the Dingle Peninsula, Co. Kerry, where it was discovered in 1962. Singletons recorded at Bude, Cornwall, on 6 Aug 1990 (stated to be most similar to spp. *demuthi*) and inland at Farringdon, North Hampshire, on 22 Sep 1950 probably indicate occasional dispersal.

Scarce Arches

plate 56

Fabula zollikoferi (Freyer)

Immigrant 73.133 (2356)

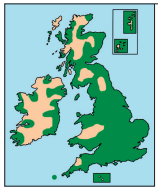
Field characters FW 18–25mm. A large, pale fawn noctuid. Forewing has a large, pale-outlined kidney mark, often darker towards trailing edge, but sometimes rather indistinct. One form is rather uniform, but with an obscure dark central streak or short basal streak. Form *internigrata* Warr. has a longer black basal streak, and forewing is dusted with blackish scales and has a pale outer band. **Similar species** Pale examples of Bulrush Wainscot are somewhat similar but have a broader, more rounded forewing and narrower kidney mark. Large Wainscot has a more angular, pointed forewing and kidney mark is absent or very faint. **Flight season** One generation. Aug–Oct. Most British records are in Sep. Comes to light and sugar. **Life cycle** Breeding unknown in the British Isles; life cycle poorly known. **Larval foodplants** Meadow-rues and Great Fen-sedge are reported foodplants. Also thought to be associated with Common Reed, on whose stems it has been reared. **Habitat** Wetlands. **Status and distribution** Immigrant. Seventeen records, all between 1867 and 1996, with eight in Sep 1934. Recorded from Devon, Sussex, Kent, Norfolk, Yorkshire, Angus and Aberdeenshire. A strongly migratory but little understood species, mainly found in Siberia and central Asia, thought to breed only as far west as western Siberia and the southern Urals. It occurs sporadically in northern Europe, with one recorded in Iceland, some 5,000km from the nearest likely breeding area.

Large Wainscot

plate 56

Rhizedra lutosa (Hb.)

Common 73.134 (2375)



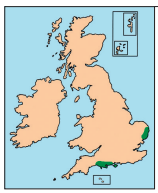
Field characters FW 16–23mm. Very variable in size. Forewing pointed or slightly hooked, light greyish straw or reddish straw, much less often brownish grey, and lightly or (less often) heavily dusted and streaked with black. Has an outer cross-line of fine dark dots, occasionally joined to form a curved, jagged line. Hindwing whitish, lightly or (less often) heavily dusted with grey, usually with a central row of dark dashes. **Similar species** Blair's Wainscot is smaller, forewing is even more pointed and hindwing is smoky, with whitish streaks. Rush Wainscot has a more brownish, relatively broad forewing and grey hindwing with a thin dark central band, stronger on underside. See also Bulrush Wainscot, Reed Dagger and Scarce Arches. **Flight season** One generation. Aug–Oct or early Nov. Flies briefly at dusk and again later in the night, when it comes to light, sometimes far from breeding sites (usually female). Feeds at flowers and occasionally at sugar. **Life cycle** Overwinters as an egg. Larva Apr–late Jul. Feeds inside roots and stem bases. Pupates among the roots of the foodplant. **Larval foodplants** Common Reed. **Habitat** Reed-beds and reedy ditches, breeding in the drier parts and margins, not where there is permanent standing water. Only in small numbers where reed-beds are burned after winter cutting. **Status and distribution** Resident. Common. Fairly well distributed in suitable habitat throughout England, Wales, Man and the Channel Islands. Widespread but local in mainland Scotland (and probably only vagrant in the Western Isles and Northern Isles) and in Ireland.

Blair's Wainscot

plate 56

Sedina buettneri (Her.)

RDB; suspected immigrant 73.135 (2376)



Field characters FW 12–14mm. Forewing very pointed and tapered compared to related species, straw with diffuse dark streaking and dusting. Hindwing dark grey, with whitish streaks and fringes. **Similar species** See Large Wainscot, and also Reed Dagger, which is larger, with a dark basal streak and white hindwing. **Flight season** One generation. Late Sep–mid-Oct. Flies from dusk and can be found moving among dense stands of sedges after dark. Comes readily to light-traps placed in the breeding areas, but rarely captured away from this habitat. **Life cycle** Overwinters as an egg, laid in rows on leaves of the foodplant. Larva late Apr–Aug. Feeds within stems of young shoots. Pupates near ground level, within a stem of the foodplant. **Larval**

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

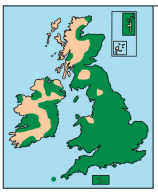
foodplants Lesser Pond-sedge. **Habitat** Sedge-beds in river systems and marshes. **Status and distribution** Resident and suspected immigrant. Red Data Book species. Several apparently long-established populations have been discovered along rivers in Dorset from Oct 1996 onwards. First discovered in the British Isles in Sep 1945 in Freshwater Marsh, Isle of Wight, where it was recorded, sometimes in large numbers, annually until 1951–52, when the marsh was drained, cut and burned, after which the moth was never seen there again. Seven single records of suspected immigrants, two in Sussex (Walberton, 1985, and Playden near Rye, 1996), two in Kent (Lydd, 1987, and Dungeness, 1991), one in Essex (Frinton-on-Sea, 1994), three in Suffolk (Rendham, 2006, and Dunwich, 2007 and 2010) and three near Freshwater on the Isle of Wight (two at Totland, 2007, and one at Afton Marsh, 2011).

Bulrush Wainscot

plate 56

Nonagria typhae (Thunb.)

Common 73.136 (2369)



Field characters FW 20–24mm. Large size and broad, rather blunt forewing with small blackish dashes or crescents along outer edge and (usually) fine arrowheads near them distinguishes this from other wainscots. Usually has a rather narrow, dark-outlined kidney mark and sometimes an oval, both indistinct. Male is light reddish brown, sometimes darker, with diffuse darker streaks, dark dots and greyish-white highlighted veins. Female similar but light straw-coloured or darker greyish straw-coloured. Form *fraterna* Treit. is dark brown or blackish, with indistinct markings, and is widespread and not infrequent. **Similar species** In Large Wainscot, kidney and oval are absent or very faint, and forewing is narrower, more pointed and plainer, without dark marks along outer edge. Webb's Wainscot is smaller, with trailing half of kidney mark thickly ringed with blackish. See also Scarce Arches.

Larva of Bulrush Wainscot (pupa below).

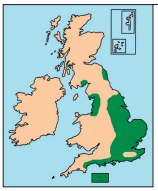
Flight season One generation. Late Jul–late Sep. Comes to light, sometimes far from breeding sites (usually female). Does not feed. **Life cycle** Overwinters as an egg. Larva Apr–early Aug. Feeds inside stems, at first in the upper parts, then lower, moving to new stems as it grows, and leaving very obvious exits and entrances. Pupates in the final foodplant, or in a dead stem. **Larval foodplants** Bulrush, less often Lesser Bulrush. **Habitat** Margins of ponds, lakes and ditches, fens, marshes and estuaries. Highly dispersive, rapidly colonising even small patches of foodplant. **Status and distribution** Resident. Common. Fairly well distributed in suitable habitat throughout England, Wales and Man. Local in southern, south-west, central and north-east Scotland and around the Moray Firth, in Ireland and in the Channel Islands.

Fen Wainscot

plate 56

Arenostola phragmitidis (Hb.)

Local 73.137 (2377)



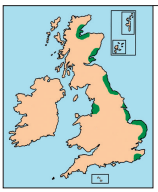
Field characters FW 14–16mm. Unmistakable. A smooth, rather slender moth. Forewing quite broad, light or dull greyish straw-coloured or light reddish brown (f. *rufescens* Tutt), and unmarked, but diffusely darker towards outer margin, with coffee-coloured fringes. Hindwing grey with whitish fringes. **Flight season** One generation. Jul–Aug. Flies at dusk and later comes to light, sometimes in numbers, and to flowering grasses. **Life cycle** Overwinters as an egg. Larva Apr–late Jun. Feeds inside stems, changing to new ones as it grows. Pupates on the ground among leaf litter. **Larval foodplants** Common Reed. **Habitat** Reed-beds. Inclined to wander into other habitats, including gardens. **Status and distribution** Resident. Local. In southern England from South Devon to Kent, most frequent on or near the coast. Extends locally inland through Berkshire and Oxfordshire and the eastern side of the Midlands, the London area and into East Anglia, where it is well distributed. Also in Lincolnshire and Yorkshire (where it is expanding), Lancashire and south Cumbria. Two on the Northumberland coast in 2011. In Scotland, found at Auchencairn Bay, Kirkcudbrightshire, since 2003. Local in the Channel Islands.

Lyme Grass

plate 56

Longalatedes elymi (Treit.)

Nb 73.138 (2348)



Field characters FW 15–18mm. A slender moth. Forewing narrow, ranging from rather plain, light buff with a faint outer line of dark dots, to diffusely streaked with darker shades, and with blackish veins. Hindwing whitish, sometimes

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

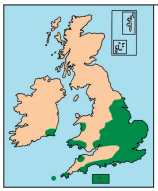
with dark veins. This combination is diagnostic. **Flight season** One generation. Mid-Jun–early Aug. Comes readily to light from dusk, and sometimes seen in hundreds at rest on the foodplant after dark. **Life cycle** Believed to overwinter as a small larva within the foodplant, the eggs probably hatching in Aug. Lives and feeds within the lower part of the stem, below the level of the sand. Large larvae are regularly found in Apr and May, and pupate in early Jun at the base of the plant. **Larval foodplants** Lyme-grass. **Habitat** Coastal sand-dunes and dune-slacks, wandering into saltmarsh and other adjacent habitats. **Status and distribution** Resident. Nationally Scarce B. Almost confined to the east coast and a single site on the south coast (Camber Sands, East Sussex, where it is believed to have been introduced with the foodplant). Two were noted at Dungeness in 1992, 14km east of Camber, the first records for Kent. Discovered in Lancashire in 2009, at Crosby, Formby and St Annes-on-Sea. On the east coast, occurs locally in the Hamford Water area of Essex, which it colonised around 1975, the Thorpeness/Minsmere/Aldeburgh area of Suffolk, and sandy stretches of the coasts of Norfolk, Lincolnshire, Yorkshire, Durham, Northumberland, Fife, Angus and Kincardineshire, and around the Moray Firth from Moray to East Sutherland.

Twin-spotted Wainscot

plate 56

Lenisa geminipuncta (Haw.)

Local 73.139 (2370)



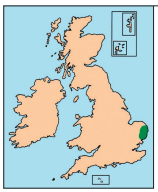
Field characters FW 11–16mm. Forewing quite broad, blunt. Ground colour light brown, reddish brown, greyish brown, dark brown or blackish. Rather plain, with any noticeable dark streaks restricted to base, closest to leading edge. Kidney mark very narrow, often divided into twin spots, either chalky white with dark edging or entirely dark, sometimes faint. Hindwing grey. **Similar species** Dark form of Brown-veined Wainscot is slimmer, kidney mark is dark but usually broader and white-edged, or less often entirely dark, and forewing is narrower near base. In small dark Rush Wainscot, forewing is sharper-tipped and richer brown, kidney mark is wider and faint, but never white, and there is usually a dark central streak. **Flight season** One generation. Early Aug–mid-Sep. Flies at dusk among the larval foodplant and is often frequent where it is established, but only comes to light in small numbers. Does not feed. **Life cycle** Overwinters as an egg. Larva May–Jul. Feeds inside stems, changing to new ones as it grows. Pupates low down in a sturdy stem of the foodplant, head upwards. **Larval foodplants** Common Reed. **Habitat** Extensive reed-beds and small patches of reeds in ditches, ponds, riversides and fens, with highest population densities in unmanaged reed-beds. May wander into other habitats without reeds, including gardens. **Status and distribution** Resident. Local. Fairly well distributed and sometimes abundant in suitable habitat, in south-west England (mainly along the south coast), central southern and south-east England, the south and east Midlands north to central Yorkshire (where it is expanding its range), south Wales and the Channel Islands. Very local in the north-west Midlands. Rare in Ireland, where it is found only very locally in Co. Wexford and formerly in Co. Cork.

White-mantled Wainscot

plate 56

Archanara neurica (Hb.)

RDB 73.140 (2372)



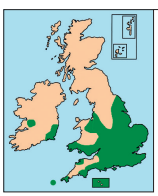
Field characters and similar species FW 12–13mm. English name refers to diagnostic white line on edge of collar when fresh. White marks on oval and kidney often evident as three spots. Otherwise very similar to Brown-veined Wainscot, but generally slimmer and lacking central spot on underside of both fore- and hindwings. A blackish form became frequent in the 1920s and 1930s in the now lost Sussex population but is seldom seen elsewhere. Reddish f. *rufescens* Edelsten is more frequent. **Flight season** One generation. Jul–early Aug. Comes to light, sometimes in numbers, otherwise seldom seen. **Life cycle** Overwinters as an egg on an old reed stem. Larva late Apr–late Jun. Feeds in stems, usually about halfway up. Pupates head down in an old dry reed stem. **Larval foodplants** Common Reed. **Habitat** Edges of reed-beds and reed-lined ditches on or near the coast, with abundant dead stems. Frequently cut or burned sites are thought to be unsuitable. **Status and distribution** Resident. Red Data Book species. In the 1990s, known only from a 15km stretch of coastal reedbeds in Suffolk, from Thorpeness to Benacre, the sites in between including Sizewell and the Minsmere/Walberswick area. Since 2000, it has also been found on the outskirts of Ipswich and a little further north at Shingle Street and Melton. Discovered in Britain in 1908 on Pevensey Marshes, near Eastbourne, Sussex, where it survived until the habitat was destroyed during the Second World War. Singletons were recorded nearby in 1952 and 1953, but no resident population has been rediscovered.

Brown-veined Wainscot

plate 56

Archanara dissoluta (Treit.)

Local 73.141 (2371)



Field characters FW 12–15mm. Forewing quite broad in male, with a blunt tip. Narrower, more pointed and with leading edge generally more curved in paler, greyer and plainer female. In most frequent form (f. *arundineta* Schmidt), forewing is dull straw

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

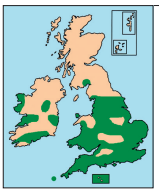
or reddish straw, dusted with grey and black, and with a thick, diffuse brown streak emanating centrally from base. This is restricted to base in female, but in male extends to outer edge, broadening as it does so. Kidney mark outlined with white, most strongly in blackish trailing half, less often narrow and entirely dark. Sometimes the middle vein is whitish. Hindwing grey or whitish grey. Has a central spot on underside of both fore- and hindwings. A less frequent form is plain dark brown or blackish brown. **Similar species** See White-mantled Wainscot, Twin-spotted Wainscot, Silky Wainscot, Fenn's Wainscot and Webb's Wainscot. **Flight season** One generation. Late Jul–early Sep. Comes to light, and occasionally to sugar. **Life cycle** Overwinters as an egg. Larva Apr–early Jul. Feeds inside stems, changing to new ones as it grows. Pupates a few centimetres from the ground in a sturdy stem of the foodplant, head downwards. **Larval foodplants** Common Reed. **Habitat** Reed-beds and ditches. Adults sometimes wander into other habitats, including gardens. **Status and distribution** Resident. Local. England north to Lancashire and Yorkshire, south and north Wales, including Anglesey, and the Channel Islands. Particularly widespread in East Anglia, along the south coast and in the Midlands. In Ireland, very local on the south-east coast in Cos. Waterford, Wexford and Wicklow. Also very locally inland, in Co. Galway.

Small Rufous

plate 56

Coenobia rufa (Haw.)

Local 73.142 (2379)



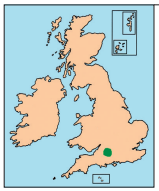
Field characters and similar species FW 10–12mm. Not unlike Small Wainscot in size, colour and markings, but body much slimmer and with a more rounded, less pointed forewing. Forewing has a narrow, diffuse central streak, and further streaks radiating to outer edge, and is finely and variably dusted with light and dark grey. An often indistinct, curved outer cross-line is represented by blackish dots. Ground colour light straw white, pinkish straw, pinkish brown, reddish brown or smoky brown. Hindwing usually whitish, sometimes grey, with a central cross-line or row of dots. Weakly marked Small Dotted Buffs are larger, with leading edge of forewing less curved and outer line of dots forming a question mark. **Flight season** One generation. Jul–Aug. Flies in the hour before dusk, and occasionally comes to light later in the night. **Life cycle** Overwinters as a small larva. Larva Sep–May. Feeds inside stems, changing to new ones as it grows. Pupates low down in an old stem of the foodplant. **Larval foodplants** Jointed Rush, Sharp-flowered Rush and Soft-rush. **Habitat** Fens, marshes, poorly drained pasture and bogs, breeding in the drier parts. **Status and distribution** Resident. Local. In suitable habitat in England and Wales, north to south Cumbria and Yorkshire. In Scotland, one at Auchencairn Bay, Kirkcudbrightshire, in 2011 and there are old records from elsewhere. Local in the southern half of Ireland and in the Channel Islands. One record from Man, in 1895.

Brighton Wainscot

plate 56

Oria musculosa (Hb.)

pRDB; suspected immigrant 73.143 (2378)



Field characters FW 12–16mm. Two long, broad whitish-fawn stripes running through rather angular sandy-brown or fawn forewing, along with shorter stripes near outer edge, are diagnostic. These stripes are present, but less striking, in pale and worn individuals. **Flight season** One generation. Late Jul–mid-Aug. Has been disturbed in large numbers by day during cereal harvesting, and seen flying and resting on stems from dusk. Comes readily to light. **Life cycle** Overwinters as an egg attached to grasses or standing cereals. Larva late Apr–mid-Jun. Pupates in the ground below the foodplant. **Larval foodplants** Various grasses, later moving on to winter wheat, summer Rye, Oats or Barley, feeding initially within the stems, then moving to the ears to eat the unripe grains. **Habitat** Arable farmland, particularly cereal fields, their grassy margins, verges and hedge bases, the non-cropped areas probably being important as overwintering sites. **Status and distribution** Resident and suspected immigrant. Proposed Red Data Book species, formerly Nationally Scarce A. In the past, widely recorded in central southern England, particularly Wiltshire, Hampshire and Oxfordshire, and north to Northamptonshire, but in steep decline in recent decades. Last recorded in 2001 (three on Salisbury Plain) and possibly extinct. Some records are of unusually small, pale adults early in Jul before the main flight period, often near the south coast or away from the breeding habitat, suggesting immigration.

Small Wainscot

plate 56

Denticucullus pygmina (Haw.)

Common 73.144 (2350)

Field characters FW 10–14mm. Small and quite thickset, with a 'shaggy' thorax. Forewing light straw, pinkish straw, orange-brown, pinkish brown or reddish brown, or rarely smoky brown. There is usually a dark grey or brown central streak, with further streaks radiating towards outer edge, and a faint, gently curved row of dark dots. No other discernible markings. Occasionally streaks and dots are very faint or even absent, or forewing is heavily streaked and dusted with dark scales. Hindwing grey with whitish fringe. **Similar species** See Concolorous (flies earlier in year), Cloaked Minor and Mere Wainscot. **Flight**

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

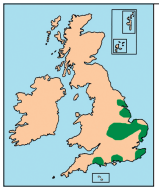
season One generation. Jul or Aug–Sep or early Oct. Flies at dusk and again later in the night, when it comes to light and rests on the larval foodplant. Does not feed. **Life cycle** Overwinters as a larva. Larva Sep–early Jul. Feeds within stems. Pupates in a cocoon in hollow stems or among plant debris. **Larval foodplants** Sedges, including Lesser Pond-sedge, Glaucous Sedge and cottongrasses; also Reed Sweet-grass, other grasses and possibly rushes. **Habitat** Most abundant in fens, marshes, boggy moorland and damp woodland, but also along ditches in other habitats and sometimes in gardens. **Status and distribution** Resident. Common. Well distributed in suitable habitat throughout Britain, Man, Ireland and the Channel Islands.

Mere Wainscot

plate 56

Photedes fluxa (Hb.)

Nb; suspected immigrant 73.145 (2349)



Field characters FW 12–15mm. Forewing rather angular, rather plain, creamy white to sandy or reddish brown, with cross-lines faint or represented by tiny black dots. Kidney mark has a grey spot in trailing half. Hindwing whitish or pale grey. **Similar species** See Concolorous. Small Wainscot usually has dark streaks (although it can be quite plain), kidney mark is absent or barely suggested, and forewing is narrower. **Flight season** One generation. Jul–Aug. Flies from dusk, and is often seen on the wing where numerous. Comes readily to light, and sometimes to sugar and wine ropes. **Life cycle** Overwinters as a part-grown larva in a stem of the foodplant. Larva Sep–Jun. Feeds within lower part of stem. Pupates in a tough cocoon among foodplant debris. **Larval foodplants** Wood Small-reed. **Habitat** Woodland rides, clearings and plantations, usually in ancient woodlands on poorly drained soils. Also the drier parts of various wetland habitats, both coastal and inland, including fens, marshes, reed-beds, broads, and ditch-banks in old or partially reclaimed wetland sites. **Status and distribution** Resident and suspected immigrant. Nationally Scarce B. The main distribution is in a belt from the heavy clay soils of Oxfordshire and Buckinghamshire, north-east through the south-east Midlands, and into the Breckland and Broads of East Anglia. Local in Lincolnshire, Yorkshire, Worcestershire, Warwickshire and Dorset. Resident in some coastal reed-beds and other suitable coastal habitat, e.g. Walberswick in Suffolk, near Sandwich in Kent, Browndown Marsh in Hampshire, and Pagham Harbour and Rye in Sussex, although other coastal records appear to be of wanderers or possibly immigrants. Found at a single site in Monmouthshire in the 1980s, but not recently.

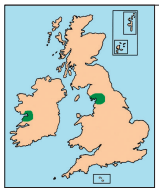
Least Minor

plate 56

Photedes captiuncula (Treit.) 73.146 (2344)

ssp. *expolita* (Stt.)
RDB

ssp. *tincta* (Kane)
Ireland



Field characters and similar species FW 7–9mm. Smaller and more slender than all other noctuid species in the British Isles. The larger male is distinguished from small forms of Cloaked Minor (with forewing longer and narrower, especially near base) by the shape of the outer central cross-line, which forms a shallower question mark and is straight in trailing half, and here often edged with white. The English ssp. *expolita* Stt. is brown, and the Irish ssp. *tincta* Kane is redder and brighter, with a stronger white edging to central band, more often extending into leading half. These cross-lines are more pronounced in the female of both subspecies. Middle-barred Minor (usually nocturnal) is somewhat similarly marked, but larger and more thickset. **Flight season** One generation. Mid-Jun–early Aug. Male flies about wildly and erratically in sunny weather, usually noon–4pm, diving deep down among grass to rest, from which it is often disturbed at the slightest touch of the vegetation. Less active in dull weather. Also flies at night and comes to light. **Life cycle** Overwinters as a part-grown larva in the sward. Larva Aug–late May. Pupates in a flimsy cocoon on the ground. **Larval foodplants** Glaucous Sedge and possibly other sedges, and in the Burren recently found on Blue Moor-grass. **Habitat** Open, dry limestone grassland, including rough fields, usually on south-facing hills and dales near the coast, and grassy coastal cliff-tops. **Status and distribution** Resident. Red Data Book species. Ssp. *expolita* is thought to be confined to the Carboniferous Limestone formations found in the extreme south of Cumbria (the Arnside and Beetham area, north to Kendal), and the Malham and Grassington areas at the western edge of north Yorkshire. Formerly found on the coast of Northumberland, in the Morpeth/Druridge Bay area on Westphalian Coal Measures, and on Magnesian Limestone in Co. Durham, on the coast from Blackhall Rocks to Beacon Point and Castle Eden Dene (north of Hartlepool), and inland in Cassop Vale. However, it was last found in these areas in 1985. Ssp. *tincta* locally frequent in the Burren area of Cos. Clare and Galway and has been found in similar habitat in Co. Mayo.

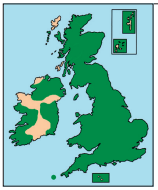
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Small Dotted Buff

plate 56

Photedes minima (Haw.)

Common 73.147 (2345)



Field characters FW 11–14mm. Slender, with a whitish-straw or yellowish-straw forewing, sometimes tinged with reddish brown. Forewing broad and rather plain in male, with leading edge gently curved. Central cross-lines very fine, blackish brown, scalloped or represented by a series of dots or short dashes, the outer line forming a question mark. Has a roughly triangular brown blotch on leading edge near tip, sometimes extended as a dark outer cross-band. This combination is diagnostic. Female is much smaller, with a narrower forewing, either similarly marked to male or with a darker central band, most apparent towards trailing edge, and distinct whitish edging on cross-lines. **Similar species** Female can resemble some forms of Cloaked Minor (with outer central cross-line similar in shape), but leading edge of forewing less curved and central cross-lines further apart at trailing edge. See also Middle-barred Minor and Small Rufous. **Flight season** One generation. Late Jun–early Aug. Comes to light, the male more frequently, and occasionally to sugar. At dusk, male flies slowly over grassland, and female rests on grass stems. **Life cycle** Overwinters as a larva. Larva Aug–early Jun. Feeds inside a stem, hollowing out the base. Pupates in an underground cocoon. **Larval foodplants** Tufted Hair-grass. **Habitat** Poorly drained grassland, including woodland rides and marshes. Occasional in some gardens. **Status and distribution** Resident. Common. Well distributed and frequent throughout most of Britain (but probably vagrant in the Outer Hebrides and Shetland). Widespread in Ireland, on Man and in the Channel Islands.

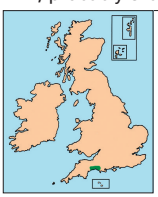
Morris's Wainscot

plate 56

Photedes morrisii morrisii (Dale)

RDB 73.148 (2346)

Bond's Wainscot ssp. *bondii* (Knaggs) plate 56
RDB; probably extinct



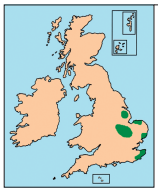
Field characters FW 12–14mm. Rather slender. Forewing quite broad with a curved leading edge, white, and very finely dusted blackish, especially near outer edge. Sometimes has a curved outer central cross-line consisting of black dots. Hindwing white, dusted with grey, more heavily towards outer edge and with diffuse grey central cross-band. Fringes white. Bond's Wainscot is slightly larger and more brownish, usually with a line of heavier black spots on forewing and darker hindwing. **Similar species** Concolorous has white forewing and grey hindwing, but is smaller and more thickset, with a more angular forewing. **Flight season** One generation. Late Jun–mid-Jul. Male flies from dusk. Both sexes rest on stems of the foodplant after dark, sometimes in numbers. Comes to light and sugar. **Life cycle** Overwinters as a larva in a foodplant stem. Larva Aug–late May. Feeds inside the stems, and usually pupates among shoots at the base. **Larval foodplants** Tall Fescue. **Habitat** Grassy south-facing slopes and terraces of undercliffs by the sea. Frequent landslips in the occupied sites create large areas of bare calcareous ground and wet flushes, maintaining the early successional habitat and suitable microclimate necessary for colonisation by the foodplant. **Status and distribution** Resident. Red Data Book species. Morris's Wainscot occurs very locally but in numbers along about 25km of the south coast of England, from Charmouth, Dorset, and in Devon to Sidmouth, but most recently near Axmouth. Also recorded further east near Thorncombe Beacon and Eype. Recorded once from Portland, Dorset, in the 19th century. Bond's Wainscot was regarded as a distinct subspecies from Kent, known only from a short stretch of rough grass on a chalk cliff overlying Gault clay, with seepages and landslips, between Folkestone Leas and the beach. Not seen here since the 1970s, and probably extinct.

Concolorous

plate 56

Photedes extrema (Hb.)

RDB; suspected immigrant 73.149 (2347)



Field characters and similar species FW 11–13mm. Similar size and shape to Mere Wainscot, pale examples of which have a grey spot in lower half of kidney mark, whereas kidney mark of Concolorous lacks this and is very faint or absent. Also, curved row of faint black dots across outer portion of pale straw or whitish forewing is usually stronger and hindwing is grey (darker than forewing). Borderline or worn moths should be dissected for certain determination. Small Wainscot flies mainly later in the year, and has narrower forewing, usually with darker streaks. See also Morris's Wainscot and Bond's Wainscot, which are larger. **Flight season** One generation. Mid-May–mid-Jul. Sometimes found among foodplants but mostly seen at light, flying from dusk, also late at night and just before dawn, usually in small numbers. **Life cycle** Overwinters as a part-grown larva in a stem of the foodplants, near the base. Larva late Jun–May. Enters a stem on hatching and feeds in several stems before pupating in a tough cocoon among leaves at the base of the plant. **Larval foodplants** Purple Small-reed and Wood Small-reed. Only Wood Small-reed is present at some of the ancient woodland sites. At Woodwalton Fen the moth is more numerous among Purple Small-reed, which is more of a fenland plant, although

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

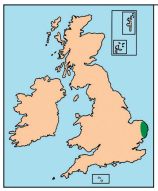
both species are present. **Habitat** The drier parts of fens, without standing water or dominant Common Reed, and marshy open areas, rides and clearings in ancient lowland woodland on heavy soils. **Status and distribution** Resident and suspected immigrant. Red Data Book species. Found very locally in Northamptonshire at Yardley Chase, Castor Hanglands, Bedford Purlieus, Salcey Forest, Fineshade and Geddington Chase. Also into Buckinghamshire, where some sites straddle the boundary. In Huntingdonshire, at Holme Fen, Monks Wood and formerly Woodwalton Fen (not seen in the last decade); in Peterborough at Orton Pit, where a very large population was found recently; in two limewoods near Bardney in central Lincolnshire; and at Ketton Quarries and Luffenham Heath in Leicestershire. Individuals, assumed to be wanderers, are occasionally recorded in nearby areas, including local gardens. Over 30, presumed immigrants, have been recorded on the coasts of south-east England, the majority in East Kent from 1976 onwards, with others in Sussex, Essex and Suffolk.

Fenn's Wainscot

plate 56

Protarchanara brevilinea (Fenn)

RDB 73.150 (2351)



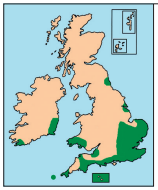
Field characters FW 14–17mm. The rather broad, blunt-ended sandy-brown forewing, speckled and dusted with blackish, and with cross-lines represented by black dots, make this quite a distinctive wainscot. Some individuals have a short dark basal streak, but f. *sinelinea* Farn lacks this. **Similar species** Brown-veined Wainscot is smaller and more slender, and has a more rounded forewing with a distinct kidney mark. Rush Wainscot is more reddish or yellowish, with a more pointed forewing, and Webb's Wainscot has black dots along outer edge. None of these has a black basal streak. **Flight season** One generation. Mid-Jul–mid-Aug. Flies from dusk, visiting flowering grasses and aphid honeydew on reeds and sallows. Comes to sugar, and often in numbers to light. **Life cycle** Overwinters as an egg, laid on a standing reed or in reed litter. Larva Apr–mid-Jun. Feeds in the upper parts of stems and later on the leaves. Pupates in a cocoon among plant debris. **Larval foodplants** Common Reed. **Habitat** Reed-beds, preferring the drier areas. The greatest population densities are often where areas of reeds are cut every couple of years or are growing rather sparsely. **Status and distribution** Resident. Red Data Book species. In the British Isles, found only in the Norfolk Broads, where it occurs widely, and on and near the Suffolk coast from Dunwich north to Benacre. Has colonised newly created habitat in the Minsmere area.

Webb's Wainscot

plate 56

Globia sparganii (Esp.)

Nb 73.151 (2373)



Field characters FW 15–18mm. Distinguished by the broad, blunt forewing, rounded at tip, and very pale, faint kidney mark, most obvious where the dark central streak runs around it, forming a dark, open ring. The extent of the streaking is quite variable, usually crossing a curved outer row of black dots. Has a row of small but clear black spots along outer edge. Ground colour reddish brown or orange-brown in male, paler creamy buff in female. Hindwing whitish, streaked with grey from base. Tip of abdomen projects conspicuously beyond wings at rest. **Similar species** The rarer Rush Wainscot is most similar, but lacks the dark ring and the strong dark spots on outer edge of forewing, which is more pointed or slightly hooked. Also, the hindwing is more uniformly grey, not streaked. Bulrush Wainscot is more freckled with dark spots. Male Brown-veined Wainscot is smaller, with white on kidney mark. Fenn's Wainscot is more sandy in colour and lacks dark spots along outer edge of forewing. **Flight season** One generation. Late Jul–Sep. Comes to light. Often wanders from the breeding sites. **Life cycle** Overwinters as an egg, attached to a leaf of the foodplant. Larva May–mid-Aug. Feeds internally and pupates head upwards below a prepared window in a stem, particularly of Bulrush. **Larval foodplants** Bulrush, Lesser Bulrush, Yellow Iris, Common Club-rush and Branched Bur-reed. Bulrush is frequently the only foodplant present at breeding sites. **Habitat** Breeding areas have included small patches of Bulrush by ponds in woodland, but open habitats are more usual, such as ponds, ditches, fens, marshes, estuaries and flooded gravel-pits, with a mixture of foodplants. **Status and distribution** Resident. Nationally Scarce B. First reported in Britain in 1879 in south-east Kent, and until the 1980s largely restricted to coastal localities, mainly from Hampshire to Kent and in East Anglia, also south-west England, south Wales and the Channel Islands. Since then, it has increased within that range and spread inland, mainly across East Anglia and south-east England, west to Oxfordshire and Berkshire, and north to Huntingdonshire and Leicestershire. It has also spread north along the east coast to Spurn, Yorkshire. One was recorded at Tynemouth, Northumberland, in 2006. In Ireland, established very locally in Cos. Cork and Wexford.

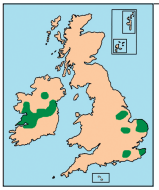
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Rush Wainscot

plate 57

Globia algae (Esp.)

RDB 73.152 (2374)



Field characters FW 14–18mm. Forewing broad, rather blunt-ended but tip slightly hooked. Orange-brown in most males (distinguishing them from other large wainscots), paler reddish brown or yellowish brown in female. A diffuse dark central streak passes through the end of the pale, barely visible kidney mark rather than forming a ring around it. Has fine, darker dusting, a curved outer row of dark dots and a very fine dark line or dashes on outer edge. Hindwing grey, with a narrow, rather faint central cross-band, stronger on underside. Irish individuals from the Burren are more heavily marked than English specimens, male shaded with grey and black, and forewing markings on female more striking. **Similar species** See Webb's Wainscot, Fenn's Wainscot and Large Wainscot. **Flight season** One generation. Aug–Sep. Flies from dusk and sometimes seen at rest on stems after dark. Comes to light, sometimes in good numbers within breeding habitat, particularly male. **Life cycle and larval foodplants** Overwinters as an egg, laid on Common Club-rush. Larva late May–early Aug. Feeds internally in stems. Usually moves to Bulrush, Lesser Bulrush or Yellow Iris to complete its growth. Pupates head upwards, often in a dead standing stem. **Habitat** Stands of emergent plants at the edges of wetlands, including broads, freshwater lakes and water-filled gravel workings. Records suggest the moth wanders, which may explain the colonisation of recent man-made habitat. **Status and distribution** Resident. Red Data Book species. Very local. Found most extensively in Norfolk, in the Broads, the Breckland wetlands near Brandon, west of Thetford Forest on the Suffolk–Norfolk border and, more recently, from the north coast at Blakeney. Also, on lakesides on both sides of the Sussex–Surrey border, and in Lincolnshire, Nottinghamshire and Huntingdonshire. Resident at Dungeness, Kent, in 1952–54. Other scattered records in southern England may indicate overlooked colonies. Also very local in Ireland, mainly western and central, from Co. Fermanagh south to Co. Limerick. One recorded on Guernsey in 1998.

Union Rustic

plate 57

Pabulatrix pabulatricula (Brahm)

Former resident; extinct 73.153 (2332)

Field characters and similar species FW 14–17mm. A whitish-grey moth, rather like a pale form of Minor Shoulder-knot, but forewing broader, longer and more tapered, inner central cross-line oblique and with an additional basal streak along trailing edge. Central cross-band strongly darkened and constricted in trailing half, usually with a solid black bar. **Flight season** One generation. Mid-Jul–mid-Aug. Comes to sugar before dusk, and also to light. Recorded at rest on oak trunks by day. **Life cycle** Overwinters as a larva. Larva about Sep–late May or Jun. **Larval foodplants** Unknown in the British Isles. Reported from woodland grasses in mainland Europe. **Habitat** Grassy places in woodland. **Status and distribution** Extinct resident. Most of the records are from Yorkshire and the east Midlands, where the moth was sometimes frequent. Some 116 were captured in Wharncliffe Wood, Yorkshire, in 1888, and about 60 were seen near Lincoln in early Aug 1916. The moth was last seen in these areas in 1919. There are also a few older scattered single records from Glamorgan, Shropshire, Leicestershire, Norfolk, Suffolk, Cheshire and Cumbria. Specimens were collected in Scotland, near Paisley, Renfrewshire, until 1902. The last British record was from Bushey Heath, Hertfordshire, in 1935. The reasons for its decline and apparent extinction are unknown.

Dusky Brocade

plate 57

Apamea remissa (Hb.)

Common 73.154 (2330)

Field characters FW 17–19mm Very variable. Forewing quite broad, leading edge arched towards tip. Colour ranges from brownish grey, usually marbled with slightly richer brown and with inconspicuous markings (f. *obscura* Haw.), or with stronger markings, including a distinct black central bar and two basal streaks (f. *submissa* Treit.), to greyish brown with striking paler, sometimes sandy, markings. **Similar species** See Confused, Crescent Striped, Large Nutmeg and White Colon. Form *submissa* can superficially resemble Light Brocade, which is noticeably greyer, or Pale-shouldered Brocade, which has a whiter 'W' mark. Light Brocade, Pale-Shouldered Brocade and White Colon have hairy eyes (view in good light under a low-power binocular microscope). See also Dark Brocade (eyes with lashes). **Flight season** One generation. Jun–early Aug. Comes regularly to light, and to sugar and flowers. **Life cycle** Overwinters as a larva close to the ground. Larva Aug–Apr. Feeds at night except when small, hiding at ground level by day. Pupates underground. **Larval foodplants** Grasses, including Reed Canary-grass and Common Couch, feeding at first on the flowers and seeds, and later on the leaves. **Habitat** A range of grassy places, including gardens, damp pasture, drier calcareous grassland, hedgerows and open woodland. **Status and distribution** Resident. Common. Well distributed and often numerous throughout Britain, Man and Ireland. Widespread in small numbers in the Channel Islands.

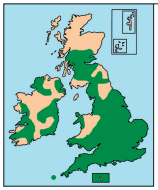
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Clouded Brindle

plate 57

Apamea epomidion (Haw.)

Common 73.155 (2327)



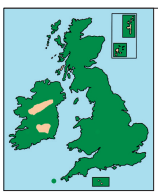
Field characters FW 17–20mm. Extensive dark brown or reddish-brown brindling on forewing of some examples is distinctive (f. *lipara* Tams), but some are mainly pale and relatively plain. Lighter parts of forewing vary from yellowish brown or fawn to reddish. A wavy pale cross-line near outer edge has two short, ill-defined dark wedges projecting inwards from it. There are two short, thick, dark streaks at forewing base and one along trailing edge. Oval and basal side of kidney mark heavily outlined with dark brown. **Similar species** Pale forms can superficially resemble those of Clouded-bordered Brindle, but these lack pale cross-line in dark area along outer edge, dark outer wedges are well defined, there is usually only one basal streak or wedge (along trailing edge), and oval and basal side of kidney mark are not darkly outlined. **Flight season** One generation. Jun–Jul. Comes to light in small numbers and to sugar and flowers. **Life cycle** Overwinters as a larva, probably close to the ground. Larva Aug–early Mar. Feeds at night except when small, hiding at ground level by day. Pupates in a cocoon on the soil surface. **Larval foodplants** Grasses, including Cock's-foot and Tufted Hair-grass, feeding at first on the seeds and later on the leaves. **Habitat** Broadleaved woodland and long-established scrub, including some gardens and parkland. **Status and distribution** Resident. Common. Fairly well distributed and locally frequent in England and Wales. Local and uncommon in the southern half of Scotland (north to Perthshire and Argyll) and in Ireland. Rare on Man. Local in the Channel Islands.

Clouded-bordered Brindle

plate 57

Apamea crenata (Hufn.)

Common 73.156 (2326)



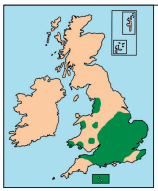
Field characters FW 18–22mm. Variable, with two distinct colour forms. In one, forewing is light yellowish brown, tinged with red or grey, often inclining to greyish white, especially along trailing edge. Key features are two well-defined reddish-brown wedges projecting from outer edge, sometimes joined by a thin brown band. Wedge beyond kidney mark is often double-pointed, and that near trailing edge is usually longer and narrower. There is another long, pointed brown wedge at base of trailing edge. The other colour form, f. *combusta* Haw., is rather plain reddish brown to mahogany, with the oval and kidney mark pale-outlined (usually yellowish), and usually at least a suggestion of a pale basal patch, but with all other markings faint. Similar blackish-brown or blackish-red forms without pale markings are known, but are rare. Intermediates between the two main forms occasionally occur. In both forms the oval is variable in shape, but often elongated. **Similar species** See Clouded Brindle and Scarce Brindle. **Flight season** One generation. May–Jul, slightly later in the north. Comes frequently to light, sugar and flowers, and is often seen flying fairly low over grassland at dusk. **Life cycle** Overwinters as a larva close to the ground. Larva Aug–Apr. Feeds at first among flower-heads of the foodplants, later on the leaves and hiding at ground level by day. Pupates in a loose cell among roots. **Larval foodplants** Grasses, including Cock's-foot. **Habitat** Gardens, all types of grassland, fens, moorland and woodland rides. **Status and distribution** Resident. Common. Throughout Britain, Man and Ireland. Local in the Channel Islands.

Large Nutmeg

plate 57

Apamea anceps ([D. & S.])

Local 73.157 (2333)



Field characters FW 16–21mm. Forewing often rather pointed, but varying somewhat in shape and width, pale straw to sandy brown, or greyish brown, with sandy marbling or panels, particularly near outer edge. Oval and kidney mark usually distinct and often outlined whitish. Basal streak brown and indistinct, or absent. There are two very fine, dark cross-lines, the first jagged and the second scalloped, and two darker blunt wedges along outer margin. Rather variable in size. **Similar species** Dark examples somewhat resemble Dusky Brocade (f. *obscura* Haw.), which lacks sandy marbling. See also Rustic Shoulder-knot, Crescent Striped and Pale Shining Brown. **Flight season** One generation. Late May–Jul. Occasional in the autumn. From 30 Oct to 31 Dec 2011, ten in Bedfordshire, with singles in Berkshire, Buckinghamshire and Hertfordshire, following exceptionally warm autumn weather and an early emergence in May. Comes regularly to light, and to sugar and flowers. **Life cycle** Overwinters as a larva close to the ground. Larva Aug–Apr. Feeds at night, hiding by day in a silken cell. Pupates underground. **Larval foodplants** Grasses, including Cock's-foot, Common Couch and cereal crops, initially feeding on the flowers and seeds, and later on the leaves. **Habitat** Usually dry calcareous grassland, including pasture, arable farmland, some gardens, and woodland rides and edges. Occasionally in habitats on more poorly drained clays. **Status and distribution** Resident. Local. Well distributed and locally abundant, particularly on well-drained farmland, roughly from the Thames Valley north into the south and east Midlands, East Anglia and Lincolnshire, but has declined in some

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

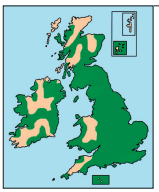
areas. Numbers in the Rothamsted Insect Survey national light-trap network declined by 93% between 1968 and 2007. Uncommon in southern coastal counties, and very scarce in most of south-west England, Wales, the north Midlands and northern England. In the early 19th century, extended locally into Northumberland and southern Scotland. In Ireland, last recorded in 1950, one at Glengariff, Co. Cork. Two older records from Co. Dublin (one in 1860). Local in the Channel Islands.

Rustic Shoulder-knot

plate 57

Apamea sordens (Hufn.)

Common 73.158 (2334)



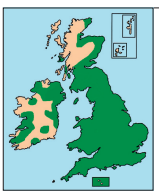
Field characters FW 16–19mm. Combination of slightly branched black basal streak on broad, rather plain sandy-brown or greyish-brown forewing is diagnostic. Oval and kidney mark distinct, the latter often outlined whitish. Forewing sometimes with a reddish tinge. Darker forms predominate in north and west. Some examples are more marbled and basal streak is sometimes greatly reduced. **Similar species** Large Nutmeg has a more marbled forewing, and basal streak is brown, indistinct and not branched, or absent. Dusky Brocade is greyer and less plain. **Flight season** One generation. May–Jul. Comes to light, sugar and flowers. **Life cycle** Overwinters as a larva close to the ground. Larva Jul–Mar. Pupates in a strong cocoon on or just below the ground. **Larval foodplants** Grasses, including Cock's-foot, Common Couch and cereal crops, initially feeding on the seeds and, later, the leaves. **Habitat** A wide range of grasslands, arable farmland, woodland rides and many gardens, including in urban areas. **Status and distribution** Resident. Common. Well distributed and often abundant throughout most of Britain and Man, although local or scarce in south-west England, most of Wales and the far north of Scotland. Rare in Orkney and a rare vagrant in Shetland. Widespread but somewhat local in Ireland and in the Channel Islands.

Small Clouded Brindle

plate 57

Apamea unanimis (Hb.)

Common 73.159 (2331)



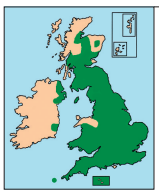
Field characters FW 15–17mm. The small size and kidney mark always outlined in white, more noticeably so along outer edge, are the most obvious features. Forewing pale or dark brown, reddish brown or olive brown, variably marbled with paler or darker markings. Has two basal streaks, one placed centrally and one along trailing edge. **Similar species** Resembles some forms of the extremely variable Common Rustic and Lesser Common Rustic, which usually lack a centrally placed basal streak and have a smaller, narrower crescent-shaped mark on hindwing (this is especially noticeable on underside). Common Rustics emerge from early Jul, by which time Small Clouded Brindles are usually in worn condition. **Flight season** One generation. Late May–early Jul. Comes to light, sugar and flowers, particularly those of rushes. **Life cycle** Overwinters as a fully grown larva among leaf litter or in other sheltered places. Larva Jul–Mar or Apr. Pupates among leaf litter or inside a dead plant stem. **Larval foodplants** Grasses, including Reed Canary-grass and Wavy Hair-grass. **Habitat** Marshes, fens, margins of ponds, lakes and ditches, damp grassland and damp open woodland. **Status and distribution** Resident. Common. Well distributed and fairly frequent in England and Wales. Widespread in the southern half of Scotland and local north to Argyll, Mull and Coll in the west, and near the eastern coast to Caithness. Local on Man, and in Ireland and the Channel Islands.

Slender Brindle

plate 57

Apamea scolopacina (Esp.)

Common 73.160 (2335)



Field characters FW 14–17mm. Quite distinctive. Forewing pale straw-coloured or orange-brown with a dark outer edge. Kidney mark strongly outlined in white, usually with an adjacent dark brown patch. Central chocolate-brown spot on thorax and dark smudge near base of trailing edge of forewing are very obvious at rest. Forewing fairly broad, with a rather curved leading edge and two very fine, scalloped black cross-lines, the outer more distinct. These markings show little variation. **Flight season** One generation. Late Jun–mid-Aug. Comes to light, sugar and flowers. **Life cycle** Overwinters as a larva close to the ground. Larva Aug–May. Pupates in an underground cocoon. **Larval foodplants** Woodland grasses, including Wood Melick, Wood Meadow-grass and False Brome, and wood-rushes, feeding at first inside the stems, and later on the leaves and flowers. **Habitat** Chiefly woodland with grassy rides and clearings, but sometimes more open country. **Status and distribution** Resident. Common. Formerly rather local, mainly in central southern, south-east and south-west England, Wales and the Midlands, north to Yorkshire and Cumbria. Has increased and expanded since the 1980s, and now well distributed throughout most of England, Wales and the southern half of Scotland, and local further north to the Moray Firth. Found on Man. Discovered in Ireland in 1999 in Co. Down, and since recorded locally also in Cos. Antrim, Louth and Wexford. Local in the Channel Islands.

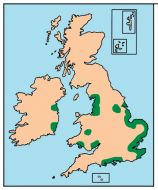
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Crescent Striped

plate 57

Apamea oblonga (Haw.)

Nb 73.161 (2325)



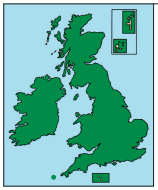
Field characters FW 18–21mm. Forewing quite broad, with nearly straight leading edge and rather blunt tip; pale to dark grey-brown, with a smooth, silky appearance. Kidney mark partly outlined in creamy white and often with white spots. Outermost cross-line (if present) forms a distinct 'W' centrally, and a solid dark bar joins central cross-lines. Most frequent form is faintly marked, but f. *abjecta* Hb. is strongly marked. **Similar species** Several, but none with a silky appearance. In White Colon, pale outer cross-line fails to form a distinct 'W' in middle and eyes are hairy. Dusky Brocade is smaller with a more curved leading edge. Confused has a similar combination of features, but is also smaller. Large Nutmeg has narrower, more pointed, mottled, warmer brown forewing. See also Scarce Brindle, usually more brown or reddish, and plainer, with more prominent chalky white on kidney mark. **Flight season** One generation. Late Jun–early Aug. Visits flowers of Marram, thistles, Sea Campion and rushes, from dusk. Comes readily to sugar and light, sometimes in numbers. **Life cycle** Overwinters as a larva. Larva late summer–late May or Jun. Hides by day in tunnels among roots or under stones, feeding at night and not climbing stems. Pupates in an underground chamber. **Larval foodplants** The roots and stem-bases of grasses, including Common and Reflexed saltmarsh-grasses, Bulbous Meadow-grass and Red Fescue. **Habitat** Saltmarshes, estuaries, mudflats, coastal grazing marshes (especially along ditches), brackish marshes, dune-slacks, broads and fens. **Status and distribution** Resident. Nationally Scarce B. Almost exclusively coastal. Local along the south coast from Dorset to East Kent, including the Isle of Wight. Well distributed along the north Kent coast, Thames Estuary and East Anglian coast, and locally north to Spurn, Yorkshire. Probably resident very locally inland, in East Anglia and south Yorkshire. Very local on the west coasts of England and Wales, mainly around the Severn, Mersey and north to Morecambe Bay, Lancashire. In Scotland, one in West Perthshire in 1999 (close to the Firth of Forth). Rare vagrant on Shetland. In Ireland, found only very locally in Cos. Louth and Wexford. Very local in the Channel Islands.

Dark Arches

plate 57

Apamea monoglypha (Hufn.)

Common 73.162 (2321)



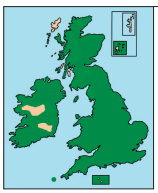
Field characters FW 19–26mm. Quite variable in colour, but easily recognised. Forewing rather tapered, most frequently greyish brown, but can also be pale greyish straw, dark brown or blackish. Large and usually conspicuous oval and kidney mark, and a 'W' mark near outer edge, are constant characters. Another useful diagnostic feature is a dark 'V' mark on either side of thorax, present even in dark examples. Form *infuscata* White is blackish with conspicuous markings, and f. *aethiops* Stdgr. is similar but with the markings obscured. This dark form predominates in parts of northern Britain. A rather small, warm brown form lacking in contrast occurs in Shetland. **Similar species** See Northern Arches. **Flight season** Usually one generation, Jun–Aug. Sometimes a partial second generation in the south, Sep–Nov (to late Dec in 2011). Comes to light, often in abundance, and to sugar and flowers, where it usually rests with wings horizontal and quivering. **Life cycle** Overwinters as a larva in a chamber among grass roots. Larva Aug–Jun. Feeds when small on flowers and seeds, later on roots and stem-bases from within its chamber. Pupates underground. **Larval foodplants** Grasses, including Common Couch and Cock's-foot. Egg-laying has been observed in the wild into leaf-sheaths of Tufted Hair-grass. **Habitat** Ubiquitous. In gardens, all types of grassland, arable land, hedgerows and verges, woodland, marshes, heathland and high moorland. **Status and distribution** Resident. Common. Very well distributed and usually abundant throughout the British Isles.

Light Arches

plate 57

Apamea lithoxylaea ([D. & S.])

Common 73.163 (2322)



Field characters FW 18–23mm. Forewing rather tapered, light reddish straw, finely marked with darker streaks and dots. Diagnostic characters are a short, roughly scythe-shaped dark mark near centre of wing, thickened in middle, and two diffuse brownish wedges on outer edge. Cross-line beyond middle is curved and represented by fine blackish dots or dashes. Variation is slight. **Similar species** See Reddish Light Arches. **Flight season** One generation. Late Jun–early Aug. Comes regularly to light, sometimes in quite large numbers, and to sugar and flowers. **Life cycle** Overwinters as a larva, probably at the base of the foodplant, on or below the ground. Larva Aug–Jun. Pupates underground. **Larval foodplants** Initially the flowers

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

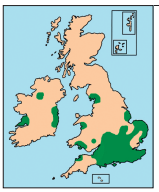
and seeds, and later the stem-bases, of grasses, including Annual Meadow-grass. **Habitat** A wide range of grassy places, including gardens, calcareous grassland and woodland rides. **Status and distribution** Resident. Common. Widespread and frequent throughout most of Britain, Man, Ireland and the Channel Islands, but not recorded from Shetland.

Reddish Light Arches

plate 57

Apamea sublustris (Esp.)

Local 73.164 (2323)



Field characters and similar species FW 18–21mm. Quite similar to Light Arches, but generally darker and with a slightly shorter, broader and less tapered forewing. Diagnostic markings are clearly defined reddish-brown wedges on outer edge, and instead of a centrally placed scythe-shaped mark, a shorter, more evenly thickened brown bar. Pattern is quite constant, but ground colour varies from whitish to reddish straw. See also Pale Shining Brown. **Flight season** One generation. Jun–Jul. Comes to light from dusk, sometimes in numbers, and to sugar. **Life cycle** Early stages apparently unknown in the wild, but probably overwinters close to the ground as a larva, like closely related species, and feeds until Jun, pupating underground. Hatches in Aug in captivity. **Larval foodplants** In captivity, at first the flowers and seeds of unspecified grasses, and later the roots. **Habitat** Chalk and limestone grassland, breckland, well-vegetated sand-dunes and shingle. **Status and distribution** Resident. Local. Fairly well distributed and locally frequent in central southern and south-east England, extending locally into the south Midlands, Cambridgeshire and East Anglia, including Breckland. Very local in south-west England, Wales, north-west England and Ireland.

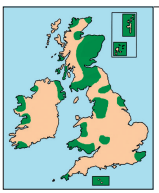
Confused

plate 57

Apamea furva ([D. & S.])

ssp. *britannica* Cock.

Local 73.165 (2329)



Field characters FW 16–19mm. Forewing dull, mousy brown, with leading edge straight or slightly curved towards tip. Markings fine, dainty and rather indistinct, but outline of kidney mark and wavy outermost cross-line are usually whitish. There is a tuft of long scales near base of trailing edge, forming a slight projection, and two narrow, dark outer bands on underside of forewing. A local form, distinctly greyer, occurs in the Burren, Co. Clare. **Similar species** Easily confused with the very variable f. *obscura* of Dusky Brocade. This lacks a scale tuft near base of trailing edge, and also has generally broader forewing with a more curved leading edge, usually with an element of richer brown and with only one dark band on underside. See also Crescent Striped and Nutmeg, which has hairy eyes. **Flight season** One generation. Jul–Sep. Comes to light and sugar. **Life cycle** Overwinters as a larva underground. Larva Sep–Jun. Hides underground by day and pupates in the soil without a cocoon. **Larval foodplants** The roots and lower stems of grasses, including Rough Meadow-grass and Wood Meadow-grass. **Habitat** Rocky coasts and mountain moorland; also very locally on sand-dunes. **Status and distribution** Resident. Local. Locally frequent in Wales, the north and west Midlands, northern England and Scotland, including the Hebrides, Orkney and Shetland. Very local in south-west England and near Dover and Folkestone, Kent, on northern and western coasts of Ireland, and in the Channel Islands. Old records from Man.

Scarce Brindle

plate 57

Apamea lateritia (Hufn.)

Immigrant 73.166 (2328)

Field characters FW 19–24mm. Forewing rather plain, reddish brown, light yellowish brown, dull brown, grey-brown or even blackish. Kidney mark (or at least outer part) and oval normally outlined in white, even in dark examples. Oval is variable, but usually small and often inconspicuous. Has a cross-line of small black spots beyond kidney mark, and usually small whitish spots along leading edge. **Similar species** See Crescent Striped, which is grey-brown and silky. The reddish-brown f. *combusta* of Clouded-bordered Brindle is smaller, kidney mark and oval are usually yellowish, oval is usually larger and often elongated, and forewing is usually pale at base. Somewhat similar Pale Shining Brown has a shiny appearance and irregular dark brown edging on outermost cross-line. **Flight season** One generation. As suspected immigrants in Jul–Aug, but Jun–Aug in mainland Europe. Comes to light. **Life cycle** Overwinters as a larva, feeding Sep–May. **Larval foodplants** The roots of various grasses, such as Sheep's-fescue, Tufted Hair-grass and Wavy Hair-grass. **Habitat** Possibly established briefly in gardens and allotments at Dovercourt, Essex, but unconfirmed. **Status and distribution** Immigrant. Fourteen published British records, the first in about 1887 at Porthkerry, Glamorgan, and the second on 17 Jul 1972 in West Norwood, south London, with another the following night in Bexley, Kent. Six records from Dovercourt, Essex, between 1985 and 1990 may have been the result of temporary establishment. One at Spurn, Yorkshire, on 17 Jul 1991; Norwick, Shetland, on 11 and 12 Aug 1995; Landguard, Suffolk, on 4 Jul 2000; Fetlar, Shetland, on 13 Aug 2004; Fair Isle, Shetland, on 23 Jul 2009; and Saltwood, Kent, on 14 Jul 2013. Resident across much of Europe, but predominantly eastern, as reflected by the distribution of immigrant records.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

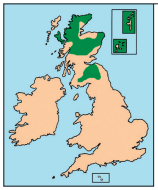
Northern Arches/Exile

plate 57

Apamea exulis (Lefeb.)

Na

73.167 (2324)



Field characters and similar species The two geographically isolated populations of this species were formerly regarded as distinct subspecies, but we retain their respective English names. **Northern Arches**: FW 17–19mm. Key feature is the broad, deep-scaled, shaggy thorax. About the size of Dusky Brocade, but more thickset, and smaller than Dark Arches (which has dark 'W' mark on thorax), with a less tapered, broad and blunt forewing. In Dark Brocade, forewing is more angular and tapered, usually with three points on outer edge of kidney mark. Both Dusky Brocade and Dark Brocade have a sharply defined double crest of scales on thorax, absent in Northern Arches. In Dark Brocade, eyes have long lashes. Forewing colours and patterning variable: usually dark brown, even blackish, but sometimes paler brown and more variegated, but indistinctly marked, although kidney mark is generally paler. Lighter brownish forms usually have a pinkish tinge, especially to cross-lines, which distinguishes them from Confused and Dusky Brocade. Some forms closely resemble Exile. **Exile**: FW 19–20mm. Similar to Northern Arches, but tends to be larger, more strongly marked and less reddish, although some of the latter are almost indistinguishable. Ground colour varies considerably, from honey-coloured on Unst to blackish on the mainland of Shetland. **Flight season** One generation. Jul–Aug. Comes readily to sugar and light. **Life cycle** Overwinters as a larva, possibly over more than one winter. Larva Sep–May or Jun. Pupates underground. **Larval foodplants** Not confirmed in the wild. Assumed to be the lower stems and roots of grasses, as with all the other *Apamea* species found in the British Isles, possibly starting development on the flowers and seeds. Has been reared successfully on Purple Moor-grass. **Habitat** Peaty moorland and upland grassland. Northern Arches from *c.* 200m to over 1,000m, Exile often close to sea-level. **Status and distribution** Resident. Northern Arches: Nationally Scarce A, but records suggest Nationally Scarce B. Formerly considered a subspecies endemic to mainland Scotland, Orkney and Arran. Widespread but local in the Highlands and in southern Scotland. Very local in Northumberland, where the first example was caught at light next to Kielder Reservoir on 13 Jul 1992, probably the first record in England. Exile: Shetland (including a record from Fair Isle in 1987), where it is locally frequent.

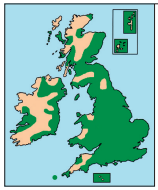
Double Lobed

plate 57

Lateroligia ophiogramma (Esp.)

Common

73.168 (2336)



Field characters FW 13–16mm. Rather strikingly and uniquely marked. Forewing rather narrow, and sandy, pale or dull reddish brown. A large, roughly triangular or lobed reddish-brown or dark brown blotch extends along leading edge almost to tip and into central area, surrounding pale kidney mark, and culminating in a dark bar. The trailing edge of this blotch is variably edged with white. A melanic form occurs, as illustrated, in which forewing is mainly dark brown, but the blotch remains visible. **Flight season** One generation. Late Jun–Aug. Comes to light, sugar and flowers. **Life cycle** Overwinters as a larva inside a stem of the foodplant. Larva Aug–early Jun. Pupates in a cocoon on the ground or in leaf litter. **Larval foodplants** Reed Canary-grass, Reed Sweet-grass and cultivated Pampas-grass, feeding inside the stems and burrowing downwards. **Habitat** Fens, marshes, riverbanks and lake margins, watermeadows and damp woodland. Also in gardens, where it breeds on cultivars. **Status and distribution** Resident. Common. Quite well distributed throughout England, Wales and Man. In Scotland, formerly only found in the south and Central Belt, and locally north to Aberdeenshire, but has recently expanded and now quite widespread in the east and north-east, with scattered records in the west (including the Hebrides) and north to Caithness, Orkney and Shetland. Widespread but local in Ireland and local in the Channel Islands.

Common Rustic

plate 58

Mesapamea secalis (L.)

Common

73.169 (2343)

Field characters FW 12–16mm. Extremely variable, but with several consistent features. Forewing is blunt-tipped and outer edge is rounded and not sharply angled. Kidney mark is always discernible and at least partly outlined with white, sometimes largely white or creamy white, usually with roughly concentric markings. Ground colour can be almost any shade of yellowish brown, greyish brown, reddish brown, blackish brown or black, either uniform or patchy. Cross-lines vary in strength, and central ones may be joined by a blackish bar. One distinctive form, usually without a blackish bar, is yellowish brown, with dark brown along leading edge and around oval and kidney mark. Very occasionally there is a broad, darker central cross-band. **Similar species** See Lesser Common Rustic, reliably separable only by examination of genitalia,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

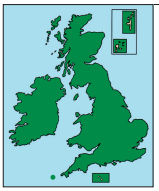
and Small Clouded Brindle. Crescent and the ear moths all have sharp-tipped forewing. See also Suspected and Oak Rustic. **Flight season** One generation. Jul–Aug. Comes to light, sometimes in large numbers, and to sugar and flowers, especially of grasses, buddleias and ragworts. **Life cycle** Overwinters as a larva. Larva Sep–May. Feeds inside a stem, moving to new ones as it grows. Pupates in a cocoon underground. **Larval foodplants** Grasses, including Cock's-foot, Tall Fescue, Tufted Hair-grass and cereal crops; also Hairy Wood-rush. **Habitat** A wide range of grasslands and grassy places, including gardens, farmland, heathland, calcareous grassland and woodland. **Status and distribution** Resident. Common. Well distributed and generally abundant throughout the British Isles.

Lesser Common Rustic

plate 58

Mesapamea didyma (Esp.)

Common 73.170 (2343a)



Field characters and similar species FW 11–16mm. Almost identical to Common Rustic, with a comparable range of variation, and separable only by examination of genitalia. Slightly smaller on average. Black examples with a chalky-white kidney mark are usually Lesser Common Rustic. See also Small Clouded Brindle. Crescent and the ear moths all have a sharp-tipped forewing. **Flight season** One generation. Jul–Aug. Comes to light, sugar and flowers. **Life cycle** Overwinters as a larva. Larva Sep–May. Feeds inside a stem, moving to new ones as it grows. Pupates in an underground cocoon. **Larval foodplants** Grasses, including Cock's-foot and fescues. **Habitat** A wide range of grasslands and grassy places, including gardens. **Status and distribution** Resident. Common. Only recently recognised as a species, so knowledge of its distribution is very incomplete. Indications are that it occurs throughout most of Britain, Man and Ireland. Confirmed from the Channel Islands, where the black form is widespread.

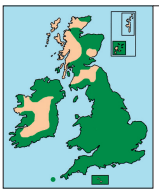
Note Remm's Rustic *Mesapamea remmi* Rézb.-Res. was raised as a species on the basis of small differences in genitalia from Common Rustic and Lesser Common Rustic, as mentioned in previous editions. It was later found that these were shown in only a very small proportion of large samples dissected (e.g. three out of 600), and it was subsequently concluded that these were hybrids between those two species.

Rosy Minor

plate 58

Litoligia literosa (Haw.)

Common 73.171 (2342)



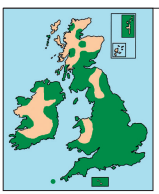
Field characters and similar species FW 10–13mm. Mixture of pinkish or reddish brown and grey is diagnostic in most cases. Ground colour sometimes fawnish. Central cross-lines strongly bowed towards one another near centre and consequently dark bar joining them is short. In the London area and elsewhere in southern England, the Midlands and northern England, rather dark, poorly marked forms are frequent, along with brownish-black f. *aethalodes* Rich. A very pale form occurs on the Sussex coast and particularly bright forms occur in western Ireland. Marbled, Rufous and Tawny Marbled minors can be similar in build, but the central cross-lines are further apart, so that any dark central bar is longer. They also emerge earlier in the year. See also Cloaked Minor. **Flight season** One generation. Late Jun–Aug. Comes to light, sugar and flowers, especially of ragworts and Marram. **Life cycle** Overwinters as a larva. Larva Sep–early Jun. Feeds at first on roots, then inside a stem. Pupates in a thin cocoon in soil or leaf litter. **Larval foodplants** Various grasses, including Lyme-grass, Marram and Cock's-foot, and also cereal crops and sedges. **Habitat** Various open grassy calcareous habitats, including coastal cliffs, sand-dunes, fens, scrub and gardens. **Status and distribution** Resident. Common. Most abundant in coastal situations, but well distributed inland in calcareous areas, and at lower densities elsewhere, in England, Wales and Man, and in southern and eastern Scotland north to Caithness and Orkney, but very local in the north-west. Also around the coast of Ireland. Local in the Channel Islands.

Cloaked Minor

plate 58

Mesoligia furuncula ([D. & S.])

Common 73.172 (2341)



Field characters and similar species FW 10–12mm. More slender than the other minors, with a narrower forewing. Extremely variable, but outer central cross-line (when present) forms a deep question mark, curving around kidney mark and then turning sharply towards base, before straightening out and then turning slightly towards trailing corner as it meets trailing edge. Consequently, central bar is short. In distinctive f. *bicoloria* Vill., basal half of forewing is brown, contrasting sharply with broad white outer half and thereby forming a 'cloak' when moth is at rest. Other less contrasting forms occur, somewhat resembling Rosy Minor, but not pinkish brown. See also Least Minor and female

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

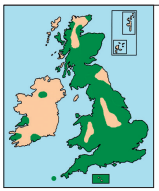
Small Dotted Buff. Form *reticulata* Tutt is brownish with a whitish kidney mark, and obscurely marbled with greyish white and shades of brown. These and almost unmarked brown, dark brown or dull straw-coloured forms, with a darker outer edge, occur quite frequently. Plain, light straw-coloured forms occur on sand-dunes in western Ireland and also in Northumberland, where f. *latistriata* Hoff. & Knud. also occurs, pale with a long blackish streak near trailing edge. These pale forms are somewhat like Small Wainscot, which is stouter, usually with a central dark streak on forewing. **Flight season** One generation. Jul–early Sep. Comes to light, sugar and flowers, especially of Marram and ragworts. Male flies low over the ground late in the day, especially around sunset. **Life cycle** Overwinters as a larva. Larva Aug–early Jun. Feeds inside stems, then eats out a chamber at base of foodplant, in which it pupates. **Larval foodplants** Grasses, including Sheep's-fescue, Tufted Hair-grass and False Oat-grass. **Habitat** Typically in open, well-drained grassland on light soils, usually with a short sward, especially coastal sand-dunes and cliffs, chalk downland and some gardens. **Status and distribution** Resident. Common. Well distributed in most of England and Wales, Man and the Channel Islands. Widespread but mainly coastal in the southern half of Scotland. Scarce and probably vagrant further north, including Shetland. Widespread around the coast of Ireland, scarce inland.

Marbled Minor

plate 58

Oligia strigilis (L.)

Common 73.173 (2337)



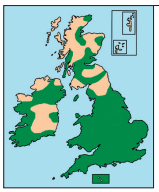
Field characters and similar species FW 11–13mm. Highly variable and separable with certainty from the comparably variable Rufous Minor and Tawny Marbled Minor only by differences in genitalia, a simple operation with males (see illustration). Brightly marked examples of all three species are usually characterised by a solid black bar between central cross-lines of forewing and a broad paler band beyond, but a large proportion of most populations are obscurely marked melanics. However, some characters are helpful in selecting probable examples of each species for confirmation. Large specimens occurring early in the season, with a chalky-white outer band, well-defined outer central cross-line, black and scalloped beyond kidney mark, and an orange tuft on thorax, are likely to be Marbled Minors. Outer band can also be greyish white, light brown, reddish brown, dark brown or even absent, as may be the black central bar. Equally variable throughout its range. See also Rosy Minor and Minor Shoulder-knot. **Flight season** One generation. Late May–Jul (or Aug in northern Scotland). Comes regularly to light, sugar and honeydew. **Life cycle** Overwinters as a larva. Larva Aug–May. Feeds inside a stem, moving to new ones as it grows. Pupates among the roots of the foodplant. **Larval foodplants** Grasses, including Cock's-foot, Common Couch and Reed Canary-grass. **Habitat** A wide range of grassy places, including gardens, grassland on most types of soil, woodland rides and marshes. **Status and distribution** Resident. Common. Well distributed and frequent throughout most of Britain, Man and the Channel Islands. Widespread but less frequent in Scotland, including the Inner Hebrides. Very local and uncommon in Ireland.

Tawny Marbled Minor

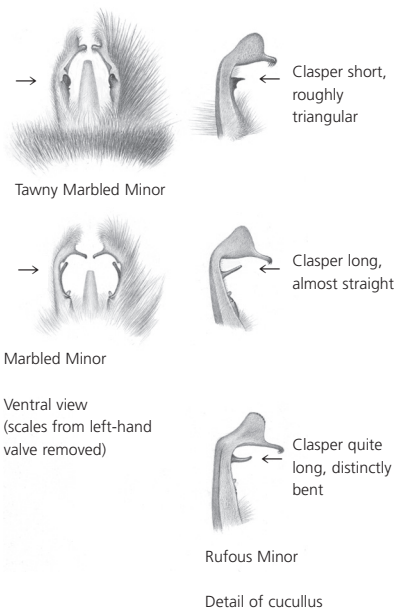
plate 58

Oligia latruncula ([D. & S.])

Common 73.174 (2339)



Field characters and similar species FW 11–13mm. See Marbled Minor. Small blackish examples with a brown, often coppery outer or central band and no reddish or orange tufts on thorax are likely to be Tawny Marbled Minors. The whitish-banded form is more rare, except in Ireland, where it is frequent, although examples with a whitish-tinged, light brown band occur relatively infrequently elsewhere. See also Rosy Minor and Minor Shoulder-knot. **Flight season** One generation. Late May–late Jul, or Aug in northern Britain and Ireland. Comes regularly to light, and to sugar. **Life cycle** Overwinters



Genitalia of male *Oligia* species.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

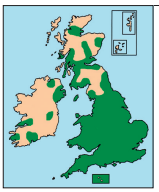
as a larva. Larva Aug–Apr or May. Feeds inside a stem, moving to new ones as it grows. Pupates in a flimsy cocoon among the roots of the foodplant. **Larval foodplants** Grasses, including Cock's-foot. **Habitat** A wide range of grasslands, including woodland rides and gardens. **Status and distribution** Resident. Common. Well distributed throughout most of England, Wales, Man and the Channel Islands. Apparently local in Northumberland and in Scotland, north to Rum and Caithness. Widespread and locally frequent in Ireland.

Rufous Minor

plate 58

Oligia versicolor (Borkh.)

Local 73.175 (2338)



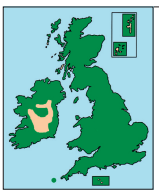
Field characters and similar species FW 11–12mm. See Marbled Minor. Medium-sized, well-marked examples with a bright, conspicuous, pale brown oval and kidney mark, marbled with reddish, and with one or more reddish tufts on thorax and a greyish-white outer band are more likely to be Rufous Minors. Note that in one form of Tawny Marbled Minor forewing is extensively tinged with deep reddish brown. See also Rosy Minor and Minor Shoulder-knot. **Flight season** One generation. Jun–Jul. Comes to light and sugar. **Life cycle** Overwinters as a larva. Larva Aug–spring. In captivity, feeds inside a stem, moving to new ones as it grows. Pupates in a flimsy cocoon among the roots of the foodplant. **Larval foodplants** Found in the wild on Cock's-foot and Wavy Hair-grass, confirmed by rearing and dissection of adults. In captivity, feeds on the insides of the stems of grasses. **Habitat** Woodland, heathland, coastal cliffs and many other grassy places. Generally uncommon in urban areas. **Status and distribution** Resident. Local. Quite well distributed and locally frequent throughout most of England and Wales and the southern half of Scotland. Very local in the northern half and recorded north to West Ross. Confirmed on Man. Very local and uncommon in Ireland. Widespread and frequent in the Channel Islands.

Middle-barred Minor

plate 58

Oligia fasciuncula (Haw.)

Common 73.176 (2340)



Field characters FW 10–12mm. Small, quite thickset and distinctive. Forewing orange-brown, reddish brown or pale greyish brown (f. *pallida* Tutt), with a dark central bar between central cross-lines, edged at each end with white, most strongly on its outer edge. Variation is relatively slight, but in north-east England dull greyish-brown forms occur, and in northern Britain the moth tends to be smaller and darker. **Similar species** Female Small Dotted Buff is slimmer. See also Least Minor. **Flight season** One generation. Jun–Jul, or early Aug in northern Britain. Comes to light, sugar and flowers. **Life cycle** Overwinters as a larva. Larva Aug–May. Feeds at night, hiding by day inside a leaf-sheath. Pupates in a cocoon near the ground. **Larval foodplants** Grasses, particularly Tufted Hair-grass. **Habitat** Damp grassland, marshes, fens, woodland edges, rides and clearings; also regularly in gardens. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout the British Isles.

Maize Wainscot

plate 58

Sesamia nonagrioides (Lefeb.)

Suspected immigrant 73.177 (2379a)

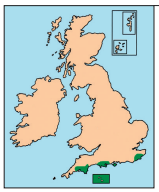
Field characters FW 13–19mm. Varies considerably in size. Quite stocky with a rather broad, light brown or straw-coloured forewing. Markings somewhat variable. Fairly plain, often with a diffuse dark central streak, line of outer dots and darker shading towards outer edge, which has a dark line or dark dashes along it. All of these markings may be faint. Hindwing pure white. Antennae feathered in male. **Similar species** Several resident wainscots are superficially similar, but none has the above combination and they do not have feathered antennae. Most, such as Rush Wainscot, Webb's Wainscot and Fen Wainscot, have a darker hindwing. Common Wainscot and Mathew's Wainscot may have a whitish hindwing, but forewing is narrower and has more prominent pale veins, especially the central one. Lyme Grass is more slender. Examination of genitalia may be required for separation from the closely related *Sesamia cretica* Led., which tends to be slightly smaller and has a similar European distribution. **Flight season** May–Oct in mainland Europe, all year in the tropics. Comes to light. **Life cycle** Multiple generations per year, probably three or four in Europe. Breeds continuously in the tropics. **Larval foodplants** Grasses, including arable crops, especially Maize, but also including wheat, Oats and Barley, feeding internally in the stem and fruiting bodies. **Habitat** Open grassy areas, including farmland. **Status and distribution** Suspected rare immigrant. A single record, one in a light trap on St Agnes, Scilly, on 2 Oct 2011 during a period of high migrant activity. Widespread in the warmer parts of southern Europe, where it is an agricultural pest.

Beautiful Gothic

plate 58

Leucochlaena oditis (Hb.)

RDB; suspected immigrant 73.178 (2226)



Field characters FW 14–16mm. The white lines resembling crazy paving, coupled with an often golden oval and kidney mark, and the small size of the moth, are diagnostic. Varies both in ground colour and markings, from dark purplish forms in

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

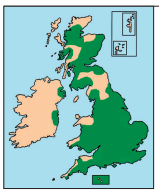
Cornwall to grey forms, which are predominant at eastern end of range. Antennae feathered in male. **Similar species** See Dumeril's Rustic. **Flight season** One generation. Late Aug–mid-Oct. Adults rest on grass stems soon after dark and fly in numbers a couple of hours later. Frequent at light-traps in the breeding areas. **Life cycle** Overwinters as a larva, hatching in Oct, feeding by night and growing slowly throughout the winter. Spins a cocoon in the soil in Feb but rests in it until late May or early Jun before forming a pupa. **Larval foodplants** Various grasses. Reported from Common Couch and Annual Meadow-grass, with eggs being laid on the seedheads. **Habitat** Grassy cliffs and well-drained south-facing slopes by the sea, in areas where frosts are rare. **Status and distribution** Resident. Red Data Book species. Resident locally from Cornwall, Devon, Dorset and the south-west coast of the Isle of Wight. Singles (either vagrants or immigrants) at Sandy Point, Hayling, Hampshire, in 2010; near Bognor, West Sussex, in 1976; Rye, Sussex, in 1999; and Dungeness, Kent, in 2006. Widespread and frequent in the Channel Islands.

Orange Sallow

plate 58

Tiliacea citrago (L.)

Common 73.179 (2271)



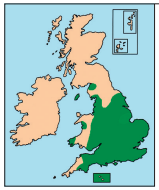
Field characters FW 15–17mm. Forewing broad, pointed, orange-yellow, finely speckled with orange-red, and with orange-brown cross-lines and veins. There are three complete cross-lines, the central one thicker, fairly straight, diagonal and passing between oval and kidney mark, touching the latter. This pattern is constant and diagnostic. There is slight variation in colour, with some examples dull orange, and in extent of speckling and intensity of dark cross-lines and veins (all of which may be brown). **Similar species** See Orange Upperwing. **Flight season** One generation. Aug–early Oct. Comes to light, wine ropes and sugar (especially if painted on lime leaves), and feeds at flowers, honeydew and overripe blackberries. **Life cycle** Overwinters as an egg, laid on a twig of the foodplant. Larva late Mar–early Jun, feeding at night. At first hides by day between spun leaves, and when larger at the base of the tree, climbing up at dusk to feed. **Larval foodplants** Native and introduced limes. Also reported from a weeping variety of Wych Elm. **Habitat** Broadleaved woodland, parks, avenues and gardens in rural and suburban situations. **Status and distribution** Resident. Common. In Britain north to East Ross. One report from Man. Rare in Ireland, recorded since 2002 in very small numbers from Cos. Antrim, Down, Dublin and Wicklow.

Barred Sallow

plate 58

Tiliacea aurago ([D. & S.])

Common 73.180 (2272)



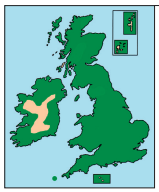
Field characters FW 14–16mm. Forewing pinkish red or purplish brown, with a broad, wavy-edged, usually yellow or orange-yellow central band. A small blotch at base and a thin, wavy outer line are both same colour as central band. This pattern is very constant and diagnostic. Less frequently, central band is deep orange or reddish orange, and ground colour is pale pinkish brown. **Flight season** One generation. Sep–early Nov. Comes to light and sugar, and feeds at Ivy flowers and overripe berries. **Life cycle** Overwinters as an egg, laid on a twig of the foodplant. Larva Apr–early Jun, feeding mainly at night. **Larval foodplants** Widely reported as mainly Field Maple and Beech, at first on the buds and flowers, and when larger on the leaves. Also found and reared on Pedunculate Oak. In captivity, successfully reared on the foliage of many other trees, including elms, Goat Willow and Hazel. **Habitat** Broadleaved woodland, mature hedgerows, scrubby farmland, downland and some gardens. **Status and distribution** Resident. Common. Quite well distributed, in most of England north to south and central Yorkshire, and local further north to Cumbria and Co. Durham. Very local in western Wales. First recorded on Man in 2002. Local in the Channel Islands.

Pink-barred Sallow

plate 58

Xanthia togata (Esp.)

Common 73.181 (2273)



Field characters FW 13–16mm. Deep red or pinkish-brown head and shoulders, contrasting with a yellow thorax, readily distinguish this moth from other sallows. Slightly hooked forewing is bright orange-yellow, with deep pink or reddish-brown markings. 'Pink bar' is a roughly diagonal band extending from leading edge to about halfway along trailing edge, its inner edge elbowed at kidney mark, which is dark in trailing half. These features vary little; band is usually fairly solid, but sometimes consists of broken, scalloped lines. **Similar species** Sallow has yellow or orange shoulders, and trailing half of kidney mark is usually blackish. **Flight season** One generation. Sep–Oct in the south, Aug–Sep in the north. Comes to light and sugar, and feeds at Ivy flowers and overripe blackberries. **Life cycle** Overwinters as an egg, laid in short rows on twigs of the foodplant, close to a bud. Larva late Mar–early Jun. Feeds at first inside a catkin until it falls. Constructs an underground cocoon and pupates about six weeks later. **Larval**

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Barred Sallow.

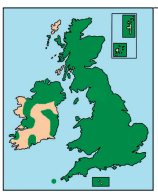
foodplants The catkins of sallows and poplars; later on herbaceous plants such as docks. **Habitat** Most frequent in broadleaved woodland, carr, marshes and fens, but also occurs on heathland and other places where there are sallows and poplars, including gardens. **Status and distribution** Resident. Common. Well distributed and frequent throughout most of Britain, Man and Ireland, including Orkney and the Hebrides. Vagrant on Shetland. Local in the Channel Islands.

Sallow

plate 58

Cirrhia icteritia (Hufn.)

Common 73.182 (2274)



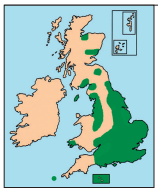
Field characters FW 14–17mm. Usually unmistakable. Slightly hooked forewing is yellow or orange-yellow with reddish-brown, dark brown or pinkish markings and usually a black spot in trailing half of kidney mark. There is huge variation in extent and intensity of markings. Most frequently, forewing is irregularly banded or extensively marbled. Form *flavescens* Esp. has almost pure yellow forewing with very faint orange cross-lines, a reddish-black spot in faint kidney mark and a row of small dark spots near outer edge. Form *obsoleta* Tutt is similar but orange-yellow. Extreme examples of these forms, which occur regularly, are almost unmarked. **Similar species** See Pink-barred Sallow, Dusky-lemon Sallow, Pale Lemon Sallow and Angle-striped Sallow. **Flight season** One generation. Sep–Oct in the south, late Aug–early Oct in the north. Comes to light and sugar, and feeds at Ivy flowers and overripe blackberries. **Life cycle** Overwinters as an egg, laid near buds of the foodplant. Larva late Mar–early Jun. Feeds inside a catkin until it falls. Constructs an underground cocoon, pupating about six weeks later. **Larval foodplants** The catkins of sallows and poplars; later on herbaceous plants such as docks. **Habitat** Most frequent in broadleaved woodland, carr, marshes and fens, but also on heathland and moorland, and in other places where there are sallows and poplars, including gardens. **Status and distribution** Resident. Common. Well distributed and frequent throughout England, Wales, Scotland (including the Inner Hebrides and Orkney, but vagrant on Shetland) and Man. Widespread in Ireland. Local in the Channel Islands.

Dusky-lemon Sallow

plate 58

Cirrhia gilvago ([D. & S.])

Local 73.183 (2275)



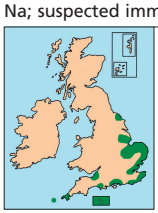
Field characters FW 15–18mm. Forewing not hooked, dull orange-yellow or orange-brown, variably and irregularly banded, marked and clouded with blackish grey or (less often) dark brown. Dark markings may be faint or highly reduced to narrow, broken cross-lines, or most of wing is clouded. Hindwing whitish, sometimes darker near trailing corner. **Similar species** Variegated forms of Pale-lemon Sallow have a slightly hooked forewing, as do darker forms of Sallow, which is also brighter orange-yellow. Some forms are superficially similar to Brick, which has a grey hindwing with a brownish-white wedge at leading edge and several fine, unbroken cross-lines on forewing, the outer edged with reddish. **Flight season** One generation. Late Aug–early Oct. Comes to light and sugar, and feeds at Ivy flowers and overripe blackberries. **Life cycle** Overwinters as an egg, laid on a twig of the foodplant. Larva Apr–early Jun. Feeds at first inside a flower bud and later more openly. **Larval foodplants** Usually the buds, ripening seeds and leaves of Wych Elm, but sometimes of English Elm. **Habitat** Broadleaved woodland, hedgerows and parkland with elms. Needs elms large enough to flower in abundance. **Status and distribution** Resident. Local. Declined in numbers in the Rothamsted Insect Survey light-trap network by 94% between 1968 and 2007. Likely to have been affected by Dutch elm disease. Formerly found, generally quite locally, over much of England, parts of Wales and more rarely in the southern half of Scotland, north to Aberdeenshire. The range has changed little, but it is now apparently more uncommon in many areas, including Scotland, but recently found around the Moray Firth. Vagrant on Shetland. Local and rare on Man, where it was first recorded in 1989. Recorded on Jersey in 1962, on Guernsey in 1984, and more recently on Alderney and Guernsey.

Pale-lemon Sallow

plate 58

Cirrhia ocellaris (Borkh.)

Na; suspected immigrant 73.184 (2276)



Field characters FW 18–19mm. Forewing dull orange-brown or grey-brown, slightly but distinctly hooked, and rather uniformly coloured in the most frequent form, with a clearly defined kidney mark and outer cross-line. Kidney mark dark in trailing half, often with a small white spot. Less

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

frequent f. *gilvescens* Worsley-Wood is more variegated. Hindwing whitish, darker near trailing corner. **Similar species** Dusky-lemon Sallow (kidney without white spot) and Brick have a blunter forewing tip. Outermost cross-line of Brick is heavily edged with reddish and hindwing is grey with brownish-white wedges. Form *gilvescens* can be somewhat like an orange form of Sallow, which is more brightly coloured and lacks white spot in kidney mark. **Flight season** One generation. Sep–Oct. Attracted to overripe blackberries and other fruit, to sugar, and to the flowers of grasses and rushes. Comes to light in very small numbers, even when larvae are frequent nearby. **Life cycle** Overwinters as an egg on a twig of the foodplant. Larva Apr–early Jun. Feeds mainly at night, and rests underground for about six weeks before pupating there. **Larval foodplants** The catkins of Black-poplar and cultivars such as Lombardy-poplar, the larvae falling with the catkins to the ground and feeding on them until they disintegrate. Able to eat poplar leaves and also the foliage of docks and other low-growing vegetation below the trees. **Habitat** Many low-lying open situations where the foodplants grow naturally or have been planted, including long-established commons, riversides and floodplains, roadsides, shelterbelts, parks and sports grounds. **Status and distribution** Resident and suspected immigrant. Nationally Scarce A. Not found in Britain until 1893, in north-east Surrey, and seems unlikely to have been overlooked. In Surrey, it occurs especially along the banks of the River Thames, including suburban areas, and extends very locally into north Kent. Also locally distributed throughout East Anglia, Essex, Cambridgeshire and Huntingdonshire, and extending west into Northamptonshire and Bedfordshire. Last recorded in Buckinghamshire and Berkshire in the early 1980s. Single examples occur elsewhere, including Wanlip Gravel Pit in Leicestershire (1987), Melbury Down in Dorset (1994), Grosmont in Yorkshire and Langworth in Lincolnshire (2006), and in southern coastal counties, suggesting immigration. Such records have become more frequent and almost annual since 2006, with at least 24 in the peak year of 2011 and over 50 from 2002 to 2011. There is a single 21st-century record from Guernsey.

Pale Stigma

plate 59

Mesogona acetosellae ([D. & S.])

Suspected immigrant 73.185 (2141)

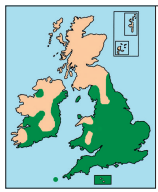
Field characters and similar species FW 19–21mm. About the size of Lesser Yellow Underwing and quite distinctive. Forewing pale reddish brown, sometimes pinkish or greyish, broad and rather plain. Has a conspicuous pale-outlined kidney mark and oval between two brown cross-lines, the inner straight and the outer curved, which converge towards trailing edge. Hindwing pale brownish or pinkish grey. **Flight season** Aug–Oct. **Larval foodplants** Mainly oak, but also reported from Blackthorn, Hawthorn, poplars and sallows. **Habitat** Woodland and more open places. **Status and distribution** Rare immigrant. Recorded only once in the British Isles: a single female at sugar in a garden at Arlington, about 10km inland from Eastbourne, East Sussex, on 26 Oct 1895, during an influx of immigrant moths. Widespread in central and southern Europe.

Beaded Chestnut

plate 59

Agrochola lychnidis ([D. & S.])

Common 73.186 (2267)



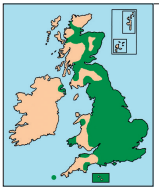
Field characters FW 15–18mm. Very variable, but not difficult to recognise. Forewing somewhat pointed and kidney mark narrow. Oval generally dark, small and often elongated. Ground colour most frequently chestnut brown or reddish brown, but can be brownish white, greyish yellow, light or dark greyish brown or blackish. There is usually a diagonal, dark brown or blackish dash on leading edge near tip, and often several other weaker dark spots along leading edge, which itself is sometimes whitish (best seen from front). Some examples are very faintly marked, while others have strong light or dark cross-lines or bands and pale veins. Hindwing uniformly grey, sometimes with a small, obscure dark spot or crescent near centre, and light brown fringes. **Similar species** See Brown-spot Pinion, Lunar Underwing, Southern Chestnut and Flounced Chestnut. **Flight season** One generation. Sep–early Nov. Comes to light, sometimes in large numbers, and to sugar. Feeds at Ivy flowers and overripe berries. **Life cycle** Overwinters as an egg. Larva late Mar–Jun, feeding mainly at night. Forms a brittle cocoon underground, and pupates therein several weeks later. **Larval foodplants** Various herbaceous plants, including buttercups, clovers and chickweeds. Also on grasses and, when larger, on broadleaved trees and shrubs, particularly Hawthorn. **Habitat** Broadleaved woodland, scrub, hedgerows, grassland, heathland, gardens and many other situations. **Status and distribution** Resident. Common. Frequent, but liable to large annual fluctuations in numbers. Formerly one of the most numerous autumn moths in many English lowlands, including gardens, but much less numerous than formerly. Numbers declined by 93% from 1968 to 2007 in the Rothamsted Insect Survey light-trap network. Remains well distributed in most of Britain north to Yorkshire and Lancashire, but scarce further north to Cumbria and Northumberland. Local in Wales and on Man. Rarely recorded in Scotland (the last in 1976, in Stirlingshire). Locally frequent in Ireland, mainly along the east coast and in the south. Widespread and frequent in the Channel Islands.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Brown-spot Pinion plate 59

Agrochola litura (L.)

Common 73.187 (2266)

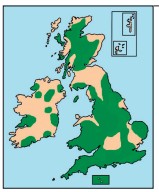


Field characters FW 14–17mm. Short diagonal dash near tip of forewing, marks along leading edge and partial cross-line near wing base, all intensely black, are diagnostic. Forewing reddish brown, less often dark purplish brown or greyish brown. In f. *rufa-pallida* Tutt, basal half, as far as obtusely angled narrow central band, is distinctly paler reddish brown, and in f. *borealis* Sp.-Schn. it is light greyish brown or whitish grey. Hindwing uniformly grey. **Similar species** Beaded Chestnut lacks a short black cross-line near base of forewing, and marks along leading edge are dark brown, or occasionally blackish but not intensely black and often weak. Kidney mark is generally narrower, and oval is smaller and often elongated. **Flight season** One generation. Late Aug–Oct. Comes to light and sugar, and feeds at Ivy flowers and overripe blackberries. **Life cycle** Overwinters as an egg. Larva Apr–early Jun, feeding at night. Constructs a strong underground cocoon and pupates about six weeks later. **Larval foodplants** Herbaceous plants, including Meadowsweet, Common Sorrel and Bladder Campion. Also when larger on low-growing leaves of broadleaved trees such as oaks, sallows and hawthorns. **Habitat** Broadleaved woodland, parkland, heathland, fens, scrub, hedgerows and gardens. **Status and distribution** Resident. Common. Formerly one of the most numerous autumn moths in English lowlands, including gardens. However, numbers in the Rothamsted Insect Survey light-trap network declined by 82% from 1968 to 2007. Well distributed throughout most of England, but local in the south-west and in Wales. Well distributed, mainly on lower ground, in mainland Scotland, in the south and in the eastern half north to the Moray Firth, but very scarce in the north-west. Two records only from Ireland, singles at different sites in Co. Down, in 1996 and 2004. In the Channel Islands, recorded recently on Alderney, with older records from Guernsey and Jersey.

Flounced Chestnut plate 59

Agrochola helvola (L.)

Common 73.188 (2265)



Field characters FW 16–18mm. Diagnostic features are the broad, pointed forewing, usually rather softly marked, with a wide, dark reddish-brown or purplish-brown band at base and a slightly narrower one near outer margin. This pattern is constant, but intensity of markings varies, as does brown ground colour, which may be tinged greenish or reddish. Hindwing smoky grey with a pale fringe and a narrow pale band around outer margin, leading into a broad, pale wedge along leading edge. Unlike related species, when fully at rest usually sits with wings held flat and away from surface, and with head pointed slightly downwards. **Similar species** Beaded Chestnut has a narrower forewing, narrow kidney mark and oval, and uniformly grey hindwing. See also Southern Chestnut, which is similar in shape, but smaller, with a more pointed, deep reddish-brown forewing. **Flight season** One generation. Sep–Oct. Comes to light and sugar, and feeds at Ivy flowers and particularly at overripe blackberries. **Life cycle** Overwinters as an egg, laid on a twig or bark. Larva Apr–Jun, most active at night. Constructs an underground cocoon and pupates about eight weeks later. **Larval foodplants** Broadleaved trees, including oaks, elms, birches and willows, also Heather and Bilberry. **Habitat** Broadleaved woodland, scrubby downland, heathland and moorland. Often where there is much Bramble, though possibly the moth is simply easiest to record where it is attracted to the overripe berries. **Status and distribution** Resident. Common. Less numerous than formerly. Numbers declined by 94% from 1968 to 2007 in the Rothamsted Insect Survey light-trap network. Widespread but local throughout most of Britain north to Caithness and Sutherland, including Man and the Inner Hebrides. Apparently most in decline in lowland areas, especially in central southern England and the Midlands. Scattered and local in various parts of Ireland. Recorded on Jersey and Alderney.

Red-line Quaker plate 59

Agrochola lota (Cl.)

Common 73.189 (2263)

Field characters and similar species FW 15–18mm. The most frequent form of this moth is rather like a grey version of Yellow-line Quaker, but slightly larger and with a broader forewing. Outermost cross-line is reddish brown, edged yellowish, and fairly straight apart from a small notch near

Larva of Red-line Quaker.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

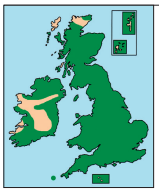
leading edge. Variation is slight. Trailing half of kidney mark usually intensely black. Forewing usually slate grey, sometimes lighter. Form *rufa* Tutt is flushed with pinkish red and is most frequent in the north and west. **Flight season** One generation. Sep–Nov. Comes to light and sugar, and feeds at Ivy flowers and overripe berries. **Life cycle** Overwinters as an egg, laid singly on a twig of the foodplant. Larva Apr–early Jun. Feeds at first inside the flowers, later in a spun terminal shoot and finally hiding between spun leaves, coming out to feed at night. Constructs an underground cocoon and pupates about six weeks later. **Larval foodplants** The catkins and leaves of willows. **Habitat** Woodland rides, scrub and hedgerows in open country; also river valleys, marshes, fens and heathland. Often in suburban gardens. **Status and distribution** Resident. Common. Well distributed and frequent throughout Britain, Man and Ireland, including the Hebrides (and recorded from Orkney and Shetland) and the Channel Islands.

Yellow-line Quaker

plate 59

Agrochola macilenta (Hb.)

Common 73.190 (2264)



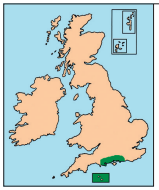
Field characters FW 14–16mm. This rather plainly marked moth is distinguished from other brownish autumn-flying species by the outermost cross-line, which is narrow and brown or reddish brown, edged yellowish, and almost straight apart from a small notch near leading edge. A black dot near the wing base is also characteristic. Forewing usually light, rather milky brown or light yellowish brown, less often distinctly yellowish or tinged with grey or pink. Trailing half of kidney mark often dark, sometimes intensely black, but in the frequent f. *obsoleta* Tutt it matches ground colour. **Similar species** See Brick and Red-line Quaker. **Flight season** One generation. Oct–early Dec in the south, Sep–early Nov in the north and in Ireland. Comes regularly to light and to sugar, and feeds at Ivy flowers and overripe berries. **Life cycle** Overwinters as an egg, laid on a branch of the foodplant. Larva Apr–Jun. Feeds at first in a spun terminal shoot, later on the expanded leaves and finally on herbaceous plants. Constructs an underground cocoon and pupates several weeks later. **Larval foodplants** Oaks, poplars, Beech, sallows, Hawthorn and herbaceous plants; also Heather on lowland heaths and in parts of northern Britain. **Habitat** Broadleaved woodland, scrub, heathland, moorland and hedgerows. Often in suburban gardens. **Status and distribution** Resident. Common. Well distributed and usually frequent throughout most of mainland Britain, Man, Ireland, the Channel Islands and the Inner Hebrides, but probably vagrant in the Outer Hebrides, Orkney and Shetland.

Southern Chestnut

plate 59

Agrochola haematidea (Dup.)

RDB 73.191 (2264a)



Field characters and similar species FW 14–15mm. Smaller than Beaded Chestnut, and forewing more pointed, with a deep reddish tint and, usually, dark greyish or blackish shading along trailing edge, normally crossing wing beyond the weakly defined kidney mark. Hindwing uniformly grey with reddish fringes. Female usually smaller and darker than male. See also Flounced Chestnut. **Flight season** One generation. Mainly late Sep–mid-Oct. The main flight time seems to begin about 30 minutes after dusk, lasting only about 30–45 minutes. Comes to light in numbers, sometimes dozens, and is also recorded at wine ropes. **Life cycle** Overwinters as an egg, attached to the foodplant. Larva late Apr–early Jul. Feeds mainly by night and pupates underground about two months later. **Larval foodplants** Mainly the flowers of Bell Heather. Has also been found on Cross-leaved Heath but not on Heather, even when the three grow intermingled. Does not thrive on Heather in captivity. **Habitat** Extensive heathland on impoverished gravels and sand. In Sussex, the foodplants are bushy, up to knee height in some places and not close-cropped, and the site is rather dry. The New Forest sites are frequently dominated by Cross-leaved Heath, with hardly any Bell Heather, the ground is quite wet in places and the heaths grow thick and bushy, but not generally above calf height. **Status and distribution** Resident, probably overlooked until recently. Red Data Book species. Found very locally near Midhurst, West Sussex, where it was first discovered in Britain (five males to light on 10 Oct 1990) at Ambersham Common. Many other heaths in southern and eastern England were searched following the original discovery. In Oct 1996, it was found in the New Forest, Hampshire (at Linford), where it is now known to be quite widespread. Discovered in east Dorset (near Hurn Forest) in 1996, where it is spreading and is thought to be a recent colonist. Recorded once from Jersey in 1997 and recently from Alderney.

Larva of Southern Chestnut.

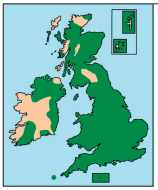
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Brick

plate 59

Agrochola circellaris (Hufn.)

Common; Immigrant 73.192 (2262)



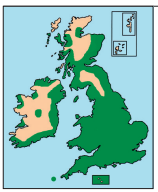
Field characters FW 14–19mm. Ground colour of forewing is usually rather light reddish brown, tinged greyish or pinkish, or darker. Trailing half of kidney mark is blackish. Wavy dark grey or brown cross-lines and bands vary greatly in intensity; the outermost is broader, edged with reddish and light yellowish-brown lines. More boldly marked examples have dark veins. Hindwing grey with a broad brownish-white wedge along front edge. **Similar species** Yellow-line Quaker is usually smaller, with a narrow, almost straight outermost cross-line, notched near leading edge. See also Dusky-lemon Sallow and Pale-lemon Sallow. **Flight season** One generation. Sep–early Dec in the south, late Aug–Nov in the north. Comes regularly to light and sugar, and feeds at Ivy flowers, overripe berries and, in the north, at Heather flowers. **Life cycle** Overwinters as an egg, laid beside the buds of the foodplant. Larva Apr–Jun. Feeds inside a flower at first, later openly. Constructs an underground cocoon and pupates after about six weeks. **Larval foodplants** Wych Elm, Aspen, poplars, sallows and Ash, at first on the flowers and maturing seeds, later on the leaves. Part-grown larvae have also been found and reared on the leaves of Midland Hawthorn under Aspen and collected in large numbers from fallen poplar catkins, and therefore probably also feed on low herbaceous plants. **Habitat** Broadleaved woodland, scrub, parkland and gardens. **Status and distribution** Resident. Common. Well distributed and often frequent throughout most of England and Wales, on Man and in Scotland, reaching the Hebrides and Orkney. In Ireland, widespread but generally local. Immigrant in Shetland where, exceptionally, over 100 were recorded in 1996, a year in which an immigration of moths of unprecedented size and variety occurred to the islands from mainland Europe. Widespread but not numerous in the Channel Islands.

Lunar Underwing

plate 59

Omphaloscelis lunosa (Haw.)

Common 73.193 (2270)



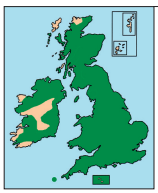
Field characters FW 14–17mm. The quite large, sometimes rather blurred, dark central 'crescent moon' marking on pale hindwing is the diagnostic feature. Forewing quite pointed, but generally rounded at very tip. There is an outer row of small black spots, ending in a short black dash on leading edge, near tip. Very variable. Ground colour very light to very dark brownish grey, yellowish brown, reddish brown, dark brown or blackish. Veins are frequently pale, and some examples are distinctly banded. Hindwing with dark dashes along margin and usually with dark outer blotches. Sometimes extensively clouded dark grey, but crescent mark usually remains discernible. **Similar species** Beaded Chestnut has uniformly grey hindwing without dashes along margin, forewing is generally more sharply tipped and kidney mark is generally narrower. **Flight season** One generation. Late Aug–mid-Oct. Comes frequently to light, and in smaller numbers to sugar, Ivy flowers and overripe blackberries. Can often be found at rest after dark, on grasses or fences. **Life cycle** Overwinters as a small larva, low down among grass. Larva Oct–May. Feeds at night and hides low down by day. **Larval foodplants** Grasses, including Annual Meadow-grass and Yorkshire-fog. **Habitat** A range of grasslands, including damp pasture, parkland and downland, and gardens. **Status and distribution** Resident. Common. Well distributed and frequent to abundant throughout England and Wales north to Yorkshire, on Man and in the Channel Islands. Further north in England and in Scotland, north to East Ross and including the Hebrides, more restricted to lowland and coastal areas. Mainly coastal in Ireland. Widespread and locally frequent along the east coast, more local elsewhere.

Chestnut

plate 59

Conistra vaccinii (L.)

Common 73.194 (2258)



Field characters FW 14–15mm. Outer edge of forewing rounded, readily distinguishing this from most other brown noctuid moths flying in autumn and early spring. Highly variable and can be very plain or strongly marbled. Trailing half of kidney mark usually dark. Ground colour of forewing light or dark chestnut brown, or a mixture of the two. Less frequent forms are heavily dusted and/or streaked with light brown or grey, or have grey- or black-edged cross-lines. More rarely, forewing is extensively blackish. Hindwing grey, fringes usually pinkish brown. **Similar species** See Dark Chestnut, Red-headed Chestnut and Dotted Chestnut. **Flight season** One generation. Late Sep–May. Comes to light and sugar, and feeds at Ivy flowers, sallow catkins and overripe berries. In autumn, usually found feeding, and more frequent at light in late winter and spring. **Life cycle** Overwinters as an adult, becoming active in mild weather. Mating occurs in spring. Larva late Apr–Jun. Feeds at first on the leaves of trees, sometimes later on herbaceous plants, usually at night. Constructs a loose earthen underground cocoon, pupating up to two months later. **Larval foodplants** Include oaks, elms, Blackthorn, Hawthorn, Downy Birch, Sweet Chestnut and docks. **Habitat** Most frequent in broadleaved

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

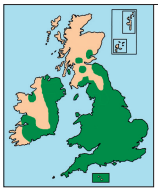
woodland; also in hedgerows, scrub and many gardens. **Status and distribution** Resident. Common. Well distributed and frequent throughout most of Britain (including the Inner Hebrides), Man, Ireland and the Channel Islands.

Dark Chestnut

plate 59

Conistra ligula (Esp.)

Common 73.195 (2259)



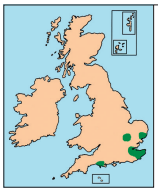
Field characters and similar species FW 13–15mm. Forewing pointed or slightly hooked at tip (although this may be difficult to appreciate fully because the fringes follow a straighter line), and rather shiny when fresh. Ground colour usually dark chestnut brown, dark chocolate brown or blackish brown, less often paler chestnut brown. Sometimes has a distinct light brown, grey or whitish-grey band near outer edge, and cross-lines of the same colour. Hindwing grey with brown or grey fringes. **Similar species** In Chestnut, forewing is usually paler, broader and more rounded, and tip is not hooked. Care is needed in borderline cases. **Flight season** One generation. Oct–Feb, occasionally Mar; male usually Oct–Dec or Jan. Comes to light in rather small numbers, also to sugar and Ivy flowers. **Life cycle** Overwinters initially as an adult. Mates in Dec or Jan and eggs are laid in Jan or Feb. Larva Apr–Jun. Feeds at night, at first on leaves of trees, and when larger on herbaceous plants. Constructs a loose cocoon underground, pupating several weeks later. **Larval foodplants** Include Blackthorn, Hawthorn, sallows, oaks, docks and Dandelion. **Habitat** Woodland and more open country, including farmland. Also in some suburban gardens and urban areas, where it is sometimes more frequent than Chestnut. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout England and Wales, and in the Channel Islands. First recorded on Man in 2004. Local but increasing and expanding in southern Scotland, north to Perthshire and Angus. Widespread but local in Ireland.

Black-spotted Chestnut

plate 59

Conistra rubiginosa (Scop.)

Immigrant; recent colonist 73.196 (–)



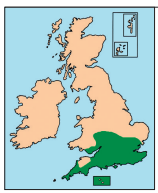
Field characters FW 15–17mm. The prominent black spots in the oval and kidney mark distinguish this moth from similar species. Forewing rather narrow, with quite a sharp and squared-off tip, milky grey-brown or reddish brown, with noticeably paler veins. Often has one or more small black spots near base. **Similar species** In plain form of Red-headed Chestnut, black spots (if present) are restricted to kidney mark and veins are not conspicuous. Also, forewing is broader and rounded at tip. **Flight season** In mainland Europe, Aug–May. Comes to light, sugar and sap runs. Active in mild weather during the winter. In Britain, so far recorded Nov–Feb. **Life cycle** Overwinters as an adult. Larva (not yet recorded in Britain) spring to early summer. **Larval foodplants** In mainland Europe, a wide range of woody plants, including hawthorns, oaks, elms, sallows and heathers, and stated to complete development on herbs such as bedstraws, dandelions and plantains. **Habitat** In mainland Europe, a wide variety, including woodland, more open habitats and gardens. **Status and distribution** Immigrant and recent colonist. First recorded in Britain in a light-trap in a garden in Dartford, Kent, on 6 Nov 2011. Since then, found more widely in the Dartford and Gravesend area of north-west Kent (over 20 recorded) and apparently becoming established. One at Sandwich Bay Bird Observatory on 22 Dec 2011 and one at Felixstowe, Suffolk, on 27 Nov 2014. Two in Bedfordshire in Dec 2015, at Biggleswade on the 17th and Upper Caldecote on the 18th. One at the Portland Bill Bird Observatory, Dorset, 5 Jan 2016, at a lighted window. Found throughout most of mainland Europe, and since 2005 has increased and expanded rapidly northwards and westwards in Holland, a likely source of the British moths.

Dotted Chestnut

plate 59

Conistra rubiginea ([D. & S.])

Nb 73.197 (2260)



Field characters FW 15–17mm. Extensive blackish spotting and dotting over forewing distinguishes this moth from other chestnuts and sallows. Ground colour varies from almost brick red to light chestnut-orange, often paler and more yellowish when faded after hibernation. Forewing has a rounded outer edge. Hindwing brownish grey. The rare f. *unicolor* Heylaerts lacks black spotting. **Similar species** Chestnut is slightly smaller, brown and lacks spotting. **Flight season** One generation. Oct–Nov, flying again Mar–May. Comes to light before overwintering, but more often in the spring, when it is more likely to be trapped in gardens. Also to sugar and the flowers of Ivy, sallows and Blackthorn. **Life cycle** Overwinters as an adult. Larva late Apr–mid-Jun. Habits in the wild poorly understood, but known to be associated with the ant *Lasius fuliginosus*, in the nests of which larvae, pupae and freshly emerged adults have been found. There has been speculation about interaction of this species with ants since the 19th century. The larva has protective hairs not present in others of the genus *Conistra*. **Larval foodplants** Apple, including old fallen leaves. Also reared on Blackthorn, plums and sallows. Accepts Dandelion and other low-growing plants. **Habitat** Woodland, wooded heathland and mature hedgerows with mature trees. **Status and distribution** Resident. Nationally Scarce

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

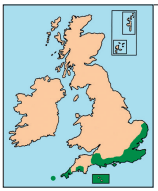
B. Formerly, largely restricted to Surrey, West Sussex, Hampshire, south-east Dorset, Somerset, South Devon and southern Cornwall. Since the 1990s, has increased and expanded north. Two in Buckinghamshire in 2000, the first in 100 years. In 2002, recorded for the first time in Hertfordshire and Essex, in Glamorgan for the first time since before 1917, and one in Warwickshire in 2003, the first since 1886. Has since expanded into much of the south Midlands, including Herefordshire, Worcestershire, Warwickshire, Northamptonshire and Bedfordshire, and east into Hertfordshire, Essex and Kent. Recorded on Alderney.

Red-headed Chestnut

plate 59

Conistra erythrocephala ([D. & S.])

Immigrant; transitory resident 73.198 (2261)



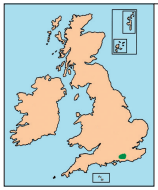
Field characters and similar species FW 16–18mm. Diagnostic features of this moth, which in shape looks somewhat like a larger Chestnut, are two or more black dots within kidney mark, mainly in trailing third or forming a ring (generally darkened in trailing half in Chestnut). Often, top of head is a lighter reddish than thorax (both same colour in Chestnut). Two main forms. In one, forewing is either rather uniform, warm greyish brown or lighter pinkish brown. Form *glabra* Hb. is chestnut brown (often quite dark), with a light brown band along leading edge and across outer area. **Flight season** One generation. Late Sep–Nov, reappearing Mar–Apr. In Britain, usually seen Oct–Nov, with a handful of records Dec–Apr, including recently. Some may represent overwintering, but others, such as those in Feb 2004, were part of a winter immigration. Comes to sugar and light, and feeds at Ivy flowers. **Life cycle** Overwinters as an adult. Eggs are laid in Mar. Larva Apr–Jun. In late Jun makes a cocoon underground, but does not pupate until Aug. **Larval foodplants** Reportedly the young spring leaves of oaks, elms and Hornbeam initially, later feeding on the ground on plants such as Dandelion, plantains, bedstraws and violets. **Habitat** Woodland and more open habitats. **Status and distribution** Immigrant and transitory resident. Appears to have been established in woods in parts of East Sussex between 1847 and 1874, and again from 1913 to 1932. A series of records from near Canterbury, Kent, between 1866 and 1903 is clouded with uncertainty because dishonest insect traders were involved. There have been about 100 records of immigrants. Historically, these were mainly in south-east England, but since 2001 over 80 have been seen, more widely along southern coasts, from Suffolk to Scilly, Isle of Wight and in Somerset. Recorded once on Jersey in 1996 and recently on Alderney. Recorded from virtually every country in Europe and breeds just across the English Channel, in France.

Orange Upperwing

plate 59

Jodia croceago ([D. & S.])

RDB; possible immigrant 73.199 (2257)



Field characters and similar species FW 14–17mm. Pointed orange forewing contrasts with white hindwing. A narrow dark band crosses centre of forewing and bends in a right angle at base of kidney mark, beyond which is a row of blackish dots, and there are white dashes along leading edge. These features distinguish Orange Upperwing from somewhat similar Orange Sallow, which is slightly larger, with a broader forewing. See also Blossom Underwing. **Flight season** One generation. Early Sep–early Nov, flying again Feb–mid-May. Visits Ivy flowers, sallow catkins, sugar and light. Occasionally beaten from the dry leaves retained by some oak trees over winter. **Life cycle** Overwinters as an adult. Mating takes place in spring. Larva late Apr–mid-Jul. Pupates in a slight cocoon just below the soil surface, the larva resting until Aug before pupation. **Larval foodplants** Pedunculate Oak and almost certainly Sessile Oak, which is the more frequent oak in the western sites. Prefers young shoots in warm situations, such as those provided by coppiced oak. **Habitat** Open oak woodland and scrub, oak coppice and oaks in hedgerows. In the mid-1970s, at Friday Street, Surrey, about 30 wild larvae were found by day, mostly on branches virtually trailing the ground, on semi-mature trees. All the oaks at this site keep their foliage in winter, not only the low saplings, and the site is a frost hollow. **Status and distribution** Resident and possible immigrant. Red Data Book species. Currently proving elusive, in spite of many searches. On 11 May 2006, a single, possibly immigrant adult was light-trapped in Ashdown Forest, Sussex, coinciding with the arrival of known migrants. Prior to that, the last confirmed sighting was of six individuals on 15 Oct–4 Nov 1994 in woodland between Cardigan and Aberystwyth, Cardiganshire, from which area singletons were also reported at Aber Magwyr on 4 May 1955, and near Llechryd in 1982. The best-known localities were on the Surrey–West Sussex border, particularly at Friday Street and Abinger, where the moth was recorded in fair numbers up to 1977. Also in woodland near Dunsfold and Plaistow, but last seen in these areas in 1984. Other recent reports are all of singletons, usually at light. Recorded in Cornwall on 4 May 1983 and in Ashdown Forest, East Sussex, on 29 Sep 1984. Found at Bovey Tracey, near Newton Abbot, Devon, annually from 1968 to the mid-1970s. There are also single reports from Somerset and Shropshire since 1980. The historical distribution of the moth was always southern, and also included Wiltshire, Oxfordshire, the west Midlands and the Isle of Wight.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

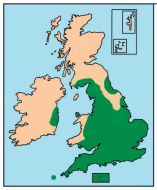
Tawny Pinion

plate 59

Lithophane semibrunnea (Haw.)

Local

73.200 (2235)



Field characters FW 16–20mm. When at rest, resembles a piece of bark or broken twig. Forewing narrow, tawny brown, generally paler and straw-coloured towards leading edge. Key feature is solid blackish bar extending from near trailing corner inward along forewing, parallel with trailing edge. This is cut by a short, pale, flattened 'S' mark. Thorax has a crest in centre and shoulders are pointed, projecting forwards rather like a pair of ears. The crests have a blue-green iridescence, especially when fresh, which may also be present on the dark areas of the forewing. Variation is slight, mainly in ground colour, which may be paler or tinged greyish. **Similar species** See Pale Pinion. **Flight season** One generation. Oct–Nov, reappearing Mar–May. Feeds after dark, in autumn on Ivy flowers and overripe blackberries, and in spring on sallow catkins. Also comes to sugar and, in small numbers, to light. **Life cycle** Overwinters as an adult, seldom found, but probably under loose bark and other sheltered situations. Mates in spring. Larva May–Jul. Constructs a strong underground cocoon and pupates up to eight weeks later. **Larval foodplants** Ash. **Habitat** Open broadleaved woodland, parkland, some gardens, and marshy places. **Status and distribution** Resident. Local. Seldom seen in numbers, but found in all parts of England and Wales. Formerly very local north of the south Midlands, but recently increased and now extends to Cumbria and Northumberland. In Scotland, one in Dumfriesshire in 2009 and one in Kirkcudbrightshire in 2011. In Ireland, one in Co. Wicklow in 2004 and one in Co. Dublin in 2014. Local in the Channel Islands.

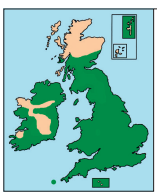
Pale Pinion

plate 59

Lithophane socia (Hufn.)

Local

73.201 (2236)



Field characters and similar species FW 17–20mm. Quite similar to Tawny Pinion. Has same thoracic and abdominal crests, but these lack blue-green iridescence, and forewing is slightly broader and usually paler, with a more curved leading edge. Diagnostic feature is lack of a black bar near trailing corner. Instead, there are two small brown elliptical marks. There may also be a brown or blackish bar, but it is placed more centrally, level with oval and kidney mark. Some examples are extensively dark, especially towards trailing and outer edges, most frequently in western Britain and in Ireland. Hindwing brownish grey. See also Silver Cloud. **Flight season** One generation. Oct–Nov, reappearing Mar–May. Feeds after dark, in autumn on Ivy flowers and overripe blackberries, and in spring on sallow catkins. Also comes to sugar and, in small numbers, to light. **Life cycle** Overwinters as an adult, probably under loose bark or in another sheltered situation. Mating occurs in spring. Larva May–Jul. Constructs a strong underground cocoon and pupates about a month later. **Larval foodplants** Various trees and shrubs, including oaks, sallows, birches, Apple, Horse-chestnut, Bramble and Wild Privet. Also reported from herbaceous plants, although possibly only in captivity. **Habitat** Broadleaved woodland and parkland. Recently recorded more widely in other habitats, including gardens. **Status and distribution** Resident. Local. Historically, has been thinly distributed and usually seen only in small numbers, most often in southern and south-west England, including Scilly, the south-west Midlands, Wales, Man and Ireland. In recent years, it has undergone a rapid and major increase and expansion in Britain, and is now widespread throughout England and Wales, and in the southern half of Scotland north to Argyll and Fife. One on Shetland in 2000. Widespread and locally frequent in Ireland, where the population appears to be stable. Local in the Channel Islands.

Grey Shoulder-knot

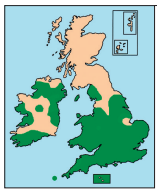
plate 59

Lithophane ornitopus (Hufn.)

ssp. *lactipennis* (Dadd)

Common

73.202 (2237)



Field characters FW 17–19mm. Cold, light grey forewing, with bold black curved antler-like mark at base, and often marked with light brown in lower half of kidney mark and along outermost cross-line, distinguishes this moth from related species. Shoulders squared and slightly pointed, and has a central thoracic crest. Hardly varies, although some examples are slightly darker grey. Has a short, thin black mark near centre of forewing, like a pitchfork. **Similar species** Grey Chi can be similar in size and colour, but basal streak on forewing is absent or short, and it has a bold black central χ (chi) mark. Forewing broader, shoulders rounded and hindwing usually paler. See also Conformist (immigrant race). **Flight season** One generation. Sep–Nov, reappearing Feb–Apr, occasionally earlier. Feeds after dark, in autumn on Ivy flowers and overripe blackberries and in spring on sallow catkins. Comes to sugar and regularly to light. Can be found by day resting on tree trunks and fences, where it is often conspicuous. **Life cycle** Overwinters as an adult, probably under loose bark or in another sheltered situation. Mates in spring. Larva May–Jul. Constructs a strong underground cocoon and pupates about a month later. **Larval foodplants** Pedunculate Oak; probably

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

also Sessile Oak and possibly Turkey Oak. **Habitat** Broadleaved woodland and parkland. **Status and distribution** Resident. Common. Well distributed in southern and south-west England, East Anglia, the south and west Midlands and Wales. Formerly rare in the rest of England, but has recently expanded and now widespread in the east Midlands, Lincolnshire and northern England, including Cumbria, and also on Man. Widespread but local in Ireland and in the Channel Islands.

Conformist

plate 60

Lithophane furcifera furcifera (Hufn.)

Immigrant 73.203 (2238)

ssp. *suffusa* (Tutt)
Presumed extinct

Field characters FW 17–20mm. Ssp. *suffusa* is characterised by dark slate-grey forewing, with a short, thin, roughly central black bar, at ends of which cross-lines are often evident, resulting in a mark resembling a pitchfork (with a 'handle'). Outer end of this bar is closer to trailing edge, and roughly level with centre of kidney mark, which is usually marked with orange-brown. Has a black basal streak, often branched where it forms the edge of a pale patch, forming an antler-like mark. The generally paler grey immigrant ssp. *furcifera* often has a whitish basal patch. **Similar species** See Nonconformist, Softly's Shoulder-knot and Grey Shoulder-knot. **Flight season** One generation. Both presumed residents and suspected immigrants have been recorded in Sep–Oct and again in Mar–May, after hibernation. Comes to light, sugar, Ivy flowers and sallow catkins. **Life cycle and larval foodplants** In northern Europe, overwinters as an adult and larvae have been found Apr–Jun, mainly on Alder, although birches, sallows and poplars are also reported foodplants. No information on foodplants or habitats in Britain was ever published, possibly due to secrecy by the few reported to have found the moth, although the early stages may never have been found in the wild in Britain. **Habitat** In mainland Europe, damp woodland and wooded stream valleys, including in uplands. **Status and distribution** Ssp. *suffusa* is a presumed extinct resident, but some believe it could still be present. Discovered at Llantrisant, Glamorgan, in Oct 1859, when two were captured on Ivy flowers, and apparently found regularly in the area up to the 1880s. Three specimens labelled 'Glamorgan' may have come from the Neath/Port Talbot area. One was reportedly taken at sugar on 2 Oct 1869, in Monmouth, and another a few days previously. A male was reported near Bigsweir, on the Gloucestershire bank of the River Wye, on 31 Mar 1907. The last was recorded at light near Cardiff, on 10 Oct 1959. Ssp. *furcifera* is an immigrant. About a dozen probable immigrants were recorded between about 1870 and 1946, all in England and mainly in the south-east, although the first was in Halifax, Yorkshire. Two have been reported since 1946, one at Seaton Sluice, Northumberland, on 16 Apr 2007 and one in Scotland, at Insh, East Inverness-shire, on 9 Apr 2011.

Softly's Shoulder-knot

plate 60

Lithophane consocia (Borkh.)

Suspected immigrant 73.204 (2238a)

Field characters and similar species FW 18–20mm. Very similar to ssp. *furcifera* of Conformist, and any suspected specimen of either should be retained for confirmation. Ground colour of forewing dark grey and general appearance usually more contrasting, with darker speckling and often stronger whitish basal patch and whitish variegation (cleaner, more slate grey in Conformist). See also Nonconformist. **Flight season** In mainland Europe, one generation. Sep–Nov and Mar–May after hibernation. **Larval foodplants** Mainly Alder, also birches and Hazel. **Habitat** Boggy northern forests, extending into the tundra and at higher elevations in the south of its range. **Status and distribution** Suspected rare immigrant. The only British example was caught in an actinic light-trap in Hampstead, London, on 21 Sep 2001. It was originally thought to be an example of the Continental ssp. *furcifera* of the Conformist. Mainly found in northern and eastern Europe.

Nonconformist

plate 60

Lithophane lamda (Fabr.)

Immigrant 73.205 (2239)

Field characters and similar species FW 17–20mm. Similar to Conformist and Softly's Shoulder-knot, but distinguished by a longer, thicker black bar running parallel to trailing edge of forewing, its outer end projecting just beyond kidney mark. Outermost cross-line generally with a longer central inward projection (pointing to wing base) than in Conformist and Softly's Shoulder-knot. Ground colour varies from light to dark grey or purplish grey. Forewing base generally has a pale patch, as in immigrant ssp. *furcifera* of Conformist. **Flight season** One generation. All the British records are Sep–Oct. In mainland Europe, the moth hibernates and reappears in the spring. Comes to light, sugar and Ivy flowers in the autumn, and sallow catkins in the spring. **Life cycle** Overwinters as an adult. Larva May–Jul in mainland Europe; never found in Britain. **Larval foodplants** A range, including Bog-myrtle, Bog Bilberry, Creeping Willow and poplars. **Habitat** Moorland, boggy northern forests and upland bogs. **Status and distribution** Rare immigrant. Fifteen reported between 1865 and 1938, all from south-east England and East Anglia, except for one at Ledbury, Herefordshire, in 1870. A number of the records were from north-west Kent, and it is possible that it became temporarily established there. Not recorded in the British Isles since 1938. Found widely across northern Europe, including Scandinavia.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

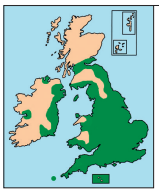
Blair's Shoulder-knot

plate 60

Lithophane leautieri (Boisd.)

ssp. *hesperica* Bours.

Common 73.206 (2240)



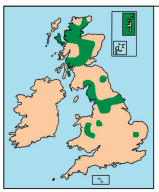
Field characters FW 17–20mm. The narrow grey forewing, with a long, fairly straight black basal streak and others centrally, readily distinguish this moth from related species and others flying in autumn. Kidney mark often extends towards base. Black streaks and other dark markings vary in intensity, and some examples have a pink flush on kidney mark, hindwing, undersides of both fore- and hindwings and on abdomen. **Flight season** One generation. Late Sep–Nov. Comes regularly to light, but rarely to sugar and seldom seen by day. **Life cycle** Overwinters as an egg, laid on the foliage of the foodplant. Larva Mar–Jul. Pupates underground. **Larval foodplants** The flowers and young leaves of Monterey, Lawson's and Leyland cypresses; occasionally on Common Juniper. **Habitat** Conifer plantations, parks, gardens and other places where the foodplants are found. **Status and distribution** Resident. Recent colonist. Common. First found in 1951 on the Isle of Wight, and now well distributed and often abundant throughout England and most of Wales. Reached Cumbria by 1996, north Wales by 1997 and Scotland (Kirkcudbrightshire) by 2001, and since then recorded north to Stirlingshire and Fife. Well established on Man by 1997. First recorded in Ireland (Co. Wicklow) in 2002, and now well established in eastern coastal counties and found locally further west. Widespread and frequent in the Channel Islands.

Golden-rod Brindle

plate 60

Xylena solidaginis (Hb.)

Local; Immigrant 73.207 (2233)



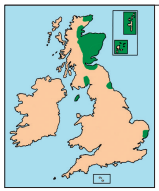
Field characters FW 18–21mm. When at rest by day on moorland vegetation, with wings folded around the body and tail end in the air, this distinctive moth closely resembles a grouse dropping or piece of broken twig. When wings are spread, the narrow, cold grey and whitish forewing is seen to be bluntly hooked. Kidney mark is large and conspicuous, and outermost cross-line is jagged in the middle, with several elongated black arrowhead marks projecting inwards. Variation is only slight, but some examples have a distinct darker central band. **Similar species** Sword-grass looks superficially similar when at rest, but is larger, with a dark brown thorax. **Flight season** One generation. Aug–Sep. Comes to light, sugar and flowers, especially of heathers and ragworts. Rests openly by day on vegetation, rocks, posts and, often, barbed wire. **Life cycle** Overwinters as an egg. Larva late Apr–Jul, resting on the foodplant. Pupates in a cocoon under moss or soil. **Larval foodplants** Heather, Bilberry, Cowberry, Bearberry, Bog-myrtle, willows, birches and probably other moorland plants. **Habitat** Moorland, upland scrub and open woodland. **Status and distribution** Resident and occasional immigrant. Local. Well distributed in Scotland, including the Inner Hebrides, northern England, the north Midlands south to Staffordshire, and north and central Wales. Recorded as an immigrant in 1954 (at least 17 scattered across the southern half of England), and others including singles in 1973 (Lincolnshire), 1976 (Norfolk), 1983 (Berkshire), 1996 (Hertfordshire) and 2006 (Suffolk), most of which have been of the more uniformly grey f. *cinerascens* Stdgr., found in Germany. Singles in Shetland in 1997 and 2002.

Sword-grass

plate 60

Xylena exsoleta (L.)

Nb 73.208 (2242)



Field characters and similar species FW 24–29mm. Similar to Red Sword-grass but trailing half of forewing is straw-buff, marbled with grey, and not sharply contrasting with leading half, and there is no orange-red or reddish brown. Sword-like marks are more variable but are usually shorter, ending well short of dark area beyond kidney mark. Lower half of hind leg pale above. Rests with wings creased and closed tightly around body, distinguishing it from most other noctuid moths. See also Golden-rod Brindle. **Flight season** One generation. Sep–Nov, reappearing in Mar–May. Feeds at Ivy flowers and overripe blackberries in autumn, and at sallow catkins and Blackthorn flowers in spring. Comes to sugar, more so in autumn than in spring. Comes to light in small numbers. **Life cycle** Overwinters as an adult, possibly in dense tussocks of grasses and rushes. Mating takes place after hibernation. Larva May–Jul. Feeds in warm sunshine as well as at night. Pupates in a cocoon among debris on the ground. **Larval foodplants** Wild larvae reported from thistles, Creeping Cinquefoil, Common Restharrow, stonecrops, Groundsel, docks, Hop and Sugar Beet. Will accept other foodplants in captivity, including shrubs and trees such as Blackthorn, Bird Cherry and hawthorns. **Habitat** Moorland, rough pasture and open woodland, but larvae were found in lowland woodland in Berkshire in 1929 and on a rail embankment in Buckinghamshire in 1938. **Status and distribution** Resident and suspected immigrant or vagrant. Nationally Scarce B. The range has been contracting northwards for 30–40 years or more. Formerly resident locally in most parts of England, Wales and southern Scotland, but apart from very occasional records now largely restricted to the north-eastern part of Scotland, from Perthshire to

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

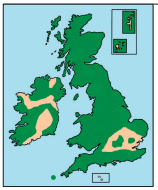
Aberdeenshire, around the Moray Firth, north to Caithness. Also possibly resident in Orkney and Shetland, including Fair Isle, and still present on Man. Scattered historical records through Ireland, more so near the east coast, the most recent in 1962. Recorded once from Jersey, in 1913.

Red Sword-grass

plate 60

Xylena vetusta (Hb.)

Local; suspected immigrant 73.209 (2241)



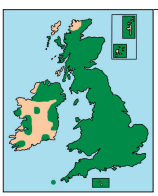
Field characters FW 24–29mm. Rests with wings creased and closed tightly around body, resembling a piece of wood. Diagnostic feature is contrast between the straw-coloured leading half of forewing, with an orange-red tint, and the rich mahogany-brown or blackish-brown trailing half, best appreciated when wings are unfolded. Less frequently, the pale area is more extensive and reaches trailing edge, level with kidney mark. One or two black sword-like streaks extend inward from outermost cross-line, the longest almost reaching the dark blotch beyond kidney mark. Foot and lower part of hind leg dark red-brown. **Similar species** See Sword-grass. **Flight season** One generation. Sep–Nov, reappearing Mar–late May, occasionally early Jun. Feeds after dark, in autumn on Ivy flowers and overripe blackberries, and in spring on sallow catkins. Comes to sugar and light. **Life cycle** Overwinters as an adult, probably under loose bark, or in a rocky outcrop or other sheltered situation. Mating occurs in spring. Larva May–Jul. Feeds openly by day and night. Pupates underground in a fragile cocoon. **Larval foodplants** Woody and herbaceous plants, including Bog-myrtle, heathers, Yellow Iris, sedges and the flower-heads of Soft-rush and Compact Rush. **Habitat** Moorland, rough upland pasture, boggy heathland, damp woodland and marshes. **Status and distribution** Resident and suspected immigrant. Local. Fairly well distributed and frequent throughout mainland Scotland and the Hebrides. Regular suspected immigrant or possible resident in Orkney and Shetland. Widespread in northern England, Wales, south-west England, Man and Ireland. Local in Dorset and Hampshire, notably the New Forest. Scattered records across the rest of England, generally of single adults, either vagrants or immigrants.

Satellite

plate 60

Eupsilia transversa (Hufn.)

Common 73.210 (2256)



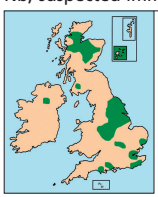
Field characters FW 17–20mm. Unmistakable. Diagnostic features are small kidney mark on richly coloured forewing and two small 'satellite' dots either side of it. These marks vary in colour from white or cream to orange or orange-brown. The satellites are sometimes a different colour to the kidney mark and to one another, and are occasionally hard to distinguish, but rarely absent. Forewing rich reddish brown, orange-brown or tawny brown, smooth with thick scalloped fringes, sometimes with a bluish or purplish sheen when fresh. **Flight season** One generation. Late Sep or Oct–late Apr. Comes regularly to light and sugar, and feeds at Ivy flowers and berries, including those of Guelder Rose. **Life cycle** Overwinters as an adult, becoming active in mild weather. Larva Apr–Jun. Feeds at night and hides by day between spun leaves. Constructs an underground cocoon and pupates up to three months later. **Larval foodplants** Omnivorous. At first, a variety of broadleaved trees and shrubs, including oaks, Blackthorn, Hawthorn, Hazel, Field Maple, Sweet Chestnut and elms. When larger, also preys on other moth larvae. **Habitat** Broadleaved woodland, scrub, parkland and gardens, and moorland in the north. **Status and distribution** Resident. Common. Widespread throughout England, Wales and mainland Scotland north to Caithness, and found on Man, in the Hebrides, Orkney, Shetland and the Channel Islands. Widespread but local in Ireland.

Angle-striped Sallow

plate 60

Enargia paleacea (Esp.)

Nb; suspected immigrant 73.211 (2313)



Field characters FW 17–20mm. Quite distinctive. Forewing broad, with a slightly hooked tip, and yellow to orange-yellow. Usually has a fine, roughly centrally elbowed inner central cross-line, curved outer cross-line and dark spot in trailing half of kidney. Hindwing yellowish white. Some immigrants are extensively dusted with dark grey scales. **Similar species** The shape of the inner cross-line precludes confusion with other somewhat similar sallows, which are all usually smaller. In some individuals, all markings are very faint. Such forms could be confused with f. *flavescens* Esp. of Sallow, which has a white hindwing. In Orange Sallow, the inner central line may be angled, but less so and closer to the leading edge, and kidney lacks dark spot. **Flight season** One generation. Residents mainly Aug–mid-Sep, but suspected immigrants sometimes in Jul. Comes readily to sugar, and the male particularly to light, sometimes in large numbers. Has been recorded feeding at flowers of Heather. **Life cycle** Overwinters as an egg on the foodplant. Larva late Apr–mid-Jun, hiding between spun young leaves by day and feeding at night. Pupates underground. **Larval foodplants** The young leaves of Silver Birch and Downy Birch, usually on mature trees. Also reported from Aspen in Yorkshire and elsewhere (this is stated to be the main foodplant on the Continent). **Habitat** Woodland with mature birch, both in low-lying and upland areas, and lowland heathland

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

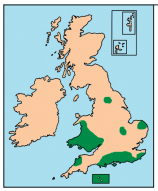
with mature birch trees. Strongly associated with large sites that have a long continuity of birch, but has also colonised new sites. **Status and distribution** Resident and suspected immigrant. Nationally Scarce B. As a resident, found in two discrete, well-separated areas and can be locally numerous in both. Widespread along the Spey Valley and the Great Glen in Scotland, extending north to the coasts of Inverness-shire, Morayshire and Banffshire, and into East Ross. Also Deeside, Aberdeenshire and Perthshire. Also distributed in a broad belt south-west to north-east from the Welsh Marches, through the Midlands to Lincolnshire and central and eastern Yorkshire. About 110 singletons have been recorded elsewhere, widely scattered mainly across the southern half of England, and occasionally in northern England, Wales, Shetland (1996), the Channel Islands (Jersey, 1982) and Ireland (one in Fermanagh in 2002). They are often accompanied by known immigrants from eastern Europe such as the Great Brocade and are usually few in number, although 26 occurred in 1964.

Double Kidney

plate 60

Ipimorpha retusa (L.)

Local 73.212 (2311)



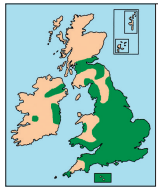
Field characters FW 13–15mm. Pale-outlined oval is elongated, quite large and often kidney-shaped, hence the English name. Forewing quite broad, distinctly hooked, dark olive brown, often dusted with grey and tinged with pink. Cross-lines are fine and pale, dark-edged, roughly parallel, the inner central one slightly curved in trailing half and outer one almost straight or slightly bent. A further dark band runs through kidney mark. This fairly simple pattern shows only minor variation. **Similar species** See Olive. **Flight season** One generation. Late Jul–early Sep. Comes to light, sugar, honeydew and flowers, usually in small numbers. **Life cycle** Overwinters as an egg, laid on the foodplant. Larva early Apr–late May. Lives inside a shelter of spun leaves. Pupates in an underground cocoon. **Larval foodplants** Sallows, willows and Black-poplar. **Habitat** Damp woodland, fens, riverbanks and marshes. **Status and distribution** Resident. Local. Recently found mainly in Devon, Dorset, Wiltshire, Hampshire, Surrey, Sussex and Kent, south and west Wales, and very locally in the Norfolk Broads and a small area of central Yorkshire. One in Bedfordshire in 2008. There are pre-2000 records from Cheshire, Lancashire and the Midlands.

Olive

plate 60

Ipimorpha subtusa ([D. & S.])

Local 73.213 (2312)



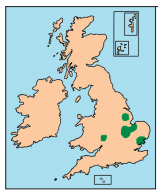
Field characters and similar species FW 14–16mm. Similar in general pattern and colour to Double Kidney, but generally larger and with a paler olive-brown forewing that is never tinged pinkish. Most importantly, forewing is at most slightly hooked, and cross-lines converge slightly towards trailing edge, the outer one curved. Any cross-banding is very diffuse. Variation in colour and markings is slight. Cross-lines often yellowish. **Flight season** One generation. Late Jul–early Sep. Comes to light in small numbers and to sugar and honeydew. **Life cycle** Overwinters as an egg, laid on the foodplant. Larva Apr–May. Feeds in leaves spun together, usually quite high up on the tree. Pupates in an underground cocoon. **Larval foodplants** Aspen and other poplars. **Habitat** Broadleaved woodland, shelterbelts, marshes, lakesides and gravel-pits, parks and gardens. **Status and distribution** Resident. Local. Widespread throughout most of England, more local in Wales and in southern Scotland and the Central Belt. Local and scarce in Ireland, mainly in the east. Widespread in the Channel Islands.

White-spotted Pinion

plate 60

Cosmia diffinis (L.)

pRDB 73.214 (2317)



Field characters and similar species FW 14–16mm. Distinguished from Lesser-spotted and Lunar-spotted pinions by its much larger and bolder, pure white markings on leading edge of forewing. These are especially obvious in ultra-violet light. **Flight season** One generation. Late Jul–late Aug, rarely to mid-Sep, but peak numbers are in early Aug. Male comes readily to light, arriving from about 10.30pm onwards. Female is much less frequent at light. **Life cycle** Overwinters as an egg, probably on the foodplant. Larva Apr–mid-Jun. Pupates in a cocoon between spun leaves or (reportedly) on bark. **Larval foodplants** Formerly recorded both from English Elm and Wych Elm. At current Huntingdonshire breeding sites, on Small-leaved Elm and English Elm, some trees growing in single-species plantations and many reaching full height, with much epicormic growth. **Habitat** Woodland, copses, plantations and shelterbelts. The larvae are reportedly more frequent on epicormic foliage, i.e. the shoots growing directly out of the trunk. There is no evidence yet of breeding in low elm regrowth in hedges without large trees. **Status and distribution** Resident. Proposed Red Data Book

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of White-spotted Pinion.

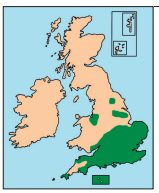
species. Formerly Nationally Scarce A. Until Dutch elm disease began to infect trees in Britain in the 1970s, this moth was locally distributed in England and Wales north to the Mersey, with a more northerly population on limestone in south Cumbria. During the 1990s it was seen annually only in a group of woods in Huntingdonshire and Cambridgeshire, with occasional scattered records elsewhere, suggesting that a few other isolated populations survived. It was rediscovered in 2002 in Bedfordshire and at several sites in Essex from 2002 onwards. Surveys from 2003 to 2008 have resulted in the discovery of a few additional small populations in the four counties mentioned above, some threatened by fresh outbreaks of Dutch elm disease. In 2012, it was rediscovered in Worcestershire and one was trapped near Lincoln with others since.

Lesser-spotted Pinion

plate 60

Cosmia affinis (L.)

Local 73.215 (2316)



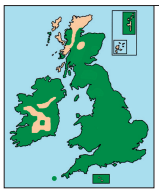
Field characters and similar species FW 12–16mm. Small size of white markings at leading edge of reddish-brown forewing, which are only a slight broadening of the thin, angled cross-lines, distinguishes this species from White-spotted Pinion. Lunar-spotted Pinion has a better developed half-moon shape on leading edge near tip of forewing, which is tinged pinkish and purple and generally broader. Hindwing of Lesser-spotted Pinion is dark grey with broad outer black band, greyish in White-spotted and Lunar-spotted pinions. All three species pull forewings in tightly to the side of the body when fully at rest. **Flight season** One generation. Mid-Jul–late Aug. Comes to light from early in the night, sometimes in fair numbers, and to sugar. **Life cycle** Overwinters as an egg. Larva late Apr–mid-Jun. Pupates in a cocoon among old leaves. **Larval foodplants** English Elm, Small-leaved Elm and Wych Elm; also probably other elms. **Habitat** Quite frequent in some elm woods and shelterbelts; also in hedgerows and other open sites, including some where Wych Elm is the only elm present. **Status and distribution** Resident. Local. Formerly quite well distributed in England northwards to central Yorkshire, and local in Wales, with occasional records from Cumbria. Over some of its range it has survived the major outbreaks of Dutch elm disease that killed off large elms in the 1970s and 1980s, but appears to be now more local in much of the Midlands and scarce in Wales. Widespread and frequent in the Channel Islands.

Dun-bar

plate 60

Cosmia trapezina (L.)

Common 73.216 (2318)



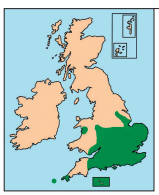
Field characters FW 13–16mm. Variable in colour, but easily recognised by the shape of central cross-lines on forewing; the inner one is more or less straight and very oblique, and the outer one is curved, and the two converge towards trailing edge. Kidney mark has a black spot in its trailing half. Often, the central band thus formed is a different shade. Most frequently forewing is a shade of brown and central band is darker brown, but there are greyish and reddish forms, and occasionally the central band is black (f. *badiofasciata* Teich). **Flight season** One generation. Jul–Aug (mainly Aug in the north). Comes readily to light, sugar and aphid honeydew, and recorded at flowers such as Hemp-agrimony and ragworts. **Life cycle** Overwinters as an egg. Larva Apr–late Jun. Pupates in a cocoon in plant debris on the ground. **Larval foodplants** The larvae have been beaten from most broadleaved trees and shrubs, particularly large larvae, which eat larvae of other moth species as well as leaves. Frequent on Pedunculate Oak, elms, birches, Blackthorn, hawthorns, Hazel, willows, Aspen and Field Maple, but also recorded from less abundant species such as Wild Service-tree. **Habitat** Most situations with trees or shrubs, including gardens and hedgerows, but most abundant in woodland. **Status and distribution** Resident. Common. Well distributed throughout most of Britain, although scarce in north-west Scotland and probably vagrant in the Northern Isles. Also well distributed on Man, in Ireland and in the Channel Islands.

Lunar-spotted Pinion

plate 60

Cosmia pyralina ([D. & S.])

Local 73.217 (2319)



Field characters FW 13–16mm. A half-moon-shaped marking near forewing tip gives this moth its common name, but the marking is more like a rose petal, frequently marked with pink and mauve as well as much white. Forewing otherwise deep brownish pink, usually with hardly a trace of white elsewhere (except sometimes on leading part of inner central cross-line), and has a curved leading

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

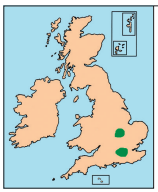
edge. Hindwing greyish. **Similar species** Lesser-spotted Pinion has an almost black hindwing, and white cross-lines on narrower, browner forewing, which usually has a rather straighter leading edge. **Flight season** One generation. Early Jul–late Aug. Comes to light, sugar and aphid honeydew. **Life cycle** Overwinters as an egg. Larva Apr–mid-Jun. Pupates in a cocoon among plant debris. **Larval foodplants** Blackthorn, hawthorns, Apple, Bullace and elms, including English Elm, Small-leaved Elm and Wych Elm. **Habitat** Hedgerows, scrub, woodland, parks and occasionally gardens. **Status and distribution** Resident. Local. Well distributed in southern, central and eastern England and the south Midlands. Apparently very local in Cornwall and North Devon. In Wales, almost entirely in the south-east. Very few, scattered records north to Yorkshire and Lancashire. Local in the Channel Islands.

Heart Moth

plate 60

Dicycla oo (L.)

RDB 73.218 (2315)



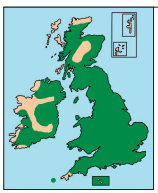
Field characters FW 15–17mm. Unmistakable. Kidney mark is often a perfect heart shape. Both this, the oval, the lines on outer edge and fringe of golden-yellow and reddish-brown forewing are boldly outlined in reddish brown. Basal area may be greenish grey and, in the widespread but infrequent f. *renago* Haw., this colour covers most of the wing. **Flight season** One generation. Mid-Jun–mid-Jul. Comes to sugar, often well before dark. Comes fairly readily to light, usually after midnight, and the weather does not have to be unusually warm as is sometimes believed. **Life cycle** Overwinters as an egg, probably on oak twigs in the canopy of mature trees. Larva mid-Apr–early Jun, between leaves strongly spun together. Beating for larvae is seldom successful, even at night, although occasionally they have been obtained from branches within reach of the ground. Pupates in a fragile cocoon just below ground. **Larval foodplants** The young and expanding leaves of mature and over-mature Pedunculate Oak. **Habitat** Woodland, lightly wooded commons and parkland with widely spaced mature Pedunculate Oaks, usually with other lower vegetation providing some shelter. Also occurs in farmland with oaks growing in and around fields. Soil types range from heavy clay to lighter heath-like conditions. **Status and distribution** Resident. Red Data Book species. Very local, and at some sites occurs in relative abundance for a short time, followed by many years of great scarcity. Now occurs in numbers only in the Ashtead/Epsom area, and has been recorded sporadically from other parts of Surrey, including farmland at Leigh. Also well distributed in Windsor Forest and recorded from other sites in Berkshire. Still present at Yardley Chase, Northamptonshire, but long lost from many woodlands in its former range due to the felling of old oaks. Three were seen at Wellington Country Park, Berkshire, in 1986. On 12 Jul 1994, a fresh adult was light-trapped at West Wickham, north-west Kent (a historical locality, with records from 1896 and 1897), the first record for Kent since 1919. Recorded in the Hampshire part of Pamber Forest in 1993, and formerly in the New Forest. Formerly found in Essex, but last seen at Ongar and Stondon Massey in 1969. Last recorded in Buckinghamshire in 1991, at Marlow.

Centre-barred Sallow

plate 60

Atethmia centrago (Haw.)

Common 73.219 (2269)



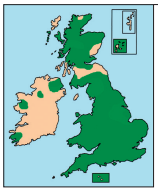
Field characters FW 15–18mm. Usually unmistakable. Forewing broad, slightly hooked, and orange-yellow with a broad but incomplete pinkish-red or pinkish-brown central band. Kidney mark dark, oval very indistinct. All markings vary somewhat in intensity, but general pattern and shape of cross-lines is constant. More uniformly orange, reddish and purplish forms are known, but these are rare in the wild. **Flight season** One generation. Aug–Sep. Comes regularly to light in small numbers, but rarely to sugar or flowers. **Life cycle** Overwinters as an egg, laid in small batches on a twig or in a bark crevice. Larva early spring–early Jun. Lives at first inside an unopened bud, later hiding either in a crevice on the trunk or at the base of the tree, climbing very quickly just before dusk to feed during the night. Constructs an underground cocoon and pupates several weeks later. **Larval foodplants** The unopened buds and flowers of mature Ash. **Habitat** Broadleaved woodland and more open places with isolated Ash trees, including hedgerows, riverbanks and gardens. **Status and distribution** Resident. Common. Well distributed throughout most of Britain, but more local in Scotland, reaching the Inner Hebrides, Caithness and Sutherland. Widespread on Man and in Ireland. Local in the Channel Islands.

Minor Shoulder-knot

plate 61

Brachylomia viminalis (Fabr.)

Common 73.220 (2225)



Field characters FW 13–15mm. The black streak at base of forewing, along with grey colouring, are diagnostic. Forewing whitish grey through to blackish grey, sometimes marked with pinkish red along leading edge and around oval and kidney mark. Antennae slightly feathered in male. The whitish-grey f. *stricta* Hb. is most frequent. The dark grey f. *obscura* Stdgr. is frequent

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

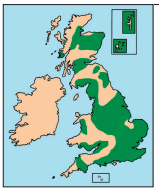
in the Midlands and northern England. Other rarer forms are f. *saliceti* Borkh., in which only the basal half of the forewing is dark grey, and the uniformly blackish f. *unicolor* Tutt. **Similar species** See Union Rustic. Marbled, Rufous and Tawny Marbled minors are superficially similar, but lack basal streaks, are smaller and are seldom predominantly grey. **Flight season** One generation. Jul–Aug. Comes to light and sugar, and feeds at flowers. **Life cycle** Overwinters as an egg, laid on the twigs of the foodplant. Larva Apr–Jun, at first in a spun terminal shoot, later feeding openly at night, hiding between spun leaves by day. Pupates in leaf litter or just under the soil surface. **Larval foodplants** Grey Willow; also other willows and Aspen. **Habitat** Damp woodland, marshland, fens, heathland, river valleys, pond margins and some gardens. **Status and distribution** Resident. Common. Quite well distributed throughout England, Wales and Scotland, including the Hebrides, and local in Orkney and the Channel Islands. Very local in Ireland, with scattered records from the north and west.

Suspected

plate 61

Parastichtis suspecta (Hb.)

Local; immigrant 73.221 (2268)



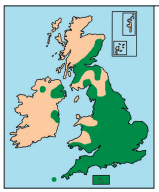
Field characters FW 14–16mm. Quite slender and fairly distinctive, although variable. Forewing narrow at base and rather tapered. Rather plain greyish brown, reddish brown or purplish brown, or a mixture of these, or variegated with brownish yellow. Cross-line beyond middle finely scalloped or represented by tiny black dots or dashes. Oval and kidney mark as ground colour or paler, with pale outlines. Variegated and richly marked forms predominate in northern and western Britain. **Similar species** Worn examples of the plain grey-brown form could be mistaken for Common Rustic or Lesser Common Rustic, which have a blunt-tipped forewing and usually narrower kidney mark. **Flight season** One generation. Jul–Aug. Comes to light in small numbers, and to sugar and flowers, notably of ragworts. **Life cycle** Overwinters as an egg. Larva Apr–early Jun. Feeds at first within a spun terminal shoot, later between folded leaves. Pupates in an underground cocoon. **Larval foodplants** Birches and probably sallows. **Habitat** Fens, carr, woodland, heathland and moorland with birch scrub. **Status and distribution** Resident and immigrant. Local. Fairly well distributed in southern and south-east England, East Anglia, and from north Wales and the Midlands north to Ross-shire. Very local elsewhere in southern Britain. Immigrant in Orkney and Shetland, probably from mainland Europe, since only plainer forms occur here. Rare in Ireland, last recorded in 1962, one in Co. Dublin. Also from Cos. Kerry, Wicklow, Tyrone and Armagh.

Dingy Shears

plate 61

Apterogenum ypsillon ([D. & S.])

Local 73.222 (2314)



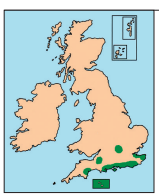
Field characters FW 15–19mm. Diagnostic features are the rather plain, light or dark, soft greyish-brown or warm grey forewing, blackish blotches between oval and kidney mark and on both sides of oval, and usually gently curved leading edge. Tooth-like mark in centre of forewing is variable in size and shape, and oval and kidney mark may be joined. Has a rather short, black streak at base, sometimes obscure, and a dark outer cross-line that is often formed into arrowheads centrally. **Similar species** Form *dissimilis* of Dog's Tooth has a white outermost cross-line, deeply jagged in middle, forming a distinct 'W'. **Flight season** One generation. Late Jun–early Aug. Comes regularly to light and sugar, usually in small numbers. **Life cycle** Overwinters as an egg. Larva Apr–early Jun. Feeds at first inside a catkin, later only at night, hiding under loose bark or in leaf litter by day. Pupates in a cocoon under bark or on the soil surface. **Larval foodplants** The leaves and catkins of willows and poplars. **Habitat** Damp woodland, marshes, fens and riverbanks. **Status and distribution** Resident. Local. Fairly well distributed throughout most of England. More local in Wales and old records from Man. Very local in southern Scotland and north-east to Aberdeenshire. Very local in Ireland, mainly in the north and on the eastern side, south to Co. Wexford. Rare in the Channel Islands.

Oak Rustic

plate 61

Dryobota labecula (Esp.)

Resident; recent colonist; suspected immigrant 73.223 (2246a)



Field characters and similar species FW 12–15mm. Quite unlike any other noctuid normally found very late in the year in Britain. Quite thickset, with a rather blunt, brown or blackish forewing. Kidney mark orange or white (f. *albomacula* Culot), the latter form somewhat resembling forms of Common or Lesser Common rustic (with flight season earlier in year), but with black basal streak on forewing usually more conspicuous, and lacking black central I-bar running parallel to trailing edge. **Flight season** One generation. Oct–Nov in Britain, sometimes later on the Continent. Nocturnal and comes to light, otherwise seldom seen. **Life cycle** Overwinters as an egg. Larva slow-growing, Apr–Sep in mainland Europe. **Larval foodplants** Evergreen Oak. **Habitat** Woodlands, gardens, hedgerows and hillsides. **Status and**

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

distribution Resident, recent colonist and suspected immigrant. First recorded in Britain in 1999 at Freshwater, Isle of Wight, singles on 15 Oct and 22 Nov, 15m from a row of Evergreen Oak, and three at Freshwater in 2001. In 2004 and 2005, recorded more widely on the Isle of Wight, where it is now established. In 2005, 24 were recorded on the mainland, in Dorset (13), Hampshire (ten) and Devon (one). Larvae were found in Dorset and Hampshire, and it rapidly established and increased. Currently resident locally in Devon (Teignmouth area), Dorset (e.g. Swanage, Weymouth), South Hampshire and West Sussex. Other records include singles at Pegwell, Kent, in 2011; Kingsdown, Kent, in 2014; and in 2015 at Dartford in Kent, Langport in Somerset, Reading in Berkshire and Ovingdean in East Sussex. Currently resident in the Channel Islands. First recorded on Jersey in 1991 and on Guernsey in 1995, and now widely established. In mainland Europe, mainly southern, but extends locally into northern France.

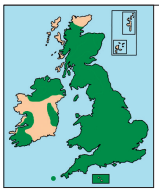
Merveille du Jour

plate 61

Griposia aprilina (L.)

Common

73.224 (2247)



Field characters FW 18–23mm. A beautifully and uniquely marked moth. Forewing broad with a curved leading edge, light pastel green with black markings, many of which are edged with white. These may be fine and reduced, or more extensive and forming blotches or a central band. In extreme cases most of wing is black, but some green remains, including oval and kidney mark. **Similar species** Scarce Merveille du Jour is a similar shade of green but is smaller and slimmer, with distinct white streaks on forewing, and flies much earlier in the year. **Flight season** One generation. Sep–Oct. Comes to light and sugar, and feeds at Ivy flowers and overripe berries. **Life cycle** Overwinters as an egg, laid singly or in small batches on branches or in bark crevices of the foodplant. Larva Apr–Jun. Feeds at first inside an opening bud, and when larger only at night, hiding in a bark crevice on the trunk by day. Constructs a strong underground cocoon close to the base of the tree, pupating several weeks later. **Larval foodplants** The immature flowers and leaves of Pedunculate Oak; probably also Sessile Oak and possibly Turkey Oak. **Habitat** Broadleaved woodland, parkland and hedgerows. Some gardens, but generally not in urban centres. **Status and distribution** Resident. Common. Widespread and locally frequent throughout England and Wales, and in Scotland north to Sutherland, on Man and in the Channel Islands. More local in Ireland.

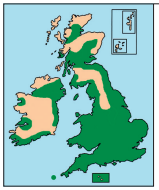
Brindled Green

plate 61

Dryobotodes eremita (Fabr.)

Common

73.225 (2248)



Field characters FW 15–17mm. Quite variable. Forewing dull green, greenish black or grey, usually rather obscurely marked, but sometimes more strongly variegated with black, white and brown. Has a small pale blotch in centre adjacent to oval, bordered with black along its rear and outer edges. This varies in shape, width, colour and intensity, but nearly always has a small projection at its trailing corner pointing towards outer edge of wing. Hindwing usually dirty grey, with a rather faint, dark central band. **Similar species** See Southern Brindled Green and Sombre Brocade. See also Shears, which has a more angular brown or grey forewing with two projections on pale central blotch. Its main flight season is much earlier, although it can have a small second generation. **Flight season** One generation. Sep–Oct in the south and in Ireland, late Aug–Sep in the north. Comes regularly to light, sugar and overripe blackberries. **Life cycle** Overwinters as an egg, laid in small batches on oak twigs. Larva Apr–Jun. Feeds at first inside a bud, later only at night, hiding by day in a spun terminal shoot. Pupates underground in a cocoon. **Larval foodplants** The expanding buds and leaves of Pedunculate Oak and probably Sessile Oak. Also found on Hazel under a canopy of Pedunculate Oak, and reared successfully on it. Reported from hawthorns. **Habitat** Broadleaved woodland, parkland and some gardens, including suburban areas. **Status and distribution** Resident. Common. Well distributed in the southern half of England, in Wales and in the Channel Islands (first recorded there in 2000). Widespread but more local in northern England, mainland Scotland north to West Ross, and in the Inner Hebrides. Local and rare on Man. Local in Ireland.

Southern Brindled Green

plate 61

Dryobotodes roboris (Boisd.)

Resident or immigrant. Channel Islands

73.226 (2248a)

Field characters and similar species FW 12–14mm. Similar to Brindled Green, but smaller and forewing is slightly more angular. Usually predominantly green, sometimes grey or grey-brown. Diagnostic features are a distinct dark spot in trailing corner and a broad, plain, pale cross-band in outer area. Pointed pale central blotch usually prominent. **Flight season** One generation in mainland Europe, Sep–Nov. **Life cycle** Overwinters as an egg. Larva spring until May or Jun. Pupates in a strong cocoon in the ground in early Aug. **Larval foodplants** Oaks. **Habitat** Oak woodland, including scrub oak. **Status and distribution** Two records, both on Jersey at light.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

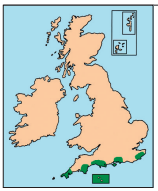
One at Creux Baillot on 12 Oct 2006 and one at Waterworks Valley on 30 Sep 2011. Normally found in Iberia and the southern half of France.

Sombre Brocade

plate 61

Dryobotodes tenebrosa (Esp.)

Immigrant; recent colonist 73.227 (2248b)



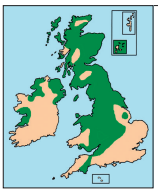
Field characters and similar species FW 15–17mm. Markings somewhat similar to Brindled Green, but forewing broader, warm brown (sometimes with extensive grey dusting), with a longer black basal streak. Pale central mark usually quite broad, but not noticeably pointed. Has a rather irregular, light brown cross-line near outer edge, with blackish edging (especially in leading half) broken centrally by double outward projection. Hindwing usually whitish, with a conspicuous narrow, dark central band. Also somewhat reminiscent of Dark Brocade, which is larger with outer edge of kidney wavy, or Pale-shouldered Brocade, in which outermost cross-line is white, forming a clear 'W' in centre (and eyes are hairy). **Flight season** One generation. In the British Isles, late Sep–mid-Oct. In mainland Europe, stated to be Oct–Dec. **Life cycle** Overwinters as an egg. Larva in the spring. **Larval foodplants** In mainland Europe, recorded on Evergreen Oak and Kermes Oak. **Habitat** Oak woodland, including scrub oak. **Status and distribution** First captured in the Channel Islands on 19 Sep 2006, at St Peters, Guernsey, but identified retrospectively, after the capture of one on 2 Oct 2006 at Icart Point, Guernsey. Now believed to be an established resident on Guernsey and Alderney after subsequent records, including 15 on Guernsey in 2008. The first British mainland record was a female at light on 12 Oct 2008 at Durlston Country Park, Swanage, Dorset. Recorded there annually since, in increasing numbers. A second population was discovered at Abbotsbury, Dorset, in 2010. Singletons in 2010 on Hayling Island, Hampshire, and in 2011 at Falmouth in Cornwall and Studland in Dorset. Ten at one site at Bonchurch, Isle of Wight, in 2014 and four at one site in Teignmouth, Devon, in 2015 suggest further colonisation or expansion. Also, one recorded at Hythe, Kent, in 2015. Normally found in southern Europe, including Iberia and the southern half of France.

Grey Chi

plate 61

Antitype chi (L.)

Common 73.228 (2254)



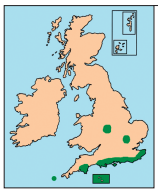
Field characters FW 15–19mm. Black mark in centre of forewing, sometimes resembling the Greek letter χ (chi), is diagnostic; it may also be anvil-shaped, or thickened to form a solid bar, or less often reduced. Forewing greyish white, or cold light or darker greyish green (f. *olivacea* Steph. strongly marked, and f. *nigrescens* Tutt weakly marked). Hindwing whitish in male, grey in female. Dark forms are most frequent in the Midlands, northern England and parts of Scotland. **Similar species** See Grey Shoulder-knot. **Flight season** One generation. Aug–Sep. Comes to light and sugar. Often found by day at rest on stone walls, on buildings near lights, on rocks and on tree trunks. **Life cycle** Overwinters as an egg. Larva Apr–Jun, feeding at night. Pupates underground in a strong cocoon. **Larval foodplants** Few wild records but apparently docks and sorrels. Accepts sallows, hawthorns, Lilac, Red Currant and many other plants in captivity. **Habitat** Moorland, upland grassland and other open grassy places, including parkland and gardens in urban areas. **Status and distribution** Resident. Common. Local in south-west England. Quite well distributed in the Midlands, Wales, northern England, mainland Scotland and the Hebrides. In decline, especially at the southern end of the range, where it is increasingly confined to higher ground. Rare, probably vagrant, in southern and eastern England. Numbers in the Rothamsted Insect Survey national light-trap network declined by 80% from 1968 to 2007. Local in Ireland, mainly in the north, and in the west south to Co. Clare. Local on Man. Old records from the Channel Islands.

Flame Brocade

plate 61

Trigonophora flammea (Esp.)

Immigrant; former transitory resident; recent colonist 73.229 (2251)



Field characters FW 20–23mm. Very distinctive among British species, the large straw-white central kidney mark with a pointed flame-like inward extension and straw-white streak along trailing edge being the most striking features. Forewing otherwise purplish brown, tinged with a violet sheen, with several dark blocks and a light brownish outer band. Hindwing grey-brown. **Similar species** Two very similar species, *Trigonophora crassicornis* (Ob.) and *T. jodia* (H.-S.), occur in France and could possibly occur in Britain. *Trigonophora crassicornis* is paler, and antennae of male have longer fine filaments. *T. jodia* is noticeably smaller, and hindwing of male is whitish. **Flight season** One generation. Sep–early Nov. Comes to light, sugar and Ivy flowers. **Life cycle** Overwinters as a small larva. Larva Nov–May. Pupates underground. **Larval foodplants** Not confirmed in Britain. Has been reared indoors, initially on Lesser Celandine, buttercups, Common Chickweed, Field Mouse-ear and grasses, and when larger also accepted Cow Parsley, Wood Avens and woody plants such as Blackthorn, privets and Broom. **Habitat** Recent colonies are centred on scrubby, unimproved chalk grassland. Also recorded in sparse woodland, parkland and marshy ground. **Status and**

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

distribution Regular immigrant and transitory resident in the British Isles. Found in numbers, from about the mid-1850s, at various places near the coast of East Sussex, including sites near Brighton, Arundel and Eastbourne (although details are somewhat shrouded in mystery and misinformation), to about 1892, after which there were several hard winters and it was not seen again until 1919 and then 1946. Over 300 immigrants have been recorded, almost annually since 1990, mainly in southern coastal counties from Devon to Kent, particularly in Dorset, and one in Northamptonshire in 2001. Resident populations have recently become established on Portland in Dorset (where it is now quite numerous) since about 2011, and between Beachy Head and Birling Gap in East Sussex, where it has also been seen in numbers since 2011. Further colonisation along the south coast seems likely. Widespread and frequent resident in the Channel Islands. Resident from northern France and Spain to the Mediterranean and south-eastern Europe.

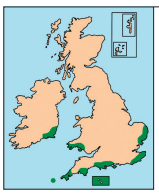
Feathered Brindle

plate 61

Aporophyla australis (Boisd.)

ssp. *pascuea* (Humph. & Westw.)

Nb 73.230 (2230)



Field characters and similar species FW 14–17mm. Forewing rather narrow, with a streaky pattern. Has a black basal streak, central jagged cross-lines and a series of blackish streaks near outer edge. Hindwing white in male (which has slightly feathered antennae), grey-brown in female. Varies greatly in colour from locality to locality. In general, individuals from Cornwall are heavily marked and dark, especially in central portion of forewing, the degree of contrast decreasing eastwards to Kent, where the moths have light markings and a pale ground colour; but there are other local forms (such as grey forms on the Isle of Wight) rather than a single gradation. The dark brown f. *ingenua* Freyer also occurs at low frequency. Quite distinctive, although the narrow forewing and rather squared shoulders are reminiscent of the shoulder-knots and pinions, none of which have a white hindwing in male. Grey forms patterned with black wedges, dashes and other spiky markings are also distinctive. See also Deep-brown Dart. **Flight season** One generation. Late Aug–mid-Oct. Has been found at rest on grass stems and visiting Ivy flowers and sugar soon after dark. Comes well to light later in the night. **Life cycle** Overwinters as a larva. Larva Oct–mid-May. Feeds and grows slowly during the winter, before pupating under moss or in earth. **Larval foodplants** Various low-growing plants, including Sea Campion, Common Sorrel, Bramble and Wood Sage; possibly also some grasses. **Habitat** Shingle beaches, vegetated sand-dunes, soft-rock sea-cliffs, unimproved coastal grassland and south-facing chalk downland. **Status and distribution** Resident. Nationally Scarce B. Very local, but can be abundant. Mainly coastal. Established in Cornwall, South Devon, Dorset (widespread), Isle of Wight, Sussex, Kent, North Essex and Suffolk. Occasional in Hampshire and Norfolk. In Wales, established on the south coast of Pembrokeshire, in Glamorgan (on the Gower) and once at Llechryd, Cardiganshire, in 1980. Local in south-east Ireland on the coasts of Cos. Waterford, Wexford and Wicklow. Widespread and frequent in the Channel Islands.

Deep-brown Dart and Northern Deep-brown Dart

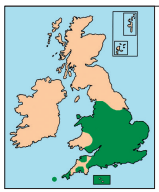
The status of these two species has long been debated. In older British literature, Northern Deep-brown Dart was treated as a northern subspecies of Deep-brown Dart, but in the current and previous checklists it is regarded as a separate species. Some Continental authorities consider that the British and Irish populations belong to one species, referred to as *Aporophyla lueneburgensis*, and that *A. lutulenta* is a mainly eastern European species, extending west to Germany and Holland. However, the latter appears to more closely resemble 'our' Deep-brown Dart.

Deep-brown Dart

plate 61

Aporophyla lutulenta ([D. & S.])

Common 73.231 (2231)



Field characters FW 15–18mm. A fairly thickset, warm deep brownish-grey or blackish moth. Forewing quite broad with leading edge straight or almost so and outer edge rather tapering to tip. Markings vary in intensity and may be obscure. Often there is a broad darker central band. Hindwing in male white, sometimes with a central row of small blackish dots or short dashes; in the female, dark grey. Antennae of male slightly feathered. **Similar species** See Northern Deep-brown Dart, which until fairly recently was regarded as a subspecies. See also Black Rustic. The dark brown f. *ingenua* Freyer of Feathered Brindle has a narrower forewing and black basal streak. **Flight season** One generation. Sep–Oct. Comes to light and sugar, and feeds at flowers and overripe blackberries. **Life cycle** Overwinters as a very small larva. Larva autumn–early Jun. Feeds at night and hides low down by day. Pupates underground. **Larval foodplants** Apparently a range of woody and herbaceous plants and grasses, including Broad-leaved Dock and sorrels, and reportedly Broom, Blackthorn, Field Gromwell, Annual Meadow-grass and Tufted Hair-grass. **Habitat** Open habitats, mainly on calcareous or light sandy soils but also clays, including permanent pasture, hay-meadows, downland, heathland, coastal sand-dunes, rough grassland and some gardens. Also wide woodland rides. **Status and distribution** Resident. Common. Well distributed in southern Britain south of a line from the Severn to the Humber, and including Scilly, and further

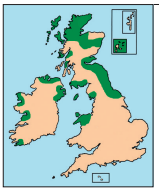
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

north into the Midlands, probably on lower ground. Recorded in Lancashire since the 1990s. In the Channel Islands, singletons on Guernsey in 1972 and Jersey in 1981, and recorded recently from Alderney.

Northern Deep-brown Dart plate 61

Aporophyla lueneburgensis (Freyer)

Common 73.232 (2231a)

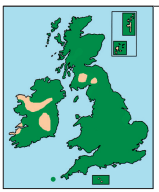


Field characters and similar species FW 15–17mm. Very similar in shape and markings to Deep-brown Dart, but on average slightly smaller and seldom brownish. Forewing either uniformly dull blackish, or heavily dusted with cold grey and with a blackish central band. Black dots or dashes on hindwing of male usually evident, often well developed and sometimes joined to form a curved line. Antennae of male slightly feathered. See also Black Rustic. **Flight season** One generation. Early Aug–mid-Sep. Comes to light and sugar, and feeds at flowers. **Life cycle** Overwinters as a small larva. Larva autumn–late May. Feeds at night and hides low down by day. Pupates underground. **Larval foodplants** Various woody and herbaceous plants and grasses, including Heather, Bilberry and Common Bird's-foot-trefoil. **Habitat** Moorland and rough grassy or rocky places, both on the coast and inland at low altitude. **Status and distribution** Resident. Common. Well distributed and often fairly frequent in Scotland, including the Hebrides and Orkney, but thought to be in decline. Also found in northern England, north Wales, Man, and the north and west coasts of Ireland. There is uncertainty as to the southern extent of this species (as currently defined) in Britain, especially in the Midlands and south Wales. Possibly, if present in these areas it is more restricted to higher ground.

Black Rustic plate 61

Aporophyla nigra (Haw.)

Common 73.233 (2232)

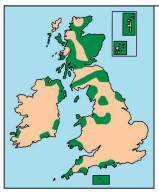


Field characters FW 17–21mm. As the name suggests, this is a consistently deep black or brownish-black moth, with a glossy forewing when fresh. Its only conspicuous feature is white or creamy white outer edging of kidney mark. Hindwing in male white, with narrow dark outer edges; in female grey, lighter near base. Antennae not visibly feathered in either sex. **Similar species** Deep-brown Dart and Northern Deep-brown Dart are smaller and never glossy, outer edge of kidney mark is not strongly highlighted whitish and antennae of male are feathered. **Flight season** One generation. Sep–Oct, slightly earlier in the north. Comes to light and sugar, and feeds at Ivy flowers and on overripe blackberries. **Life cycle** Overwinters as a small larva. Larva Oct–May. Feeds at night and hides low down by day. Pupates underground. **Larval foodplants** Various woody and herbaceous plants, including Tufted Hair-grass, Heather, Blackthorn and clovers. **Habitat** Open heathland, moorland, calcareous grassland, roadside verges and other rough, herb-rich grassy places, including gardens and woodland rides. **Status and distribution** Resident. Common. Well distributed and frequent throughout most of Britain. Formerly rare or absent in large parts of eastern England, East Anglia, parts of the Midlands, and north-east England, but has been increasing since the 1980s and has expanded into these areas. Breeds in Orkney, but vagrant in Shetland. Widespread and frequent on Man, in Ireland and in the Channel Islands.

Brindled Ochre plate 61

Dasypolia templi (Thunb.)

Local 73.234 (2229)



Field characters FW 18–23mm. A stout, furry, rough-scaled moth. Forewing greenish brown, heavily dusted and marked with dull yellow and grey, or paler and predominantly yellowish brown. Oval and kidney yellowish. Paler and more yellowish examples tend to be males. Hindwing yellowish, dusted grey-brown and with yellow-brown fringes. **Similar species** Usually unmistakable. Some forms of Northern Rustic have a similar forewing colour and pattern, but have a dark grey hindwing with chalky-white fringes, and in most cases are noticeably silky. **Flight season** One generation. Sep–early Nov. Mating occurs in the autumn and only female overwinters, surviving as late as May. Comes to light, sometimes commonly, but does not feed. **Life cycle** Overwinters as an adult female, in a rocky outcrop, drystone wall or outbuilding. Eggs are laid on the foodplant. Larva Apr–Jul or early Aug, at first inside the stems, later burrowing into the roots. Pupates just below the soil surface. **Larval foodplants** Hogweed and Wild Angelica. **Habitat** Mainly rough coastal grassland, cliffs and sand-dunes in the south. In northern Britain, also on upland grassland, moorland and marshes inland. **Status and distribution** Resident. Local. Well distributed and locally abundant in northern and north-east Scotland and the Northern Isles. Widespread but more local in the rest of Scotland, and in northern England south to Flamborough Head in Yorkshire, Lancashire, and inland south to Derbyshire and Staffordshire. Coastal in Wales, Man, south-west England, Dorset, Hampshire and the Isle of Wight. Very local in Ireland, mainly on eastern and northern coasts, and recorded from North Kerry and West Mayo in the west. Widespread in the Channel Islands.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Feathered Ranunculus

plate 61

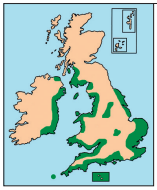
Polymixis lichenea lichenea (Hb.)

Local

73.235 (2255)

ssp. *scillonea* Rich.

Scilly



Field characters FW 15–18mm. Ssp. *lichenea* has a rather delicate greyish-green forewing, often dusted and freckled with whitish grey. Hindwing whitish in male, grey in female, with bold black dashes around margin, and sometimes with a dark central line. Antennae feathered in male. Tends to be paler in calcareous areas in southern England and darker on rocky western coasts. Yellowish marked forms occur in Devon, and some from north Wales are strongly tinged with brown. Ssp. *scillonea* from Scilly has a generally darker green forewing, often strongly freckled with blackish, with obscure markings and a prominent white kidney mark, or with more extensive, strongly contrasting whitish markings. **Similar species** Black-banded has a blackish-grey central band on forewing (sometimes weakly defined) and is marked with orange-yellow, and antennae are not feathered in male. Hindwing lacks a central cross-line, and has a narrow, more or less continuous dark line around outer edge. See also Large Ranunculus. **Flight season** One generation. Sep–Oct. Comes to light, the male generally after midnight, and to sugar; feeds at Ivy flowers and overripe blackberries. **Life cycle** Overwinters as a small larva, low down in the vegetation. Larva Oct–May. Feeds at night and is most frequently found in sheltered situations. Pupates underground in a strong cocoon. **Larval foodplants** Various herbaceous plants, including Hound's-tongue, Sea Plantain, Thrift, Biting Stonecrop and wild Cabbage. **Habitat** Rocky and soft-rock coastal cliffs, sand-dunes, vegetated shingle, limestone and chalk slopes, sometimes slightly inland. **Status and distribution** Ssp. *lichenea* is resident. Local. Mainly coastal. Well distributed around the coast of southern Britain, including the Isle of Wight, extending north to North-east Yorkshire in the east and to Cumbria in the west (including Anglesey), and locally in south-west Scotland north to Argyll and Arran, and on Man. Very local inland in Kent, South Devon, north Wales, and the north Midlands, including Cheshire, Derbyshire (Dovedale and Matlock) and Yorkshire. Occasionally recorded elsewhere inland as a vagrant. Found locally on the eastern coast of Ireland, from Co. Antrim to Co. Waterford. Widespread and abundant in the Channel Islands. Ssp. *scillonea* is found only on Scilly.

Black-banded

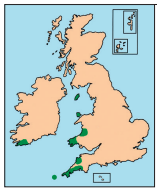
plate 62

Polymixis xanthomista (Hb.)

ssp. *statices* (Gregs.)

Na

73.236 (2253)



Field characters and similar species FW 16–18mm. Likely to be confused with the larger and much more widespread Large Ranunculus, from which it is distinguished by a dark central cross-band on forewing, passing between oval and kidney mark, smaller size, narrower forewing and absence of a dark cross-band on hindwing (white in male, grey in female). Antennae not feathered. See also Feathered Ranunculus. **Flight season** One generation. Mid-Aug–Sep or early Oct. Comes to light, sometimes in fair numbers, and recorded at sugar. **Life cycle** Overwinters as an egg. Larva Mar–early Jul, feeding by night. Pupates in a cocoon in a crevice or in soil under the foodplant. **Larval foodplants** Mainly Thrift, eating the flowers and leaves. Also reported from the flowers of Sea Plantain, Sea Campion, Harebell and Kidney Vetch. Readily accepts sallow leaves in captivity. **Habitat** Rocky coastlines, breeding usually on foodplants splashed at high tides, although sometimes light-trapped further inland in scrubby areas. **Status and distribution** Resident. Nationally Scarce A. A subspecies distinct from those in mainland Europe. Local on Scilly, the north and south coasts of Devon and Cornwall, Somerset (occasionally), Pembrokeshire (including Skokholm Island), Cardiganshire, Anglesey and Man. Rare in Ireland, with three recorded at different locations in Co. Cork, the most recent in 2010.

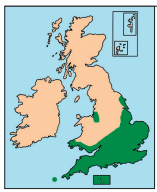
Large Ranunculus

plate 62

Polymixis flavicincta ([D. & S.])

Local

73.237 (2252)



Field characters FW 17–22mm. Quite a thickset moth, with a broad, delicate pale (or darker) greenish-grey forewing, usually with golden-orange freckling, particularly along outermost cross-line and around kidney mark. Sometimes areas between central cross-lines are slightly darker. Hindwing whitish or grey, with a distinct thick grey central line. Antennae not feathered. **Similar species** See Black-banded and Small Ranunculus. **Flight season** One generation. Sep–Oct. Comes to light and sugar, but only occasionally found feeding at flowers. Can be found by day at rest on walls, rocks and fences. **Life cycle** Overwinters as an egg. Larva Apr–Jul. Feeds at night and hides low down by day. Pupates underground in a strong cocoon. **Larval foodplants** The flowers and leaves of many wild and cultivated herbaceous plants, including several

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Black-banded.

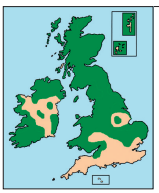
confirmed records from Dandelion in the wild; also Daisy, Michaelmas-daisies, Rosebay Willowherb, Red Valerian, cultivated mints, delphiniums and ragworts, and sometimes also on woody species such as currants, Ivy and plums. **Habitat** Particularly gardens and disturbed ground in urban areas, also damp meadows, river valleys and coastal rough ground; sometimes heathland but more frequent in neutral and calcareous situations. **Status and distribution** Resident. Local. Well distributed and fairly frequent in England south of a line from the Severn Estuary to the Wash, and along the coast of south Wales to Pembrokeshire. Local in Lincolnshire and in Yorkshire along the coast (and formerly inland). Occasional elsewhere in northern England and the north Midlands. Widespread and frequent in the Channel Islands.

Dark Brocade

plate 62

Mniotype adusta (Esp.)

Common 73.238 (2250)



Field characters FW 18–21mm. Forewing quite broad and rather tapered, and pale brown, olive brown, dark brown (sometimes tinged with reddish brown) or blackish brown. Dark forms are the most frequent in northern Britain. A solid black bar usually joins second and third cross-lines, but this is sometimes thin and occasionally incomplete, failing to reach third line. There is a distinct wavy black basal streak. Outer edge of kidney mark is whitish, often wavy or irregular, and pale outermost cross-line forms a distinct 'W' in centre. Eyes not hairy, but with long hair-like scales curving around them, like lashes (can be lost on worn specimens). **Similar species** Examples with an incomplete black bar are most likely to be confused with Cabbage Moth, which has a spine on foreleg (tip of tibia) and chalky-white edging on more regular kidney mark, usually lacks a distinct basal streak and is generally greyer. Northern Arches and Exile are stouter, cross-lines are thicker, and outermost cross-line is less jagged, not forming a well-defined 'W', or is barely discernible. Dusky Brocade has a less pointed forewing and is greyer. Cabbage Moth and Pale-shouldered Brocade have hairy, unlashed eyes. All *Apamea* species have hairless, unlashed eyes. See also Sombre Brocade. **Flight season** One generation. Late May–early Aug. Comes to light and sugar, and feeds at flowers. **Life cycle** Overwinters as a fully grown larva underground in a cocoon, in which it pupates in Apr or May. Feeds Jun–Sep, mainly at night. **Larval foodplants** Various woody and herbaceous plants, including Heather, Bog-myrtle, Alder, Bladder Campion and, reportedly, grasses. Readily accepts sallows and hawthorns in captivity. **Habitat** In the south, heathland, chalk downland, fens, woodland and some gardens. Further north, moorland, upland grassland and sand-dunes. **Status and distribution** Resident. Common. In decline at the southern end of its range. Formerly found locally in south-west and central southern England, but now rare or absent. Widespread in the Midlands but apparently less so than formerly, and patchy. More widespread but still somewhat local in East Anglia. Well distributed and frequent, particularly in upland areas, in northern England, Wales, Man and throughout Scotland. Widespread and locally frequent in Ireland. Old records from the Channel Islands.

Bedrule Brocade

plate 62

Mniotype solieri (Boisd.)

Suspected immigrant or adventive 73.239 (2250a)

Field characters and similar species FW 16–19mm. Resembles Dark Brocade but slightly smaller and more tawny brown, with a paler hindwing, whitish in male with a darker border, more generally dark brown in female (greyish white in Dark Brocade). Central black bar usually thin, and pale outer cross-line generally less pronounced. **Flight season** One generation in mainland Europe. Aug–Sep. Comes to light. **Life cycle** Overwinters as a larva, feeding from autumn to spring. Pupates underground. **Larval foodplants** The roots and leaves of a wide range of wild and cultivated herbaceous plants. **Habitat** Open habitats, including in gardens and on farm crops. **Status and distribution** Suspected immigrant or adventive. Only one recorded in the British Isles, at Bedrule, near Denholm, Roxburghshire, on 29 Aug 1976, at a time of high migrant activity, although accidental importation is a possibility. Resident mainly in south-eastern Europe and the Mediterranean islands, but has been recorded in Denmark.

Beautiful Arches

plate 62

Mniotype satura ([D. & S.])

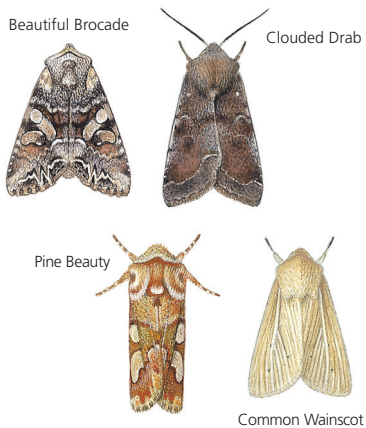
Possible extinct resident, or Immigrant 73.240 (2249)

Field characters and similar species FW 19–23mm. Fairly unmistakable. Forewing broad, with a curved leading edge, dark brown marbled with lighter reddish brown, especially outer area, oval and kidney. Has a thick black central bar and rather short black basal streak. Outermost cross-line

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

pale, forming a 'W' centrally. Thorax has a reddish crest. Most like Dark Brocade (narrower, more angular forewing) or Northern Arches (leading edge straighter, thorax without crests). **Flight season** One generation. Jul–Oct in mainland Europe. **Life cycle** Overwinters as an egg. Larva May–Jun. **Larval foodplants** A wide range of plants reported, including Bramble, Honeysuckle, sallows, hawthorns, Blackthorn and Raspberry. **Habitat** Woodland and open heathland in mainland Europe. Unknown in Britain. **Status and distribution** Possibly resident in the 19th century but may have occurred as an immigrant. Of the small number of records, some are misidentifications and others were deliberate frauds, but a few appear genuine. Of the latter there are at least two, some years apart, from the mid-19th century: one from near Reading, Berkshire, the other from south Oxfordshire. Two were reportedly taken at sugar by J.W. Tutt at Wicken Fen, Cambridgeshire, in 1891, and there is a previous record from the county at least 35 years earlier. In the 1920s, two dealers reported specimens from Kent, which have subsequently been dismissed. Two 19th-century specimens exist allegedly from Aberdeenshire, but these were dismissed at the time as improbable. Widespread throughout most of Europe.

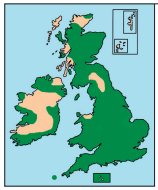
Hadeninae
Brocades, quakers and leaf-eating wainscots



Pine Beauty
plate 62

Panolis flammea ([D. & S.])

Common 73.241 (2179)



Field characters FW 15–16mm. Unmistakable. Large whitish kidney mark, drawn out close to leading edge towards wing tip, is the most noticeable diagnostic feature. Forewing rather narrow and pointed, orange-brown, reddish brown or brick red, often yellowish along outer edge and sometimes dusted whitish. Sometimes variegated with greenish grey (f. *grisea* Tutt), or intermediate (f. *grisoevariegata* Goeze). Rests with wings folded tightly against body. When sitting head down on the tip of a shoot, the moth closely resembles a pine bud, suggesting that this is the favoured natural roosting place. **Flight season** One generation. Mar–May. Comes to light, but in very small numbers, sometimes even when the population size is large. Feeds at sallow catkins. **Life cycle** Overwinters as a pupa, in a flimsy cocoon in leaf litter or in a crevice in a tree trunk. Larva May–Jul. **Larval foodplants** The needles of pine trees, including Scots Pine, Corsican Pine and Lodgepole Pine, especially on the new shoots. Also recorded from larches. **Habitat** Occurs in pine forests and plantations; also in parks and gardens. Became very abundant in northern Scotland in the 1970s when the North American Lodgepole Pine was planted extensively on depauperate acid soils, causing serious damage. Lodgepole Pine is now rarely planted and the moth is only an occasional pest. **Status and distribution** Resident. Common. Throughout most of Britain, including the Hebrides, on Man and in the Channel Islands. Widespread but local in Ireland.

Clouded Drab
plate 62

Orthosia incerta (Hufn.)

Common 73.242 (2188)

Field characters FW 16–20mm. Extremely variable, although most examples are easily recognisable. Forewing somewhat variable in shape, but fairly sharp-tipped and often rather rough in appearance. Outermost cross-line paler and slightly irregular, almost always with small dark blotches at leading edge, one-third of the way along and at trailing corner. These are less obvious on dark examples and, exceptionally, are missing on the very palest. In much of southern and eastern England, ground colour is most frequently blackish or dark reddish brown, largely with obscure markings. Further north and west, paler forms are more frequent and can be pale brown, greyish, reddish or light grey, to some extent clouded, dusted or flecked (sometimes heavily) with dark brown or black. However, fairly plain examples do occur, notably in

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

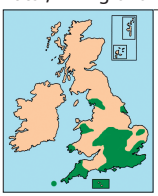
north-east Scotland. **Similar species** Powdered Quaker is a softer pastel shade and more plainly marked, outermost cross-line is straighter, without dark blotches, and forewing is not clouded. See also Northern Drab, Lead-coloured Drab and Twin-spotted Quaker. **Flight season** One generation. Early Mar–May, sometimes earlier. Comes to light and sugar, and feeds at sallow catkins and Blackthorn flowers. **Life cycle** Overwinters as a pupa in an underground cocoon, with the adult fully formed inside. Larva Apr–Jun. Lives at first in developing buds, then in spun shoots or leaves, resting under a leaf in the final instar. **Larval foodplants** A wide range of broadleaved trees. Perhaps most numerous on oaks and sallows, but frequent on Downy Birch, Silver Birch, Hawthorn, Hazel, elms, Sweet Chestnut and limes. **Habitat** Most abundant in woodland, but occurs in many habitats with trees and shrubs, including gardens. **Status and distribution** Resident. Common. Well distributed and frequent throughout most of the British Isles, but vagrant on Shetland.

Blossom Underwing

plate 62

Orthosia miniosa ([D. & S.])

Local; Immigrant 73.243 (2183)



Field characters FW 15–17mm. Hindwing pinkish white, showing up brightly at night around moth traps, easily distinguishing this species from relatives flying in the spring. Warm sandy or pinkish-brown colour, grainy appearance and softly defined markings of forewing contrasts with sharper markings and harder colours of other members of the genus. Forewing fringe pinkish. Kidney mark rather narrow. Cross-lines always evident, darker brown, pale-edged and finely scalloped. Central band usually a deeper shade, and occasionally sprinkled with whitish scales. Variation is relatively slight, but an uncommon form is more uniformly dark reddish brown. **Similar species** Reddish examples of Small Quaker are usually smaller and have a more rounded forewing, central area is not darker, cross-lines (when evident) are fine and blackish, and hindwing is grey. See also Common Quaker. **Flight season** One generation. Early Mar–early May. Comes to light, sometimes in numbers; feeds at sallow catkins from dusk and occasionally at sugar. **Life cycle** Overwinters as a pupa in an underground cocoon, with the adult fully formed inside. Larva late Apr–mid-Jun. Lives gregariously in light webs when small. **Larval foodplants** Mainly oak leaves, but also known to eat wasp galls on oak. Part-grown larvae are also recorded from other trees and shrubs such as Blackthorn and Hawthorn, and on herbaceous plants. **Habitat** Oak woodland and old hedgerows with mature oak trees. Larvae are most numerous on oaks in sunny situations and low oak coppice, often on damp ground. **Status and distribution** Resident and immigrant. Local. Widespread in central southern and south-west England and in Wales. Local in south-east England, East Anglia, the south and west Midlands, north Lancashire and south Cumbria. In Ireland, recorded only from the south-east, from Co. Dublin to Co. Cork, but not since 1961 and considered extinct. In Mar and Apr 1999, a large immigration occurred, with at least 60 on coasts from Glamorgan to Norfolk. Since then, scattered examples have occurred at coastal localities in most years north to Yorkshire, with 14 in 2003, and from Alderney (12 in total) since 2006. Examination of older coastal records strongly suggests that this is not just a recent phenomenon.

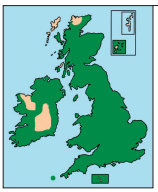
Larva of Blossom Underwing.

Common Quaker

plate 62

Orthosia cerasi (Fabr.)

Common 73.244 (2187)



Field characters FW 13–17mm. Easily recognised by round-tipped forewing, with large, rounded, pale-outlined oval and kidney mark, and uniformly grey hindwing. Extremely variable in ground colour and extent of markings, but always some shade of brown: light sandy, warm sandy or orange-brown, light or dark greyish brown, warm brown, or blackish brown. Outer cross-line generally distinct. **Similar species** Small Quaker is usually smaller, with a narrow kidney mark and usually weak outer cross-line. Blossom Underwing has a more pointed forewing, narrower kidney mark and pinkish-white hindwing. See also Vine's Rustic. **Flight season** One generation. Mar–May, with small numbers sometimes emerging in mild spells during the late autumn and winter. Comes to light, often in abundance, and to sugar, and feeds at sallow catkins and Blackthorn flowers. **Life cycle** Overwinters as a pupa in an underground cocoon, with the adult fully formed inside. Larva Apr–Jun. Lives at first in developing buds, then in spun shoots or leaves, resting under a leaf in the final instar. **Larval foodplants** A wide range of broadleaved trees, including oaks, sallows, birches, elms, hawthorns, Sweet Chestnut and Hazel. **Habitat** Occurs in most lowland habitats, including gardens, but is most abundant in woodland. **Status**

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

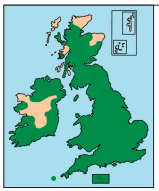
and distribution Resident. Common. Well distributed and frequent throughout most of the British Isles, extending to the Hebrides and Orkney.

Small Quaker

plate 62

Orthosia cruda ([D. & S.])

Common 73.245 (2182)



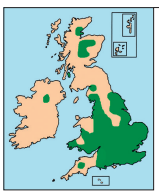
Field characters FW 12–15mm. Readily distinguished from other early-spring noctuids by its small size, usually light colour and plain appearance of forewing. The latter also has a rough appearance, created by a fine dusting of black scales, sometimes strong enough to be visible to the naked eye. Often, the only noticeable markings are a narrow kidney mark and a pale line near outer edge. Some examples have fine, dark cross-lines. Ground colour pale to dark pastel brown, tinged greyish or reddish, or delicately frosted with off-white, and occasionally dark brownish grey. **Similar species** See Blossom Underwing and Common Quaker. **Flight season** One generation. Late Feb–early May. Comes to light, often in numbers, and feeds at sugar and sallow catkins. **Life cycle** Overwinters as a pupa in an underground cocoon, often close to a tree trunk, with the adult fully formed inside. Larva Apr–early Jun. Feeds at night and hides between spun leaves of the foodplant during the day. **Larval foodplants** Mainly oaks; also other trees, including Downy Birch, Hazel, sallows, Field Maple and Sweet Chestnut. **Habitat** Broadleaved woodland (where it can be abundant), wooded areas and wet heathland. Smaller numbers occur in hedgerows and gardens. **Status and distribution** Resident. Common. Well distributed in Britain north to southern Scotland, and more local further north to East Ross, including the Inner Hebrides, and on Man. Widespread and locally frequent in Ireland. Local in the Channel Islands.

Lead-coloured Drab

plate 62

Orthosia populeti (Fabr.)

Local 73.246 (2185)



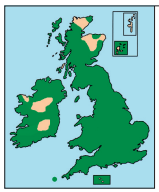
Field characters FW 15–17mm. A grey moth, characterised by rather round-tipped forewing, with quite large, pale-outlined oval and kidney mark always evident. Male has feathered antennae, which is visible to the naked eye. Fine, scalloped dark cross-lines may be present, and outermost line is pale, often with small brown or black marks on its inner edge, especially centrally. Ground colour varies from pale leaden grey to blackish grey. **Similar species** Easily overlooked among its commoner and very variable relatives. Clouded Drab can be leaden grey, but forewing slightly more pointed at tip, and lower half of kidney mark noticeably darker, except in the darkest examples. It is also usually larger. Antennae of male Clouded Drab are not visibly feathered, although they appear quite thick, and under a hand-lens can be seen to have short projections. Common Quaker can be similar in pattern, but brownish. See also Northern Drab. **Flight season** One generation. Mar–Apr. Comes to light, and feeds at sallow catkins and, occasionally, sugar. **Life cycle** Overwinters as a pupa in an underground cocoon, with the adult fully formed inside. Larva late Apr–early Jun. Feeds at night and hides by day between two leaves spun flatly together. **Larval foodplants** At first inside the catkins, later on the leaves, of Aspen, Black-poplar and, occasionally, other poplars. **Habitat** Broadleaved woodland and other areas where poplars are numerous, including some parks and gardens. **Status and distribution** Resident. Local. Widespread in central southern and south-east England (but scarce in south-west England), East Anglia and the Midlands. Local in southern Wales, Yorkshire, Lancashire and Cumbria. In Scotland, very local in the eastern Highlands, from Perthshire and Aberdeenshire north to East Sutherland. Rare in Ireland, found very locally in Co. Fermanagh and one record from Co. Down, in 1973.

Powdered Quaker

plate 62

Orthosia gracilis ([D. & S.])

Common 73.247 (2186)



Field characters FW 15–19mm. Rather long, comparatively pointed forewing, more delicate pastel ground colour, and powdered or grainy appearance due to fine black speckling separate this from similar spring moths. Usually, the only distinct markings are quite large oval and kidney mark, a curved row of fine blackish dots beyond kidney mark and a fairly straight, dark-edged pale outermost cross-line. Extremely variable in ground colour, from sandy white, through sandy grey, bright orange-brown, reddish brown, warm dark grey-brown tinged with pink or mauve, to blackish. There is huge geographical variation. Pale sandy-grey forms predominate in much of lowland Britain. Very dark examples with pale markings have occurred in Hampshire and Yorkshire. Salmon-pink, reddish-brown and dark grey-brown forms, which are usually associated with Bog-myrtle, are the most frequent in Scotland, Ireland and parts of Wales. In the New Forest and Somerset, the moths are mainly reddish brown, with a whitish hindwing. **Similar species** See Clouded Drab. **Flight season** One generation. Apr–May. Comes to light and sugar, and feeds at sallow catkins and Blackthorn flowers. **Life cycle** Overwinters as a pupa in an underground cocoon, with the adult fully formed inside. Larva May–Jul. Lives at first in a spun terminal shoot, later hiding low down by day. **Larval foodplants** Herbaceous and woody plants, including willows, Black-poplar, Blackthorn, Bog-myrtle, Meadowsweet,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

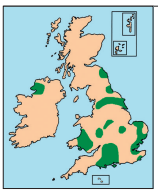
Purple-loosestrife and Common Fleabane. **Habitat** Most common in marshes, but also occurs in damp woodland, gardens and open country, more especially in the southern half of Britain. The populations associated with Bog-myrtle are restricted to marshes and bogs. **Status and distribution** Resident. Common. Well distributed throughout England, Wales, most of Scotland (where it is scarce in the north-east and far north but reaches Orkney), Man and most of Ireland. Infrequent but annual in the Channel Islands. The Bog-myrtle-feeding populations are widespread but local in Scotland (including the Inner Hebrides and Orkney), Ireland, parts of Wales, Somerset and the New Forest, Hampshire.

Northern Drab

plate 63

Orthosia opima (Hb.)

Local 73.248 (2184)



Field characters FW 15–17mm. Stocky, with a very furry thorax. Forewing pointed, with a very straight leading edge. Quite variable in colour, ranging from cold light grey, pale yellowish grey or reddish grey, warm dark grey or brown, or greyish black. Dark central band in the brown form f. *brunnea* Tutt may be faint, but usually catches the light and can be seen with care. Dark forms are frequent and appear to have no geographical or habitat association, grading into paler grey forms, but pale yellowish or reddish-grey forms are found at coastal sites in Kent, Essex, north Norfolk and Northumberland. **Similar species** Lead-coloured Drab has a less angular forewing, usually black spots on inner edge of outermost cross-line, and male has visibly feathered antennae. In the usually larger Clouded Drab, forewing is less pointed, with a curved leading edge. Any dark shading is usually in small patches or covers whole forewing. Both species lack a broad, darker central band and have a less furry thorax. **Flight season** One generation. Apr–May. Comes to light and sugar, and feeds at sallow catkins and Blackthorn flowers. **Life cycle** Overwinters as a pupa in an underground cocoon, with the adult fully formed inside. Larva May–Jul. **Larval foodplants** A range of both woody and herbaceous plants, including sallows and birches, ragworts, Mugwort and Common Sea-lavender. **Habitat** A range of open, usually damp places, including saltmarshes, freshwater marshes, heathland, downland, golf-course roughs and sand-dunes. Sometimes associated with river valleys and floodplains, especially in the south. **Status and distribution** Resident. Local. Widespread but thinly distributed and apparently in decline, especially in central southern England and the Midlands. Still found extensively along the coasts of Essex, Suffolk and north Norfolk, locally in Dorset and Hampshire, south Wales and Yorkshire, and very locally in Gloucestershire, Oxfordshire, Buckinghamshire, Hertfordshire and Kent. Also in the Midlands north to Cheshire, and in Northumberland. Rare in Scotland, recorded from Berwickshire and Roxburghshire, but not recently, and rare in Ireland, with few, very scattered records, mainly in the west and north.

Hebrew Character

plate 63

Orthosia gothica (L.)

Common 73.249 (2190)

Field characters FW 15–17mm. Named after black mark in centre of forewing, which is unique among our spring-flying moths. This mark is variable, but in most cases is roughly saddle-shaped. It may also be cut in two by the oval, and more rarely a solid rectangle, reduced or bent and distorted. In most examples forewing is greyish or reddish brown, but varies from pale sandy to blackish, and can be tinged with pink or purplish brown. In the reddish f. *gothicina* H.-S., the saddle mark is more similar in colour to the surrounding area and therefore less distinct. This form occurs as a small percentage of the population on moorland in parts of the Scottish Highlands and elsewhere in northern Britain. A similar form (f. *obsoleta* Tutt.) with more variable

Larva of Northern Drab.

Larva of Hebrew Character.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

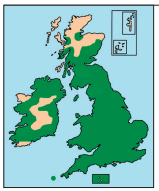
ground colour occurs as far south as Hampshire and in Ireland. **Flight season** One generation. Mar–mid-May in southern Britain, Apr–early Jun in the north and in Ireland. Small numbers sometimes emerge in mild spells during the late autumn or winter. Comes to light and sugar, often flying very late in the night, even in cold conditions, and feeds at sallow catkins. **Life cycle** Overwinters as a pupa in an underground cocoon, with the adult fully formed inside. Larva Apr–Jul. Feeds mainly at night, at first on buds and then on leaves. **Larval foodplants** A wide range of trees, bushes and herbaceous plants, including oaks, birches, hawthorns, sallows, limes, Bilberry, Meadowsweet and Common Nettle. **Habitat** Ubiquitous, from moorland to the smallest of urban gardens and yards. **Status and distribution** Resident. Common. Frequent throughout the British Isles.

Twin-spotted Quaker

plate 63

Anorthoa munda ([D. & S.])

Common 73.250 (2189)



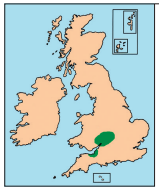
Field characters FW 17–20mm. Two black spots on inner edge of faint pale outermost cross-line, one-third of the way in from leading edge of rather broad, curved forewing, are usually the diagnostic features. There may be additional black spots, forming a row, or they may be brown and faint, or missing altogether (f. *immaculata* Stdgr.). Ground colour light brown, tawny, reddish or greyish brown, often rather grainy. Male antennae visibly feathered. Female antennae with projections visible under a hand-lens. **Similar species** Clouded Drab is normally greyer, with blotches on outermost cross-line instead of two distinct spots, and antennae are not visibly feathered. **Flight season** One generation. Mar–Apr, sometimes earlier. Comes to light and sugar, and feeds at sallow catkins. **Life cycle** Overwinters as a pupa in an underground cocoon, with the adult fully formed inside. Larva Apr–Jun. Feeds at night. Rests among leaves by day when small, and hides in a bark crevice when larger. **Larval foodplants** A wide range of trees and woody plants, including oaks, sallows, Aspen, Field Maple, Sweet Chestnut, Ash, Honeysuckle and Hop. **Habitat** Broadleaved woodland. **Status and distribution** Resident. Common. Well distributed throughout most of England, Wales, Man, Ireland and the Channel Islands. Formerly local in Scotland, mainly in the south and Central Belt, but has expanded and now widespread north to Argyll, Perthshire and Aberdeenshire, and local north to East Ross.

Silver Cloud

plate 63

Egira conspicillaris (L.)

Na 73.251 (2181)



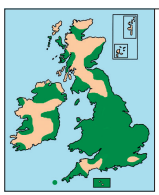
Field characters and similar species FW 16–18mm. Fairly unmistakable. Form *melaleuca* View., the most frequent form in Britain, has blackish markings and is distinctive. At rest, forewing tip appears rounded and projecting when viewed from the side, due to the wing being creased, and thorax has central crests. The brown form has similarities with Pale Pinion but has a white hindwing with dark veins, whereas that of Pale Pinion is grey-brown, and it has pointed shoulders. **Flight season** One generation. Mid-Apr–late May. Comes to light, usually late at night. Occasional at sugar. Recorded feeding at Blackthorn flowers. **Life cycle** Overwinters as a pupa, in a fragile cocoon underground. Larva late May–mid-Jul. Young larvae disperse in the wind on silk threads. **Larval foodplants** Unconfirmed in the wild. Egg batches have been found on old dock stems in open ground, and pupae under oaks and elms. In captivity, accepts docks, Common Nettle, oaks, elms, Blackthorn and many other plants. **Habitat** Rough open ground, grassy fields, hedgerows, scrub, open woodland and orchards. **Status and distribution** Resident. Nationally Scarce A. The restricted distribution is centred on the lower Severn Valley, extending both sides of the river. Locally widespread in Herefordshire, Worcestershire, Warwickshire and Gloucestershire, and extending into Monmouthshire and Breconshire. Also, local in Somerset, particularly near the coast. One was reported from Gower, Glamorgan, in the 19th century, and at least one reliably from South Devon in 1962. In the 19th century, resident at a number of sites in Kent and a single record from Essex. One recorded in Middlesex in 1959.

Hedge Rustic

plate 63

Tholera cespitis ([D. & S.])

Common 73.252 (2177)



Field characters FW 15–19mm. Forewing of this rather thickset species is quite broad and rather uniformly blackish brown, with a straight leading edge. The only conspicuous markings are oval and kidney mark outlined in golden yellow, and pale cross-lines. Whole wing is finely dusted with golden yellow. Variation is slight. Kidney mark sometimes extends to a point in direction of oval. Male has slightly feathered antennae. Hindwing usually whitish in male and grey in female, paler toward the base. **Flight season** One generation. Aug–Sep. Comes to light, and feeds at sugar and sugared flower-heads. **Life cycle** Overwinters as an egg, laid loose in the

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

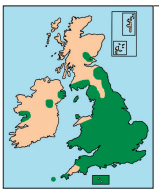
sward. Larva Mar–Jul. Feeds at night, at first on the leaves, and when larger at ground level on the stems. **Larval foodplants** Hard-bladed grasses, including Mat-grass and Wavy Hair-grass. **Habitat** A range of open grasslands and rough grassy places, including suburban gardens. **Status and distribution** Resident. Common. Less numerous than formerly. Numbers in the Rothamsted Insect Survey national light-trap network declined by 97% between 1968 and 2007. Until the 1980s at least, well distributed in England, Wales and Man, but recently declines have been widely reported, although the range has not contracted. In Scotland, widespread north to Sutherland at low elevations, and showing signs of recovery. Widespread but local in Ireland and in the Channel Islands.

Feathered Gothic

plate 63

Tholera decimalis (Poda)

Common 73.253 (2178)



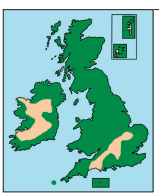
Field characters FW 16–22mm. Fine straw-white streaks along veins of broad forewing, dark cross-lines and black arrowhead marks on inner edge of outermost cross-line distinguish this from most other species. Male is thickset, with a broad forewing, straight leading edge and strongly feathered antennae. Female larger, with unfeathered antennae and straight or slightly curved leading edge. **Similar species** Bordered Gothic has a narrower, more rounded forewing with pale cross-lines, and antennae are not feathered in male; it flies in Jun and Jul. See also Gothic. **Flight season** One generation. Aug–Sep. Comes regularly to light. **Life cycle** Overwinters as an egg, scattered over grassland in flight. Larva Mar–Jul. Feeds at night, at first on the leaves, and when larger at ground level on the stems. **Larval foodplants** Hard-bladed grasses, including Mat-grass and Sheep's-fescue. **Habitat** Rough grassland, including downland, woodland rides and edges, parkland and some gardens. **Status and distribution** Resident. Common. Well distributed throughout most of Britain, north to south-east and the far south-west of Scotland. Very local further north, to Perthshire, and on Man. Scattered and very local in Ireland, with few recent records. Local and occasional in the Channel Islands.

Antler Moth

plate 63

Cerapteryx graminis (L.)

Common 73.254 (2176)



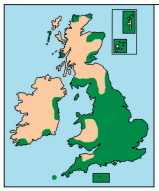
Field characters FW 12–17mm. Forewing with straight leading edge, and diagnostic elongated, branched creamy-white antler-like central mark. This mark may be reduced or enlarged, but varies relatively little in general shape. However, there is considerable variation in extent and intensity of black streaks, which may be virtually absent. Ground colour light to dark olive brown or tinged reddish, with a dull appearance. Male has slightly feathered antennae; female is larger, with simple antennae. **Flight season** One generation. Mid-Jul–mid-Sep. Comes to light and sugar, sometimes in large numbers, and feeds at flowers. Also flies during the day, especially in the north. **Life cycle** Overwinters as an egg, scattered over grassland in flight. Larva Mar–Jun. Feeds mainly at night and hides in the sward by day. **Larval foodplants** Hard-bladed grasses, including Sheep's-fescue, Mat-grass and Purple Moor-grass; also reported on sedges and rushes. **Habitat** Grassland, mainly in open country, particularly acid upland pasture, moorland and downland. **Status and distribution** Resident. Common. Throughout Britain and Man. Often abundant in northern, upland areas, the larvae occasionally stripping hillsides of grass. Appears to be declining in parts of the south, including the south Midlands and the London area. Widespread and locally frequent in Ireland, but in the south more coastal. Rare in the Channel Islands.

Nutmeg

plate 63

Anarta trifolii (Hufn.)

Common; Immigrant 73.255 (2145)



Field characters FW 14–18mm. Key characters include kidney mark, which is quite large with half nearest trailing edge always darker than ground colour, and shape of forewing, which is rather narrow near the base, and pointed with a straight leading edge. Forewing ground colour pale to dark brownish grey, or pale sandy brown, usually dusted with grey or sometimes black, giving a finely variegated effect. Outermost cross-line forms a distinct pale-edged 'W'. Eyes hairy (view under low-power microscope). **Similar species** White Colon is usually larger and stockier, outline of kidney mark is whitish, and outer band normally fails to form a 'W'. Dusky Brocade (f. *obscura*) has the 'W', but again is larger and has a broader forewing, with a more curved leading edge. Confused is browner and kidney mark is edged whitish. In all these species, forewing is broader near base and less pointed. In Confused and Dusky Brocade, eyes are not hairy. **Flight season** Two overlapping generations. Apr–Sep, peaking in Aug. Comes to light, sugar and flowers. **Life cycle** Overwinters as a pupa, in a fragile underground cocoon. Larva May–Jul and Sep–Oct. Feeds at night. **Larval foodplants** Herbaceous plants, particularly goosefoots, Common Orache and other related species, but also recorded on unrelated plants, including Field Bindweed, onions and conifer seedlings. **Habitat** A range of rather open, often disturbed places, including gardens, waste ground, downland, fens and open woodland, favouring light soils. Especially frequent in coastal areas and river valleys. **Status and distribution** Resident and

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

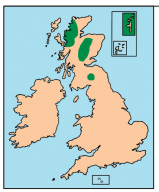
immigrant. Common. Well distributed in England north to the Midlands, Yorkshire and Lancashire. More local and uncommon further north, and in Wales and Man. Widely scattered, scarce and mainly immigrant in Scotland, including the Western Isles and Northern Isles (although temporarily established on Orkney in the 1970s). A rare immigrant in Ireland, with 11 singles recorded, on southern and eastern coasts, from Co. Kerry to Co. Down. Widespread and frequent in the Channel Islands. In Feb 2004, 29 were recorded, on Scilly (nine), and in Cornwall, Dorset (18) and Kent. They were unusually pale and well marked, and were part of an unprecedented long-distance winter arrival of migratory moths, originating in north-west Africa.

Broad-bordered White Underwing

plate 63

Anarta melanopa (Thunb.)

RDB 73.256 (2144)



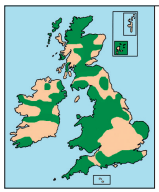
Field characters FW 11–13mm. Diagnostic features are grey forewing, marked with black, and dark oval and kidney mark without an adjacent central white spot. Hindwing white with broad blackish border and dark central crescent. **Similar species** Small Dark Yellow Underwing and Beautiful Yellow Underwing have a yellow hindwing and conspicuous white markings on forewing. **Flight season** One generation. Mid-May–Jun. Flies in sunshine or if it is cloudy but warm, and takes advantage of short sunny periods on cloudy days. Feeds at flowers of montane plants such as Bearberry and Cowberry. Can travel at great speed, but often flies only a few centimetres above the vegetation, in a direct bee-like fashion, especially in windy weather. Can be readily attracted, from distances of 10m or more, to bunches of flowers such as Cherry Laurel. **Life cycle** Overwinters as a pupa, in a cocoon among plant debris under the foodplant. Larva Jul–Aug. Feeds at night and rests under the leaves of the foodplant by day. **Larval foodplants** Crowberry, Cowberry, Bilberry and Bearberry. Has been reared on sallow. Also accepts Knotgrass, Common Rock-rose and other unrelated plants, but on these mortality is reportedly high. **Habitat** Usually high moorland, on the slopes, ridges and summits of mountains, at altitudes over 650m. Also near sea-level in the far north. **Status and distribution** Resident. Red Data Book species. Local in the central Highlands, from Perthshire north to Banffshire and into East Inverness-shire, and in the north-west Highlands in Ross-shire and West Sutherland. In southern Scotland, found in Selkirkshire in 2010 and Peeblesshire in 2013, and there are old records from elsewhere in the Southern Uplands. Resident at one site on Shetland. The Natural History Museum holds old specimens labelled 'Hebrides'. Recorded from near the summit of Cheviot, Northumberland, in 1950 and on 12 Jun 1974.

Beautiful Yellow Underwing

plate 63

Anarta myrtilli (L.)

Common 73.257 (2142)



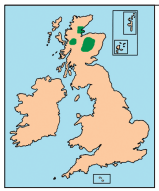
Field characters FW 10–12mm. Forewing most often reddish brown (f. *rufescens* Tutt) or less frequently brownish grey, but always intricately marbled with greyish white. A small white blotch in centre of forewing adjacent to oval is usually the most noticeable feature. Hindwing yellow, with a broad black border extending narrowly along both leading and trailing edges. **Similar species** Small Dark Yellow Underwing has a large, conspicuous white kidney mark. True Lover's Knot has a somewhat similar forewing and is sometimes active during the day on heathland and moorland, but has a dirty brown hindwing and is usually slightly larger. Both species are well camouflaged when sitting on heathers. **Flight season** Two, probably overlapping generations in southern England, late Apr–Aug. In northern England, Scotland and Ireland, one generation, May–Jul. Flies low over heathers in sunshine, and feeds at flowers. **Life cycle** The overwintering stage is not known for certain, but is probably the larva or pupa. Larva Apr–Oct or later, or Jul–Sep or later in the north. Feeds mostly during the day. Pupates in a tough cocoon on or just below the ground surface. **Larval foodplants** The terminal shoots of Heather and Bell Heather. **Habitat** Acid heathland and moorland. **Status and distribution** Resident. Common. In suitable habitat throughout most of Britain, including the Hebrides and Orkney. Widespread but very local in most parts of Ireland. Local and rare on Man.

Small Dark Yellow Underwing

plate 63

Coranarta cordigera (Thunb.)

Na 73.258 (2143)



Field characters FW 10–12mm. Recognisable by quite large, conspicuous white kidney mark on otherwise rather uniform dark grey forewing, and black-bordered yellow hindwing, which is hidden at rest. **Similar species** See Beautiful Yellow Underwing. **Flight season** One generation. Late Apr–May, sometimes to mid-Jun, depending on altitude and latitude, and coinciding with the flowering of Bearberry, which it visits for nectar. Active in sunshine and flies rapidly. In dull weather, individuals and mating pairs can be found at rest near Bearberry flowers, or on twigs, rocks and posts, especially in the afternoon. **Life cycle** Overwinters as a pupa, in a long silken cocoon on the ground. Larva late May–mid-Jul. Feeds by night on the young shoots and leaves of the foodplant. **Larval foodplants** Bearberry

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Larva of Beautiful Yellow Underwing.

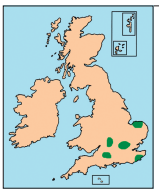
is the only foodplant confirmed in the wild. Cowberry, Bilberry and Bog Bilberry are accepted in captivity. **Habitat** Bearberry-rich moorland, mainly at altitudes of 200–650m, usually on stony glacial moraines and dry gravelly areas, or on roadside banks where Heather growth is poor. Probably benefits from a combination of sparse sward and well-drained bare ground that warms up quickly in sunshine. **Status and distribution** Resident. Nationally Scarce A. Very local in the central and eastern Scottish Highlands, in Perthshire, Inverness-shire, Aberdeenshire, Angus, Banffshire and Morayshire. Single adults in Glen Affric, East Inverness-shire (2003), and Glen Aldie, East Ross (2010), are the only records north of the Great Glen, although the habitat and foodplant are widespread in that area.

Pale Shining Brown

plate 63

Polia bombycina (Hufn.)

pRDB; Immigrant 73.259 (2148)



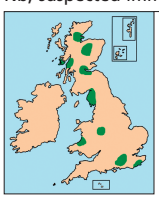
Field characters FW 19–23mm. Forewing reddish brown, with variable grey-brown tint and reflective shine when fresh. Kidney mark and oval large and usually well defined, outer edge of kidney edged white. Inner edging on fine, pale outermost cross-line dark brown, irregular and usually broken, often with one or two inward-pointing dashes or an open 'V' in trailing corner. Tufts on thorax not contrastingly reddish. In Continental Europe, distinctly grey forms predominate, and suspected immigrants are of this form. **Similar species** See Silvery Arches, with edging of outer line black, broken into three distinct sections and lacking dashes at trailing corner. Other superficially similar species, including Reddish Light Arches, Large Nutmeg and Dark Arches, have a 'W' mark near outer edge. See also Scarce Brindle. **Flight season** One generation. Early Jun–mid-Jul. Comes to light and sugar, and visits flowers, including Wood Sage, White Campion, Bladder Campion, woundworts, Viper's-bugloss, Martagon Lily and Red Valerian. **Life cycle** Unconfirmed in the wild, but almost certainly overwinters as a part-grown larva. Eggs laid by captive females have hatched by early Aug, and have produced adults in late autumn. Captive larvae seek cover rapidly if exposed to the light. Pupates underground. **Larval foodplants** Recorded once in the wild, a single well-grown larva in late Jun on Broad-leaved Dock. Plants accepted in captivity include Knotgrass, lettuces, sow-thistles, Dandelion, Common Restharrow, Grey Willow, White Willow and docks. Like other members of the genus, may sometimes complete its spring growth on the buds and leaves of deciduous trees and shrubs, so scrub may be important. However, it has been observed that the larva is a poor climber. **Habitat** Usually on light calcareous soils, on both chalk and limestone, and the remaining strongholds are in such areas. The largest numbers are usually found in rough, scrubby grassland and downland, but also recorded in open woodland and arable farmland. **Status and distribution** Resident and immigrant. Proposed Red Data Book species, formerly Nationally Scarce B. Until the mid-1970s, widely and well distributed in southern and south-east England northwards to a line between the Severn and the Humber. In the 1980s it was considered Nationally Scarce. Since then it has undergone a massive and continuing decline. Until very recently, present in small numbers on the South Wiltshire–North Hampshire border. Recorded locally in west Oxfordshire since 2005, and in 2006 in numbers, mainly in open arable farmland on well-drained calcareous soil, most recently in 2013 near Woodstock. There was an apparent recovery more widely in 2006, but it has since become very hard to find and must be at very low population levels, if present. Other records since 2000 come from Hertfordshire, north Norfolk and Salisbury Plain, Wiltshire. Recorded annually in Cambridgeshire (until 1980) and Kent (until 1992), and in Northamptonshire, Leicestershire and Gloucestershire in the mid-1990s. Eleven examples of the pale grey Continental form, at Dungeness and Greatstone, Kent, from 1976 to 2006 are considered to be immigrants. Very scattered records, mostly from the more distant past, from other parts of England, including Yorkshire and Northumberland, also Wales, Man, and (in the 19th century) southern Scotland, eastern Ireland and the Channel Islands, some of which may also refer to immigrants.

Silvery Arches

plate 63

Polia hepatica (Cl.)

Nb; suspected immigrant 73.260 (2149)



Field characters and similar species FW 21–25mm. The richly marbled greyish forewing and reddish tufts on grey thorax make this moth fairly easy to recognise. Both the reddish-tinted forms of southern England and the darker silvery-grey or even bluish forms in Scotland have a lustre not present in Grey Arches, which has a distinct blackish dash or arrow mark in trailing corner and lacks

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

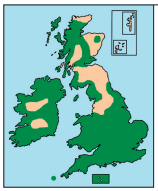
reddish. Edging of outermost cross-line on forewing of Silvery Arches is black and broken into three distinct sections, and not extended into prominent dashes or arrowheads. See also Pale Shining Brown and (faded) Green Arches. **Flight season** One generation. Jun–Jul. Sometimes found at rest on birch trunks by day. Comes to sugar, and in smaller numbers to light. **Life cycle** Overwinters as a small larva, probably among ground vegetation. Larva late Jul or Aug–May. Pupates underground. **Larval foodplants** Pre- and post-hibernation larvae have been beaten from birches and sallows, and post-hibernation larvae also from Bog-myrtle and, less often, Hawthorn and Honeysuckle. Herbaceous plants are also accepted in captivity. **Habitat** Scrubby woodland on heathland, moorland and in river valleys, and open woodland on acid soils and clays. **Status and distribution** Resident and suspected immigrant. Nationally Scarce B. Found locally in the Scottish Highlands, particularly the Spey Valley, also Deeside, Perthshire, Argyll, north to Ross-shire and south to the Central Belt. Also in south Cumbria (Witherslack), the acid heaths of Surrey, Hampshire and Berkshire, and Sussex (but in decline in this area), and mainly older records from the west Midlands (e.g. Wyre Forest, Shropshire/Herefordshire) and central and north Wales. Suspected immigrants are occasional along the coast of south and south-east England.

Grey Arches

plate 63

Polia nebulosa (Hufn.)

Common 73.261 (2150)



Field characters FW 21–26mm. Key features of this normally grey or whitish moth are the leading edge of forewing, which is strongly curved, and oval and kidney mark, which are large and pale with dark outlines. Has a blackish dash or arrow mark in trailing corner. Very variable in colour, ranging from white to light or dark grey, or blackish. The pale form (f. *pallida* Tutt) predominates in western and northern Britain and in Ireland. In the late 19th century, blackish forms with bright white fringes, f. *robsoni* Collins and f. *thompsoni* Arkle, were recorded in northern England, but have now become rare. Hindwing grey, darker towards fringe. **Similar species** See Silvery Arches and Great Brocade. **Flight season** One generation. Jun–Jul. Comes to light, and feeds at sugar and flowers. Can sometimes be found by day on tree trunks and posts. **Life cycle** Overwinters as a part-grown larva, on the ground in leaf litter. Larva Aug–May. Feeds at night, and by day rests among the foliage of woody foodplants when small, hiding on or near the ground when larger. Pupates in a cocoon on or in loose earth. **Larval foodplants** Woody plants, including Hazel, Downy Birch, Silver Birch, Honeysuckle, sallows and Bramble. Also low-growing plants such as docks. **Habitat** Broadleaved woodland and well-wooded country in the south, including rural gardens, but more restricted to woodland in the north. **Status and distribution** Resident. Common. Well distributed throughout most of England and Wales, and western and central Scotland, including the Hebrides. Rare or absent from most of eastern Scotland and the far north. Widespread in Ireland. Local on Man and in the Channel Islands.

Feathered Ear

plate 64

Pachetra sagittigera (Hufn.)

ssp. *britannica* Turn.

Former resident; presumed extinct 73.262 (2151)

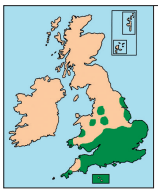
Field characters and similar species FW 17–20mm. Fairly distinctive. Forewing quite broad, brownish white with a prominent, large, whitish-outlined light brown oval and kidney, and hoof-shaped, dark brown central mark, sometimes only outlined. Has a roughly square whitish blotch in trailing corner. Antennae feathered in male. Ssp. *britannica* was more whitish than the central European populations, which are generally darker grey or brown. **Flight season** One generation. Mid-May–late Jun. Reported visiting flowers of Wild Privet. Comes to sugar and sometimes to light. **Life cycle** Overwinters as a larva and has been found in numbers on grass stems at night in Jan and Feb. Larva Jul–Apr. Pupates in a flimsy cocoon on the ground. **Larval foodplants** Grasses, particularly Annual Meadow-grass and Wood Meadow-grass. **Habitat** Calcareous grassland. The moth is reported as hiding among 'grass tufts' by day, suggesting it occupied a rough sward, but the noted Surrey site at Betchworth was heavily grazed by Rabbits in 1950 when a number of larvae were found. This was prior to myxomatosis, which decimated Rabbit populations, after which this and many other swards became much ranker. However, the disappearance of the moth from its stronghold on Wye Downs, Kent, coincided with an intensification of grazing and burning in the 1960s. **Status and distribution** Former resident, now considered extinct. Recorded mainly from the North Downs of Surrey (discovered 1855, last seen 1960) and Kent (last seen 1963), particularly the chalk downs between Ashford and Wye, also near Folkestone and Tunbridge. One at light on Stockbridge Downs, on the Wiltshire–Hampshire border, about 1950, and in 1921 one was found near High Wycombe, Buckinghamshire.

Light Brocade

plate 64

Lacanobia w-latinum (Hufn.)

Local 73.263 (2157)



Field characters FW 18–21mm. The easiest of the group to identify, being larger, with bold, clear-cut markings, usually including a thick black central bar, and a wide, uniformly cold light grey cross-band beyond the kidney mark. Varies very little in

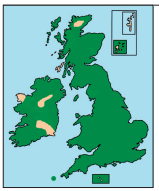
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

colour and markings, although some individuals are tinged with pink. Eyes hairy (view in good light under a low-power microscope). **Similar species** See Beautiful Brocade. See also Dusky Brocade (eyes not hairy). **Flight season** One generation. May–mid-Jul. Comes to light and feeds at sugar and flowers, and is sometimes found by day at rest on fences and tree trunks. **Life cycle** Overwinters as a pupa underground. Larva late Jun–Aug. Feeds at night. **Larval foodplants** A range of woody and herbaceous plants, including Broom, Dyer's Greenweed, Bramble and Redshank. **Habitat** Often associated with open ground on calcareous soil, but also frequent on some heaths and heathy commons. Sometimes recorded in open woodland. **Status and distribution** Resident. Local. Well distributed in England, north to the Wash and the west Midlands. Local in Wales (mainly in the south). Occasional, very scattered records in the north Midlands and northern England. Recorded from Alderney, but not since 2007.

Pale-shouldered Brocade plate 64

Lacanobia thalassina (Hufn.)

Common 73.264 (2158)

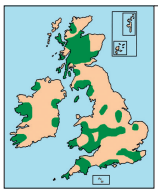


Field characters FW 16–20mm. Usually distinguishable from other members of the group by its broader forewing, with a more curved leading edge and richer, overall rather dark reddish-brown coloration, variably dusted with light brown and off-white. There is also a light greyish-brown form, f. *humeralis* Haw. In centre of forewing is a solid black bar or thin line, nearly always joining middle cross-lines. An arm extends inward from near the outer end of this line to form an outlined tooth-like mark. Sometimes a pale central blotch is present. Some females are rather dark, with pale basal patch less obvious. Eyes hairy (view in good light under a low-power microscope). **Similar species** Dusky Brocade has a duller white 'W' and the eyes are not hairy. See Dog's Tooth and Beautiful Brocade. See also Dark Brocade (which lacks pale basal patch) and Sombre Brocade, in both of which the eyes are not hairy, but have long lashes. **Flight season** Mainly one generation. May–late Jul. A small second generation has been reported in the south in Aug. Comes to light, sometimes in numbers, and feeds at sugar and flowers. **Life cycle** Overwinters as a pupa in an underground cocoon. Larva late Jun–early Sep. Feeds at night. **Larval foodplants** A wide range of mainly woody plants, including oaks, hawthorns, Apple, sallows, Aspen, Barberry and Honeysuckle. **Habitat** Woodland, wooded country, scrub, moorland, fens; sometimes gardens but seldom in urban areas. **Status and distribution** Resident. Common. Throughout most of Britain, Man and Ireland, extending to the Outer Hebrides and Orkney. Old records from Shetland. Recorded on Alderney in 2005 and 2006, and old records from Guernsey.

Beautiful Brocade plate 64

Lacanobia contigua ([D. & S.])

Local 73.265 (2156)

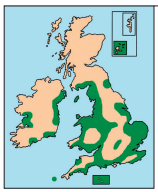


Field characters FW 16–19mm. Brightly marked examples of this moth are distinguished by the very marbled appearance and the broken whitish oblique band on forewing running from centre to trailing corner, composed of the oval mark, a highly variable central blotch (sometimes with two points) and part of outer band. The band forms a 'V' when moth is at rest, but may be indistinct on dark individuals. Variable in ground colour, but predominantly greyish white, clouded and variegated with grey, pink or orange-brown; or blackish grey, clouded with pale grey. **Similar species** The preceding and following three species are similar in general pattern and all have hairy eyes. In particular, outermost cross-line of forewing forms a distinct white 'W', there is a pale patch at base of leading edge and a black basal streak. Examples of Pale-shouldered Brocade with a pale central blotch may be very similar to darker forms of Beautiful Brocade, but are usually browner. Light Brocade lacks pale white oblique band, as does Dog's Tooth (brownish and less marbled, although sometimes either paler dusted or clouded). **Flight season** One generation. Late May–Jul. Comes to sugar and light. **Life cycle** Overwinters as a pupa, in an underground cocoon. Larva late Jul–Sep. Feeds by day and night. **Larval foodplants** A range of mainly woody plants, including Downy Birch, Silver Birch, oaks, Broom, Bog-myrtle, Heather, Dyer's Greenweed and Bracken. **Habitat** On heathland and moorland, and in woodland on neutral and acid soils. **Status and distribution** Resident. Local. Quite widespread in suitable habitat in south-west and central southern England (mainly Dorset, Hampshire and Surrey), and in Wales. Widespread but local in the Midlands, north-west England and on Man, but very scarce east of the Pennines. Widespread but local in western and central mainland Scotland and the Inner Hebrides, but very scarce or absent from the east and far north. Very localised in Ireland, where it is found in several highly scattered areas.

Dog's Tooth plate 64

Lacanobia suasa ([D. & S.])

Local; Immigrant 73.266 (2159)



Field characters and similar species FW 15–20mm. Diagnostic feature is a distinct, often solid, dark tooth-like mark in centre of forewing. This fails to reach third cross-line, and there is no central black bar or line, which eliminates brightly marked Dusky Brocades (eyes not hairy) and most Pale-shouldered Brocades (can be similar in colour but also have a

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

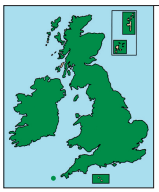
broader forewing). Eyes hairy. There are two distinct colour forms: one is greyish brown, clouded with sandy brown; the other, f. *dissimilis* Knoch, is uniformly dark greyish brown, its only distinct markings the tooth mark, whitish outer 'W' and black basal streak. Form *dissimilis* is sometimes less numerous, but seems to occur in all populations. See also Bright-line Brown-eye and Stranger. **Flight season** Two generations in southern Britain, late May–early Jul and late Jul–early Sep. In Scotland, one generation, Jun–Jul. Comes to light, sometimes in numbers, and feeds at sugar and flowers. **Life cycle** Overwinters as a pupa underground. Larva late Jun–Jul and late Aug–Sep in the south, and Aug–Sep further north. Feeds at night. **Larval foodplants** Herbaceous plants, including Common Sea-lavender, Greater Plantain and goosefoots. **Habitat** Most numerous in damp places such as saltmarshes, coastal grasslands, moorland and river valleys, but does occur inland in drier farmland and some urban and suburban areas. **Status and distribution** Resident. Local. Widely but patchily distributed in England and Wales, and most frequent on the coast. More widespread inland in East Anglia and north-west England, but scarce east of the Pennines. Local in south-west Scotland and an immigrant in the Northern Isles. Local along the east and south coast of Ireland, and the west coast north to Co. Galway. Occasional on Man and in the Channel Islands.

Bright-line Brown-eye

plate 64

Lacanobia oleracea (L.)

Common 73.267 (2160)



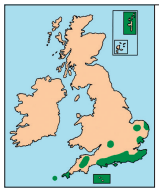
Field characters FW 14–19mm. Diagnostic features are uniformly warm brown forewing, slightly dusted with white; orange blotch in kidney mark (the 'brown eye'), which is dark in trailing third; and fine pure chalky-white outer cross-line, forming a 'W' (the 'bright-line') in centre. Central tooth mark is dark and usually inconspicuous. Variation is slight, chiefly in strength of small white oval, extent of dusting and shade of brown. **Similar species** Dog's Tooth f. *dissimilis* is duller brown and lacks orange blotch in kidney mark. See also Splendid Brocade and Broom Moth. **Flight season** One or two generations. May–late Jul in most places. In southern Britain and sometimes further north, usually a small second generation, Aug–Sep. In 2003, a few undersized individuals were reported in early Sep as far north as Aberdeenshire and Banffshire. **Life cycle** Overwinters as a pupa underground. Larva Jun–Oct. Feeds at night and rests on or under the foodplant during the day. **Larval foodplants** A wide range of wild and cultivated herbaceous and woody plants, including Common Nettle, Fat-hen, willowherbs, St John's-worts, Traveller's-joy, Black-bindweed, Tamarisk, English Elm, Hazel, Hop and Reed Sweet-grass. Occasionally a pest of Tomatoes, boring into the fruit. **Habitat** Occurs in most habitats. Abundant in gardens and other cultivated land, including in glasshouses. Frequent on heathland and on the edges of saltmarshes. Also occurs in woodland rides. **Status and distribution** Resident. Common. Well distributed and frequent throughout most of the British Isles, but considered vagrant on Shetland.

Splendid Brocade

plate 64

Lacanobia splendens (Hb.)

Immigrant 73.268 (2160a)



Field characters and similar species FW 16–18mm. Somewhat similar to Bright-line Brown-eye, but paler. Forewing pinkish brown, with darker shading. Kidney whitish or darker (but not orange) with whitish outline, and dark grey in trailing third. Outermost cross-line fine, whitish but not chalky white, forming only a shallow 'W' centrally. **Flight season** Mainly one generation. May–Jul. A second generation in the extreme south of its European range. **Life cycle** Overwinters as a pupa. Larva mid–late summer. **Larval foodplants** As yet unrecorded in Britain. In mainland Europe, a range of herbaceous plants, including nightshades and bindweeds. **Habitat** Marshy places, including damp woodland, damp meadows, moorland, and margins of streams and lakes. **Status and distribution** Immigrant. First recorded in the Channel Islands on 5 Jul 2001, at St Peters, Guernsey, then on 16 Jul 2001 at Icart Point, St Martins, Guernsey, but not identified until 2003. Became numerous in the Channel Islands for several years but then declined. In Britain, over 140 recorded so far. There were 12 in 2003, the first in south-east Kent, at Dymchurch, on 14 and 16 Jun, and at Lydd on 24 Jun. Others between 30 Jun and 29 Jul 2003 on Scilly (three), Dorset (five) and the Isle of Wight (one). Further small numbers in 2004 (three), 2005 (seven) and 2006 (three). Highest annual total is 90 in 2010. Mainly in southern coastal counties; others include singles in Surrey (2004), Somerset (2005), Shetland (2010), Oxfordshire (2014) and Norfolk (2015). Records suggest the possibility of subsequent colonisation. Very widespread but very local in central and southern Europe, reaching the coast of north France, Belgium and Holland. Regarded as endangered in some countries.

Stranger

plate 64

Lacanobia blenna (Hb.)

Uncertain; Immigrant and/or temporary former resident 73.269 (2161)

Field characters and similar species FW 15–17mm. Rather like an unusually small, pale whitish-brown Dog's Tooth in shape and markings, but with an oblique, pale straw-coloured flash extending from flattened oval to outer cross-band, a smaller basal streak and generally more intricate markings.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

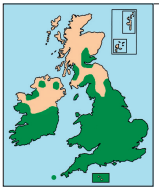
Hindwing whitish, sometimes with a dark outer band. Tawny Shears is smaller, without central flash and outer 'W' mark on forewing. **Flight season** In mainland Europe, two generations, May–Jul and Aug–Sep. **Larval foodplants** Sea Beet, Prickly Saltwort and oraches. **Habitat** Mainly coastal saltmarshes and sand-dunes, but sometimes inland on calcareous grassland. **Status and distribution** Rare immigrant and possible temporary resident. The only confirmed records are of three captured at Freshwater, Isle of Wight, in 1857, 1859 and 1879, the first two at sugar; and one captured on the downs near Lewes, Sussex, in 1868. Resident in coastal habitats in north-west Spain, the south and west coasts of France, around the Mediterranean and in south-eastern Europe.

Dot Moth

plate 64

Melanchra persicariae (L.)

Common 73.270 (2155)



Field characters FW 16–21mm. The rather broad, glossy black forewing and large, conspicuous white kidney mark make this moth unmistakable. Shows little variation and other markings are usually indistinct. **Flight season** One generation. Late Jun–Aug. Comes to light and feeds at sugar and flowers. **Life cycle** Overwinters as a pupa, in an underground cocoon. Larva Aug–Oct. Feeds by day and night, and rests on the foodplant. **Larval foodplants** A wide range of wild and cultivated herbaceous and woody plants, including Common Nettle, Hop, Field Bindweed, Broad-leaved Dock, Groundsel, Michaelmas-daisies, White Clover, Black Currant, Ivy, Hazel, Elder, Barberry, willows, and larch seedlings. **Habitat** Frequent in gardens and hedgerows. Occurs in a wide range of open and wooded habitats. **Status and distribution** Resident. Common. Well distributed and sometimes frequent in southern Britain and the Channel Islands. Tends to be restricted to lower ground in north Wales, northernmost parts of England, on Man and in southern Scotland, north to Perthshire. Widespread in the southern half of Ireland, but very local further north.

Larva of Dot Moth.

Broom Moth

plate 64

Ceramica pisi (L.)

Common 73.271 (2163)

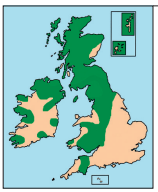
Field characters FW 16–20mm. Most conspicuous and diagnostic feature of rather broad forewing is outermost cross-line. This is irregular and creamy yellow, forms a distinct spot in trailing corner and has dark arrowhead marks or blotches along its inner edge. Ground colour pale to dark reddish brown or dark purplish brown. Kidney and oval grey-brown or reddish brown. Some examples are marbled with grey, or are brownish yellow tinged with pink. The darkest are often dusted with purplish grey and are most frequent on peaty moorland. **Flight season** One generation. Late May–Jul, into Aug in the north. Comes to light and feeds at sugar and flowers. **Life cycle** Overwinters as a pupa in an underground cocoon. Larva Jun–Sep. Most active at night, resting on the foodplant by day. **Larval foodplants** A wide variety of herbaceous and woody plants, including Heather, Bracken, Broom, Bramble, sallows, Sea-buckthorn and larches. **Habitat** All kinds of open country, including gardens, but especially heathland and moorland. Less frequent in woodland and marshland. **Status and distribution** Resident. Common. Throughout most of the British Isles, but vagrant on Shetland. Particularly abundant on northern moorland.

Glaucous Shears

plate 64

Papestra biren (Goeze)

Local; suspected immigrant 73.272 (2162)



Field characters and similar species FW 15–18mm. Quite narrow, rather pointed, marbled ash-grey forewing with large, rounded whitish kidney mark is diagnostic. Ground colour pale to dark grey, but the heavy pattern varies only in minor detail. Some examples are marked with yellowish white, especially along outermost cross-line. Despite its name, this species does not possess the characteristic scissor-like marks of Shears, which can also be ash grey. Instead, there is a dark-edged pale tooth-like mark in centre of forewing. **Flight season** One generation. May–Jun, in small numbers to mid-Jul or later in the north and at high altitudes. Comes to light and flowers. Can be found at rest on trees and rocks during the day, and sometimes active by day. **Life cycle** Overwinters as a pupa underground. Larva Jun–Aug. Feeds largely at night. **Larval foodplants** Many herbaceous and woody species, including Bog-myrtle, Meadowsweet, Creeping Willow, Bilberry and Heather. **Habitat** Moorland. **Status and distribution** Resident and occasional suspected

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

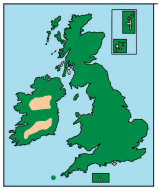
immigrant. Local. South-west England, Wales, the west and north Midlands, northern England and Scotland (including the Hebrides, Orkney and Shetland), Man and Ireland. In the Channel Islands, recorded only from Alderney (three in 1970 and two in 1994). Probably partly immigrant in the Northern Isles. Two fresh, almost black individuals, unlike British forms, were recorded in Orkney in Jun 1980 with immigrant Silver Ys after the local moths had finished flying, and were presumed immigrants.

Shears

plate 64

Hada plebeja (L.)

Common 73.273 (2147)



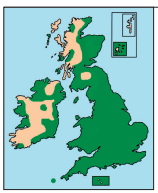
Field characters FW 14–17mm. Diagnostic feature is the bold whitish mark in centre of forewing. This radiates outwards to two sharp points, somewhat like an open pair of scissors or shears, and contrasts sharply with the blackish bar or blotch adjacent to or surrounding it. This mark is somewhat variable in size, and may be restricted to veins, but the general pattern is fairly constant. Forewing varies in colour, being whitish grey, sandy, pale to dark brownish grey, or grey. **Similar species** See Barrett's Marbled Coronet. **Flight season** Mainly one generation, May–early Jul, with a small second generation in Aug–Sep in southern Britain north to Yorkshire, where it currently constitutes c. 3% of records. Comes to light and feeds at sugar and flowers, including campions, Wood Sage, Viper's-bugloss and Red Valerian. Can sometimes be found during the day sitting on tree trunks and posts. **Life cycle** Overwinters as a pupa, in a cocoon on the ground, under leaf litter or moss. Larva Jul–Aug, and again later in the south. Feeds at night. **Larval foodplants** Herbaceous plants, including Smooth Hawk's-beard, Mouse-ear-hawkweed and Lucerne. **Habitat** Typically, open places on light soils, including heathland, sand-dunes and downland, but also in open woodland. **Status and distribution** Resident. Common. Throughout the British Isles.

Cabbage Moth

plate 64

Mamestra brassicae (L.)

Common 73.274 (2154)



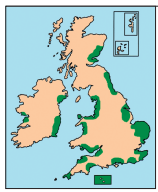
Field characters FW 14–22mm. Most noticeable characters on forewing are chalky-white outline of kidney mark and whitish inner edge of dark outer band, which forms a 'W' mark in the middle. Ground colour dark brownish grey, sometimes rather blackish or paler, often with pale brown blotches. Variation is relatively slight. Front leg has a curved spine on the lower end of the tibia (best seen under a microscope or hand-lens), absent in similar species. **Similar species** See White Colon. Also Dark Brocade, in which black bar in centre of forewing joins middle cross-lines and eyes are not hairy, but with long lashes. **Flight season** Usually two or three generations, May–Oct, north at least to Yorkshire, but has been found in every month of the year. Further north, probably one or two generations, May–Aug. Comes to light, usually in rather small numbers, and feeds at sugar and flowers. **Life cycle** Overwinters mainly as a pupa, in an underground cocoon, and sometimes as a larva, which can be found at any time of year, but mainly in late summer and autumn. Feeds at night and hides close to or under the ground by day. **Larval foodplants** Best known as a pest of cultivated brassicas, ruining Cabbages by burrowing into the heart. However, feeds on the leaves of almost any wild or cultivated herbaceous plant, and is also recorded on woody species, including sallows and oaks. **Habitat** A lowland species most frequent in cultivated areas, but found in many habitats, including open woodland. **Status and distribution** Resident. Common. Throughout most of Britain, Man and the Channel Islands, but more thinly distributed in western Scotland north of the Central Belt, and in Ireland. No recent records from Shetland.

White Colon

plate 64

Sideridis turbida (Esp.)

Nb 73.275 (2152)



Field characters FW 17–20mm. Forewing has a grainy appearance. The white comma or sometimes colon-shaped marking, which forms the lower, outer part of the kidney mark, is quite striking when moth is in good condition and helps to distinguish it from several similar grey-brown noctuids. Pale outermost cross-line broken and irregular, not forming a central 'W'. Eyes hairy (view under low-power microscope). **Similar species** Cabbage Moth usually has more extensive white on kidney mark (although it may form a colon) and spine on front leg. In Dusky Brocade, Confused, Nutmeg, Cabbage Moth and Crescent Striped (with a smooth, silky appearance), outermost whitish cross-line of forewing usually has a pronounced central W-shaped zigzag. In Dusky Brocade and Crescent Striped, eyes are not hairy. **Flight season** Mainly one generation, late May–Jun, with a small second generation in southern England, late Jul–Aug. Visits flowers such as Viper's-bugloss and various grasses, sometimes by day, and comes to sugar and light. **Life cycle** Overwinters as a pupa underground, formed in Aug. Larva late Jun–Jul. Second-generation larvae have been found at Sandwich, Kent, in late Aug and Sep. Feeds by night and hides in sand near

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

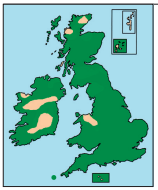
the foodplants by day. **Larval foodplants** Sea Rocket, Common Restharrow, Sea Sandwort, Sand Spurrey and Ribwort Plantain, and probably many other plants. Larvae have also been found on the flowers of Sea Bindweed and, in breckland, on Flixweed, and have been reared on oraches, goosefoots and Knotgrass. **Habitat** Coastal habitats, particularly vegetated sand-dunes, shingle and marshes. Also inland on breckland and heathland. **Status and distribution** Resident. Nationally Scarce B. Widespread but generally very local, on the coast of western Britain from Cornwall to north Lancashire, along the south coast of England, in East Anglia (where it is more widespread) and north to Northumberland, and in Scotland to Kincardineshire (and formerly from the Moray Firth and the south-west). Also in the Channel Islands. Inland, found in the Breckland of East Anglia, and on heathland in North Lincolnshire and Nottinghamshire, and formerly in North Hampshire and Surrey. In Ireland, local on the east coast in Cos. Wexford and Wicklow (and one recent record from Co. Down), and in the west on the Aran Islands, with older records from Cos. Kerry and Donegal.

Campion

plate 64

Sideridis rivularis (Fabr.)

Common 73.276 (2166)



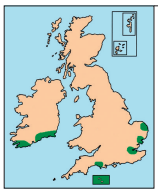
Field characters and similar species FW 14–16mm. A diagnostic feature of this species when freshly emerged is the purplish-pink marbling on forewing, especially along cross-line beyond kidney mark, leading edge and central area. However, this colour fades with age, leaving forewing dark greyish brown, like that of Lychnis, which has similar markings. Campion has a broader forewing, with kidney mark and oval usually joined, or kidney at least extending from its base towards oval. On Lychnis, these marks are nearly always separate and kidney is not usually distorted. On Campion, pale outermost cross-line is zigzagged throughout and turns to finish at or near trailing corner. On Lychnis, it is zigzagged only near leading edge and in the middle, and then curves more smoothly to finish on trailing edge, usually angled towards base of wing. **Flight season** Two generations in southern Britain, late May–Jun and late Jul–early Sep. In northern England, generations overlap. Further north and in Ireland, one main generation, late May–Jul, sometimes with a partial second. Comes to light, usually in rather small numbers, and feeds at flowers. **Life cycle** Overwinters as a pupa, in a fragile cocoon just beneath the soil surface. Larva Jun–Jul and Aug–Sep where there are two generations, Jul–Sep where there is one. Lives inside the seed capsules until too large, then feeds only at night, hiding near the ground by day. **Larval foodplants** The ripening seeds of White, Red and Sea campions, and Ragged-Robin. **Habitat** A wide range of open, grassy places, including verges, damp meadows, waste ground, moorland, sea-cliffs and woodland rides. **Status and distribution** Resident. Common. Throughout most of the British Isles, extending to the Outer Hebrides and Orkney.

Bordered Gothic

plate 64

Sideridis reticulata (Goeze) 73.277 (2153)
ssp. *marginosa* (Haw.)
pRDB; suspected immigrant

ssp. *hibernica* Cock.
Ireland



Field characters and similar species FW 17–19mm. Characterised by whitish veins and cross-lines, and whitish-outlined oval and kidney. Ssp. *marginosa* is the form recorded over most of mainland Britain and is a light brown moth, strikingly different in appearance from the darker, greyer ssp. *hibernica*, which occurs on the extreme south coast of Ireland. However, recent specimens from Portland, Dorset, are dark like those from Ireland. Feathered Gothic flies later in the year and has dark cross-lines. Gothic is larger and has a much broader forewing. See also Mediterranean Brocade. **Flight season** One generation. May–Jul. Has been reported feeding at the flowers of Red Valerian, campions, Viper's-bugloss and Wood Sage, and comes readily to sugar and light. **Life cycle** Overwinters as a pupa in loose earth. Larva late Jun–early Sep, but appears not to have been found in the wild, so the life-cycle details are deduced from observations in captivity. Eggs laid by wild-caught females hatch in about two weeks. **Larval foodplants** Reared with limited success on Soapwort. Bladder Campion and Knotgrass are also accepted. Soapwort has a scattered distribution somewhat similar to the records of the moth, but seems unlikely to be a crucial factor. In Continental Europe, stated to feed on seedheads of Soapwort, campions and related plants. **Habitat** Chalk downland, calcareous parts of breckland heaths, limestone and chalk cliffs, quarries, and other exposures such as cuttings and embankments. Also other disturbed ground, including calcareous brownfield sites. **Status and distribution** Resident and suspected immigrant. Proposed Red Data Book species. Formerly Nationally Scarce B. Ssp. *marginosa* is in serious decline and now merits RDB status. Formerly quite well distributed in suitable habitat in central southern and south-east England, more local in the Midlands, with scattered records extending to south Wales, Lancashire, Yorkshire and Man. Resident at Gravesend, Kent, until 2001, but not seen there since, or in former strongholds such as the Breckland of East Anglia or Portland in Dorset since about 1998, despite searches. Several in Yorkshire in the 1980s, and singletons reported in Glamorgan at Llanishen, Cardiff, in 1995 and Roath,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Cardiff, in 1996, and at Slimbridge, Gloucestershire, in 1989. Occasional suspected immigrants resembling the dark Continental race include records in Norfolk at Eccles-on-Sea in 1999 and Honing in 2003. Potential immigrants have also occurred in Dorset, most recently in 2005 at West Bexington, and one at Landguard, Suffolk, in 2011. Recorded twice from Jersey in 1993, and more recently on Guernsey. Ssp. *hibernica* occurs on the south coast of Ireland, in Cos. Wexford, Waterford, Cork and Kerry, where it is currently well established and locally fairly numerous.

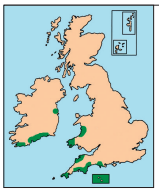
Barrett's Marbled Coronet

plate 64

Conisania andalusica (Stdgr.)

ssp. *barrettii* (Doubl.)

Nb 73.278 (2169)



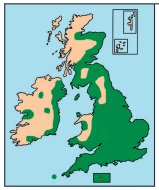
Field characters and similar species FW 15–19mm. Forewing clouded with lighter and darker shades, often making markings rather obscure. Usually has an irregular pale central blotch beside oval, often with one or two short projections in trailing half, somewhat like those of Shears, which is smaller and has clearer markings. Ground colour ranges from warm brown with indistinct lines (predominant in South Devon populations), to greyish brown with white lines and clouding (north Cornish coast). Individuals from Ireland, Guernsey and the French coast all differ in appearance and have been named f. *turbata* Don. (greyish), f. *lowei* Tutt (yellowish) and f. *argillacea* Hb., respectively. The much more widespread Lychnis lacks a pointed pale central blotch and has finer, crisper markings, as does Pod Lover, which is smaller. See also Grey. **Flight season** One generation. Early Jun–Jul, sometimes Aug. Recorded visiting campion flowers from dusk. Comes readily to light on the breeding grounds. **Life cycle** Overwinters as a pupa. Larva Jul–Sep. The larvae bore first into the leaves and leaf axils, then move into the stems and bore down to the roots, where the cocoon is formed. **Larval foodplants** Sea Campion, Rock Sea-spurrey and Sand Spurrey. **Habitat** Mainly coastal cliffs and some shingle beaches, but has been found as a larva 3km inland and in woodland. **Status and distribution** Resident. Nationally Scarce B. In mainland Britain, confined to the north and south coasts of Devon and Cornwall and the coast of Carmarthenshire and Pembrokeshire. Two worn specimens were taken in Cardiganshire in 1983, the first county records. One of these was inland at Cors Caron NNR, an apparent wanderer, the other in typical coastal habitat at Aberporth, so it is likely to be locally established on the Cardiganshire coast. There are 19th-century records for Caernarvonshire, Anglesey and Man, and a single fresh individual was recorded at light on the Isle of Wight on 3 Jun 1952. In Ireland, occurs on the south coast in Cos. Cork and Waterford, and at Howth, Co. Dublin. Locally frequent in the Channel Islands.

Broad-barred White

plate 64

Hecatera bicolorata (Hufn.)

Common 73.279 (2164)



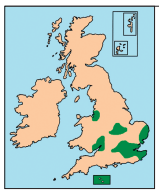
Field characters FW 13–15mm. Broad, dark grey or blackish central band on white or greyish-white forewing, which has a straight leading edge, usually makes this an unmistakable species. Occasionally, ground colour is grey. **Similar species** Grey examples superficially resemble worn Small Ranunculus, which is similar in shape but forewing is tinged greenish and marked with orange. **Flight season** Usually one generation, late May–Jul. Sometimes a small partial second generation in Aug, north to Yorkshire, where it comprises 8% of recent records. Comes to light, sometimes in numbers, and feeds at flowers, including campions, Red Valerian and Viper's-bugloss, on which it is often found resting by day. **Life cycle** Overwinters as a pupa just below the ground. Larva Jul–late Sep. Feeds by night and day, often resting exposed on leaves and flowers in dry weather. **Larval foodplants** The flowers and flower buds of hawkweeds and hawk's-beards, sow-thistles and other closely related plants. **Habitat** Vegetated coastal dunes, shingle and disturbed rough grassland, particularly on limestone and chalk downland. Sometimes breeds in gardens. **Status and distribution** Resident. Common. Well distributed in southern Britain and the Channel Islands. More local in northern England, on Man and in southern Scotland, where it occurs in the Central Belt and on the eastern side north to the Moray Firth. In Ireland, mainly in eastern and southern coastal counties, and in the west in Cos. Galway and Clare, but thinly recorded elsewhere.

Small Ranunculus

plate 64

Hecatera dysodea ([D. & S.])

RDB; suspected immigrant; former resident 73.280 (2165)



Field characters and similar species FW 14–15mm. Quite distinctive. Forewing greenish grey, dusted with darker scales and with fine mottling of orange-gold scales and spots (these varying in intensity), including a row near outer edge. Has a broad, dark central cross-band. Feathered Ranunculus and Large Ranunculus have similar forewing mottling but are easily distinguished by size. Hindwing of Feathered Ranunculus is largely white; that of Small Ranunculus has a broad, dark grey border. See also Broad-barred White. **Flight season** Probably two generations. Late Apr–early Oct. In the late 19th and early 20th centuries (before its disappearance), Jun–early Aug. Comes to light

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

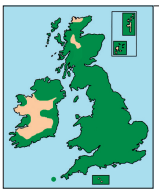
and visits flowers. **Life cycle** Overwinters as a pupa underground. Larva Jul–Aug, easily found on the foodplant by day. **Larval foodplants** Prickly Lettuce; also Great Lettuce and recently found on Wall Lettuce. In the 19th century, recorded in large numbers on cultivated lettuces. Eats mainly the flowers and seeds. **Habitat** Rough open ground, including roadside verges, old chalk pits, gardens, allotments and brownfield sites. **Status and distribution** Recent recolonist, suspected immigrant and former resident. Red Data Book – Insufficiently Known (based on records before 1997). Now merits Nationally Scarce B. Formerly widespread and locally frequent, mainly in East Anglia and south-east England, but with scattered records along the south coast, around the Severn and into south Wales. Had virtually disappeared by 1914, with half a dozen or so records up to 1939. Reappeared in 1997, with adults at light in a garden in Gravesend, Kent, on 28 Jun and 6 Aug, followed by adults and larvae more widely in Kent in 1998. Singles at light at Landguard Point, Suffolk, in Jun 1999 and in 2000, suggesting immigration. Has since spread and is now well established in south-east England, including the London area, and has rapidly spread into central southern England, the Midlands (including Nottinghamshire) and East Anglia. In 2001, found at Newport, Monmouthshire, and now well established in that county, and in Merseyside since 2005. In the Channel Islands, recorded on Alderney in 2006 and 2007, and recorded from Guernsey pre-2000.

Lychnis

plate 64

Hadena bicruris (Hufn.)

Common 73.281 (2173)



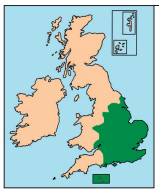
Field characters FW 14–17mm. Forewing quite broad, dark greyish brown with fine, quite crisp straw-white markings and a solid, square or tooth-like dark central mark. **Similar species** See Campion, Barrett's Marbled Coronet and Pod Lover. **Flight season** Two generations north to Yorkshire and Lancashire, late May–Jul and Aug–Sep. One or two generations further north, the second partial, Jun–Jul. Comes to light regularly and feeds at flowers. **Life cycle** Overwinters as a pupa in an underground cocoon. Larva late Jun–early Aug and Sep in the south, Jul–Aug in the north. Lives inside the seed capsules of the foodplant, sometimes until quite large, then feeds only at night and hides near the ground by day. **Larval foodplants** The ripening seeds of campions, especially White and Red, and Sweet-William. **Habitat** A wide range, including gardens, roadside verges, field margins, hedgerows, woodland and various coastal habitats, including sand-dunes. **Status and distribution** Resident. Common. Throughout Britain, Man and the Channel Islands. Widespread but local in Ireland.

Varied Coronet

plate 64

Hadena compta ([D. & S.])

Common (possibly Naturalised); suspected immigrant 73.282 (2170)



Field characters and similar species FW 13–15mm. Bold blackish-grey and white forewing colour is very like that of typical form of Marbled Coronet, which is slightly larger. However, on Varied Coronet white cross-band is complete and meets trailing edge about halfway along, and is therefore not oblique as in Marbled Coronet. Little variation, but some are more heavily marked and dusted with white, especially along outer edge. See also White Spot. **Flight season** Usually one generation. Jun–Jul. Occasional in the autumn as a possible second generation or immigrant. Comes to light and feeds at flowers. Female often active and laying eggs on the foodplant before dark. **Life cycle** Overwinters as a pupa, in an underground cocoon. Larva Jul–early Sep. At first lives inside seed capsules of foodplant, then when large feeds only at night, hiding near the ground by day. **Larval foodplants** Usually the ripening seedpods of Sweet-William, but also recorded on Bladder Campion. **Habitat** Gardens and calcareous grassland, wandering into other habitats, including woodland. **Status and distribution** Resident. Colonist or accidental introduction. Common. Recorded, possibly as an immigrant, in the late 19th century, but first recorded breeding in Dover in 1948. Since then it has spread rapidly across southern England, East Anglia and the Midlands, northwards into Yorkshire and westwards to Dorset, Somerset, Gloucestershire and south Wales. Rare on Alderney.

Marbled Coronet

plate 64

Hadena confusa (Hufn.)

Local 73.283 (2171)

Field characters FW 14–16mm. Examples from southern, central and eastern England have a roughly square greyish-white blotch at tip of forewing and further white blotches in central area and along trailing edge near trailing corner, sometimes almost merged into an oblique diagonal band, and are unmistakable. Further north and west, particularly in south-west England, Wales, Scotland and Ireland, the white is often replaced by dull yellow, and blackish ground colour is strongly tinted dark olive green. In Orkney and Shetland, the pale markings are often reduced or even absent (f. *obliterae* Robson). **Similar species** See Varied Coronet and White Spot. **Flight season** In most areas, one generation, late May–early Jul. In south-east England, a small second generation in Aug. Comes to light and feeds at

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

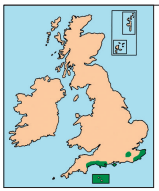
flowers. **Life cycle** Overwinters, sometimes twice, as a pupa in an underground cocoon. Larva Jul–Aug. At first lives inside seed capsules of foodplant, then when large feeds only at night, hiding near the ground by day. **Larval foodplants** The ripening seedpods of Sea and Bladder campions, Rock Sea-spurrey and other related species, including cultivated varieties. **Habitat** Open ground on calcareous soils, especially on the coast. Sometimes in gardens. **Status and distribution** Resident. Local. Widespread in coastal areas all around Britain, including the Hebrides, Orkney and Shetland, Man and the Channel Islands. Also widespread inland in southern England, East Anglia and the Midlands, more locally in northern England, and very locally in Scotland, notably in the Spey Valley, East Inverness-shire. In Ireland, mainly in the north and the west, including inland.

White Spot

plate 64

Hadena albimacula (Borkh.)

RDB 73.284 (2172)



Field characters FW 15–17mm. Angular central white blotch on olive-brown forewing, in combination with white-edged black cross-lines, is diagnostic. **Similar species** In southern form of Marbled, forewing is blackish grey with a much more variegated appearance, and white markings are larger and more numerous, including prominent white blotch at wing tip. See also Varied Coronet, with a complete white central cross-band. **Flight season** Main generation is May–mid-Jul (peak in late May), with smaller but regular numbers of a partial second generation or delayed emergence in Aug–mid-Sep. Can be found by day on posts and walls of wooden buildings. Flies from dusk and visits flowers, including those of the larval foodplant and related species such as Viper's-bugloss, Wood Sage and Red Valerian. Comes regularly to light. **Life cycle** Overwinters as a pupa just below ground. Larva Jul–Aug. Rests on seedheads of foodplant by day when young and at the base of the plant among shingle and debris when larger, feeding mainly at night. **Larval foodplants** Seed capsules and seeds of Nottingham Catchfly. As these are usually well over by late Sep–Oct, the fate of larvae resulting from late adults is uncertain. Has been reared on the flowers and seedheads of other related species, including Sea, Bladder, Red and White campions, and on cultivated Sweet-William and carnations. **Habitat** Apparently confined to the few places on the south coast of England where Nottingham Catchfly grows. At Dungeness, Kent, this is extensive open coastal shingle; elsewhere, chalk or limestone coastline with cliffs. The plant favours dry, well-drained situations such as slopes, cliff ledges and shingle beds. **Status and distribution** Resident. Red Data Book species. Surveys from 1998 to 2001 indicated that the moth was breeding on at least seven sites on the south coast of England: in Devon, from Branscombe eastwards to the Axmouth/Lyme Regis NNR; in Dorset at White Nothe, Ballard Down/Studland Cliffs and possibly elsewhere; in Hampshire at Browndown, near Gosport; and in Kent at Dungeness, Hythe Ranges and the recently created Samphire Hoe. Continued breeding at a site near Beer, Devon, is probable but needs confirmation. Most of these sites have a long history (Kent since 1816; Hampshire since 1865; Devon since 1889). A worn female was recorded at light in Croydon, Surrey, on 3 Jun 1983 and a few single adults, probably vagrants, inland in Devon, Dorset and Sussex. Very local on Jersey and Alderney.

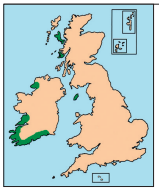
Grey

plate 64

Hadena caesia ([D. & S.])

ssp. *mananii* (Gregs.)

RDB (protected on Man) 73.285 (2174)



Field characters FW 15–17mm. Forewing coarsely marked, with indistinct oval, kidney and other markings. Fine scalloped black inner and outer central cross-lines may be discernible. Individuals from Man and most of Ireland are bluish grey, often marked diffusely with yellowish blotches. Those from the Burren, Co. Clare, are strongly bluish, and those from the Hebrides are bluish black and more variegated. **Similar species** Dark forms of the Pod Lover and Tawny Shears are more distinctly marked. Barrett's Marbled Coronet is larger, with a pale central blotch. Northern Rustic is much larger, with a white fringe on hindwing. **Flight season** One extended generation or partial second generation. Late May–Aug. Flies rapidly from dusk. Fairly frequent at light. **Life cycle** Overwinters as a pupa, in a cocoon among rocks. Larva Jun–Aug, sometimes Sep. At first feeds in the seedpods, then on the leaves, hiding under more isolated plants by day. **Larval foodplants** Sea Campion. **Habitat** Rocky coasts and shingle, breeding mainly on plants within 50m of the strand-line. **Status and distribution** Resident. Red Data Book species. In Scotland, very local in the Hebrides, on Islay, Mull, Rum and Skye, and recorded on Arran and western Argyll. Probably more widespread in this area than the records suggest. Found around the coast of Man. In Ireland, local on the south and west coast, from Cos. Waterford to Clare and the Aran Islands, and in West Donegal. Four specimens labelled 'Cumberland 1899' have been reported.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

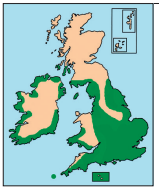
Tawny Shears plate 65

Hadena perplexa perplexa ([D. & S.])

Common 73.286 (2167)

Pod Lover ssp. *capsophila* (Dup.) plate 65

Local (protected on Man)



Field characters FW 13–15mm. **Tawny Shears** is extremely variable, but characterised by a rather broad, angular and quite pointed forewing with a straight leading edge, quite sharply defined markings and often a variegated appearance. Constant features are several arrowhead marks before outermost cross-line, and a dark-outlined tooth-like or bullet-shaped mark in central area. Ground colour whitish or pale straw, tawny or dull brown. Pale examples are often rather plain; in some the markings are rather obscure, but most have conspicuous markings, particularly the kidney mark. Hindwing brownish white, sandy, brownish or grey, often with a darker outer band. Whitish forms occur in south-east England. Elsewhere, sandy or tawny brown forms predominate, except in the extreme west of mainland Britain, where the usual form is dull brown. **Pod Lover** is the same size and shape, but dull brownish grey or even blackish, extensively marked and dusted with greyish white or straw white. Occasionally somewhat paler tawny brown. **Similar species** Pale examples of Tawny Shears are superficially similar to Sand Dart, which is likely to occur in some of the same southern coastal localities. However, Sand Dart has a longer, narrower forewing and silky white hindwing, sometimes darkened along veins but without a dark outer band. Pod Lover superficially resembles Lychnis, which is larger, with a broader, less pointed forewing. Barrett's Marbled Coronet is also larger and broader, and more obscurely marked. See also Viper's Bugloss and Stranger. **Flight season** One generation, May–Jul, with a small second generation in southern England in Aug. Comes to light and to flowers, particularly Red Valerian, campions and Wood Sage. **Life cycle** Overwinters as a pupa, in an underground cocoon. Larva late Jun–Aug, and again in the autumn in the south. **Larval foodplants** The ripening seeds of Bladder Campion, White Campion, Nottingham Catchfly, Sea Campion and Rock Sea-spurrey. **Habitat** Dry open ground on calcareous soils inland, including field margins and gardens. Many coastal habitats. Pod Lover is found mainly on rocky coastlines. **Status and distribution** Resident. Common. Tawny Shears is well distributed throughout England and Wales, and is local in the far south-west of Scotland. Pod Lover is found extensively around the coast of Ireland, and on Man. Forms resembling it have been reported from Cornwall, widely around the Welsh coast, Lancashire and in south-west Scotland. Moths resembling both subspecies are widespread and frequent in the Channel Islands.

Larva of Pod Lover.

Viper's Bugloss plate 65

Hadena irregularis (Hufn.)

Former resident, presumed extinct 73.287 (2168)

Field characters and similar species FW 14–15mm. Forewing intricately marked with warm shades of sandy brown. Distinguished from Tawny Shears by large pale oval and kidney marks, bold brown cross-lines, pale outermost band and broadly chequered fringes. Dusky Sallow is superficially similar, but with a distinct pinched or broken dark central cross-band. **Flight season** One generation. Late May–Jul. Flies from dusk, comes to light and visits flowers, including those of the larval foodplant. **Life cycle** Overwinters as a pupa, in a cocoon just below the ground. Larva Jul–early Aug. Feeds on the developing seed capsules of the foodplant, the larger larvae leaving the plant to hide near the ground by day. **Larval foodplants** The sole larval foodplant is Spanish Catchfly. The larva does not feed on Viper's-bugloss, as the vernacular name might imply, and the only connection with this plant is that the adult may visit the flowers for nectar. **Habitat** The foodplant occurs as a native only in areas of Breckland where the soil is chalky or calcareous sand. Colonies of the moth were found on roadside verges, open grassland, derelict and fallow fields, paths and woodland edges. The plant thrives best following small-scale ground disturbance, such as that caused by Moles or Rabbits. **Status and distribution** Former resident, now presumed extinct. In the British Isles only ever recorded reliably from the Breckland, including colonies in Norfolk, Suffolk and Cambridgeshire. Recorded annually as larvae on the foodplant, sometimes in large numbers, until the 1960s. The last substantiated record was of larvae at Icklingham, Norfolk, in 1968, despite extensive searches of this and other sites.

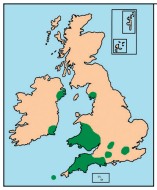
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Double Line

plate 65

Mythimna turca (L.)

Nb; suspected immigrant 73.288 (2191)



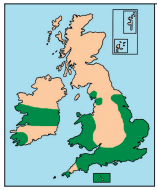
Field characters FW 18–23mm. Large size and dark-speckled rich sandy- or pinkish-brown forewing, with a simple pattern of dark cross-lines (inner one kinked, outer fairly straight and oblique) and white-tinted slit-like kidney mark, make this species quite distinctive. **Flight season** One generation. Mid-Jun–mid-Jul in south-east England but as late as mid-Aug in west Wales. Comes readily to light from dusk onwards, often in numbers. Attracted to sugar. **Life cycle** Overwinters as a small larva, low down among grasses. Larva Aug–May. Feeds by night and pupates in a cocoon just below ground. **Larval foodplants** Grasses, including Cock's-foot, Wood Meadow-grass, Sweet Vernal-grass, Field Wood-rush and Carnation Sedge. In Surrey, found on Common Bent and Creeping Soft-grass. **Habitat** In south-west England and south Wales, associated with wet, rough, acid grassland along valley bottoms, stream-sides, commons and flushed hillsides, where light grazing by Cattle or Horses maintains a herb-rich turf. This habitat is known as Culm grassland in England and Rhos pasture in Wales, and frequently adjoins thick hedgerows or mature woodland, with the moth favouring the wood edge or the shelter of Gorse, willow scrub or Bracken when available. The larva has been found in this situation, after midnight, feeding among tussocks 10cm tall. In Cardiganshire, breeds on the grassy floor of mature woodland, and in Surrey in parkland with mature Pedunculate Oaks. **Status and distribution** Resident and suspected immigrant. Nationally Scarce B. Locally frequent in south-west England, and in south Wales north to Breconshire and Cardiganshire. Outlying populations in Richmond Park and Wimbledon Common, Surrey, known since the 19th century. Historically, resident quite widely across central southern England to Essex, and in Cheshire and Lancashire. Scattered single adults still occur, for example at Eaton Wood, Berkshire (modern Oxfordshire), in 1983; Bentley Wood in 2010; near Thorpeness, on the East Suffolk coast, in 1992; others in Dorset and Gloucestershire; and one on Walney Island, Cumbria, in 2011. In Ireland, one on the coast of Co. Wexford in 2010 and one in Co. Down in 2015. It is uncertain whether these are vagrants, originate from overlooked populations or are immigrants.

Striped Wainscot

plate 65

Mythimna pudorina ([D. & S.])

Local 73.289 (2196)



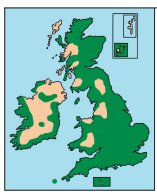
Field characters FW 16–19mm. Unlike any other wainscot found in the British Isles. Forewing broad, leading edge softly arched. Softly marked, pale straw-coloured, streaked with pastel pink or pale brown and dusted with black, and with no sign of cross-lines. The darker streaks, emphasised by scattered black scales, are most prominent along outer edge, through centre of wing and towards trailing edge. The fringes are pink. Shows slight variation in extent of streaking, and pink tinge is sometimes absent. Hindwing grey-brown. **Flight season** One generation. Jun–Jul. Comes to light and sugar, and feeds at flowers, especially of marshland grasses. **Life cycle** Overwinters as a very small larva. Larva Aug–May. Feeds at night, usually close to the ground. Pupation occurs in a cocoon in leaf litter. **Larval foodplants** Broadleaved grasses, including Common Reed, Purple Moor-grass and Reed Canary-grass. **Habitat** Marshes, fens, boggy heathland and acid grassland. **Status and distribution** Resident. Local. Widespread in south-west, central southern and south-east England, East Anglia, and south and west Wales. Local elsewhere in Wales, Lincolnshire, Yorkshire and north-west England, southern Ireland and the Channel Islands.

Brown-line Bright-eye

plate 65

Mythimna conigera ([D. & S.])

Common 73.290 (2192)



Field characters FW 15–17mm. English name is derived from conspicuous, roughly tear-shaped white mark at base of small kidney mark, and brown cross-lines and veins towards outer edge. Cross-line before oval is V-shaped, and this combination is diagnostic. Markings hardly vary and ground colour is either tawny or rusty brown. **Flight season** One generation. Jun (late Jun or Jul in the north)–Aug. Comes to light and sugar, and feeds at flowers. **Life cycle** Overwinters as a small larva, low down in the vegetation. Larva Aug–May, feeding at night. Pupates in an underground cocoon. **Larval foodplants** Grasses, including Cock's-foot and Common Couch. **Habitat** A wide range of grasslands, including woodland rides and edges, and rough grassland and gardens in urban areas. **Status and distribution** Resident. Common. Throughout most of England and Wales, and on Man. Widespread in south-west Scotland and on the eastern side, but very local in the west. Records extend to Orkney, where it may be resident. Widespread in Ireland but mainly in coastal areas. Rare on Jersey.

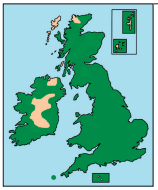
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Common Wainscot

plate 65

Mythimna pallens (L.)

Common 73.291 (2199)



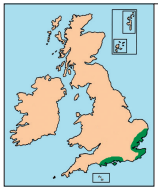
Field characters and similar species FW 14–17mm. Similar in markings and general form to Smoky and Southern wainscots, but generally a paler, brighter straw-coloured or strongly reddish-brown moth (but sometimes heavily streaked with brown). Forewing broadening more rapidly from a narrower base, and generally more tapered. Dark central streak usually weak or absent, and hindwing usually white or faintly dusted with grey (less commonly extensively grey – usually on female – but rarely with blackish dashes as in Southern). Smoky is variable in these respects, and borderline cases can be very difficult to separate, but in Common, underside of forewing is usually largely plain (occasionally with black streaks). Outer edge of forewing not hooked or projecting at tip. Blackish dots toward outer edge often absent. Collar, when viewed from front, lacks lines. Examples with a darkened forewing and smoky hindwing may also have extensive blackish streaks on underside of forewing. They are more frequent in the second generation (which is often seen later than Smoky Wainscot). See also Mathew's Wainscot and Obscure Wainscot. **Flight season** Two overlapping generations in southern Britain (and in Ireland) and tending to spread northwards, late May–Oct. In Yorkshire, second-generation individuals were rare in the 1980s, but have increased gradually and since 2002 have outnumbered the first generation. Further north, one generation, Jul–Aug. Comes to light, sometimes in very large numbers, and feeds at sugar and flowers, especially grasses. **Life cycle** Overwinters as a small larva, deep in the sward. Larva Jun–Aug and Sep–May in the south, Aug–Jun in the north. **Larval foodplants** Various grasses, including Tufted Hair-grass, Annual Meadow-grass, Common Couch and Cock's-foot. **Habitat** A wide range of dry and damp grasslands, including in urban areas, and often frequent in woodland rides. **Status and distribution** Resident. Common. Well distributed throughout most of Britain, Man and the Channel Islands, often in abundance. Widespread in most of Scotland at low elevations, but local in the north-west and on high ground. Immigrant in the Northern Isles. In Ireland, widespread, but more so in the south and eastern side.

Mathew's Wainscot

plate 65

Mythimna favicolor (Barr.)

Nb 73.292 (2200)



Field characters and similar species FW 16–18mm. Very similar to Common Wainscot in markings, colour and shape, and considered by some to be a saltmarsh race of that species. In comparison, slightly larger, and the majority of individuals have a deep sandy-orange forewing, on which pale veins are less prominent and line of black dots near outer edge is better developed. There is also a straw-coloured form. Both forms generally have off-white hindwing with grey streaks, and lack pale veins in forewing. **Flight season** One or two generations. Late May–early Sep. Comes frequently to light and sugar, and visits the flowers of grasses and rushes, especially when sweet and sticky with the products of ergot fungus. **Life cycle** Overwinters as a small larva. Larva Aug–late May. Feeds at night in mild weather. Pupates underground. **Larval foodplants** Common Saltmarsh-grass and probably other grasses on saltmarshes. Has been reared on Cock's-foot and Annual Meadow-grass. **Habitat** Coastal and estuarine saltmarshes. Occasionally individuals disperse or are blown inland. **Status and distribution** Resident. Nationally Scarce B. First considered a distinct species in 1895 and recognised in the 1996 European checklist, although some authorities regard it as a saltmarsh race of the Common Wainscot. Found on the south and east coasts of England, where it is locally numerous in Dorset, Hampshire, the Isle of Wight, West Sussex, and from north Kent to Suffolk. Also recorded in East Sussex and the south coast of Kent.

Smoky Wainscot

plate 65

Mythimna impura (Hb.)

Common 73.293 (2198)

Field characters FW 14–18mm. Forewing with a slightly curved leading edge. Straw-coloured, finely streaked, with a brown or black streak alongside whitish central vein. Has sparse black dots towards outer edge and one centrally, less often more numerous and forming a cross-row. Outer edge usually curved and, although somewhat variable in shape, not hooked or projecting at tip. Markings vary in intensity. Hindwing smoky grey, to paler and only lightly dusted and streaked with grey. Some examples, especially those from northern Britain, are smaller with a darker hindwing. Underside of forewing extensively dusted and streaked with blackish scales, sometimes covering most of wing apart from leading and outer edges. Collar, when viewed from front, lacks lines. **Similar species** See

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

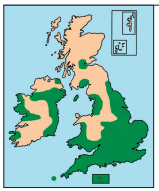
Southern Wainscot and Common Wainscot. **Flight season** Usually one generation. Late Jun–Aug. A small second generation sometimes reported in southern Britain, Sep–Oct. However, confusion with dark second-generation forms of Common Wainscot does occur. Comes to light, often in large numbers, and feeds at sugar and flowers. **Life cycle** Overwinters as a small larva, low down in the vegetation. Larva Aug–May or Jun, feeding at night. Pupates in an underground cocoon. **Larval foodplants** A range of grasses, including Cock's-foot and Common Reed; also Hairy Wood-rush. **Habitat** All types of grassland, including woodland rides. Particularly abundant in lowland grassland, including rough ground and urban gardens, and on sand-dunes in the north. Less frequent on moorland. **Status and distribution** Resident. Common. Throughout the British Isles.

Southern Wainscot

plate 65

Mythimna straminea (Treit.)

Local 73.294 (2197)



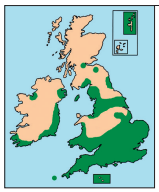
Field characters and similar species FW 14–18mm. Very similar to Smoky Wainscot and worn examples (especially males) are very easily overlooked. Forewing with brown streak along pale central vein, but often broader, especially in female. Outer cross-row of black dots usually well developed and with a central dot. Can be similar in colour – soft, light greyish straw – but often tinged with light pinkish brown. Tip hooked or with outward projection (can be very slight). Hindwing whitish, darkened along veins and slightly to moderately dusted with grey, with a curved row of short blackish central dashes, sometimes faint. Underside of forewing either clean pale straw or only slightly streaked or dusted with grey, especially near kidney mark. Underside of hindwing with a black central spot. Collar with a thin, pale-edged dark line running along it, sometimes faint (view from front). Less likely to be confused with Common Wainscot, which normally lacks a dark central spot on underside of hindwing (see also under that species). See also Obscure Wainscot, Cosmopolitan and Reed Dagger (very pointed forewing). **Flight season** One generation. Late Jun–Aug. Comes to light and feeds at sugar painted onto reeds and flowering grasses. **Life cycle** Overwinters as a small larva. Larva Aug–May or early Jun. Feeds at night and hides in old reed stems or in leaf litter by day. **Larval foodplants** Common Reed and Reed Canary-grass. **Habitat** Marshes, fens, marshy riverbanks, and along canals and ditches. **Status and distribution** Resident. Local. Widespread and fairly well distributed in England north to the Wash (particularly in East Anglia and the south Midlands), and in the Channel Islands. More local in Wales and on Man. Formerly very local in northern England, but has been expanding and now widespread in Yorkshire and Lancashire, and recorded locally to South Northumberland (since 2010) and Cumbria. Found very locally in southern Scotland since 1996, on the coast of Dumfriesshire and Kirkcudbrightshire, and at a site at Kennet Pans on the Forth Estuary in 2013. Widespread but local in Ireland.

Delicate

plate 65

Mythimna vitellina (Hb.)

Immigrant; Channel Islands resident 73.295 (2195)



Field characters FW 12–14mm. Forewing quite pointed and angular. Three wavy cross-lines are often apparent, but often less obvious on paler individuals. Forewing pale yellow, orange-brown or orange-red. Dark kidney mark and oval are often visible, and often has a black dot at trailing end of kidney mark. Breeding experiments have shown that paler adults result from more rapid development at higher temperatures. Therefore, very pale individuals are probably immigrants from hot, dry places, and darker moths probably developed in a cooler climate. **Similar species** The three wavy cross-lines distinguish this species from the wainscots. **Flight season** Immigrants arrive as two or more overlapping generations. Apr–Nov (occasionally Dec), peaking Aug–Oct. One or two resident generations in the Channel Islands. Comes to light and sugar; may also be seen visiting Ivy flowers at or after dusk. **Life cycle** Immigrants early in the season result in autumn progeny in some years. It is not known whether overwintering occurs, although it may in mild winters in the extreme south-west of England. **Larval foodplants** Various grasses, including Cock's-foot and Annual Meadow-grass. **Habitat** Mainly grassy coastal areas for breeding, but occasional immigrant individuals have been captured far inland. **Status and distribution** Regular immigrant, recorded annually in varying numbers. Abundant in some years, e.g. 1992 (over 7,000 recorded) and 2006 (over 8,600), when there may be much local breeding during the summer. Most frequent in the south-west but also occurs regularly in other southern coastal areas of England and Wales. Occurs widely but less frequently inland to the Midlands, and more occasionally in northern England, Man, southern Scotland and Shetland. Widespread but infrequent in Ireland, mainly on eastern and southern coasts. Widespread and frequent resident and immigrant in the Channel Islands. Widely distributed across Europe and North Africa.

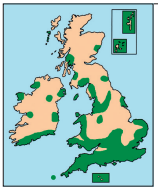
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

White-speck

plate 65

Mythimna unipuncta (Haw.)

Immigrant; Resident 73.296 (2203)



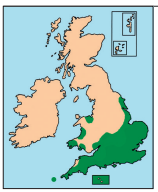
Field characters FW 18–21mm. Fairly unmistakable. Forewing rather narrow near base, but rapidly broadening, tapered and pointed. Dark diagonal streak extends from tip, sometimes shaded diffusely into a broad wedge along outer margin. Has a small white central spot on end of middle vein, at trailing end of faint reddish-brown kidney mark. Oval usually reddish, and reddish streaks and blotches often present. Ground colour pale to dark sandy brown. Hindwing grey, with blackish veins. **Similar species** Cosmopolitan has a similar pattern, but forewing more blunt and hindwing white or white with dark veins. See also Obscure Wainscot. **Flight season** Immigrants have been recorded in every month of the year, and are most numerous Aug–Oct, but infrequent in winter. In the extreme south-west, regular all year in Scilly, peaking in late autumn and early winter and probably resident. Comes to light and sugar, and visits Ivy flowers around dusk or later. **Life cycle** Immigrants earlier in the season may result in late-summer/autumn progeny in some years. Early stages could potentially be found at any time of year. Breeds continuously in warmer climates. **Larval foodplants** Larva rarely found in Britain or Ireland. Elsewhere, mainly grasses, including many cereal crops such as Maize and Rice, but also a range of herbaceous plants from a variety of families. **Habitat** Grassy coastal areas. **Status and distribution** Immigrant and resident. Regular as an immigrant, most frequent in southern coastal counties of England and Wales, particularly the south-west. Infrequently recorded far inland and further north along eastern and western coasts north to the Hebrides and Shetland, on Man and in Ireland. Recorded in hundreds in some years. Has been resident in Scilly, where it is abundant, since the end of the 20th century, and possibly elsewhere in south-west England. Resident and occasional immigrant in the Channel Islands. Found throughout most of Europe and resident in the south. Also, North Africa and the Americas. In many parts of the world it is a serious pest on cereals and other crops, including Rice.

White-point

plate 65

Mythimna albipuncta ([D. & S.])

Immigrant; recent colonist 73.297 (2194)



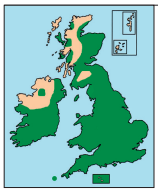
Field characters FW 14–17mm. Forewing orange-brown or pinkish brown, with a prominent white spot at base of kidney mark. Hindwing smoky grey. **Similar species** See Clay. **Flight season** Two generations, May–Jul and Aug–Oct. Comes to light and sugar; may be found on grass-heads after dark. **Life cycle** Overwinters as a larva but rarely found in the wild, so the natural life cycle is not fully understood. **Larval foodplants** Various grasses, including Common Couch and Cock's-foot. **Habitat** Open grassy places, on the coast and inland. **Status and distribution** Immigrant and recent colonist. Merits Nationally Scarce B or Local status. Until the 1980s, a regular immigrant sometimes breeding, but since then has become an established and frequent resident in southern coastal counties of England, extending into East Anglia and south Wales. Continuing to spread inland in southern central England, north at least to Oxfordshire, and seen regularly in the south-east Midlands and in numbers on the Yorkshire coast. Such is the current size and extent of the resident population that it masks further immigration, but this probably still occurs. Four in total recorded in Ireland, in Co. Cork in 1987 and 1989. Widespread and frequent resident in the Channel Islands.

Clay

plate 65

Mythimna ferrago (Fabr.)

Common 73.298 (2193)



Field characters FW 15–18mm. Thickset, with a broad, rather plain forewing that has a soft pastel appearance. Has a small (sometimes very small) tear-shaped or elliptical whitish mark at trailing end of kidney mark. Forewing pinkish brown to dull sandy grey, light olive brown or straw-coloured. Variation in markings is not great. Male has a broad black band on underside of abdomen, at the base. **Similar species** White-point is similarly marked, often similar in colour, and male also has a black band on underside of abdomen. However, it is usually smaller with a narrower forewing, and spot on kidney mark is pure white, more conspicuous and more or less round. **Flight season** One generation. Late Jun–early Aug. Comes to light and sugar, and feeds at flowers. **Life cycle** Overwinters as a small larva, low down in vegetation. Larva Aug–May, feeding at night. Pupation occurs in an underground cocoon. **Larval foodplants** Grasses, especially Cock's-foot and meadow-grasses. **Habitat** A wide range of open habitats, including gardens and wetlands; often numerous in open woodland. **Status and distribution** Resident. Common. Well distributed and frequent throughout England and Wales, on Man and in the Channel Islands. Also in much of Scotland, but scarce in the west and far north. In Ireland, well distributed throughout the southern half, and in the eastern half of Northern Ireland, but very local elsewhere.

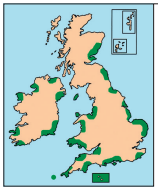
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Shore Wainscot

plate 65

Mythimna litoralis (Curt.)

Nb 73.299 (2201)



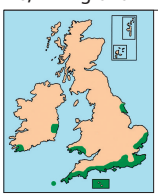
Field characters FW 15–18mm. A conspicuous branched white streak runs along centre of otherwise rather plain, light brown forewing, from near thorax almost to outer edge. Hindwing brilliant white, veins slightly darker. **Flight season** Normally one generation. Late Jun–late Aug. Occasional smaller individuals of a partial second emergence in Oct. Comes readily to light, sometimes in numbers, and to sugar and flowering Marram. **Life cycle** Overwinters as a small larva in sand. Larva Aug–late May. Feeds by night and hides in sand by day. Pupates in sand. **Larval foodplants** Marram. Spring larvae have completed growth in captivity on Annual Meadow-grass, Mat-grass and Tufted Hair-grass. **Habitat** Coastal sand-dunes and sandy beaches. **Status and distribution** Resident. Nationally Scarce B. Widespread but generally very local, in suitable habitat on the coasts of most parts of England and Wales, Man, south-west and eastern Scotland, and Ireland. Locally frequent and increasing in the Channel Islands.

L-album Wainscot

plate 65

Mythimna l-album (L.)

Nb; immigrant 73.300 (2202)



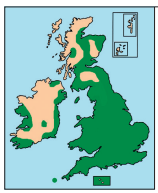
Field characters FW 15–16mm. Combination of angular forewing with straight leading edge, and middle vein white only in central area, forming a distinct 'L' shape in centre of forewing, is diagnostic. Rarely, the 'L' is reduced to a dot (f. *o-album* Milman). Forewing straw-coloured, with black streak centrally at base and along trailing edge, light and dark streaks in outer half, and distinct dark wedges along outer margin. Hindwing grey, with darker veins. **Similar species** See Shoulder-striped Wainscot (with longer black basal streak) and Obscure Wainscot, both with central vein of forewing white to wing base, not forming an 'L'. Devonshire Wainscot has a similarly coloured but less angular forewing, without the 'L', and with a clean white hindwing. **Flight season** Two generations. Late May–Jul and late Aug–Oct. Comes to light, sugar and flowers, including those of Ivy, as well as overripe blackberries. **Life cycle** Overwinters as a first-instar larva. Larva Oct–May, with a second generation in Jul–Aug. Feeds at night. Pupates in a cocoon underground. **Larval foodplants** Marram. Tall Fescue has also been suggested. Feeds on most common grasses in captivity, including Meadow Fescue, Cock's-foot and Annual Meadow-grass. **Habitat** Rough grassland by the sea, particularly near cliff edges. **Status and distribution** Resident and immigrant. Nationally Scarce B. First recorded in Britain in 1901, in South Devon, but regarded as a rare immigrant until breeding was confirmed there in the 1930s. Has since spread and is currently resident on Scilly, in all southern coastal counties, and in Essex, Suffolk and south-west Wales. Numbers probably continue to be supplemented by immigrants from mainland Europe. Singletons have been reported well inland, for example from central London, Berkshire, Surrey and North Hampshire. Widespread and frequent resident and immigrant in the Channel Islands.

Shoulder-striped Wainscot

plate 65

Leucania comma (L.)

Common 73.301 (2205)



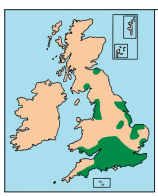
Field characters FW 16–19mm. Very long, intensely black streak extending centrally from forewing base almost to middle, further black streaks reaching outer edge and broad whitish band along leading edge are diagnostic of this boldly striped, rather thickset wainscot. Central vein also prominent, whitish and may be thickened where it branches, forming a spot. Ground colour greyish brown or dull straw-coloured, varying little, and markings vary only slightly in intensity. Hindwing grey-brown. **Similar species** The black basal streak is longer than that of Devonshire Wainscot, and L-album Wainscot (see also under those species). See also Obscure Wainscot (black basal streak absent). **Flight season** One generation. Late May–late Jul. Comes to light and sugar, and feeds at flowers. **Life cycle** Overwinters as a fully grown larva in an underground cocoon, in which it pupates in Apr or May. Larva feeds at night, Jul–Sep. **Larval foodplants** Grasses, including Cock's-foot. **Habitat** Most numerous in fens and marshes; also in other grassy places, including some gardens, and in damp woodland. **Status and distribution** Resident. Common. Well distributed throughout England, Wales, Man and southern, eastern and central Scotland, extending north to East Ross. In Ireland, local along the east coast and the west coast north to Co. Mayo, but thinly recorded elsewhere. Locally frequent in the Channel Islands.

Obscure Wainscot

plate 65

Leucania obsoleta (Hb.)

Local 73.302 (2204)



Field characters and similar species FW 15–18mm. Forewing greyish straw, often more whitish towards leading edge, with a grey tint resulting from variable fine blackish-brown dusting and streaking, especially strong centrally. Has a

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

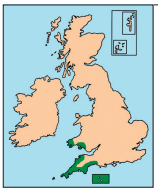
curved outer cross-row of black dots or dashes. Middle vein entirely white, thickened into a white spot where it branches out, and central black dot absent. Hindwing whitish, slightly darkened near outer edges or more extensively along veins. Underside rather plain and pale, apart from black dots along outer margins of both wings. Smoky and Common wainscots both have a black central dot on forewing, which is rarely tinted grey, central white vein does not form a spot, darker scales are usually more concentrated in a single stripe along central vein, and outer row of dots is nearly always sparse or absent. In Smoky Wainscot, underside of forewing is extensively dark. Shoulder-striped Wainscot has white central vein forming a spot, but also has a centrally placed long black basal streak and is more thickset. See also Devonshire and L-album wainscots, both with a black basal streak; Southern Wainscot, with a hooked or pointed tip to forewing; and White-speck, sometimes with a white vein, but larger and with a more pointed forewing. **Flight season** One generation. Mid-May–mid-Jul. Comes frequently to light and sugar, and after dark visits the flower-heads of grasses to feed on sticky substances produced by ergot fungus. **Life cycle** Overwinters as a fully grown larva, generally in a hollow, broken, standing dead stem of Common Reed or in fallen reed litter, sealed with silk, pupating therein in the spring. Larva Jul–Apr. **Larval foodplants** Common Reed. **Habitat** Reed-beds, fens, marshes, riverside situations (including estuaries), and reedy margins of ponds and lakes. **Status and distribution** Resident. Local. Southern England from Devon, Somerset and south Wales (and very locally in north Wales), eastwards to Kent, East Anglia and the south Midlands, and north to Yorkshire and south Cumbria. In Scotland, found very locally in the south, in Kirkcudbrightshire since 2002, and one in East Lothian in 2014. In the Channel Islands, one on Jersey in 1999.

Devonshire Wainscot

plate 65

Leucania putrescens (Hb.)

Na 73.303 (2206)



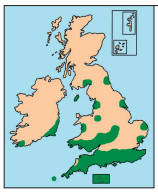
Field characters and similar species FW 14–17mm. Forewing somewhat similar to L-album Wainscot, but less angular, without white 'L' mark, and with coarser, less well-defined markings and an outer cross-row of black dots, acutely angled at leading edge. Some variation in balance between light and dark shades. Hindwing white in male, with margin and outer veins slightly darkened, more so in female. See also Shoulder-striped Wainscot and Obscure Wainscot. **Flight season** One generation. Mid-Jul–early Sep. Flies from dusk, comes to light and sugar, and has been recorded visiting flowers, frequently those of Wood Sage but also Red Valerian and various maritime grasses. **Life cycle** Overwinters as a larva, hatching by Sep. Continues feeding on mild nights throughout the winter, becoming fully grown by late Jan or Feb, when it burrows into the earth and forms a cocoon in which it rests until pupation in May. **Larval foodplants** Unspecified grasses. Accepts Annual Meadow-grass and Cock's-foot in captivity. **Habitat** Closely associated with cliffs and grassy places on the coast in the mildest parts of the south-west. **Status and distribution** Resident. Nationally Scarce A. Restricted to south-west Britain. First discovered at Torquay, Devon, in 1859. Well established locally on the north and south coasts of Devon and Cornwall, Lundy, Pembrokeshire, in Glamorgan on the Gower Peninsula, and on Flat Holm. Occasional records, probably vagrants, on the coasts of Carmarthenshire, Somerset, Dorset and Hampshire. Locally frequent in the Channel Islands.

Cosmopolitan

plate 66

Leucania loreyi (Dup.)

Immigrant 73.304 (2208)



Field characters and similar species FW 16–17mm. Forewing has quite a similar pattern to White-speck, but is more blunt, narrow and seldom marked with reddish, and has a centrally placed blackish basal streak and often a diffuse dark streak extending centrally through white spot. Kidney hardly discernible and oval absent. See also Southern Wainscot, with a hooked forewing tip and no black basal streak. **Flight season** Two or more generations abroad, May–Nov, being most frequent Sep–Oct. Comes to light and sugar; may also be seen visiting Ivy flowers at dusk or later. **Life cycle** Immigrants earlier in the season may result in late-summer/autumn progeny in some years. **Larval foodplants** Grasses, including Cock's-foot. **Habitat** Grassy coastal areas. **Status and distribution** Immigrant. Over 1,000 records. Prior to 1975, fewer than 30 had been recorded but it has become more regular in recent years, the most recorded in a single year being 532 in 2006. Other good years include 1992 (440+), 2003 (97), 2004 (62) and 2005 (141). Numbers fluctuate greatly, and the combined total for 2007 and 2009 was six. Recorded mainly from southern coastal counties of England and Wales, occasionally further inland. The majority of records come from south-west England, particularly Cornwall. Rare on the east coast but has been recorded as far north as Northumberland (two in 2006). Also recorded from Man, south-west Scotland (one in Dumfriesshire in 2006) and southern Ireland (Cos. Wicklow to Cork, 54 moths in total). A fairly scarce immigrant in the Channel Islands. Resident in southern Europe and North Africa.

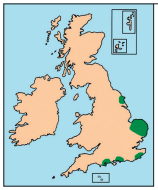
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Flame Wainscot

plate 66

Senta flammea (Curt.)

Na; suspected immigrant 73.305 (2209)



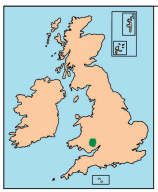
Field characters FW 14–18mm. The slender build and very curved leading edge of the pointed, tapered forewing make this a fairly distinctive wainscot. Forewing pale straw, often with a pink tinge, and with a flame-like brown central streak contrasting with pale flash along basal half of leading edge. Has an outer curved cross-row of black dots. **Similar species** Closely related species are all stockier. Reed Dagger has a pointed forewing, but is much stockier. **Flight season** One generation. Mid-May–early Jul. Comes readily to light but does not seem to feed at baits or flowers. Can be found at night on reed stems. **Life cycle** Overwinters as a pupa, usually in a broken but standing hollow reed stem sealed with silk. Larva late Jul–Sep or even Oct. Hides in hollow stems by day, feeding at night. **Larval foodplants** Common Reed. **Habitat** Reed-beds, fens and marshes, preferring areas with scattered reeds rather than dense stands. **Status and distribution** Resident and suspected immigrant. Nationally Scarce A. Locally widespread in East Anglia, including Wicken and Chippenham fens in Cambridgeshire (known since the mid-19th century), the Norfolk Broads, Strumpshaw Fen, Surlingham Marshes, Redgrave and Lopham Fen, Stoke Ferry Fen, Roydon Common, and in coastal marshes at Sea Palling and Cley next the Sea in Norfolk, and in Suffolk at Walberswick, Minsmere and Thorpeness. Also resident locally in Dorset in the Poole Basin and on Brownsea Island, at Wye in Kent (discovered in 1982) and in the Winchelsea/St Leonards area of Sussex since at least the 1960s. Recorded on about 20 occasions as a suspected immigrant, along the south coast from Kent westwards to Dorset, including the Isle of Wight, and northwards to Essex and the London area. Two in Lincolnshire (1974 and 1993), one at Flamborough in Yorkshire (2008), and one on the Gower Peninsula in Glamorgan (1978).

Silurian

plate 66

Eriopygodes imbecilla (Fabr.)

RDB 73.306 (2175)



Field characters FW 10–13mm. A small, rather plain moth. Has fine curved or wavy dark cross-lines on forewing, sometimes obscure in female. Kidney mark present, sometimes yellowish and prominent in female. Oval absent. Ground colour of male reddish through sandy brown to fawn. Female smaller and darker reddish brown. **Flight season** One generation. Late May–Jul. Male comes to light, sometimes in large numbers, but predominantly between 2am and 4am, and also flies by day. Female is rare at light but has occasionally been reported on the wing on sunny afternoons. **Life cycle** Overwinters as a part-grown larva. Larvae have recently been found before hibernation by vacuum sampling, and also feeding at night as final instars in Apr. Eggs laid by wild-caught females hatch within a couple of weeks, showing no signs of dormancy. Larvae kept in captivity, even at close to outdoor temperatures, have consistently produced adults from Sep to Dec, depending on temperature. **Larval foodplants** Final instar larvae have recently been found on Bilberry and Heath Bedstraw. Accepts Cleavers in captivity and can be reared successfully on Dandelion, feeding at night and hiding by day. **Habitat** Gullies and hollows in high moorland (400–500m) dominated by Bilberry. **Status and distribution** Resident. Red Data Book species. Very local at 450–700m in the hills of south-east Wales, where it was first discovered when one came to light in Monmouthshire, on 30 Jul 1972, which was a late season. Found in numbers at the site in late Jun 1976, breeding was confirmed in 2005 and it is still present. In the subsequent ten years, the species was found breeding on four mountains/ridges in south-east Wales, extending into Breconshire and over Offa's Dyke into western Herefordshire. At least four individuals have come to light away from known sites, so more colonies may yet await discovery. These include a single male on 6 Jul 1999 in Abergavenny, about 10km from the known breeding grounds, and one just over the English border in the Black Mountains of Herefordshire, some 20km away, on 12 Jul 1999.

Noctuinae Darts, yellow underwings, clays and allies

White-line Dart

Lesser Yellow Underwing

Setaceous Hebrew Character

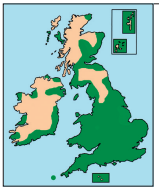
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Pearly Underwing

plate 66

Peridroma saucia (Hb.)

Immigrant 73.307 (2119)



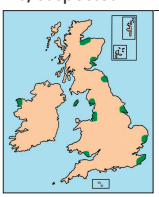
Field characters FW 19–23mm. This species' English name derives from the hindwing, which has a translucent mother-of-pearl quality, with darker veins and outer margin. Large kidney mark and oval are usually visible on forewing, but less so on darker individuals. Highly variable, forewing ranging from variegated buff (or pale grey) and dark brown to more uniformly dark, often with a strong russet coloration. Has an elongated grey crest on thorax, the front of it raised, 'Mohican-style'. **Similar species** See Turnip Moth and Dark Sword-grass. **Flight season** Has been recorded in every month of the year, winter records usually coinciding with milder weather and southerly winds. Most numerous in Sep and Oct, but also appears regularly during the summer months and, to a far lesser extent, during the spring. Attracted to light and sugar. **Life cycle** Larvae are rarely encountered but are thought to occur Jul–Oct, feeding at night. These are the progeny of earlier immigrants and may give rise to autumn adults, which supplement the immigrant population. **Larval foodplants** Various low-growing plants, including Dandelion, docks, Red Clover, Cabbage and Rape. In the past, has been reported as a pest on lettuces in glasshouses. **Habitat** May occur almost anywhere. Most frequent in coastal areas. **Status and distribution** Regular immigrant, possible transitory resident. Numbers vary greatly from year to year, and sometimes frequent. The highest recorded annual total is at least 8,500 in 2006. Most frequent in the southern half of Britain, but recorded throughout the British Isles, as far north as Shetland, on Man and widely in Ireland, mainly on the southern and eastern coasts. Frequent most years in the Channel Islands.

Portland Moth

plate 66

Actebia praecox (L.)

Nb; suspected immigrant 73.308 (2099)



Field characters FW 17–21mm. A distinctive silvery-green noctuid moth with a large, pale, dark-centred oval and kidney, and reddish outer band on long, slender forewings, closely overlapped when fully at rest. **Flight season** One generation. Jul–Sep. Nocturnal. Recorded feeding at flowers of ragworts, Heather and Marram. Comes to light, sometimes in numbers. **Life cycle** Overwinters as a larva, hatching in about Sep. Pre-hibernation habits unknown. Post-hibernation larvae hide in the sand by day and pupate there from late Jun. **Larval foodplants** Larvae have been found after hibernation feeding at night on Creeping Willow. Also reported from a variety of plants found on sand-dunes, such as chickweeds, fine marine grasses, Wormwood, Common Bird's-foot-trefoil, mouse-ears, plantains and naturalised Tree Lupin. **Habitat** Well-vegetated sand-dunes, sandy heathland, and sand and shingle banks of rivers. **Status and distribution** Resident and suspected immigrant. Nationally Scarce B. Very local and scarce, and seemingly in decline although long considered elusive. Post-2000 records mainly from the coasts of south Wales, Lancashire, Cumbria, Man, Northumberland, the Moray Firth, Spey Valley, Fife and Angus. Older records from Studland in Dorset, Dawlish Warren in South Devon, and Braunton Burrows in North Devon. Also on Gower in Glamorgan and various other places on the Welsh coast, including Anglesey; the coasts of Cheshire and Cumbria; the west coast of Scotland, including some of the Inner Hebrides; Tayside; and the coast of Angus. Inland, in the Scunthorpe area of Lincolnshire, and at Budby Heath and Misson, Nottinghamshire. Individuals occasionally recorded elsewhere, including Essex, Sussex and Kent, are regarded as suspected immigrants, although the moth was formerly seen almost annually at Dungeness, Kent (but only three since 2000), where larvae have been found in the past. Local on Man. In Ireland, recorded from several scattered coastal locations, particularly in the south and west, and also in Northern Ireland (Co. Down), but few recent sites. Recorded once from the Channel Islands, on Jersey in 1932.

Eversmann's Rustic

plate 66

Actebia fennica (Tausch.)

Immigrant 73.309 (2100)

Field characters FW 16–18mm. Quite distinctive. Forewing long, narrow and rather rounded at end. In male, there is a marked contrast between orange stripe along trailing edge of forewing and dark grey-brown of rest of wing. In female, forewing is more uniformly purplish grey or even blackish. Both oval and kidney mark are conspicuous, with light edges. Two or three small wedge-shaped black marks extend inwards in centre of outer part of forewing. Hindwing dirty white. **Similar species** The superficially similar Dark Sword-grass is larger, with a broader, more pointed forewing and a long black dart mark extending outwards from kidney. **Flight season** One generation in mainland Europe. Jul–Aug. Comes to light, sugar and flowers. **Life cycle** In mainland Europe, overwinters as a larva. Larva Sep–Jun. Pupates underground. **Larval foodplants** Bilberry and various herbaceous plants, including willowherbs. In Sweden, also recorded from Lodgepole Pine. **Habitat** Taiga moorland and light woodland. **Status and distribution** Rare immigrant. Six examples recorded, the first in Aug 1850 at Chesterfield, Derbyshire, then at Shepperton in Middlesex, Mapperley in Nottinghamshire and Newcastle-upon-Tyne (1972); Barthol Chapel in

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Aberdeenshire (1977); and Rugby in Warwickshire (1983). Some of these records coincide with arrivals of Great Brocade and Scarce Silver Y. A native of the Scandinavian, Siberian and North American taiga (where it can be a pest on Blueberry) that migrates into north-west Europe in some years.

Black Collar

plate 66

Dichagyris flammatra ([D. & S.])

Immigrant 73.310 (2101)

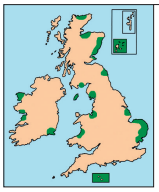
Field characters FW 19–21mm. Broad black band on collar and broken sinuous black basal streak on otherwise rather mottled milky-brown or darker forewing and thorax are diagnostic. In female, black collar is tinged with grey. Black streak often extends as a fine line around pale oval, forming a hook-like mark. Kidney also pale. Has a pale greyish streak along leading edge in basal half, more evident in darker individuals. Wings held overlapping and quite close to the body at rest, giving a slender appearance. **Similar species** Heart and Dart has a narrower blackish mark on collar, is smaller, and although very variable has no black basal streak on forewing, and has a dark central oval and kidney mark. **Flight season** Two overlapping generations in southern Europe, May–Sep. Comes to light, sugar and flowers from dusk. **Life cycle** Overwinters as a larva. Two generations, feeding from autumn to spring and in the summer. Larval stage unrecorded in the British Isles. **Larval foodplants** Reported from Wild Strawberry and Dandelion in southern Europe, and probably feeds on other low-growing plants. **Habitat** Grassland, scrub and rocky areas in mountains. **Status and distribution** Rare immigrant. Five British records. Most recently one at Eswick, Shetland, on 28 Jun 1997. Prior to that, single examples at Huntley, Gloucestershire, in Jun 1968; at Cromer Lighthouse, Norfolk, on 10 Aug 1875; and on the Isle of Wight in 1859 and 1876. Found locally in southern and central Europe.

Coast Dart

plate 66

Euxoa cursoria (Hufn.)

Nb; suspected immigrant 73.311 (2083)



Field characters and similar species FW 14–18mm. A very variable species. Forewing straw and white to dark grey and brown, but generally with a sandy tint. Darker forms predominate in more northern populations. Some forms resemble Sand Dart, but differ in that forewings are more tightly drawn together at rest, leading edge of forewing is slightly curved and kidney mark is much larger. White-line Dart has a similar range of colour forms. On underside of forewing of Coast Dart, kidney mark is large and blurred, and there is a blurred dark band beyond it. Kidney mark of White-line Dart is small and crescent-like, and there is no dark band. The darkest northern Coast Dart are as dark as Garden Dart, but in that species forewing is slightly broader. **Flight season** One generation. Late Jul–Aug, sometimes early Sep. Hides among vegetation by day, and from dusk visits flowers such as Marram and other grasses, ragworts and heathers. Attracted to sugar-bait and comes to light, sometimes in fair numbers. **Life cycle** Probably overwinters as an egg, until about Feb or Mar. Larva early spring–Jul. Feeds at night and hides in the sand near the foodplant by day, eventually pupating quite deep in the sand in an egg-shaped cocoon. **Larval foodplants** A wide range of sand-dune plants, including Sea Sandwort, violets, Early Hair-grass, Sand Couch, Hound's-tongue, Sticky Mouse-ear and Sea Spurge. Has been reared on plantains. **Habitat** Coastal sand-dunes. Tends to breed where the sand-dune vegetation is well established, rather than in the less stable dunes favoured by the Sand Dart. **Status and distribution** Resident and suspected immigrant. Nationally Scarce B. Very local in Britain, largely restricted to the bigger tracts of sand-dunes on the east, west and north coasts. In the east, found in East Anglia from Suffolk to the Wash, Lincolnshire, Northumberland, the eastern side of Scotland north to Aberdeenshire, along the Moray Firth from Morayshire to East Ross and on the north coast, on Orkney, and formerly on Shetland. In the west, in west Wales (Tenby), Cheshire, Lancashire (although not recently), Cumbria, Man, south-west Scotland and the Inner Hebrides. About a dozen suspected immigrants have been recorded on or near the Essex and Kent coasts since 1950, coinciding with influxes of known immigrants, and generally of a sandy-coloured form paler than those of resident British populations. Rare in Ireland, with records from widely scattered locations, mainly on the north and western coasts, including the Aran Islands and West Mayo, and Wexford in the south-east. Local in the Channel Islands.

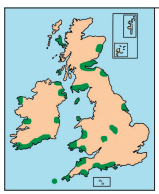
Square-spot Dart

plate 66

Euxoa obelisca ([D. & S.])

ssp. *grisea* (Tutt)

Nb 73.312 (2080)



Field characters and similar species FW 14–18mm. Pale leading edge of forewing extending from base on males and some females is most obvious feature, but this is shared with the much more variable White-line Dart, which can be seemingly almost identical. The most reliable distinguishing features of Square-spot Dart are the rather uniform, dark brown (sometimes tinted reddish or purplish) ground colour of forewing and lack of black arrowheads on inner edge of outermost cross-band. White-line Dart usually has several arrowheads on the outermost cross-line, outer central cross-line generally arcs around kidney mark without touching it (runs along the outer edge of the kidney mark in Square-spot Dart), and outer third of

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

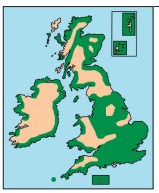
forewing generally has a more varied pattern of light and dark shades. It is sometimes necessary to examine the genitalia for confirmation. There is also a greyish form, which has been found only on the Isle of Wight. **Flight season** One generation. Early Aug–early Oct. Recorded visiting the flowers of ragworts and heathers, and attracted to sugar-bait, but most records are at light, sometimes in numbers. **Life cycle** Probably overwinters as an egg. Larva Feb–Mar, pupating underground in Jul. **Larval foodplants** Various low-growing plants. Common Rock-rose and Lady's Bedstraw have been reported specifically, but the larval habits in the wild are poorly understood. Has been reared on plantains and bedstraws. **Habitat** Rocky and hilly coasts, some of which are soft rock, earth or chalk. Also found in some hilly areas inland. **Status and distribution** Resident. Nationally Scarce B. Almost entirely coastal. Local but in places frequent on the coast of Sussex, Hampshire, Isle of Wight, Dorset, south-west England, Wales (including Anglesey), north-west England, Man, south-west Scotland, the Inner Hebrides, the east coast of Scotland from Berwickshire to Aberdeenshire, and various parts of Ireland. Old records from Northumberland, including Lindisfarne. Probable immigrants or strays recorded at Dungeness, Kent (1945) and Spurn, Yorkshire (1940s, 2005, 2006). Reliably recorded from a number of inland sites in Britain, including Hillmorton, Warwickshire, the Malvern Hills, Herefordshire and Matlock, Derbyshire. Rare in the Channel Islands, with no recent records.

White-line Dart

plate 66

Euxoa tritici (L.)

Common 73.313 (2081)



Field characters FW 13–17mm. Extremely variable in colour and intensity of markings, even in the same locality. Also quite variable in size, but distinguished from most related species by up to six short, dark arrowheads on inner edge of outermost cross-band. Forewing ranges from blackish grey, dark brown and various shades of grey to pale brown or sandy. Variation often reflects soil type, with moths from coastal sand-dunes and sandy heathland tending to be paler, brighter, and sandy or grey, and those from peaty moorland tending to be dark and strongly marked. Often the major vein parallel to leading edge of forewing is highlighted with white scales, hence the English name. **Similar species** See Square-spot Dart, Coast Dart, Garden Dart and Heath Rustic. **Flight season** One generation. Mainly mid-Jul–mid-Aug, occasionally to early Sep. Comes to light, sometimes in numbers, and feeds at sugar and flowers, notably of Marram, ragworts and heathers, sometimes by day. **Life cycle** Overwinters as an egg, laid on the foodplant. Larva late Mar–Jul, feeding at night and hiding in the soil by day. Pupates underground. **Larval foodplants** A wide range of herbaceous plants, including Hedge and Lady's bedstraws, Corn Spurrey and mouse-ears. **Habitat** Coastal sand-dunes and cliffs, heathland, moorland, downland and open heathy woodland. **Status and distribution** Resident. Common. Appears to be in decline. Numbers in the Rothamsted Insect Survey national light-trap network declined by 94% between 1968 and 2007. Still occurs in suitable habitat in most parts of Britain, including the Hebrides, Orkney and Shetland, but mainly coastal in Scotland and may now be less widespread and numerous inland in southern Britain. Local on Man. Widespread but almost entirely coastal in Ireland. Local but sometimes frequent in the Channel Islands.

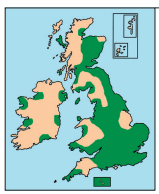
Note White-line Dart is considered by some authorities to be a complex of several very similar species, the others being *Euxoa eruta*, *E. nigrofusca* and *E. crypta*, but the other species are not yet accepted as occurring in Britain. However, this has long been regarded as a difficult group and the situation may change. They are highly variable moths and differences found are mainly in the genitalia.

Garden Dart

plate 66

Euxoa nigricans (L.)

Common 73.314 (2082)



Field characters and similar species FW 15–18mm. Similar in size and shape to White-line Dart and usually with a blunt, dark-outlined central dart mark, but plainer and browner or black rather than greyish, lacking the arrowheads near outer edge and never with a pale streak along leading edge. In southern Britain, often paler. See also Coast Dart and Square-spot Rustic, which has a broader forewing, at least in male, and seldom a dark central tooth mark. **Flight season** One generation. Jul–mid-Sep, occasional individuals from mid-Jun and to early Oct. Comes to light and sugar in small numbers, and to flowers, including ragworts and buddleias. **Life cycle** Overwinters as an egg, laid on the foodplant. Larva Mar–Jun, feeding at night. Pupates underground in an earthen cocoon. **Larval foodplants** Herbaceous plants, including clovers, docks and plantains. **Habitat** A wide range, but typically gardens, allotments, farmland, downland, rough open ground, floodplains and marshes, and occasionally woodland rides. **Status and distribution** Resident. Common. In decline. Numbers in the Rothamsted Insect Survey national light-trap network declined by 98% between 1968 and 2007. Still found throughout most of England. Also in Wales, on Man and mainly the eastern side of Scotland, but generally in small numbers. Recorded widely around Ireland, but scarce, very local and mainly on the coast. Occasional in the Channel Islands.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

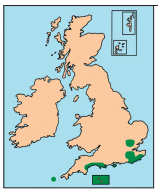
Great Dart

plate 66

Agrotis bigramma (Esp.)

Immigrant; Channel Islands resident

73.315 (2094)



Field characters FW 16–20mm. A combination of several features separate Great Dart from related species. Thorax is stout and forewing relatively broad, with a dark kidney mark and oval. Has two pale cross-lines with dark edges, and a third weaker and more jagged cross-line near outer edge, with a row of dark wedges pointing inwards from it. Cross-line nearest thorax projects sharply outwards at trailing edge. Male antennae feathered. Ground colour varies considerably, from pale brown to almost black, but markings are visible even on darkest forms, which are usually females. Hindwing white with a dark margin in male and a grey-brown outer band in female. **Similar species** Heart and Dart, Turnip Moth and Heart and Club are smaller and slighter, kidney mark is smaller and antennae are less strongly feathered in male. **Flight season** One generation. Jul–Sep. Most British records are in Aug. Comes to light, sugar and flowers. **Life cycle** In mainland Europe, overwinters as a larva. Larva Sep–May. Pupates underground. **Larval foodplants** The roots and stem bases of various unspecified low-growing plants, including grasses. Reportedly an occasional pest in vineyards. **Habitat** In mainland Europe, open, scrubby places with sparse vegetation. **Status and distribution** Resident since at least 1874 in the Channel Islands, where it is widespread and frequent. Elsewhere in the British Isles, an immigrant and possible former resident. A number were reported from Essex and Kent during the 1840s, but their origins and identification are uncertain and it is not clear whether there was a resident population. Since 1986, about 45 suspected immigrants have been recorded, 20 of those at Portland, Dorset. Also in Scilly, Cornwall, Hampshire, Isle of Wight, East Sussex, Surrey (one in 2006), Essex (one at Saffron Waldon in 1995), Hertfordshire (2014) and Co. Cork in Ireland (one in 1984). Widespread in France, and found in much of central and southern Europe.

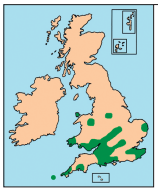
Light Feathered Rustic

plate 67

Agrotis cinerea ([D. & S.])

Nb

73.316 (2084)



Field characters FW 13–17mm. Quite distinctive, rather thickset moth lacking a central dart mark on forewing. Kidney mark rather small and narrow, with a dark outline, and oval absent or very small and dot-like. Has two fine, wavy or scalloped blackish cross-lines and a diffuse brown central band. Markings vary relatively little, but colour varies greatly. Female smaller, with a narrower forewing than male. The light chalky- or bluish-grey forms of southern England and south Wales are fairly easy to recognise. Those from Derbyshire, Warwickshire and Forest of Dean, Gloucestershire, are darker, slate grey, brown or blackish, but cross-lines are usually evident. Female smaller than male. **Flight season** One generation. May–Jun, occasionally Jul. Male comes readily to light, female much less so, but comes to sugar and has been found at rest on short grass stems after dark and is occasionally active in the sward by day in hot weather. **Life cycle** Overwinters as a fully grown larva. Larva late Jun–Sep. Feeding is completed by late Sep, and it pupates underground in spring. **Larval foodplants** Wild Thyme and possibly other low-growing plants. Accepts Dandelion and plantains in captivity. **Habitat** Unimproved chalk and limestone grassland, from lowland to moderate altitude, quarries, old slag heaps, coastal cliffs and shingle beaches, the main larval foodplant favouring short swards and broken ground. **Status and distribution** Resident. Nationally Scarce B. Local and possibly in decline, but quite widespread in suitable habitat, in central southern and south-east England. Very local in the Midlands, north to the dales on the Derbyshire–Staffordshire border, and in Wales north to Great Orme's Head and Anglesey. Singles recorded in Northumberland in 1981 and 1990. Two accepted records from Ireland, from Co. Tyrone in 1897 and Co. Kerry in 1968.

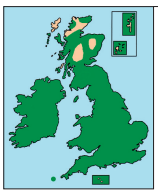
Heart and Dart

plate 67

Agrotis exclamationis (L.)

Common

73.317 (2089)



Field characters and similar species FW 15–19mm. Variable, but a constant diagnostic feature is the broad, dark brown or blackish band across front of collar, on otherwise uniform brown thorax. This often appears V-shaped from above but from front more resembles the profile of a bat, and is visible even on the darkest individuals. Somewhat similar to Heart and Club, but less blunt and stocky, and usually easy to recognise. Forewing markings similar, but ground colour usually rather plain, and rarely flecked or streaked, ranging from pale brown or greyish brown to dark brown or blackish. Central dart mark solid, usually narrow and more dart-like. Pale examples are usually males, with antennae appearing unfeathered to the naked eye, and a whitish hindwing. Females are generally darker, with a grey hindwing. Sometimes central marks are joined, distorted, blurred or formed into streaks. See also Turnip Moth, Great Dart and Black Collar. **Flight season** Two generations. Mid-May–early Aug, usually with a small second generation from Sep in the southern half of Britain. Comes to light regularly in large numbers. Several hundred per trap is not

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

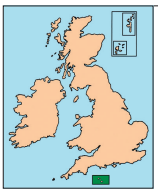
unusual, sometimes thousands. At the peak of emergence (late Jun in the south, Jul in the north) it is often by far the most numerous species in light-traps, especially in gardens. Also feeds commonly at sugar and flowers. **Life cycle** Overwinters as a fully grown larva in an underground cell, in which it pupates. Larva Jul–spring, feeding until Oct or earlier, hiding in debris or loose soil by day. **Larval foodplants** A wide range of wild and cultivated herbaceous plants, including Ribwort Plantain and Fat-hen. **Habitat** In all habitats except at high altitude, but most abundant in lowland arable farmland, pasture and gardens. **Status and distribution** Resident. Common. One of the most abundant larger moths throughout most of Britain, the Channel Islands, Man and Ireland, except in Scotland, where it is widespread but much less plentiful in the northern half, and vagrant in Orkney and Shetland.

Woods's Dart

plate 67

Agrotis graslini Ramb.

Jersey 73.318 (2083a)



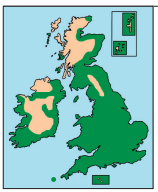
Field characters and similar species FW 15–20mm. Rather like a sandy-coloured form of Archer's Dart, but with a more pointed forewing. Antennae in male feathered, this extending narrowly to tip. In male Archer's Dart, feathering on antennae ends well before tip and hindwing is marked with grey to some extent (may only be slight). Sand Dart is slightly smaller, with narrower, less pointed forewing and unfeathered antennae. See also Spalding's Dart. **Flight season** In mainland Europe, Aug–Oct. Comes to light and sugar. **Larval foodplants** In mainland Europe, recorded from Tuberous Hawk's-beard, scabious, plantains and docks. **Habitat** Coastal sand-dunes. **Status and distribution** Resident on Jersey, where it was first recognised from eight captured in coastal dunes at Les Quennevais, St Ouen's Bay, in Aug 2001. Two were trapped roughly 1km from the original location, and populations are now known at St Ouen's Bay and Le Braye. Otherwise known only from Atlantic and Mediterranean coasts in France, Portugal, Spain and North Africa.

Turnip Moth

plate 67

Agrotis segetum ([D. & S.])

Common; Immigrant 73.319 (2087)



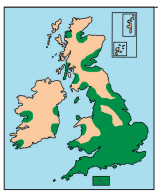
Field characters FW 16–21mm. Very variable, forewing ranging from pale sandy through various shades of brown (sometimes greyish) to black. Kidney mark, oval and central dart mark pale-centred or dark, although in darker specimens they may be obscure. Hindwing of male is gleaming white; darker individuals, especially female, have darker veins and marginal shading. Both show slight mother-of-pearl effect. Collar may have a thin, dark, inverted, rounded 'W' along its leading edge. Basal half of antennae visibly feathered in male. **Similar species** See Heart and Club. Heart and Dart has distinct, broad dark collar band on otherwise plain thorax. Crescent Dart has a smaller, whitish oval mark and in male antennae are not visibly feathered to the naked eye. Pearly Underwing is usually larger and lacks a prominent dart mark on forewing. Also, oval is larger, hindwing distinctly shines like mother-of-pearl and thorax has a long grey crest. See also Great Dart and Dark Sword-grass. **Flight season** Usually two generations. In south and central Britain, May–early Jul and Aug–Oct or Nov. In northern Britain, peak numbers continue into Jul and the second generation may be absent or only partial. Immigrants may also appear outside these times, occasionally in winter. Strongly attracted to light and sugar. **Life cycle** Overwinters as a larva. Larva Jul–Apr, sometimes Jun–Aug. Second generation Oct–Apr. Feeds slowly during the winter and pupates underground in Apr when fully grown, in an earthen cocoon. Larvae almost entirely subterranean, feeding at night; like other species in this group they are known as cut-worms. **Larval foodplants** The roots and lower shoots of a wide variety of wild and cultivated herbaceous plants, including Turnip, Carrot, Beet, Swede and Cabbage. Regarded as a pest of root crops. **Habitat** A wide variety, including gardens, agricultural land, parkland, open woodland and coastal dunes. **Status and distribution** Resident and regular immigrant. Common. Found throughout Britain, Man and the Channel Islands. Less numerous in Scotland (immigrant in the Northern Isles) and in Ireland.

Heart and Club

plate 67

Agrotis clavis (Hufn.)

Common 73.320 (2088)



Field characters and similar species FW 14–18mm. Compared to rather similar Turnip Moth and Heart and Dart, forewing is generally slightly shorter and broader, giving a slightly stockier appearance, and central dart mark is usually dark (shorter than in Heart and Dart) and more blunt and club-like. Very variable. Forewing pale straw, greyish brown or pale brown to dark brown or black. Dark examples often have pale veins. Many examples are strongly flecked or clouded with brown, unlike the generally plainer Heart and Dart. Collar (when seen from front) may have one or more thin, dark, inverted W-shaped cross-bands and may appear entirely dark from above, but not with a single broad band on plain background (see Heart and Dart). Basal two-thirds of antennae visibly feathered in male. Basal half feathered in Turnip Moth (and slightly less strongly), which has a pearly shine on hindwing and generally a smaller, paler dart mark.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Both species are highly variable in forewing markings. See also Crescent Dart and Great Dart. **Flight season** One generation. Mid-Jun–early Aug. Comes frequently to light, sugar and flowers. **Life cycle** Overwinters as a fully grown larva in an underground cell, in which it pupates. Larva Aug–spring, feeding until Nov, at first on the leaves and when larger on the roots. **Larval foodplants** A wide range of herbaceous plants, including Fat-hen, Broad-leaved Dock and Wild Carrot. **Habitat** Coastal sand-dunes, where it is most abundant, chalk downland and other open, dry habitats, typically on light soils, including gardens. Occasional in woodland rides. **Status and distribution** Resident. Common. Throughout southern Britain. Well distributed in England north to the Wash, and in south Wales. Widespread but more local in the rest of Wales, Man, the Midlands and northern England. In Scotland, widespread in coastal areas in the east and locally around the Moray Firth, otherwise very scarce. In Ireland, found very locally on the east and west coasts (in the southern half). In the Channel Islands, frequent on Guernsey and Alderney.

Spalding's Dart

plate 67

Agrotis herzogi Rebel

Immigrant 73.321 (2091a)

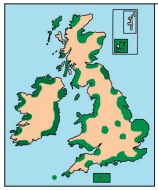
Field characters and similar species FW 15–17mm. A distinctive species unlikely to be overlooked in a light-trap. Forewing markings somewhat like a pale male Shuttle-shaped Dart or Grouville Dart, but Spalding's is larger, with a more angular and streaky forewing, and flattened and usually very elongated oval. Female tends to be darker than male, which has only very slightly feathered antennae, hard to see with the naked eye. Hindwing white. Archer's Dart and Woods's Dart are similar in shape (although Woods's has a more pointed forewing), but Archer's has a larger, dark dart mark, and antennae of male in Archer's and Woods's are visibly feathered. Sand Dart has a narrower, less pointed forewing, not streaky, and oval is not greatly elongated. **Flight season** Where it is resident, mainly Oct–Apr, probably in two generations. **Status and distribution** Rare immigrant. Two records, both males. One in a light-trap on 22 Nov 1995 at Praze-an-Beeble, near Camborne, Cornwall, and one found at rest by day in Poole, Dorset, on 16 Dec 2015. Immigrant in Europe, arriving with Sirocco winds, and recorded on very few occasions, usually in the far south and very occasionally in numbers (63 on 1 Mar 1984 at a single locality in Greece). Resident from the Canary Islands across the Sahara to the Middle East.

Archer's Dart

plate 67

Agrotis vestigialis (Hufn.)

Local 73.322 (2085)



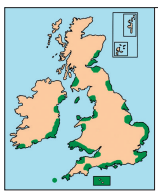
Field characters FW 14–18mm. One of the most distinctive members of the darts owing to the bold marks and highly variegated appearance of the quite broad, angular forewing. Three marks are particularly prominent: the kidney, the oval and a long bullet-shaped dart mark beside them. There is a row of short dark arrowheads towards outer edge of wing. Shows strong geographical variation, those from the heaths of Dorset, Hampshire and Surrey being particularly dark, with silvery-grey markings; some coastal sand-dune forms are almost white. Male has feathered antennae. **Similar species** Sand Dart has a slightly narrower forewing and much less bold markings. Coast Dart has a more rounded, less angular forewing. Neither has feathered antennae in male. See also Woods's Dart and Spalding's Dart. **Flight season** One generation. Jul–Sep. Readily attracted to light and sugar. Regularly seen visiting the flowers of ragworts, as well as heathers, Marram and other plants. Occasionally seen flying by day, and sometimes found resting among ragworts. **Life cycle** Larva Sep–Jun, feeding throughout the winter except when it is very cold. Pupates underground in Jun. **Larval foodplants** Herbaceous plants, including bedstraws, stitchworts and Sea Sandwort. Also reported from unspecified grasses. **Habitat** Mainly coastal sand-dunes, also vegetated shingle and inland on well-drained sandy and acid heathland. Very locally on limestone grassland. **Status and distribution** Resident. Local. Quite widespread in suitable habitat on the coast of Britain (extending north to Orkney and the Outer Hebrides), Man and Ireland. Inland, found very locally in some parts of England, including Dorset, the New Forest, Hampshire, Surrey, the Breckland of East Anglia, Lincolnshire, Nottinghamshire and Yorkshire, and in Scotland in the Spey Valley. Also in parts of Oxfordshire on sandy soil and on limestone grassland at Sydlings Copse, near Oxford. Widespread in the Channel Islands.

Sand Dart

plate 67

Agrotis ripae (Hb.)

Nb 73.323 (2093)



Field characters FW 14–18mm. Ground colour of forewing is usually sandy but in some populations is cream or greyish. All key markings are small and dainty, including the central oval, kidney mark, dart mark and dark wedges, compared to other darts. Hindwing white in male, clouded with grey in

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

female. **Similar species** Coast Dart, but this does not emerge until several weeks after the first Sand Dart, and has a more rounded, less angular forewing, with larger and generally better defined kidney mark. See also Archer's Dart, Tawny Shears, Woods's Dart and Spalding's Dart. **Flight season** One generation. Jun–Jul. Adults fly from dusk, visit flowers such as ragworts, Marram and Lyme-grass, and come to sugar and to light, sometimes in numbers. **Life cycle** Overwinters as a larva. Larva Aug–May. Fully grown by Oct, when it spins a cocoon deep in the sand, but does not form a pupa until the spring. Feeds by night, hiding in the sand by day. **Larval foodplants** Reported from many strand-line plants, including members of the Chenopodiaceae such as Prickly Saltwort, Sea-purslane, Annual Sea-blite, Common Orache and Red Goosefoot, and unrelated plants such as Sea Rocket, Sea-milkwort, Sea-holly, Sea Bindweed and sucker growth of Sea-buckthorn. Accepts sliced Carrot in captivity, on which it can be reared to adult to confirm identification. **Habitat** Coastal sand-dunes, especially those just above the high-water mark, with strand-lines and sparse vegetation. **Status and distribution** Resident. Nationally Scarce B. Local in suitable habitat in the southern half of Britain and in the Channel Islands. Found most extensively in East Anglia and south Wales, and extends very locally north to Spurn in Yorkshire, Northumberland, Cumbria, Man, and south-west and eastern Scotland to Aberdeenshire. In Ireland, local on the south and east coast, from Co. Cork to Co. Down.

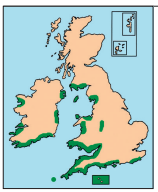
Crescent Dart

plate 67

Agrotis trux (Hb.)

ssp. *lunigera* Steph.

Local 73.324 (2090)



Field characters FW 16–19mm. Whitish oval with a dark outline, a pale area beyond kidney mark and a relatively pointed forewing with a very straight leading edge distinguish most individuals from related species. Male has pale or dark grey-brown or yellowish-brown forewing, flecked, dusted or clouded with dark brown. Oval dark-outlined and same as ground colour internally in the palest individuals, sometimes with a dark spot in centre. Hindwing whitish. Basal two-thirds of antennae slightly feathered, but not visible to the naked eye. Female more distinctive, forewing black with a varying degree of grey shading, especially just beyond kidney mark. Hindwing greyish white, with an ill-defined grey outer band. Antennae simple. **Similar species** Male can resemble Heart and Club, which has a more rounded forewing tip, darker hindwing and visibly feathered antennae. See also Turnip Moth and Great Dart. **Flight season** One generation. Jul–Aug. Occasional second-generation individuals in Oct. Recorded May–Nov in the Channel Islands. Comes to light and feeds at sugar, especially when it is painted on flower-heads. **Life cycle** Overwinters close to or under the ground as a fully grown larva. Larva Aug–spring, fully grown by late autumn. Hides near the ground by day and pupates underground. **Larval foodplants** Larvae seldom found in the wild, but recorded on Thrift and reported fully grown among Rock Sea-spurrey. **Habitat** Coastal cliffs and rocky shorelines. **Status and distribution** Resident. Local. Quite well distributed and locally frequent along the south and west coasts of Britain, from the Isle of Wight and Dorset to north Wales. Also well established on Man and in the far south-west of Scotland. Local in Sussex. In Ireland, local on the east, south and west coasts, and recorded in most counties from Down to Mayo. Widespread and numerous in the Channel Islands.

Shuttle-shaped Dart

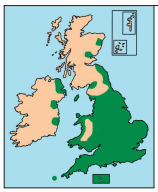
plate 68

Agrotis puta puta (Hb.)

Common 73.325 (2092)

ssp. *insula* Rich.

Scilly



Field characters FW 12–16mm. A short, stubby moth with a pale oval elongated to the shape of a weaving shuttle, pointed at both ends. Ssp. *puta* male has a pale greyish-brown forewing, with a contrasting dark brown kidney mark and a dark area at base. Female has a much darker and more uniformly coloured forewing, but still with pale shuttle mark. Head and face have a rough, twig-like appearance. Hindwing whitish in male, and light grey-brown in female. In ssp. *insula*, forewing markings in male are brighter and more contrasting, and a dark brown form is occasional. Female has more extensive pale markings on forewing than in ssp. *puta*. **Similar species** See Grouville Dart. Male might be confused with The Flame, which more closely resembles a twig, holds its wings rolled around the body rather than flat, and differs in being more buff with more extensive dark brown markings. **Flight season** At least two overlapping generations. Apr (occasionally Mar)–late Oct. There are spring and summer generations, but it is not clear whether autumn individuals represent a third brood or slower larval development. Regularly attracted to light and sugar; also visits flowers such as buddleias at night. **Life cycle** Overwinters as a larva. Larva May–Jul and Aug–Apr; Jun–Apr where only one generation. **Larval foodplants** Reported from docks, Dandelion, Knotgrass, lettuces and other herbaceous plants, but seldom found. **Habitat** A wide range of open habitats, including gardens, farmland, grassland, heathland, wetlands and open woodland. **Status and distribution** Resident. Common. Well distributed and often abundant throughout most of southern Britain, including lowland parts of Wales, and in the Channel Islands. Formerly local and rare in northern England, but has expanded greatly in the

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

21st century and become widespread and frequent north to Cumbria and Northumberland, and found on Man. In Scotland, recently (especially in 2015) widely reported in eastern coastal counties north to Aberdeenshire. First recorded in Ireland in 1984 (one in Co. Cork), and further singles in Cos. Antrim (2001), Wicklow (2007), Meath (2011) and Down (2014). Ssp. *insula* is resident on Scilly.

Grouville Dart

plate 68

Agrotis catalaunensis (Mill.)

Immigrant; Channel Islands 73.326 (2092a)

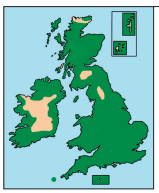
Field characters and similar species FW 15–16mm. Very similar to Shuttle-shaped Dart, especially ssp. *insula*. Differences are slight and both species are variable. Forewing in male whitish grey or light brown, and more streaked than ssp. *puta*. Often, there are dark arrow marks near outer edge and a dark line or series of dots along outer edge, as in ssp. *insula*. These markings are usually faint in the plainer ssp. *puta*. Grouville Dart is slightly larger, with a broader forewing and slightly larger kidney mark. Hindwing is generally more brilliant white. Female is very similar to that of ssp. *insula*. Records should be substantiated by examination of the genitalia. The taxonomy has not been fully investigated, and it may be that ssp. *insula* of the Shuttle-shaped Dart has a greater affinity to Grouville Dart. See also Spalding's Dart. **Flight season** In mainland Europe, two generations. Mar–Apr and Sep–Nov. **Life cycle and larval foodplants** The early stages are unknown. **Status and distribution** Rare immigrant. One record, a male at light on 10 Sep 2002 at Grouville, Jersey. Distribution in Europe is incompletely known due to confusion with Shuttle-shaped Dart, but it is mainly Mediterranean, reported from Spain east to Greece and Albania.

Dark Sword-grass

plate 68

Agrotis ipsilon (Hufn.)

Immigrant 73.327 (2091)



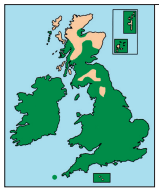
Field characters FW 15–25mm. Best recognised by its size and presence of a black dart that extends outwards from kidney mark, almost meeting with two smaller darts extending inwards from outer part of forewing. Variable, some specimens being darker and less contrasting, but usually has a pale outer band. **Similar species** Paler examples can superficially resemble Turnip Moth, which is generally smaller, without the black darts. **Flight season** As an immigrant it has been recorded during every month of the year, but most numerous Jul–Oct, and to a lesser extent during the spring. Winter records are infrequent and tend to coincide with mild weather and southerly winds. Strongly attracted to light, sugar and flowers. **Life cycle** Individuals that arrive in the spring are thought to give rise to summer larvae (most likely in Jul and Aug), the resulting adults supplementing the autumn immigrants. However, breeding and successful overwintering are unconfirmed. It is thought possible that autumn generations migrate south. **Larval foodplants** Probably many herbaceous plants, feeding near ground level and rarely reported. Accepts Dandelion and plantains in captivity. **Habitat** Has been reported from most habitats, including gardens, open farmland, heathland, moorland, parkland, woodland, marshes and dunes. **Status and distribution** Regular immigrant and possible transitory resident. Abundant in some years. Occurs throughout the British Isles, but most frequent in the south.

Flame

plate 68

Axylia putris (L.)

Common 73.328 (2098)



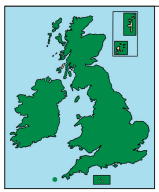
Field characters FW 14–16mm. A distinctive and rather invariable species, which rests with wings tightly folded around body, resembling a broken piece of dry stem. Straw ground colour of forewing is sometimes strongly tinged with reddish brown. Dark brown along leading edge and dark kidney mark. **Similar species** See Shuttle-shaped Dart. A number of other noctuids are straw-coloured with a streaky pattern, but none has the dark streak along the leading edge in combination with the dark kidney mark. **Flight season** One generation. Jun–Jul. Increasingly, a small second generation in Sep. Comes to light, sugar and flowers. **Life cycle** Overwinters as a pupa. Larva Jul–Oct, feeding at night. Pupates underground. **Larval foodplants** A wide range of low-growing plants, including Common Nettle, White Dead-nettle, Hedge Bedstraw and Hound's-tongue. **Habitat** A broad range, but typically gardens, farmland, downland, hedgerows, heathland and woodland edges. **Status and distribution** Resident. Common. Well distributed and frequent throughout the southern half of Britain, the Channel Islands, Man and Ireland. Widespread in northernmost counties of England and the southern half of Scotland. Local or vagrant further north, to East Ross and the Northern Isles.

Flame Shoulder

plate 68

Ochropleura plecta (L.)

Common 73.329 (2102)



Field characters FW 12–15mm. Resembles no other resident species. The English name reflects the most conspicuous and diagnostic feature, a bright straw-coloured band running along leading edge of forewing. This 'flame' is further emphasised by the black streak extending from base through oval and kidney, on the otherwise rather

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

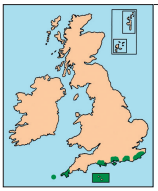
plain, rich reddish-brown or purplish-brown forewing. Hindwing glossy yellowish white, clouded grey near leading edge. **Similar species** See Radford's Flame Shoulder. **Flight season** In southern Britain and increasingly further north (e.g. Yorkshire since 2000), Apr–Sep in two generations, peaking in May–Jun and again in Aug. In northern Britain, mainly one generation, late May–early Aug, with small numbers into the autumn. Comes to light, when it flies wildly and has an unfortunate habit of occasionally entering an ear of a moth recorder. On more than one occasion this has necessitated a trip to hospital to remove the moth! Also feeds at sugar and flowers. **Life cycle** Overwinters as a pupa just below the ground surface. Larva Jun–Jul and Sep–Oct in the south, Aug–Sep in the north, feeding at night. **Larval foodplants** A wide range of herbaceous plants, including Groundsel, Ribwort Plantain and bedstraws. **Habitat** A broad range, from low to mid-altitude, including gardens, farmland, grassland, hedgerows, moorland, woodland and wetlands. **Status and distribution** Resident. Common. Throughout the British Isles.

Radford's Flame Shoulder

plate 68

Ochropleura leucogaster (Freyer)

Immigrant 73.330 (2102a)



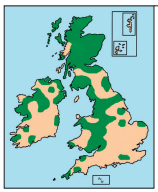
Field characters and similar species FW 13–16mm. Resembles Flame Shoulder, but with white hairs around front of abdomen (specific name means 'white stomach'). These are covered by wings when moth is at rest. Also, forewing slightly longer and narrower, with ground colour often less reddish, 'flame' usually tinged pink, and kidney and oval slightly smaller. Black streak usually extends to a point beyond kidney and often continues further as a thin pale line, whereas in Flame Shoulder it usually ends in a spot on outer edge of kidney (but may extend further). Also, hindwing whiter and contrast between thorax and pale collar usually greater. Care is needed as Flame Shoulder varies slightly. **Flight season** Recorded in Britain late Sep–late Nov, but mainly Oct. In mainland Europe, two generations, roughly Mar–May and Aug–Nov. **Life cycle** In southern Europe, overwinters as a larva. Pupates below ground. The larval stage has not been recorded in the British Isles. **Larval foodplants** Reported from trefoils and clovers in mainland Europe, and probably feeds on other low-growing plants. **Habitat** A wide range of open habitats. **Status and distribution** Immigrant. About 30 records, the first at Walberton, West Sussex, on 17 Oct 1983. All were in southern coastal counties of England, from Cornwall and Scilly to Kent, including four in 2006. Recently recorded from the Channel Islands, on Guernsey in 2008 and in 2012. Resident in southern Europe.

Barred Chestnut

plate 68

Diarsia dahlii (Hb.)

Local 73.331 (2121)



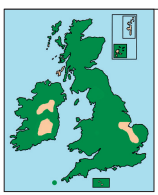
Field characters and similar species FW 15–18mm. Several features serve to distinguish this species from its closest relatives, all of which are variable. Most constant is the more arched leading edge of the forewing, which is also generally broader. In addition, a fine, pale, thread-like cross-line is almost invariably present near the outer edge (but both Ingrailed Clay and Purple Clay may have this, so wing shape is important). Male is somewhat similar to some forms of Ingrailed Clay, being clouded and banded with light chestnut brown or reddish brown and darker purplish brown, with an inconspicuous oval and kidney mark, and area between them sometimes darker. Female generally plainer, deep pinkish red, dark reddish brown or dark purplish brown, with kidney mark either pale in outline or sometimes largely pale and conspicuous. Superficially similar to Purple Clay, which has a blackish block or bar between oval and kidney mark. See also Small Square-spot. **Flight season** One generation. Aug–Sep. **Life cycle** Overwinters as a larva. Larva Sep–early spring, feeding at night and hiding in leaf litter by day. Pupates in a loose cocoon underground. **Larval foodplants** Bilberry, Bramble, sallows and birches; also other woody and herbaceous plants such as docks. **Habitat** Broadleaved woodland on acid soils, moorland and wooded heathland. **Status and distribution** Resident. Local. Widespread in mainland Scotland and the Hebrides, northern England, the north Midlands and Wales. Largely rare south of the Midlands, but locally numerous in woodland on Greensand in Surrey. Widespread but local in Ireland.

Purple Clay

plate 68

Diarsia brunnea ([D. & S.])

Common 73.332 (2122)



Field characters FW 16–20mm. Forewing quite broad, relatively plain-looking, from pinkish brown to rich, dark, purplish brown. Kidney mark as ground colour with pale outline, or bright straw-coloured and conspicuous. Area between oval and kidney mark usually blackish, and there is a black central dot. **Similar species** Pale individuals could be mistaken for northern Ingrailed Clays, but these are often more extensively orange-tinted and marbled, and slightly smaller. See also female Barred Chestnut and Rosy Marsh Moth. **Flight season** One generation. Jun–Aug. Comes to light and feeds at sugar and flowers. **Life cycle** Overwinters as a small larva, on or near the ground. Larva Aug–May,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

feeding at night and hiding in leaf litter by day. Pupates underground. **Larval foodplants** A range of herbaceous plants in the autumn, including Foxglove and figworts, and in the spring also on woody species such as Bilberry, Heather, sallows, Bramble and birches. **Habitat** Broadleaved woodland and wooded heathland. **Status and distribution** Resident. Common. Throughout most of Britain and Ireland, but vagrant on Shetland. Local in the Channel Islands, but annual and increasing on Alderney since the first was recorded in 2010.

Ingrailed Clay

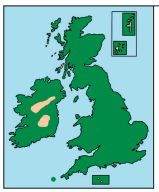
plate 68

Diarsia mendica mendica (Fabr.)

Common 73.333 (2120)

ssp. *thulei* (Stdgr.)
Shetland

ssp. *orkneyensis* (Byt.-Salz)
Orkney



Field characters FW 13–17mm. Ssp. *mendica* extremely variable, both within local populations and geographically, but usually aspects of the basic elements of forewing markings can be recognised with practice, particularly outline of kidney mark and black dot between oval and trailing edge. Outer edge usually with a series of tiny but noticeable black arrowhead or crescent marks. Forewing usually rather marbled in appearance, in southern Britain ranging from pale straw, yellowish orange and orange-brown to reddish brown. Some paler individuals are banded or clouded with reddish brown. Even more variable in northern Britain, usually smaller, predominantly darker, often with narrower forewing, sometimes clouded with pink or grey, and often lacking the black dot. Ssp. *thulei* is darker than the mainland populations, although some are similar to those from the northern mainland. Forewing narrower and more pointed, with the leading edge straight or almost so. Dirty greyish brown, deep pinkish red, dark pinkish brown or reddish brown, blackish brown or blackish, often dusted with grey. Blackish wedge usually present through the oval and kidney mark. Cross-lines often conspicuously pale-edged. Ssp. *orkneyensis* is similar to the Shetland population, but a little brighter and more striking. **Similar species** For ssp. *mendica*, see Small Square-spot, Cousin German, Purple Clay, Barred Chestnut and Rosy Marsh Moth. Some ssp. *thulei* individuals are very similar to Autumnal Rustic f. *edda*, in which the third cross-line is evenly curved, and the oval and kidney mark are pale, outlined only and never brownish. **Flight season** One generation. Late May–Jul in the south, Jun or Jul–Aug in the north and in Ireland. Comes to light, often in large numbers, and feeds at sugar and flowers. **Life cycle** Overwinters as a small larva, close to the ground. Larva Aug–May, feeding at night and hiding in leaf litter during the day. Pupates underground. **Larval foodplants** Herbaceous plants, including Primrose and violets, and also woody species such as Bramble, heathers, Bilberry, sallows, hawthorns, Blackthorn and Hazel. **Habitat** In the south, most frequently in woodland, less often in gardens and open habitats without scrub. More widely, frequent on heathland and open moorland with heathers and other woody plants. **Status and distribution** Resident. Common. Widespread and frequent throughout the British Isles.

Small Square-spot

plate 68

Diarsia rubi (View.)

Common 73.334 (2123)

Field characters FW 12–16mm. The pale or dark pinkish-brown forewing, to a greater or lesser extent banded and clouded with reddish brown or dark brown, is diagnostic. Kidney (and often oval) distinctly paler, grey or whitish, and area between often darker but not intensely black. Has a black central dot, as in Ingrailed Clay. Another useful character is outer edge of third cross-line, which is strongly dark-edged, and has very fine, short dark streaks either extending outwards, or forming a band, fading into a wavy pale line or band. Second-generation moths tend to be smaller and darker, and the northern populations that have only one generation tend to be paler. **Similar species** See Fen Square-spot. Some dark northern Ingrailed Clays are similar, but are usually more marbled. Barred Chestnut has a much more curved leading edge to forewing, and is usually larger and either more brownish or purplish. See also White-marked. **Flight season** Two distinct generations in most of southern Britain and in Ireland, May–Jun and Aug–Sep. In northern England and south-west Scotland, May–Aug or Sep, in one or two generations. Elsewhere in Scotland, one generation, Jun–Jul, sometimes (as in 2003) with small numbers from Aug north to Aberdeenshire and Banffshire, following a prolonged hot summer. Comes commonly to light and feeds at sugar and flowers, including ragworts and marsh grasses and rushes. **Life cycle** Overwinters as a larva, close to the ground. Where there are two generations, larva Sep–Apr and Jun–late Jul, feeding at night and hiding low down in leaf litter during the day. Where there is one generation, larva Aug–May. Pupates underground. **Larval foodplants** A range of herbaceous species, including Dandelion, docks and Foxglove. Also Heather, but not known to climb other woody species in the spring. **Habitat** A wide range, but most abundant in damp woodland and other marshy places, including damp pasture. Frequent in many gardens. **Status and distribution** Resident. Common. Well distributed and frequent throughout the British Isles.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Fen Square-spot

plate 68

Diarsia florida (Schmidt)

Local 73.335 (2124)

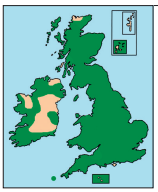
Field characters and similar species FW 15–17mm. Very similar to Small Square-spot, but larger, paler and brighter buff, and less pink. Where they occur in the same localities, flight period occurs between the two generations of Small Square-spot. In northern areas, where Small Square-spot has only one generation, many are as large and pale as the southern Fen Square-spots. No diagnostic differences have been found in the genitalia of the two species in any population, and they produce fertile hybrids. **Flight season** One generation. Late Jun–Jul. Comes to light and feeds at sugar and flowers. **Life cycle and larval foodplants** Early stages have not been found in the wild, but probably have similar habits to single-brooded Small Square-spots. **Habitat** Fens and acid bogs. **Status and distribution** Resident. Local. Thought to be in the process of evolutionary separation from the Small Square-spot. In the areas where the latter has two generations, distinct local populations with a single generation, regarded as Fen Square-spot, have been identified in East Anglia, northern England and Wales.

Red Chestnut

plate 68

Cerastis rubricosa ([D. & S.])

Common 73.336 (2139)



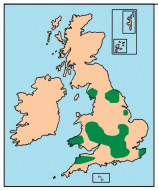
Field characters FW 14–17mm. Forewing angular, with leading half of outer edge straight or almost so, curved only at trailing corner. Ground colour uniform rich pale or dark reddish brown or purplish brown, dusted with light grey to a varying extent, especially along leading edge. Oval, kidney mark and cross-lines often rather obscure. Kidney usually darker in trailing half. In southern England, reddish forms are usual, but in Scotland and in upland areas further south, the darker, purplish or greyish forms predominate. In some northern populations, oval and kidney mark may be distinctly pale and forewing heavily frosted with white. **Similar species** See White-marked, the only other spring species with similar wing shape and rich reddish-brown colour. **Flight season** One generation. Late Mar–May in the south, Apr–May in the north and in Ireland. Comes frequently to light, and to sugar and sallow catkins. **Life cycle** Overwinters as a pupa in a strong silk-lined cocoon. Larva late Apr–Jun, feeding at night and remaining on the foodplant by day. **Larval foodplants** Wild larvae are seldom found, but recorded as feeding on herbaceous and woody plants, including bedstraws, sallows and Bilberry. **Habitat** Mainly broadleaved woodland and scrub, but also in open country, including gardens, and on northern moorland. **Status and distribution** Resident. Common. Throughout most of Britain and Ireland, including the Hebrides and Orkney, and on Man. Rare on Jersey, but probably resident on Guernsey and Alderney.

White-marked

plate 68

Cerastis leucographa ([D. & S.])

Local; suspected rare immigrant 73.337 (2140)



Field characters and similar species FW 14–16mm. Similar in size, shape and colour to Red Chestnut, but oval quite bright and kidney mark distinct, both largely creamy white, kidney dark in lower third. Third cross-line very fine and blackish, either finely scalloped or represented by a row of white-tipped dashes. Has a distinct paler band beyond third line, and area along outer edge is distinctly darker. Light grey dusting, if present, restricted to leading edge of forewing, which is very slightly curved and less pointed than that of Red Chestnut. Slightly smaller on average, and darkest individuals deep brown, rather than purplish brown. Antennae in male slightly but visibly feathered (check with hand-lens if in doubt). In Red Chestnut, oval and kidney mark usually dull, but exceptionally may be distinctly pale in outline. The outermost cross-line has a pale component, and outermost area of forewing is not distinctly darker. Antennae in male not feathered to the naked eye, but with very short projections. See also superficially similar Small Square-spot, with dark central dot, dark between oval and kidney, and antennae also not feathered. **Flight season** One generation. Late Mar–Apr. Comes to light and sallow catkins. **Life cycle** Overwinters underground as a pupa, with the adult formed inside. Larva May–Jun. **Larval foodplants** Probably only one larval record in the British Isles, a final instar resting openly on herbaceous plants by day in broadleaved woodland in Berkshire, on 24 Jun 2015 (emerged Apr 2016). In captivity, various herbaceous and woody plants are accepted, including stitchworts, docks, sallows, Bilberry and oaks. **Habitat** Open broadleaved woodland, old hedgerows and scrub. **Status and distribution** Resident and suspected rare immigrant. Local. Locally widespread in central southern England, extending into the south-east and west Midlands and south and Mid Wales. Local in south-west England, Yorkshire and the Lake District. Three in Kent, alongside influxes of Blossom Underwing, at Lyddon (4 Apr 1999), Beltinge (10 Apr 2009) and Ramsgate (1 Apr 2014). Not known to be currently resident in Kent, and last recorded in 1912.

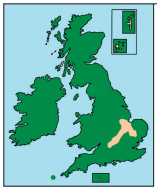
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

True Lover's Knot

plate 68

Lycophotia porphyrea ([D. & S.])

Common 73.338 (2118)



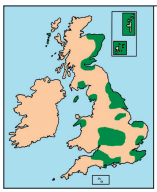
Field characters FW 12–15mm. This rather small, usually reddish-brown species is distinguished by the extensive fine black and white markings, the detail of which varies but not the general pattern. Black streaks and dashes are most prominent near outer margin and often run through oval and kidney mark. Forewing may also be deep pinkish brown or purplish brown, or less often greyish brown or blackish grey. **Similar species** Heath Rustic occurs in the same habitat but usually later in the year, has a pale streak along leading edge of forewing, a small, pale oval within a black wedge, and slightly feathered antennae in male. See also Beautiful Yellow Underwing. **Flight season** One generation. Jun–Aug. Strongly attracted to light and feeds at Heather flowers, but rarely to sugar. Active by day in bright sunshine, visiting flowers. **Life cycle** Overwinters as a nearly fully grown larva, among plant debris. Larva Aug–May. Pupates in a cocoon on or just below the ground. **Larval foodplants** Heather and Bell Heather. Recently confirmed on Bilberry. Probably Cross-leaved Heath (needs confirmation). **Habitat** Acid heathland and high moorland. Also occurs occasionally in light-traps far removed from likely breeding areas, and may breed in gardens on cultivated heathers. **Status and distribution** Resident. Common. In suitable habitats, often abundantly, throughout the British Isles.

Dotted Rustic

plate 68

Rhyacia simulans (Hufn.)

Local 73.339 (2105)



Field characters FW 17–21mm. Forewing rather long, in typical form yellowish grey-brown, with dark spots along leading edge and a row of dark dots (or short dashes) beyond kidney mark. Wavy double inner central cross-line and other cross-lines are dark. Sometimes diffusely darker between oval and kidney. The smaller f. *suffusa* Tutt occurs on the Hebrides, Orkney, Shetland and north-west Ireland, is heavily dusted with dark grey and markings are somewhat obscured. Intermediate forms occur in mainland Scotland. Hindwing grey-brown with a dirty white or light brown fringe. **Similar species** See Stout Dart, which is similar in size and shape and has similar habits, but is mousy grey-brown, often with reddish tinge, usually with a black basal streak and lacking a row of black dots beyond kidney mark. Form *suffusa* could be confused with dark forms of Northern Rustic, which has a broader forewing, more blurred markings and a chalky-white fringe on hindwing. The highly variable Square-spot Rustic is smaller. **Flight season** One generation. Late Jun–Jul in England, reappearing late Aug–early Oct; mainly Jul–early Sep in Scotland. In the south at least, the moths emerge and fly briefly, then enter a period of summer dormancy, often inside houses and outbuildings, sometimes behind curtains. Visits flowers such as Red Valerian and buddleias, comes to sugar and comes to light in small numbers. **Life cycle** Probably overwinters as a larva. English adults lay eggs in Sep, hatching after about two weeks. Pupates underground in the spring. **Larval foodplants** Unknown. The larva has not been found in the wild. The early instars have been reared indoors on grasses but later instars have required other food. Dandelion and Bramble are accepted, but very few captive larvae have survived to produce adults. **Habitat** Open countryside, including rural gardens, with hedgerows and light woodland, usually on calcareous soils. On moorland, rough pasture and mountain scree in northern Britain. **Status and distribution** Resident. Local. Prone to great fluctuations in numbers and distribution. During the 1960s, the west Midlands (particularly the Cotswolds) was considered the main stronghold, along with parts of central southern England and the south Midlands. Found locally elsewhere, including Portland, Dorset, north Wales, north-west England and Man, the Hebrides, Orkney and Shetland. In the late 1970s and early 1980s, the distribution of the southern form expanded greatly and the moth was reported from over 400 10km squares, covering much of England east of the Severn and the Pennines. It has since declined, but is still reported regularly in small numbers, over a wide area north to Northumberland. In Scotland, local and uncommon, mainly found in the north-east, Outer Hebrides, Orkney and Shetland. Rare in Ireland, with very few records, from Cos. Sligo and Donegal, the last in 1969.

Southern Rustic

plate 68

Rhyacia lucipeta ([D. & S.])

Immigrant 73.340 (2106)

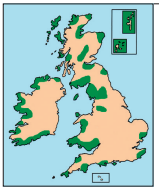
Field characters and similar species FW 23–29mm. Not unlike Dotted Rustic, with a long forewing, and some forms of Northern Rustic, but much larger, with golden-yellow markings on forewing and a greenish tint when fresh. **Flight season** In mainland Europe, Jun–Sep, including a period of aestivation. **Habitat** High mountains where there is sparse vegetation, up to 2,800m; also alpine meadows. **Status and distribution** Suspected rare immigrant. Recorded once, a worn female in a light-trap at Pulborough, Sussex, after 2am on 15 Jul 1968. On the night of 30 Jun 1968, winds from the south brought much red dust to southern England, after which many scarce migrant moths were recorded for about two weeks. The weather system was tracked back to Spain. Found in mountainous areas of southern Europe, including the Pyrenees, Massif Central and Alps, and at lower altitudes further north-east in France.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Northern Rustic plate 68

Standfussiana lucernea (L.)

Local 73.341 (2104)

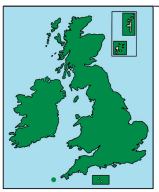


Field characters FW 17–21mm. A rather softly patterned, quite silky-looking species. The general indistinctness and blurred nature of the markings, and dark hindwing with chalky-white fringes, help to distinguish it from similar moths. Upperside of forewing dark brownish grey, heavily dusted with pale yellowish brown or greyish brown to blackish, and with very faint markings. Often has dark grey bands on underside of fore- and hindwings, which is another useful feature, but bands may be reduced or undersides almost entirely dark grey. **Similar species** See Dotted Rustic, Brindled Ochre, Stout Dart and Grey. **Flight season** One generation. Late Jun–Sep. Comes to light, and feeds at sugar and flowers such as Wood Sage, Sea Rocket and ragworts. Also flies wildly on sunny days in the late afternoon. **Life cycle** Overwinters as a small larva, low down on the foodplant. Larva Oct–May, feeding at night. **Larval foodplants** Herbaceous plants, including Harebell, Biting Stonecrop and saxifrages, and also reported from grasses such as Sheep's-fescue. **Habitat** Coastal cliffs, mountain scree and other rocky, sparsely vegetated places such as quarries. **Status and distribution** Resident. Local. Occurs locally in south-east Kent and Sussex, and from the Isle of Wight westwards along the coasts of southern and south-western England, Wales, Man, Scotland (including the Hebrides, Orkney and Shetland), and the south, west and north of Ireland. Inland in Wales, Derbyshire, the Pennines and the Lake District, and widely but very locally in Scotland. One, perhaps an immigrant, was recorded at Bawdsey, Suffolk, on 6 Aug 2009.

Large Yellow Underwing plate 69

Noctua pronuba (L.)

Common; Immigrant 73.342 (2107)



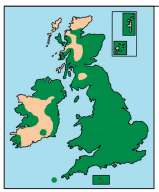
Field characters FW 21–26mm. Very variable but distinctive. Forewing long, narrow and rounded, consistently with a small black pip mark close to leading edge near tip. Hindwing has a narrow black band and no dark crescent or clouding near base, a combination not found in other yellow underwings. Forewing in male rich, dark reddish brown or blackish brown, with no or few markings, or paler reddish brown with a pale brown or grey streak along leading edge, and marbled with same colour as streak. Female not marbled, rather uniformly light brown or brownish grey and slightly or extensively flecked with darker scales, or pale reddish brown. Intermediate colour forms occur in both sexes. **Similar species** See Lunar Yellow Underwing and Lesser Yellow Underwing. **Flight season** One protracted generation. Late May–Oct or Nov. Long-lived, with a peak of activity in late Aug or early Sep. Late stragglers regularly occur well into Oct, or even Nov. Early-season immigrants arrive carrying matured eggs before resident females have reached this stage. Comes to light, sometimes abundantly – a single trap may occasionally capture several thousand in a night. Also comes avidly to sugar and nectar flowers, often feeding for several hours at a time. May be disturbed from among plant debris or ground vegetation during the day, flying rapidly to cover as do other underwing moths, displaying the brightly coloured hindwings. **Life cycle** Overwinters underground as a larva. Eggs are laid from Jul onwards in large batches, which are sometimes conspicuous on grasses or other vegetation. Larva Aug–early spring, feeding at night and hiding underground during the day. Some are fully grown by Dec. Pupates underground in spring. **Larval foodplants** A wide range of herbaceous plants and grasses, including docks, cultivated brassicas, marigolds, Foxglove and Annual Meadow-grass. **Habitat** Ubiquitous, from gardens to woodland and high moorland, but most abundant in open grassy lowland habitats. **Status and distribution** Resident and immigrant. Common. Widespread and abundant throughout the British Isles. In some years major immigrations occur on southern coasts, often associated with other immigrant species, for example *c.* 5,000 recorded at Durlston, Dorset, on 26 Jun 2003, and *c.* 8,000 at West Bexington, Dorset, on 9–11 Jul 2006.

Larva of Large Yellow Underwing.

Broad-bordered Yellow Underwing plate 69

Noctua fimbriata (Schreb.)

Common 73.343 (2110)



Field characters FW 22–27mm. A stout, beautifully marked species, quite unlike any other. Colour variable but markings very constant. When at rest, thorax appears very large, and wing tips are pulled together. Male has a reddish-brown to

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

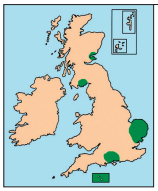
olive-green forewing; female pale brown, light green or pale reddish brown. There is also a less common mahogany-coloured form, which occurs in both sexes. Hindwing rich orange-yellow with a broad black border. **Flight season** One generation. Jul–Sep. Emerges in Jul, aestivates, and becomes active again in Aug and Sep. Comes to light in fairly small numbers, and to sugar. **Life cycle** Overwinters close to the ground as a small larva. Larva Sep–May, feeding at night and hiding by day in leaf litter. Pupates underground. **Larval foodplants** A wide range of herbaceous plants, such as Common Nettle, Primrose and Broad-leaved Dock, sometimes climbing to feed on low woody plants such as Bramble, sallows and privets, especially in the spring. **Habitat** Most frequent in broadleaved woodland and other well-wooded areas, such as parkland and wooded heathland. Recorded in smaller numbers in gardens. **Status and distribution** Resident. Common. Throughout most of mainland Britain north to Ross-shire, Man and the Channel Islands. Widespread but local in Ireland. Presumed immigrant on Orkney and Shetland.

Lunar Yellow Underwing

plate 69

Noctua orbona (Hufn.)

Nb 73.344 (2108)



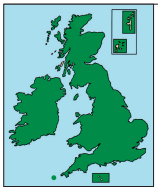
Field characters and similar species FW 17–20mm. Well-defined black marking on leading edge of forewing, near the tip, distinguishes this moth from much more frequent Lesser Yellow Underwing, which also has a broader forewing. Large Yellow Underwing has the black mark, but lacks a dark central crescent on hindwing, and is almost invariably larger. **Flight season** One generation. Late Jun–Sep, apparently aestivating and reappearing from late Aug. Comes readily to light and sugar, and has been noted visiting Heather flowers. **Life cycle** Overwinters as a larva. Larva Sep–late Apr or May. Feeds mainly at night in mild weather throughout the winter and spring, pupating in a flimsy cocoon in loose earth. **Larval foodplants** A range of fine grasses and also small herbaceous plants. Those reported include Sheep's-fescue and Wavy Hair-grass (which appear to be the favourites in Breckland), Cock's-foot, Couch, Reed Canary-grass, Meadow Buttercup, Creeping Cinquefoil, Cowslip and Common Chickweed. **Habitat** Fairly dry, sandy, heathy or calcareous sites in open situations and in open woodland, both on the coast and inland. Rare or absent if habitat is close-cut or heavily grazed. **Status and distribution** Resident. Nationally Scarce B. In decline and now apparently almost confined to two areas, wherein it remains locally widespread, namely East Anglia, chiefly in the Breckland and on the Suffolk coast, and South Wiltshire (and just into North Hampshire at Porton Down). Formerly found widely but very locally, from Hampshire and the Isle of Wight north to the Midlands, Wales and northern England, and in various parts of Scotland, north to the dune systems on the Banffshire and Morayshire coasts (where it was still present until relatively recently), but declined through the 20th century. Several on Alderney in 2012, and older records from Jersey and Guernsey.

Lesser Yellow Underwing

plate 69

Noctua comes Hb.

Common 73.345 (2109)



Field characters FW 16–21mm. Most easily recognised by combination of a dark crescent on hindwing, and no well-defined small black markings near tip of forewing close to leading edge. Instead, outermost band may be thickened at this point to form a roughly triangular dark mark, the inner edge of which is blurred. Forewing quite broad, and very variable in colour and in the intensity of cross-lines and other markings. Ground colour pale brown, pale or dark greyish brown (occasionally tinted greenish), bright or dark reddish brown, reddish black or blackish. Blackish and reddish-black forms occur in the northern half of Scotland, and in these the hindwing may also be dusted with black. On Scilly and Lundy Island, f. *sagittifer* Cock., with strong, dark cross-lines, is frequent. **Similar species** See Lunar Yellow Underwing, Large Yellow Underwing and Least Yellow Underwing. **Flight season** One generation. Jun–Sep, with smaller numbers well into Oct. Comes abundantly to light, and feeds at sugar and flowers. **Life cycle** Overwinters as a small larva. Larva Aug–May or Jun, feeding at night and hiding in leaf litter by day. Pupates underground. **Larval foodplants** A wide range of herbaceous plants, such as Common Nettle, Broad-leaved Dock and Foxglove. In spring, also climbs into bushes and small trees, including Hawthorn, Bramble, sallows and Broom. **Habitat** Ubiquitous, from gardens, downland and heathland to woodland and moorland. **Status and distribution** Resident. Common. Throughout the British Isles.

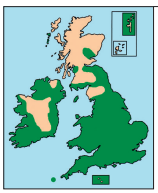
Least Yellow Underwing

plate 69

Noctua interjecta Hb.

ssp. *caliginosa* (Schaw.)

Common 73.346 (2112)



Field characters FW 14–17mm. Distinguished mainly by size and rich reddish-brown forewing coloration. Inner edge of black band on hindwing wavy, extending along trailing edge to base, from which black streaks project, and sometimes a small dark crescent. Outer band on forewing not noticeably thickened into a dark triangle at leading edge. Varies relatively little, but forewing is

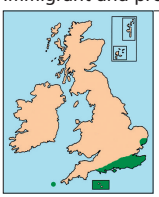
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

sometimes extensively marked with blackish, and is occasionally pale reddish brown. **Similar species** See reddish-brown forms of Lesser Yellow Underwing, in which hindwing has a large, conspicuous crescent mark, a straighter black border and yellow at base. **Flight season** One generation. Jul–early Sep. Comes frequently to light, less often to sugar and also to flowers. Occasionally seen flying wildly around hedgerows on hot, sunny afternoons. **Life cycle** Overwinters as a half-grown larva, close to the ground. Larva Sep–May, feeding at night and hiding in leaf litter by day. Pupates underground. **Larval foodplants** Herbaceous plants, such as Meadowsweet and Common Mallow, and grasses. In the spring, also on bushes such as sallows and hawthorns. **Habitat** A range of mainly open places, such as hedgerows, gardens, fens and sand-dunes. **Status and distribution** Resident. Common. Widespread and frequent in the southern half of England, Wales, the Channel Islands and Man. Formerly local in northern England, with occasional records from lowland Scotland, but has expanded and now widespread up to the Firth of Forth, with scattered records north to Perthshire and the Outer Hebrides. Widespread in Ireland.

Langmaid's Yellow Underwing plate 69

Noctua janthina ([D. & S.])

Immigrant and probable colonist 73.347 (2110a)



Field characters and similar species FW 16–18mm. Very similar to Lesser Broad-bordered Yellow Underwing. There are no reliable distinguishing characters on the upperside of the forewing, but Langmaid's is often darker. The most reliable external feature is black border on upperside of hindwing. On Lesser Broad-bordered it stops before leading edge or extends diffusely along it, usually with at least a small gap before the dark basal patch. On Langmaid's, black border is generally broader, and usually extends along leading edge without a gap, so the overall effect is of a black hindwing with a yellow spot. In addition, on underside of forewing of Lesser Broad-bordered, outer edge of black area is usually distinctly toothed and ends well before outer edge of wing, with area beyond it yellowish brown. In Langmaid's, outer edge of black area is usually smooth or diffuse (although toothed effect may be suggested), and it may extend close to outer edge, with area beyond it dull brown. Neither character is 100% reliable as intermediates occur, and in these cases it is advisable to retain the moth or pass it to an expert so that the genitalia can be examined. Even for apparently clear cases, at the very least a conclusive photograph is likely to be required for the record to be accepted. **Flight season** Jul–Sep. **Life cycle, larval foodplants and habitat** Unknown in Britain, but in mainland Europe stated to be very similar to those of Lesser Broad-bordered Yellow Underwing. **Status and distribution** Recognised as a distinct species only in 1991. Immigrant and probable colonist. The first record was one in fresh condition on 9 Jul 2001 at Southsea, Hampshire. Then 37 were recorded in 2003, 120+ in 2004, 75 in 2005 and 180 in 2006, with lower numbers in the wet summers of 2007 and 2008. The vast majority have been in southern coastal counties, from Scilly to Kent, with a handful in Suffolk. It continues to be recorded and is very probably breeding in Kent (200+ recorded), Hampshire and elsewhere. Confirmed from the Channel Islands, where it is frequent and increasing. Widespread in mainland Europe, with a more easterly distribution than Lesser Broad-bordered Yellow Underwing, but reaches the west coast of France.

Lesser Broad-bordered Yellow Underwing plate 69

Noctua janthe (Borkh.)

Common 73.348 (2111)

Field characters FW 16–20mm. Several features distinguish this rather invariable species from all except Langmaid's Yellow Underwing. Head, front half of collar, underside of thorax and basal quarter of leading edge of forewing are a delicate light green when moth is freshly emerged, fading to light brown. Forewing deep purplish brown or (less commonly) reddish brown, clouded with blue-grey. The oval and kidney mark are partly outlined with white, but all other markings are usually obscure. Hindwing has no dark crescent, and base is blackish and streaky. Outer black border ends at front edge or extends a little way along it, but rarely merges with blackish at wing base. **Similar species** See Langmaid's Yellow Underwing. **Flight season** One generation. Jul–early Sep. Comes frequently to light, and feeds at sugar and flowers. **Life cycle** Overwinters as a half-grown larva, close to the ground. Larva Sep–May, feeding at night and hiding by day in leaf litter. Pupates underground. **Larval foodplants** A wide range of herbaceous plants, including White Dead-nettle, Broad-leaved Dock, Scentless Mayweed and Lords-and-Ladies. In spring, climbs to feed in bushes such as sallows, hawthorns and Blackthorn. **Habitat** Most habitats, including woodland, hedgerows and gardens, and heathland and moorland to medium altitude. **Status and distribution** Resident. Common. Throughout the British Isles.

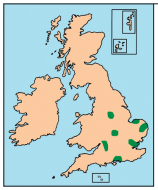
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Stout Dart

plate 70

Spaelotis ravida ([D. & S.])

pRDB 73.349 (2113)



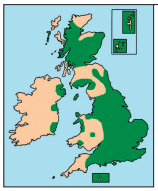
Field characters FW 18–22mm. Forewing long, narrow and rounded. Ground colour drab, mousy grey-brown, usually with a reddish tint along leading edge and sometimes more extensively. A long black streak at forewing base is normally present, but some reddish forms lack this and are weakly marked. Hindwing dirty white, with diffuse grey outer band. **Similar species** Individuals without the black streaks somewhat resemble Dotted Rustic, which is more yellowish and lacks basal streak. See also Northern Rustic, which is normally found in very different habitat and more obscurely marked. **Flight season** One generation. Jun–Sep. Emerges Jun–Jul, then aestivates in outbuildings or under loose bark, sometimes gregariously. Active again Aug–Sep. Comes to light and feeds at sugar, usually in small numbers, and at flowers such as Common Reed, Red Valerian and buddleias. **Life cycle** The larva has not been found in the wild. In captivity, eggs hatch in Dec, even if kept in a cold outhouse. The larvae feed slowly during the winter until Apr or May. **Larval foodplants** In captivity, at first on the leaves and later the roots of Dandelion, sow-thistles and docks. **Habitat** Mainly damp meadows and the edge of marshes, but can also occur on drier ground and in gardens. **Status and distribution** Resident. Formerly local, but on present evidence merits Red Data Book status. There is evidence of a massive decline, of certainly over 90% since the 1980s, in numbers of 10km squares with records, and in numbers seen. The few reports since 2000 are from few areas, including Hampshire, Wiltshire, Gloucestershire, Warwickshire, Derbyshire and East Anglia, and in many counties the last sightings were in the late 1980s or 1990s. It is long known to be subject to periodic fluctuations. East Anglia, eastern England and the Midlands were the strongholds in the 1970s and 1980s. Also formerly recorded in south-west England, Wales, northern England and eastern Scotland. The reasons for the decline are unknown, although climate change is thought to be a possibility.

Great Brocade

plate 70

Eurois occulta (L.)

Nb; Immigrant 73.350 (2137)



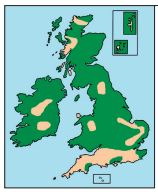
Field characters FW 24–27mm. A large, fairly unmistakable noctuid. Forewing rather pointed, quite broad, usually with a black basal streak (may be short and not obvious when wings are folded). Two long dart marks extend inwards from outermost cross-band in leading half. Wings overlap when moth is at rest. The resident populations in Britain are darker than those in mainland Europe. They are generally blackish, variably marbled with grey and often with pink when fresh. Immigrants, which arrive from Scandinavia, the Netherlands and northern Germany (and quite possibly further east), are usually paler and grey. **Similar species** Grey Arches is smaller, forewing has a more arched leading edge, lacks a basal streak, and largest dart or arrow mark on outermost cross-band is in trailing corner. When at rest, trailing edges of forewing meet over abdomen. **Flight season** One generation. Jul–early Aug. Immigrants often arrive later, in Aug and into Sep. Seldom found by day, but comes to sugar in numbers and also to light, usually late at night. **Life cycle** Overwinters as a small larva. Larva Sep–Jun, feeding mainly at night. Pupates in moss or plant debris on the surface of the soil, without a cocoon. **Larval foodplants** Mainly Bog-myrtle growing on peaty ground, although many herbaceous plants and also birches and sallows are eaten, especially in the later instars after the winter. **Habitat** By rivers and boggy areas in scrubby moorland, broadleaved woodland and pine forest. **Status and distribution** Resident. Nationally Scarce B. Locally widespread in the central and western Highlands of Scotland, with a few records as far as the west coast. Over 700 immigrants recorded, with an eastern bias, but also very widely inland throughout most of England and Scotland, including Orkney and Shetland, and rarely in south-west England, Wales, Man, Ireland (almost always on the east coast) and the Channel Islands. Small numbers in most years, but 2006 (420) and 2007 (162) were exceptional.

Double Dart

plate 70

Graphiphora augur (Fabr.)

Common 73.351 (2114)



Field characters FW 18–21mm. Broad, rather plain forewing with oval, kidney- and dart marks simply outlined in blackish is diagnostic. Forewing soft light brown to mousy or dark greyish brown, sometimes with a slight reddish tint. Otherwise varies only in the fine detail of the markings. **Flight season** One generation. Jun–mid-Aug. Comes to light in small numbers, more commonly to sugar, and also to flowers. **Life cycle** Overwinters as a small larva, close to the ground. Larva Aug–May, feeding at night and hiding by day in leaf litter. Pupates just below the ground surface. **Larval foodplants** Sallows, birches, Blackthorn and hawthorn scrub, both in the autumn and spring, and herbaceous plants, including Broad-leaved Dock. **Habitat** Broadleaved woodland and scrub, hedgerows, parkland, marshes, fens and gardens. **Status and distribution** Resident. Common, but apparently in decline. Formerly found throughout most of England and Wales. Long known to undergo

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

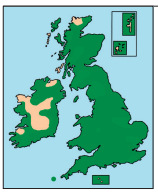
cycles of abundance, and numbers in the Rothamsted Insect Survey national light-trap network declined by 98% between 1968 and 2007. Now absent or much rarer than in the 1970s and 1980s in many parts of southern Britain, but remains widespread throughout most of Scotland, including the Hebrides and Orkney (vagrant on Shetland), and in Ireland. Rare on Man. In the Channel Islands, very old records from Guernsey and Jersey.

Green Arches

plate 70

Anaplectoides prasina ([D. & S.])

Common 73.352 (2138)



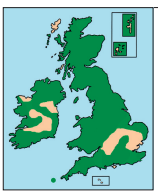
Field characters FW 20–25mm. A beautiful rich green moth when freshly emerged, marbled to a varying extent with white, brown and black. Thorax green, often with one or two rusty-red central tufts. Green pigment fades rapidly on exposure to sunlight, as with many green moths, and worn examples appear yellowish grey. Some variation in fine detail of markings. Central area often darker, sometimes with a narrow, dark blackish band. Patch beyond kidney mark usually distinctly paler, often whitish. Hindwing uniformly dark grey, with a white fringe. **Similar species** Can be confusing when very faded, when pale patch beyond kidney can be helpful. See Silvery Arches. **Flight season** One generation. Jun–Jul. Comes to light in small numbers and frequently to sugar. **Life cycle** Overwinters as a larva. Larva Aug–May, feeding at night and hiding in leaf litter by day. Pupates underground. **Larval foodplants** A range of herbaceous and woody plants, including Primrose, docks, Honeysuckle, Bramble and Bilberry. **Habitat** Broadleaved woodland and carr. **Status and distribution** Resident. Common. Throughout most of Britain, Man and Ireland, but probably vagrant in the Outer Hebrides, Orkney and Shetland. Rare, suspected immigrant in the Channel Islands, one on Guernsey in 2002 and one on Alderney in 2006.

Dotted Clay

plate 70

Xestia baja ([D. & S.])

Common 73.353 (2130)



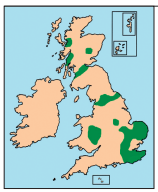
Field characters FW 17–21mm. Forewing quite broad, light or dark reddish brown or warm greyish brown, sometimes pinkish or grey. The most conspicuous markings are the two small, sharp black dots just below leading edge, close to tip. Otherwise, usually rather plain, with pale-outlined oval and kidney mark (often darker in lower half) and faint bands. **Similar species** Six-striped Rustic (dark veins and cross-lines), Neglected Rustic and Cousin German (smaller) all lack sharp black spots near leading edge of forewing. **Flight season** One generation. Jul–Aug. Comes frequently to light, and feeds at sugar and flowers. **Life cycle** Overwinters as a small larva. Larva Aug–May, feeding at night and hiding low down during the day. Pupates just beneath the soil surface. **Larval foodplants** Herbaceous plants such as Common Nettle, and in the spring also on woody species such as willows, birches, Blackthorn and Bog-myrtle. **Habitat** Woodland, heathland, also scrubby grassland on chalk and limestone, damp neutral grassland, carr woodland, wetlands and lakesides. **Status and distribution** Resident. Common. Throughout most of Britain, Man and Ireland. Recent records are thin in parts of southern England and the south Midlands. More numerous in northern Britain.

Square-spotted Clay

plate 70

Xestia stigmatica (Hb.)

Nb 73.354 (2131)



Field characters and similar species FW 17–20mm. Forewing broader than in similar species, sombre, dark grey-brown (usually with a purple tint). The thick, irregular dark outer band, with a diffuse inner edge, may be thickened at leading edge but is not formed into a clear black dash. Shape and central forewing markings most like Double Square-spot (but often with an additional black block), which is paler and has at most a fine, dark outer cross-line, and a distinct black dash on leading edge near tip, as does Triple-spotted Clay. **Flight season** One generation. Late Jul–Aug, sometimes from early Jul. Can be found visiting the flowers of burdocks, teasels, Rosebay Willowherb, Wood Sage and ragworts after dark, and comes to sugar and wine ropes. Comes to light, usually only in small numbers but occasionally into double figures, mainly late at night. **Life cycle** Overwinters as a small larva. Larva Sep–May. Feeds until mid-Apr. Makes a cocoon in the earth, but does not change into a pupa until several weeks later. **Larval foodplants** Wild larvae are rarely reported but found recently in spring on Common Nettle, Dog's Mercury and Oxlip. In captivity, will feed on Primrose, Common Chickweed, docks, elms, Goat Willow, birches, Bullace and

Larva of Square-spotted Clay.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

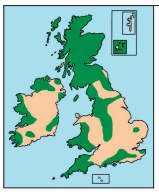
others. Has been reared from egg to adult exclusively on Ribwort Plantain, and found in the wild on this plant in the absence of woody growth in the immediate vicinity. **Habitat** Usually long-established broadleaved woodland, both in lowland and upland areas, often on chalk, gravel or clay, breeding mainly at the edges of clearings and in rides. **Status and distribution** Resident. Nationally Scarce B. Widespread in East Anglia, where it is increasing, and has recently expanded into Hertfordshire and Bedfordshire. Extends into southern England, including Buckinghamshire (particularly the Chilterns), south Oxfordshire, Berkshire, Surrey and Kent. Also found locally through the south-east Midlands to Derbyshire, the west Midlands, central parts of Wales, the northern half of Yorkshire and in the Lake District. Formerly found in the New Forest, Hampshire, and recorded from south-west England, but apparently not recently. Very local in Scotland, mainly in the west.

Neglected Rustic

plate 70

Xestia castanea (Esp.)

Local 73.355 (2132)



Field characters FW 16–18mm. A fairly unmistakable, rather plain, finely marked moth. A constant diagnostic feature is the conspicuous black base of kidney mark. Inner and outer central cross-lines are black and very finely etched and scalloped or irregular, and in some cases reduced to dots. Extremely variable in colour, from light greyish brown, sometimes tinged with pink or with pink fringes (f. *neglecta* Hb.), to grey or reddish brown. Hindwing uniformly grey with whitish, pinkish or grey-pink fringes. Variation is geographical, with f. *neglecta* dominant in the south. From the north Midlands and Wales northwards, pink and red forms predominate. The darkest occur in northern Scotland, where it can be reddish black or greyish black. A yellow form (f. *xanthe* Woodforde) has occurred rarely in Surrey, Hampshire, Staffordshire and Co. Kerry. **Similar species** Pale examples of Square-spot Rustic are similar to f. *neglecta*, but kidney mark is paler than ground colour, or at least pale-outlined, and usually squarer. In the Northern Isles, very dark individuals of both species occur with the markings obscured, but Square-spot Rustic is a more rich brownish (not pinkish) black and usually smaller. See also Cousin German and Dotted Clay. **Flight season** One generation. Aug–Sep. Comes to light, and feeds at sugar and flowers, particularly of heathers. Often seen on the wing by torchlight, just after dark. **Life cycle** Overwinters as a small larva. Larva Oct–May, feeding at night and hiding low down by day. Spends about six weeks underground before pupating. **Larval foodplants** Heather, Bell Heather and Cross-leaved Heath. **Habitat** Open and wooded heathland, moorland and raised bogs. **Status and distribution** Resident. Local. In southern England, widespread on heathland, mainly in Berkshire, Surrey and the New Forest, Hampshire. Also in south-west England, Wales, the north Midlands, northern England and Man, and in Scotland, including the Hebrides and Orkney. Local in Ireland, mainly in the western half, the north and very locally in the south-east. Recorded once in the Channel Islands, on Guernsey in 1966.

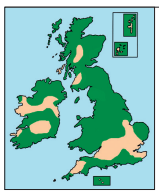
Heath Rustic

plate 70

Xestia agathina agathina (Dup.)

Local 73.356 (2135)

ssp. *hebridicola* (Stdgr.)
Hebrides



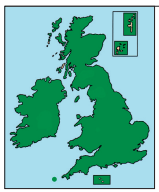
Field characters FW 14–16mm. A constant and diagnostic feature of the rather variegated ssp. *agathina* is the small, pale straw-coloured or whitish oval, rather elongated and strongly contrasting with the black wedge containing it. Another is the fine, dark inner central cross-line, which is deeply zigzagged. Has several black arrowhead marks on inner edge of outermost cross-line and a broad pale streak along leading edge. Forewing colour varies from light greyish brown, to reddish brown, dark grey or blackish, marbled with reddish brown or dusted with grey or white. Antennae in male slightly feathered. Ssp. *hebridicola* has a whitish-grey ground colour. **Similar species** Some brightly marked White-line Darts are similar, but never reddish, oval is less elongated and does not contrast quite so sharply with black wedge, and antennae are not feathered in male. See also True Lover's Knot. **Flight season** One generation. Late Aug–Sep. Comes to light, and feeds at the flowers of Heather. Often seen flying over Heather at dusk, and again later in the night. **Life cycle** Overwinters as a small larva. Larva late Sep–Jun, feeding at night and hiding low down by day. Pupates among plant debris or loose earth. **Larval foodplants** Heather. **Habitat** Acid heathland and moorland. Most numerous where Heather is tall. **Status and distribution** Resident. Local. Widespread in suitable habitat throughout most of Britain, including Orkney, on Man, in Ireland and in the Channel Islands. Vagrant on Shetland. Ssp. *hebridicola* is found in the Hebrides.

Square-spot Rustic

plate 70

Xestia xanthographa ([D. & S.])

Common 73.357 (2134)



Field characters FW 14–17mm. An abundant species. The various forms can be confusing at first, but are not difficult to recognise once learnt. The pale, or pale-outlined, usually rather square kidney mark, often darker in trailing half, is a

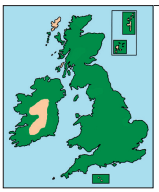
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

conspicuous diagnostic character, obscured only in some dark examples. Other markings are usually weak, but fine dark cross-lines are usually evident, the third sometimes in the form of a series of small dark dots or dashes. Forewing light brown, light or dark reddish brown or greyish brown, to dark or blackish brown. **Similar species** See Garden Dart (with a narrower forewing and a central tooth mark), Neglected Rustic, Brown Rustic (female) and Dotted Rustic (especially f. *suffusa*). **Flight season** One generation. Late Jul–early Oct, peaking in late Aug–early Sep. Flies over grassland at dusk, sometimes in profusion. Comes to light, sometimes in abundance. Also dependable at sugar, often in large numbers, and flowers such as ragworts, Heather and Marram. **Life cycle** Overwinters as a larva. Larva Sep–Apr. Feeds at night in mild weather, becoming fully grown in Mar or Apr, and then spending about six weeks in an underground cocoon before pupating. **Larval foodplants** Mainly grasses, but also herbaceous plants such as plantains and Cleavers. **Habitat** All types of grassland, including gardens, pasture and woodland rides, but not at high altitude. **Status and distribution** Resident. Common. Well distributed and abundant throughout the British Isles.

Six-striped Rustic plate 70

Xestia sexstrigata (Haw.)

Common 73.358 (2133)

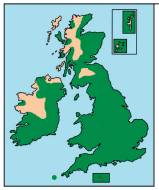


Field characters FW 15–17mm. The dark veins, fine dark cross-lines and dark-outlined pale oval and kidney mark are diagnostic and show little variation. Outermost cross-band thickened at leading edge, but has no black pips or dashes. Forewing light brown to warm dark brown. **Similar species** See Dotted Clay. **Flight season** One generation. Late Jul–early Sep. Comes frequently to light, and feeds at sugar and flowers, notably of ragworts. **Life cycle** Overwinters as a larva. Larva Sep–Apr or May, feeding at night and hiding low down by day. Pupates underground. **Larval foodplants** Rarely reported as a larva since it is difficult to distinguish from the abundant Square-spot Rustic larva, but recorded on Hedge Bedstraw, Ribwort Plantain, Bramble, Bluebell and Water Figwort. **Habitat** Wet meadows, marshes, fens and damp woodland; also in drier places such as hedgerows, gardens and downland. **Status and distribution** Resident. Common. Throughout most of Britain, including the Hebrides and Orkney, Man and Ireland. Vagrant on Shetland. Recorded recently from Guernsey.

Setaceous Hebrew Character plate 70

Xestia c-nigrum (L.)

Common; immigrant 73.359 (2126)

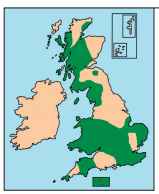


Field characters FW 14–19mm. The roughly triangular, bright straw-coloured (or occasionally pinkish-brown) central blotch extending diffusely to leading edge of forewing is diagnostic. It contrasts sharply against the roughly saddle-shaped black mark adjoining it, which supposedly resembles a letter from the Hebrew alphabet. Front half of collar is also straw-coloured. Forewing otherwise pale or dark greyish brown (sometimes reddish), or dark grey. Hindwing whitish, with a diffuse grey outer band. **Similar species** See Triple-spotted Clay and Double Square-spot. **Flight season** Two generations in the southern half of Britain north to about Yorkshire (more so here since the 1990s), a relatively small one May–Jul and a much larger one early Aug–Oct. In Scotland, Jun–Jul and a smaller second generation Aug–Oct. Comes to light, sometimes in large numbers, and feeds at sugar and flowers. **Life cycle** Overwinters as a larva. Larva Jun–Jul and Sep–Apr when there are two generations, Sep–May where there is one. Feeds at night and hides close to the ground by day. Pupates in a loose cocoon underground. **Larval foodplants** A wide range of herbaceous plants, including Common Nettle, White Dead-nettle, willowherbs and burdocks. **Habitat** Typically a lowland species, occurring in a wide variety of places, including woodland and marshes, but most abundant in cultivated areas, including gardens. **Status and distribution** Resident and suspected immigrant. Common. Well distributed and frequent throughout most of Britain, including the eastern side of Scotland, Man and the Channel Islands. The second generation can be abundant in late summer and autumn, and numbers are sometimes swelled by large influxes of immigrants. Much less frequent in western Scotland. Not infrequent in Orkney and Shetland, but possibly not resident. Widespread and locally abundant in southern and eastern Ireland, scarce and local elsewhere.

Triple-spotted Clay plate 70

Xestia ditrapezium ([D. & S.])

Local 73.360 (2127)



Field characters and similar species FW 17–19mm. In shape, forewing is not dissimilar to that of Setaceous Hebrew Character, but usually larger and darker, and never with a conspicuous triangular, pale straw blotch. Ground colour varies from dark reddish brown (sometimes slightly greyish), purplish brown or very dark purplish grey,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

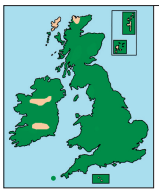
to purplish black. Hindwing grey-brown or light brown, usually paler than forewing. Markings are similar to Double Square-spot, but that has a slightly broader forewing, in most examples is paler and lacks a strong reddish or purplish tint, and hindwing is usually darker than forewing. See also Square-spotted Clay. **Flight season** One generation. Late Jun–early Aug. Comes to light, and feeds at sugar and flowers. **Life cycle** Overwinters as a larva. Larva Aug–May, feeding at night and hiding among leaf litter by day. Pupates on or just below the ground. **Larval foodplants** Herbaceous plants, including Primrose, and in the spring also woody species such as sallows, Dogwood and birches. **Habitat** Damp and open broadleaved woodland, particularly carr woodland and bushy fens. Sometimes parks and gardens. **Status and distribution** Resident. Local. Predominantly western distribution in Britain. Widespread but local and infrequent in central southern and south-east England and the south Midlands. Well distributed in Norfolk and Suffolk, south-west England, Wales, the west Midlands, north-west England, Man, and central and western Scotland, except the far north. In the east, extends locally into south Lincolnshire, but rarely recorded east of the Pennines and in most eastern parts of Scotland. Very rare in Ireland, last recorded in Co. Dublin in 1956. Rare in the Channel Islands.

Double Square-spot

plate 70

Xestia triangulum (Hufn.)

Common 73.361 (2128)



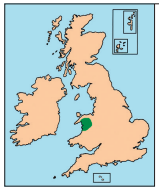
Field characters FW 17–19mm. Forewing quite broad, generally light greyish brown, occasionally tinged reddish or pinkish, sometimes darker or predominantly grey. Hindwing rather uniform grey-brown. Markings vary only slightly. **Similar species** Sometimes confused with the more local Triple-spotted Clay. See also Square-spotted Clay. **Flight season** One generation. Jun–early Aug. Comes frequently to light, and feeds at sugar and flowers. **Life cycle** Overwinters as a larva. Larva Aug–May, feeding at night and hiding low down by day. Pupates underground. **Larval foodplants** Many herbaceous plants, including buttercups, Primrose, Cow Parsley, Wood Spurge and, particularly in the spring, woody species such as Blackthorn, hawthorns and Raspberry. **Habitat** A wide range, including deciduous woodland, hedgerows, and lush riverbanks in open country. Frequent in gardens, but less so in urban areas. **Status and distribution** Resident. Common. Throughout most of Britain, Man and Ireland, but vagrant on Shetland. Infrequent in the Channel Islands.

Ashworth's Rustic

plate 70

Xestia ashworthii (Doubl.)

Na 73.362 (2129)



Field characters FW 16–20mm. Rather slender forewing and ashen colours are distinctive. Has no major black dashes or bars running along length of wings, only fine, wavy dark cross-lines. Often has diffuse blotches either side of oval and kidney, and sometimes a diffuse blackish central band. Dark outermost cross-band may be thickened to form a diffuse blackish mark at leading edge. Ground colour varies from light grey (especially male) to very dark grey. **Flight season** One generation. Mid-Jun–Aug. Comes readily to light and to sugar. **Life cycle** Overwinters as a small larva. Larva Aug–late May or Jun, feeding mainly at night, sometimes basking by day in the spring. Pupates in a flimsy cocoon under moss, among rocks or just below ground. **Larval foodplants** Many low-growing plants, including Common Rock-rose, Wild Thyme, Sheep's Sorrel, Harebell, Salad Burnet, Bell Heather, Goldenrod, hawkweeds, Lady's Bedstraw, Creeping Willow, Foxglove and Heather. **Habitat** On many geological strata, including slate and limestone, on hillsides, quarries and mountainsides. There is a belief that the species breeds only on south-facing slopes but larvae have also been found on a steep, shaded east-facing slope. Small, isolated patches of foodplant growing on steep rocky ground and scree seem to be preferred. **Status and distribution** Resident. Nationally Scarce A. The nominate subspecies, distinct from the three found in mainland Europe. Confined to north-west Wales, where it is locally frequent in Denbighshire (e.g. Llangollen), Caernarvonshire (e.g. Penmaenmawr, Snowdon and Sychnant Pass, and Cader Idris), Merionethshire, Cardiganshire (where post-1980 records include Plas Gogerddan, Tal-y-bont and Ynys-hir RSPB Reserve) and north-west Montgomeryshire. Discovered breeding on Anglesey in 1994.

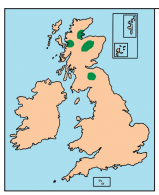
Northern Dart

plate 71

Xestia alpicola (Zett.)

ssp. *alpina* (Humph. & Westw.)

Na 73.363 (2125)



Field characters FW 15–17mm. The black or dark brown blazes on both sides of main vein in centre of rather broad forewing of this rather thickset species are distinctive. Other markings are very variable between populations. The large kidney mark and oval are usually pale and evident, often reddish. Ground colour usually variegated, sometimes strikingly so, and may include reds and greys, particularly in Aberdeenshire and Banffshire. Antennae

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

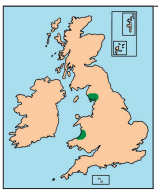
slightly feathered in male. **Flight season** One generation. Late Jun–Aug. Flies mainly late at night and comes readily to light-traps. Occasionally reported flying in hot sunshine. **Life cycle** Overwinters twice as a larva. In year 1, larva Jul–Aug, making little growth until the spring of year 2, reaching the penultimate instar by the end of the year and pupating late May–Jun of year 3. Observations suggest that local populations are largely in synchrony, with most adults in most localities emerging in even years. In these years, fully grown larvae and pupae can be found under mosses and lichens. **Larval foodplants** Mainly Crowberry. Heather, Bilberry, Cowberry, Bearberry and Trailing Azalea have been reported as additional possible foodplants but require confirmation in the wild. **Habitat** Chiefly the upper slopes and tops of mountains, usually above 450m but at lower altitudes in the far north and recorded near sea-level on Shetland. **Status and distribution** Resident. Nationally Scarce A. Very local in the Scottish Highlands, extending from Perthshire to Aberdeenshire, Banffshire (discovered in 1996), East Inverness-shire and Ross-shire. In southern Scotland, found in the Tweedsmuir Hills, Peeblesshire in 2014. Also recorded (although rarely and not recently) in the Outer Hebrides, Orkney and Shetland. In England, formerly found very locally in the northern Pennines (e.g. stated to be established at Moor House NNR, Co. Durham, in the early 1970s, and also recorded on Skiddaw and High Force) and in Northumberland (one near the summit of Cheviot in 1975). In Ireland, reported from Co. Mayo (1972) and Co. Donegal (1973).

Rosy Marsh Moth

plate 71

Coenophila subrosea (Steph.)

RDB 73.364 (2115)



Field characters and similar species FW 17–22mm. Fairly distinctive, with a rather broad forewing, often with an obvious dark central bar, usually extending both sides of oval between and before oval and kidney mark. Antennae feathered in male. In Wales and Cumbria, forewing rosy pink, clouded with lighter pinkish grey, and female may have a strong silvery bloom. Moths from Huntingdonshire were greyer. Some forms of Purple Clay and Ingrailed Clay are somewhat similar, but (usually) have a small blackish spot below oval. Purple Clay and Ingrailed Clay are also smaller, with a more angular forewing that is generally more orange-brown or purplish pink rather than rosy or grey, and neither species has feathered antennae. **Flight season** One generation. Late Jul–Aug. Often visits the flowers of Soft-rush and comes to sugar, especially female. Both sexes come to light. **Life cycle** Overwinters as a larva, from eggs laid on bog plants. Larva late Aug or Sep–mid-Jun, feeding throughout the winter in mild weather, pupating in a loose silken cocoon spun almost vertically among

Larva of Rosy Marsh Moth.

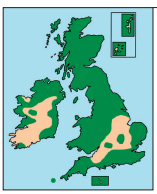
Sphagnum moss or other plant material. **Larval foodplants** Mainly the catkins, buds and then the leaves of Bog-myrtle at Cors Fochno, but other plants are also eaten, particularly Bog-rosemary in the winter when little else is available, and Bilberry. Once found on the fleshy pedicel of a flower of a cottongrass. At one site, where Bog-myrtle is absent, Crowberry is the main foodplant. In captivity, feeds readily on Crack-willow and other narrow-leaved willows, preferring the ripe female catkins. **Habitat** Bogs and mires. At Cors Fochno mainly in the hummock/hollow habitat where Bog-myrtle is 30cm or less in height, but not around the fringes of this domed mire, where the Bog-myrtle is up to 1m tall. This distribution of larvae may be more a reflection of the higher water-table and greater amount of Bog-rosemary in the central portion than the effects of past fires or selection of shorter growth of the foodplant. The larvae are more numerous where there is a fair amount of leaf litter. **Status and distribution** Resident. Red Data Book species. Known from five breeding sites in western Wales, the best known of which is Borth Bog (Cors Fochno), Cardiganshire, where it was discovered in numbers in 1967. Two of the other breeding areas are remnants of this once more extensive site. A colony was discovered at Roudsea Woods and Mosses NNR in south Cumbria in 2005. In the 19th century, it was quite numerous in Huntingdonshire, where it was discovered at Yaxley Fen in about 1828, and subsequently at Whittlesey Mere and Holme Fen, disappearing in about 1850 after the burning and draining of the fens. There are two specimens (now at Derby Museum) allegedly from Little Eaton, in Derbyshire, one from 1857 and one 'some years prior to 1885'.

Autumnal Rustic

plate 71

Eugnorisma glareosa (Esp.)

Common 73.365 (2117)



Field characters FW 15–16mm. The roughly anvil- or vase-shaped black mark between kidney mark and oval, the other black marks and cross-lines near base, and the narrow, rather angular forewing are diagnostic. Forewing cold whitish grey,

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

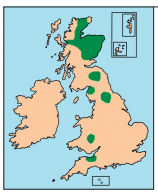
darker grey or pale orange-brown, sometimes tinged with pink, but markings vary little. Scottish individuals tend to be darker grey, pink forms are most frequent in western Britain and the orange-brown form occurs in Kent. In f. *edda* Stdgr., forewing is greyish black, the black anvil and other black marks are still evident, and other markings are pale. This form mainly occurs in Shetland and is most frequent where the soil is dark and peaty. Similar forms and intermediates also occur in Orkney and in mainland northern Scotland, occasionally as far south as Aberdeen. **Similar species** Form *edda* is superficially similar to the darkest individuals of the Shetland ssp. *thulei* of the Ingrailed Clay, which is usually brownish black rather than greyish black (see also under that species). **Flight season** One generation. Aug–Oct. Comes to light and flowers, particularly Heather, but rarely to sugar. **Life cycle** Overwinters as a small larva, close to the ground. Larva Oct–May, feeding at night and hiding by day in leaf litter. Pupates underground in a fragile cocoon. **Larval foodplants** Low-growing plants, including heathers, bedstraws and Bluebell; also birch and sallow scrub. Reportedly also grasses. **Habitat** Heathland, moorland, rough grassland, downland (provided it is not heavily grazed) and other open country, on light sandy or chalky soils. Also fens, shingle beaches and open woodland. **Status and distribution** Resident. Common. Throughout most of Britain (although rare or absent from parts of the south Midlands and Lincolnshire), on Man and in the Channel Islands. In Ireland, widespread in the north and east but more local in the west. Thought to be in decline in Britain – numbers in the Rothamsted Insect Survey national light-trap network reduced by over 94% between 1968 and 2007.

Plain Clay

plate 71

Eugnorisma depuncta (L.)

Nb 73.366 (2103)



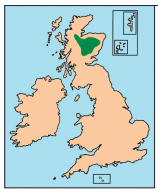
Field characters FW 16–20mm. The broad, pale yellowish-brown forewing, with two bold but broken black cross-lines in basal half before oval, makes this moth quite distinctive. Shows little variation. **Flight season** One generation. Jul–early Sep. Comes to light, sometimes in numbers. Also recorded at sugar and visiting ragwort flowers. **Life cycle** Overwinters as a very small larva, among low-growing plants. Larva Sep–Jun, but feeding mainly in the spring, at night. Pupates in a cocoon underground. **Larval foodplants** Probably a wide range of low-growing plants. Reported foodplants include Primrose, Cowslip, Common Sorrel, Sheep's Sorrel, Common Nettle, dead-nettles and stitchworts. **Habitat** Usually in or near broadleaved woodland, often in river valleys. **Status and distribution** Resident. Nationally Scarce B. Widespread in the central and eastern Scottish Highlands, extending north to Caithness and West Sutherland, but rare or absent on the western side. Also found in the south-east, centred on Roxburghshire, Selkirkshire and Peeblesshire. In northern England, well established in parts of west Yorkshire but otherwise scarce. One in Cumbria in 2012, the first for over 60 years. Very local in north and Mid Wales, and scarce in south-west England.

Cousin German

plate 71

Protolampra sobrina (Dup.)

Na 73.367 (2116)



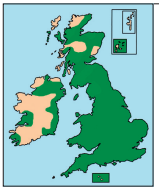
Field characters and similar species FW 14–17mm. Forewing light pink and silvery grey to dark reddish grey, with fine but rather indistinct markings. The combination of indistinct markings and lack of a black dot on forewing between oval and trailing edge distinguish this species from Purple Clay, Barred Chestnut and most Ingrailed Clays. Some northern forms of the latter lack a black dot, but usually show black marks along outer edge. If there is doubt (especially if worn), the genitalia are distinct. In very dark northern forms of Neglected Rustic, cross-lines may be very faint or absent, and kidney mark normally more distinctly darker in trailing half. See also Dotted Clay, larger and with intense black mark on leading edge near tip (sometimes a dark mark here on Cousin German, but not intensely black). **Flight season** One generation. Late Jul–Aug. Flies after dark, comes fairly reliably to light, even on cold nights, sometimes to sugar and has been reported visiting the flowers of Heather. **Life cycle** Overwinters as a small larva. Larva late Aug–Jun. Feeds mainly in May and Jun, after dark, and pupates in loose earth, moss or plant debris. **Larval foodplants** Initially on Bilberry and Heather, but after hibernation will climb low birch scrub and Eared Willow to feed on the young leaves. **Habitat** Open upland birch woodland and scrub with a ground cover of Heather and Bilberry, at altitudes from c. 200m upwards. Often associated with the early stages of birch succession, where small birch bushes are growing among Bilberry and Heather. **Status and distribution** Resident. Nationally Scarce A. A species of the Scottish Highlands, recorded particularly along the valleys of the Spey and Dee and in the Loch Rannoch area, Perthshire, and recorded locally in Ross-shire and in the northernmost Caledonian pine forest in Scotland, in West Ross.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Gothic
plate 71

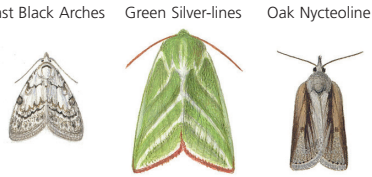
Naenia typica (L.)

Local 73.368 (2136)



Field characters FW 17–22mm. A greyish-brown moth. Forewing very broad and rounded, with brownish-white veins and cross-lines creating a netted effect, and a uniformly dark grey hindwing. **Similar species** Bordered Gothic has a network pattern, but has a much narrower forewing and paler hindwing. Feathered Gothic has dark cross-lines, flies later in the year and male has feathered antennae. **Flight season** One generation. Jun–Jul. Comes to light in small numbers, and more frequently to sugar. Also feeds at flowers. **Life cycle** Overwinters as a larva. Larva Jul–Apr, feeding at night, gregariously when small, hiding in leaf litter by day. Pupates underground. **Larval foodplants** A wide range of wild and cultivated herbaceous and woody plants, including Common Comfrey, willowherbs, Cleavers, sallows, Blackthorn, Apple and buddleias. **Habitat** Gardens, riverbanks, marshes, wet meadows, weedy hedgerows and damp woodland. **Status and distribution** Resident. Local. In lowland areas throughout most of Britain, extending north to the Hebrides and Orkney. Local on Man and in Ireland, where it appears more widespread in the north and east. Rare in the Channel Islands.

Nolidae



Comprises two sub-families. The Nolinae are a small group found worldwide. Six species have been recorded in the British Isles, of which four are resident, one is an immigrant that sometimes breeds, and one has been recorded once as a probable immigrant. All are small, whitish or grey moths with rather rounded forewings that have basal and central scale tufts (easily lost), and could well be mistaken for micro-moths. They are not often seen by day, but come to light and sometimes to sugar. The larvae feed on woody plants, and are quite hairy. They pupate above ground in tough, sometimes boat-shaped cocoons, usually formed on a stem of the foodplant and incorporating fragments of bark.

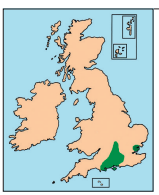
The Chloephorinae is a sub-family with many species in the tropics, some showing vivid greens and other colours. Few species in temperate regions. Larvae of the three resident in Britain feed on tree foliage. Some of the immigrant species are major agricultural pests in warmer climates.

Nolinae

Small Black Arches
plate 71

Meganola strigula ([D. & S.])

Na 74.001 (2075)



Field characters and similar species FW 9–11mm. Similar to Least Black Arches, but slightly larger on average, with a broader, greyer forewing and darker grey hindwing, and flying later in the year. Black cross-lines rather irregular, and central cross-band usually faint and diffuse. Outer area is seldom noticeably darker, and usually has small but distinct blackish streaks, sometimes roughly arranged into a cross-line. **Flight season** One generation. Late Jun–early Aug. Comes to sugar and light, occasionally in numbers. **Life cycle** Overwinters as a small larva. Larva Aug–early Jun. Pupates in a boat-shaped cocoon formed on a twig of the foodplant. **Larval foodplants** Pedunculate Oak. **Habitat** Long-established broadleaved woodland and wooded commons with mature oaks. **Status and distribution** Resident. Nationally Scarce A. Very local and decreasing in southern England; formerly from Devon to Essex and Kent, but now mainly from Dorset, Hampshire, the Isle of Wight, West Sussex, Surrey, west Berkshire and the Oxfordshire–Buckinghamshire border.

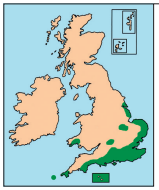
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Kent Black Arches

plate 71

Meganola albula ([D. & S.])

Nb; suspected immigrant 74.002 (2076)



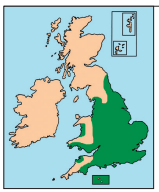
Field characters FW 10–11mm. Ground colour of forewing is white, and it appears smooth, like polished flint, due to soft, tawny brown or grey-brown markings. These vary considerably in extent, so that some examples have a narrowed central cross-band and reduced chequering on leading edge, whereas others are extensively darkened. A plain white form has also been recorded. **Similar species** Scarce Black Arches is smaller, with fine cross-lines, often edged with darker, frequently blackish scales. **Flight season** One generation. Late Jun–early Aug. Sometimes disturbed from rest under leaves by day. Comes to light. **Life cycle** Overwinters as a small larva. Larva Sep–late May or Jun. Pupates in a cocoon formed on a vertical stem. **Larval foodplants** Dewberry, Bramble, Raspberry and Wild Strawberry. **Habitat** Coastal heathland, saltmarshes, shingle and sandy beaches. Inland on chalk downland and open areas in woodland. **Status and distribution** Resident and suspected immigrant. Nationally Scarce B. Until the 1980s, found mainly along the south coast of England, but now well distributed on or near the coast from the south-west to Norfolk, locally to Spurn, south Yorkshire, and in south-west Wales. Also found inland in central southern England in Hampshire, Berkshire, Oxfordshire, Surrey, Middlesex (two records) and Wiltshire. Increasing, with recent records from Hertfordshire and the south Midlands. Widespread and frequent in the Channel Islands.

Short-cloaked Moth

plate 71

Nola cucullatella (L.)

Common 74.003 (2077)



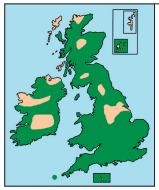
Field characters FW 8–10mm. The sharply demarcated dark base of the grey (or less often darker grey-brown) forewing makes this the easiest member of the family to recognise, and gives the appearance of a short cloak when the moth is at rest. **Flight season** One generation. Jun–Jul. In the hot, dry summer of 2006, a small second generation occurred in southern England, in Sep. Comes to light. **Life cycle** Overwinters as a small larva. Larva Aug–Jun. Pupates in a cocoon on a twig. **Larval foodplants** Hawthorn, Midland Hawthorn, Blackthorn, Apple, Pear and plums. **Habitat** Hedgerows, gardens, scrub and woodland. **Status and distribution** Resident. Common. Well distributed and fairly frequent throughout most of England, although more local in the south-west, in northernmost counties, and also in Wales. One record from Man, in 1893. Widespread in the Channel Islands.

Least Black Arches

plate 71

Nola confusalis (H.-S.)

Local 74.004 (2078)



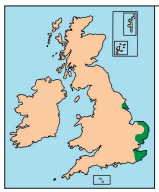
Field characters FW 9–11mm. Ground colour of rather narrow forewing is usually whitish, with fine black cross-lines, the innermost of which is elbowed or V-shaped, the outer middle one strongly curved in leading half, often shaped like a question mark. Usually a narrow but fairly distinct grey-brown outer central cross-band, and often whole outer area is noticeably darker, sometimes with small blackish dashes. Hindwing greyish. In f. *columbina* Image, found in Epping Forest and Chigwell Row Wood (Hainault Forest), Essex, forewing has a grey-brown ground colour and hindwing is somewhat darker grey. **Similar species** Small Black Arches, Scarce Black Arches and Jersey Black Arches. **Flight season** One generation. May–Jun. Occasionally recorded in Aug, e.g. one in Lancashire in 2006. Comes regularly to light, usually in small numbers. **Life cycle** Overwinters as a pupa, in a cocoon attached to a twig. Larva Jun–Aug. **Larval foodplants** A variety of broadleaved trees, including Downy Birch, Blackthorn, Buckthorn and several species of lime. Also reported from Apple, Pedunculate Oak, Beech and Evergreen Oak. **Habitat** Woodland and other well-wooded areas, including hedgerows, parkland, orchards and gardens. **Status and distribution** Resident. Local. Has shown a marked increase in numbers throughout its range since the 1960s. Well distributed throughout most of England (although apparently scarce in parts of the north Midlands), Wales, Man, Ireland and the Channel Islands. In Scotland, formerly very local but has expanded greatly in the 21st century and is now widespread to the north coast and recorded on Orkney.

Scarce Black Arches

plate 71

Nola aerugula (Hb.)

Immigrant; former transitory resident 74.005 (2079)



Field characters FW 8–9mm. Ground colour of forewing is white, variably clouded with brown or grey-brown. Irregular, fine black or brown cross-line beyond middle of forewing is diagnostic, although on some examples it is rather faint. Sometimes has a broad brown central cross-band, the irregular line forming its outer edge. **Similar species** Least Black Arches flies earlier in the year, and outer black cross-line is strongly curved. See also Kent Black Arches and Jersey Black Arches. **Flight season** One generation. Late Jun–early Aug. Mainly seen at light, but has also been found at rest on grass stems from dusk onwards. **Life cycle** Overwinters as a larva. Larva Aug–Jun. Pupates in a cocoon among stem

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

bases and plant debris. **Larval foodplants** Common Bird's-foot-trefoil and clovers. **Habitat** Formerly resident on sand-dunes. In mainland Europe, variously found in woodland (dry or damp) as well as in open, sandy places. **Status and distribution** Immigrant and transitory resident. So far, 117 reported as suspected immigrants. Mostly in light-traps on the coasts of eastern and south-east England, from Sussex to Spurn, Yorkshire, and two in Dorset. Highest annual totals in 1982 (nine), 2009 (11) and 2013 (eight). Resident near Deal, Kent, from 1858 to 1898, and might establish temporary colonies again. In mainland Europe, its distribution includes France, Belgium and Denmark.

Jersey Black Arches

plate 71

Nola chlamitulalis (Hb.)

Immigrant 74.006 (2079a)

Field characters and similar species FW 7–10mm. Forewing whitish with faint, light brown cross-lines, or extensively clouded with milky brown or grey, especially between cross-lines. Distinguished from other *Nola* species recorded in Britain by bold black blotches near outer edge of forewing, and a tawny band along outer edge. Central scale tuft usually whitish. Similar in shape to Least Black Arches, but forewing more pointed and angular. *Nola subchlamydula* (Stdgr.), also found mainly in southern Europe, is similar, but black blotches near outer edge of forewing are less pronounced. **Flight season** In mainland Europe, two generations. Apr–Jun and Jul–Aug. Adults are often found on rocks by day. **Larval foodplants** Herbaceous plants, including scabious, germanders and French Bartsia. **Habitat** Open, warm, dry places. **Status and distribution** Rare immigrant. One at light at La Haule, Jersey, on 16 Jul 1963. One in Epping Forest, Essex, on 5 Jun 2004, and one at light on 19 Jun 2005 at West Bexington, Dorset. Mainly found in southern Europe, but in France recorded north to Normandy.

Chloephorinae

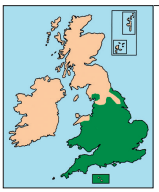
Egyptian Bollworm

Scarce Silver-lines

plate 72

Bena bicolorana (Fuess.)

Local 74.007 (2421)



Field characters FW 19–23mm. Unmistakable. Has a rather slender green thorax, with a broad, bright green forewing crossed by two thin, parallel, diagonal yellowish-white lines. Leading edge curved, yellowish white. Hindwing white. Antennae, palps and front legs salmon pink. Hardly varies, but very occasionally one of the cross-lines is absent. **Flight season** One generation. Late Jun–Jul. Comes to light regularly, but usually in small numbers, and to sugar. **Life cycle** Overwinters as a small larva on or near a bud of the foodplant. Larva Aug–May. Pupates in a tough boat-shaped cocoon on the underside of a leaf of the foodplant. **Larval foodplants** The buds and leaves of Pedunculate Oak and probably other oaks; also recorded on Downy Birch and Silver Birch. **Habitat** Broadleaved woodland and parkland. **Status and distribution** Resident. Local. Widespread in England and Wales, north to Yorkshire, where it has expanded greatly since the 1980s, and locally to south Cumbria and South Northumberland. Several recently in the Channel Islands as suspected immigrants, e.g. two on Alderney on 21 and 22 Jul 2006.

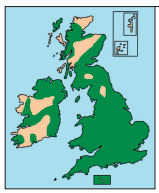
Green Silver-lines

plate 72

Pseudoips prasinana (L.)

ssp. *britannica* (Warr.)

Common 74.008 (2422)



Field characters FW 16–19mm. Unmistakable. Forewing with a straight or slightly curved leading edge, green, usually with three roughly parallel, diagonal, slightly diffuse white cross-lines, the first sharply angled at leading edge, and sometimes a white central band. Head and thorax are green, antennae are orange or pink, and palps and front legs are pink. Male has a bright green forewing, with bright pink or pinkish-brown fringes, and a yellowish-white hindwing. Female is slightly slimmer, with a broader, lighter green forewing with green or greenish-white fringes, and a white hindwing. **Flight season** One generation. May–Jul, with occasional individuals in Aug–Sep, presumably of a second generation, north at least to Lancashire. Comes to light, sometimes in moderate numbers. **Life cycle** Overwinters as a pupa, in a tough boat-shaped cocoon either on the underside of a leaf of the foodplant or in a bark crevice. Larva Jul–Sep. **Larval foodplants** Broadleaved trees, usually oaks, Downy Birch, Silver Birch or Beech, but sometimes Hazel and occasionally Sweet Chestnut, Aspen and elms. **Habitat** Mainly woodland, but sometimes seen in garden light-traps some distance from woodland. **Status and distribution** Resident. Common. Fairly well distributed and quite frequent over much of England and Wales north to Co. Durham. More local and confined to the lowlands in Northumberland, Cumbria and Scotland, north to Sutherland and the Hebrides. Local on Man. Widespread in Ireland, and in the Channel Islands.

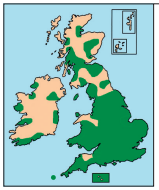
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Oak Nycteoline

plate 72

Nycteola revayana (Scop.)

Local 74.009 (2423)



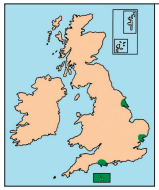
Field characters FW 11–13mm. Very variable. Forewing narrow, leading edge steeply shouldered at base and then straight or slightly concave. Markings very variable: slate grey, or a mixture of grey, brown or blackish, or less frequently pale grey, often finely marbled and with wavy dark cross-lines or a cross-band; more rarely, a broad tawny band along leading edge and a long, branched blackish central streak from base. Paler examples may have one or more black spots and a roughly triangular brown or blackish blotch midway along leading edge. Hindwing grey. **Similar species** See Eastern Nycteoline. **Sallow Nycteoline** *Nycteola degenerana* (Hb.) (plate 72) is slightly larger, with a broader forewing, and is usually variegated with black and whitish. The cross-lines are fine, dark and more wavy, and the inner central one is more strongly curved near the middle. There are three old, unconfirmed British records of this species, including a specimen in the Natural History Museum stated to have been taken in 1905 in the New Forest, Hampshire, but the full circumstances are not known. **Grey Square** *Pardasena virgulana* (Mab.) (plate 72) has been imported into Britain on okra from Cyprus and on peas from East Africa and a female was caught at light at Hamford Water near Thorpe-le-Soken, Essex (not far from the ports of Harwich and Felixstowe) on 27 September 1992. It is smaller than Oak and Eastern Nycteoline and grey with broader, more rounded forewing and white hindwing. The extremely variable *Acleris cristana* ([D. & S.]) and *A. hastiana* (L.) (Tortricidae, micromoths) are slimmer and usually smaller. *Acleris hastiana* has much shorter palps and *A. cristana* has a tuft of raised scales in centre of forewing. **Flight season** Probably two generations in southern England and in Scilly, where freshly emerged moths occur from early Jul. Elsewhere, one generation, Aug–May or early Jun. Occasionally comes to light, sugar, Ivy flowers and sallow catkins. Best located by beating lower branches of oaks or dense Hazel understorey in the evenings in Oct. **Life cycle** Overwinters as an adult, among dead leaves accumulated in epicormic growth on oaks, and also in conifers. Larva May–Jul and also recorded in Sep. Pupates in a tough, boat-shaped cocoon formed on the underside of a leaf of the foodplant. **Larval foodplants** Pedunculate Oak and probably Sessile Oak. **Habitat** Broadleaved woodland and parkland. **Status and distribution** Resident. Local. Quite well distributed, usually in small numbers but sometimes abundantly, in southern England from the southwest, including Scilly, to East Anglia. Local in Wales, the Midlands, eastern and northern England, mainland Scotland north to Ross-shire, on Man and in Ireland. Widespread but occasional in the Channel Islands.

Eastern Nycteoline

plate 72

Nycteola asiatica (Krul.)

Immigrant 74.010 (2423a)



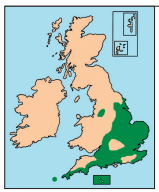
Field characters and similar species FW 11–13mm. Similar to some forms of Oak Nycteoline, but distinguished by base of forewing leading edge, which is much less steeply arched. Forewing also generally broader, glossy grey, with fine, wavy dark central cross-lines. Central spot reddish brown or dark brown, often within a blotch of same colour, which may extend to leading edge or form a diffuse cross-band. Moths not conforming to characteristics of Oak Nycteoline should be retained for confirmation, especially if caught on the coast, away from suitable habitat or at times of immigrant activity. Other very similar species are present in Europe and could conceivably occur as immigrants, and genitalia dissection is required for acceptance of records. **Flight season** One generation in northern Europe, Aug–May. Two generations further south, Jun–Jul and Sep–May. **Life cycle** Overwinters as an adult. Larva May–Jul where there is one generation, May–Jun and Jul–Aug where there are two. Pupates in cocoon attached to the foodplant. **Larval foodplants** Poplars and sallows in mainland Europe. **Habitat** Marshes and other damp places. **Status and distribution** Immigrant. Eleven records, five in Britain, the first on 20 Sep 1993 at Dungeness, Kent, the second on 22 Sep 1999 at Greatstone, Kent, both correctly identified only several years later. A male on 11 Sep 2002 at light at Kilnsea, Spurn, Yorkshire, in the company of three species of confirmed immigrant moths. One on 16 Sep 2002 at Landguard, Suffolk, and one on 3 Sep 2005 at Weymouth, Dorset. Six on Alderney from 2009 to 2011. Predominantly eastern in mainland Europe, but extends west to Spain, and long known as a migrant.

Cream-bordered Green Pea

plate 72

Earias clorana (L.)

Nb; suspected immigrant 74.011 (2418)



Field characters and similar species FW 10–12mm. Forewing green, with a white stripe along strongly curved leading edge, otherwise plain. Fringes usually white, hindwing pure white. When fully at rest, sits with wings held up at a steep angle. The much more widespread and abundant micro-moth Green Oak Tortrix *Tortrix viridana* L. (see pages 16–17) is flatter at rest and hindwing is grey. The uncommon f. *flavimargo* Joann. has brown forewing fringes, and has been mistaken for Spiny Bollworm (see under that species for differences). See also Egyptian Bollworm. **Flight season** Usually one generation, late May–Jul. Occasionally a partial second generation, Aug onwards. Rests among foliage by day, flying from dusk. Can be

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

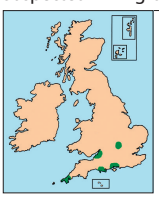
netted around the foodplant and comes well to light and to sugar, sometimes in numbers. **Life cycle** Overwinters as a pupa, in a tough boat-shaped cocoon often constructed on a twig or stem of the foodplant. Larva late Jun–Aug, sometimes with a partial second generation in Sep–Oct. **Larval foodplants** The terminal shoots of sallows and willows, possibly favouring Osier. Also recorded near ground level on Creeping Willow. **Habitat** Broads, fens, marshes, sallow carr and damp woodland (especially in East Anglia), and the floodplains and valleys of major rivers such as the Humber, Thames and latterly the Severn; also damp heathland in Dorset and vegetated shingle at Dungeness, Kent. Breeding recently suspected in well-established gardens or along nearby ditches and amenity plantings of native trees and shrubs in the east Midlands. **Status and distribution** Resident and suspected immigrant. Nationally Scarce B. Well distributed in East Anglia, extending into the south-east Midlands and north through Lincolnshire and southern parts of Yorkshire, where it has expanded greatly since the 1990s. Also occurs more locally west to the Severn Valley and south-west England (including Scilly and West Cornwall, where it has become established in the 21st century), and in central southern and south-east England, mainly in coastal counties. Singletons, suspected wanderers, have been recorded westwards into Wales, the first at Usk, Monmouthshire, on 20 Jun 1983. Recorded only once in Ireland, two in 1914 in the Coomarkane Valley, near Glengariff, Co. Cork. Singletons of f. *flavimargo* were light-trapped at St Austell, Cornwall, on 12 Jun 1992 and Freshwater, Isle of Wight, on 25 Jun 1992, and may have been immigrants. Widespread and frequent in the Channel Islands.

Egyptian Bollworm

plate 72

Earias insulana (Boisd.)

Suspected immigrant; Adventive 74.012 (2420)



Field characters and similar species FW 10–12mm. Forewing green, brownish green or light grey-brown, usually with diffuse but distinct darker cross-lines, often V-shaped. One form has a large rhomboidal brown blotch placed centrally on trailing edge, with two darker cross-lines running through it. Fringes in green form are green. Holds wings at a very steep angle when fully at rest. Cream-bordered Green Pea has a broader forewing, a more arched leading edge with a white stripe along it, and lacks cross-lines. See also Spiny Bollworm. Suspected examples of any bollworm species should be retained for confirmation. **Larval foodplants** Cotton, Carob, Maize and many other plants. Feeds in the stem and on the flowers and fruits. **Status and distribution** Suspected rare immigrant and import. Nine British records of suspected immigrants. First, an unlabelled specimen was discovered in a series of Green Oak Tortrix (see page 17), stated to have been collected in 1962 in southern England, possibly Devon. One at light at Brockenhurst, Hampshire, on 8 Oct 1967, when scarce immigrants were recorded elsewhere in England. Singletons at Portland, Dorset, on 24 Aug 1999, 8 Oct 2011 and 2 Oct 2013; at Stoke Bishop, Gloucestershire, on 27 Jul 2001; and at Holbury, Hampshire, on 28 Oct 2006. One at Woodnewton, Northamptonshire, in 2009 and one at Maenporth, Cornwall, on 7 Oct 2013. The immature stages have been found in imported produce at British airports. Resident in Africa, Asia and Australia, and recorded in Mediterranean Europe.

Spiny Bollworm

plate 72

Earias biplaga (Walk.)

Suspected immigrant; Adventive 74.0121

Field characters and similar species FW 11–12mm. Forewing broad, green or yellowish green, with very faint cross-lines and brown fringes. One form has a large purplish-brown blotch centrally on trailing edge, and these merge when at rest, making it quite distinctive. The unblotched form is somewhat similar to the rare form of Cream-bordered Green Pea, with brown fringes, but lacks white stripe on leading edge. Egyptian Bollworm has a narrower forewing with more obvious cross-lines and fringes are not brown. **Larval foodplants** Cocoa, Cotton, Okra and a range of other plants, feeding (mainly) internally. **Status and distribution** Suspected accidental import or rare immigrant. Recorded four times in Britain as singletons in light-traps. A fresh male on 17 Jul 1964 at Buckingham Palace Gardens, London (following the visit of a delegation from East Africa). One on 23 Jul 1982 at Lymington, Hampshire; one on 11 Sep 1999 with a small influx of other immigrant moths at Dungeness, Kent; and one at Woodnewton, Northamptonshire, on 27 Oct 2009. The immature stages have been found in imported vegetable produce including Okra, at British airports. Not resident in Europe, but a single specimen was recorded in Denmark in 2004, during a migratory event. Resident in sub-Saharan Africa where it is sometimes a pest on cotton.

Eastern Bollworm

plate 72

Earias vittella (Fabr.)

Suspected immigrant; Adventive 74.0122

Field characters FW 10–12mm. Unmistakable. Forewing has broad white or yellow stripes along leading and trailing edges and a broad green central stripe. **Larval foodplants** Okra, feeding inside the pods. **Status and distribution** Suspected immigrant and adventive. One on 16 Jun 2003 at Durlston Head, Swanage, Dorset, at a time of high immigrant activity. Singles at Wigstown in Leicestershire (2006) and Coventry in Warwickshire are suspected to have been accidentally introduced with Okra pods, and it has been recorded on imported produce (from India), the first in 1976. Not known to occur naturally in Europe, although a male was caught at light in southern Spain in Sep 2001.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Adventive (accidentally imported) species and those of doubtful occurrence

Previous editions of this book have included an appendix comprising accounts of selected species that are recorded occasionally in the British Isles due to accidental importation (i.e. by human means), under dubious (i.e. fraudulent) circumstances and/or where the evidence for their presence is otherwise unclear, often because it is very old. Those listed were selected because they were considered the most likely to have been genuine, the most likely to be found, because of their similarity to known British species, or because they were particularly interesting.

However, partly to provide space for new information on species of natural occurrence, this time it was felt more appropriate and helpful to describe the nature and origins of other species in greater detail rather than present formal species accounts of a selected few, given that a more exhaustive list is now easily accessible. Interested readers should refer to the current British Isles list (and updates) for details of all the known (i.e. published) examples. We have retained a small number of illustrations of these 'appendix' species in our main section, along with comparative comments under the relevant naturally occurring confusion species. In addition, notes and illustrations of three representative examples of adventive and dubious species not dealt with in the species accounts are provided below.

As mentioned in the Introduction (pages 7–8), species in the categories described above were listed in the previous British Isles list (Bradley 2000) in taxonomic order alongside native residents and those that arrive as natural immigrants. However, for the new list (Agassiz *et al.* 2013), the status of all species was critically reviewed. Those for which it was decided there was insufficient evidence of their natural occurrence in the British Isles were removed to two appendices, entitled 'Adventive Species' (i.e. accidental imports; with 71 macro species plus two added by Agassiz *et al.* 2016) and 'Questionable Records' (with 51 macro species). Here, the term 'adventive' is used purely to mean a species that has arrived in a new area as a result of human activity but has not established a breeding population. If that subsequently happens, it is described as having become naturalised. Questionable species include possible frauds as well as those that are dubious for other reasons and others that have proved to be erroneous, or no credible evidence has otherwise been found to substantiate the original claim.

The species in the first category, the adventives, are those that occur, some on a regular basis, accidentally imported (either as adults or in their early stages) with food or other organic produce such as potted plants, cut flowers or trees bound for amenity plantings; or even with man-made products or the wooden pallets and other containers used to transport them. During the 20th century, the numbers of insects (and other fauna and flora) 'hitching a ride' around the world by air, sea and road has greatly increased along with the volume of materials and people travelling long distances. This is part of a more general phenomenon that has become known as biological globalisation, with increasing numbers of species becoming established in new territories, some having drastic – often damaging – effects on the local ecology, and in some cases becoming pests in the human environment.

In many cases the natural range of adventive moths that arrive in the British Isles is far outside Europe, such that natural colonisation would be impossible or extremely unlikely. An example is Common Forest Looper (page 169), a native of New Zealand, which appears to have become naturalised in a very small area of south-west England (and is therefore dealt with in the main section of the book). Only a small proportion of such species have become naturalised, however; many are tropical or sub-tropical and cannot survive our temperate winters and are therefore unable to establish a breeding population in the open. This is perhaps rather fortunate in some cases because some are major agricultural pests. They may be intercepted with imported produce

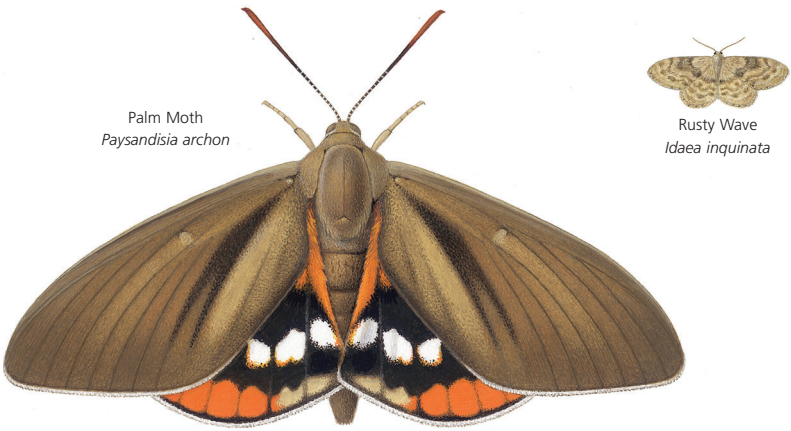
This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

by the regulatory government authorities, but some escape and are found at rest or caught in light traps. Some reach the consumer who may then report them to a local lepidopterist, who in turn may publish the find in an entomological journal. A small number of non-resident species occur regularly both as imports and as natural immigrants. These are dealt with in the main section of the book.

In the case of dubious species, records are often very old and details are vague. Even if they are supported by specimens, their labelling is often inadequate, ambiguous or barely legible, or it has subsequently been found that they were misidentified. Each example is unique, and occasionally when old material and literature is reviewed and new conclusions are made, this is published in one of the journals. Sometimes, investigations have concluded that the species was recorded fraudulently. In the 19th century, collecting was very popular among the wealthy and fraud was relatively commonplace. Collectors were prepared to pay high prices for rare insects and some dealers took advantage of this, and would travel abroad, collect specimens and sell them as British when they returned home. In some cases, it has proved difficult or impossible to establish whether a particular record was due to fraud, genuine misidentification, misleading labelling or some other confusion.

Three examples of adventive or dubious species not mentioned in the species accounts

Palm Moth *Paysandisia archon* (Burmeister) 51.0001 (Castniidae) is a very large, unmistakable moth with forewing 40–50mm. A native of South America, it was accidentally introduced into southern Europe with plant stock and is now found in Spain, southern France and Italy where it has become a pest. The larva mines stems of various palm-trees, often severely damaging or killing the plant. It was first recorded in Britain on 13 August 2002, when one was found flying in a garden at Bosham, near Chichester, West Sussex, then in May and June 2007 at West Malling, Kent, where nine emerged in an office building, in palms imported from Spain in October 2006. In July 2007, three live larvae were found in a nursery in north London, in palms imported from Italy.



Rusty Wave *Idaea inquinata* (Scop.) 70.0042 (Geometridae) is a small species with forewing 8–10mm. It has pale sandy brown wings, mottled, finely dotted and sometimes banded with darker grey-brown. All records are clearly associated with imported dried herbs and plants, upon which the larvae feed. It was found a number of times in the late 19th century, mainly in central London, the first in Bloomsbury Street in 1856. Other records are from a herbalist's shop in Holbourn in June 1868, and in shops in other streets in subsequent years. Two adults were captured in the basement of Tring Museum, Hertfordshire (date uncertain but probably in the early 20th century), where it was probably introduced with plant-derived packing materials. In

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

the late 20th century it was found several times associated with dried flowers, and an adult was found indoors in Bridgend, Glamorgan in May 2013. It is widespread in central and southern Europe and the Mediterranean coast of Africa.

Nine-spotted *Amata phegea* (L.) 72.0501 (Erebidae) has a forewing 17–23mm. It is a striking, day-flying moth unlike any resident in the British Isles, and is widespread in the southern half of mainland Europe in a variety of well-drained open habitats, the larva feeding on dead-nettles, dandelions and other herbaceous plants. It was first reported in 1872 on the Kent coast between Folkestone and Dover, flying in sunshine, but the recorder is regarded as suspect. A second was reported at Holland-on-Sea, Essex, on 24 July 2000.

Nine-spotted
Amata phegea

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Authority abbreviations used in the descriptions

For an explanation of the use of authority names, see page 18.

Barrett	Barr.
Bastelberger	Bast.
Boheman	Boh.
Boisduval	Boisd.
Borkhausen	Borkh.
Boursin	Bours.
Brünnich	Brünn.
Burrows	Burr.
Bytinski-Salz	Byt.-Salz
Chalmers-Hunt	C.-Hunt
Clerk	Cl.
Cockayne	Cock.
Cockayne & Williams	Cock. & Will.
Cockerell	Cockll.
Curtis, W.	Curt.
Curtis, W. Parkinson	W.P. Curt.
Cyrillo	Cyr.
DeGeer	DeG.
Denis & Schiffermüller	D. & S.
Donovan	Don.
Doubleday	Doubl.
Duponchel	Dup.
Esper	Esp.
Eversmann, von	Eversm.
Fabricius	Fabr.
Fletcher	Fletch.
Forster	Forst.
Fuessly	Fuessl.
Graslin	Grasl.
Gregson	Gregs.
Guenée	Guen.
Harrison	Harr.
Haworth	Haw.
Hering	Her.
Herrich-Schäffer	H.-S.
Hoffmeyer & Knudson	Hoff. & Knud.
Hohenwarth	Hohen.
Hübner	Hb.
Hufnagel	Hufn.
Humphreys & Westwood	Humph. & Westw.
Joannis, de	Joann.
Jordan	Jord.
Krulikovsky	Krul.
La Harpe	La Harpe, de
Laspeyres	Lasp.
Lederer	Led.
Lefebvre	Lefeb.
Linnaeus	L.
Mabille	Mab.
Metcalfe	Metc.
Millière	Mill.
Müller	Müll.
Newman	Newm.
Oberthür	Ob.
Ochsenheimer	Ochs.
Osbeck	Osb.
Pallas	Pall.
Philpott	Philp.
Pierret	Pier.
Piller	Pill.
Prunner, de	Prunn.
Rambur	Ramb.
Rezbanyai-Reser	Rézb.-Res.
Richardson	Rich.
Rothschild	Roths.
Rottemburg	Rott.
Rowland-Brown	Rowl.-Br.
Scharfenberg	Scharf.
Scheven	Schev.
Schrank	Schr.
Schreber	Schreb.
Scopoli	Scop.
Sheldon	Sheld.
Sparre-Schneider	Sp.-Schn.
Spuler	Spul.
Stainton	Stt.
Staudinger	Stdgr.
Stephens	Steph.
Tauscher	Tausch.
Thunberg	Thunb.
Treitschke	Treit.
Tremewan	Trem.
Turner	Turn.
Verity	Ver.
Vieweg	View.
Villers	Vill.
Walker	Walk.
Wallengren	Wall.
Warnecke	Warn.
Warren	Warr.
Werneburg	Werneb.
Westwood	West.
Wollaston	Woll.
Zeller	Zell.
Zetterstedt	Zett.
Zincken	Zinck.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Further reading

Agassiz, D J L, Beavan, S D and Heckford, R J (2013). *A checklist of the Lepidoptera of the British Isles*. Royal Entomological Society, St Albans.

Agassiz, D J L, Beavan, S D and Heckford, R J (2016a). Corrigenda to *A checklist of the Lepidoptera of the British Isles* 2013. *Entomologist's Record and Journal of Variation* 128: 50–55.

Agassiz, D L, Beavan, S D and Heckford, R J (2016b). Addenda and amendments to *A checklist of the Lepidoptera of the British Isles* on account of subsequently published data. *Entomologist's Record and Journal of Variation* 128: 94–98.

Allan, P B M (1947). *A moth-hunter's gossip*. Watkins & Doncaster, London.

Allan, P B M (1949). *Larval foodplants* (reprinted 1979). Watkins & Doncaster, Hawkhurst.

Barrett, C G (1893–1907). *The Lepidoptera of the British Islands* (11 volumes). Lovell Reeve & Co., London.

Beirne, B (1952). *British pyralid and plume moths*. Warne, London.

Bland, K P (ed.) (2014). *The moths and butterflies of Great Britain and Ireland. Volume 5: Tortricidae*. Brill, Leiden.

Bradley, J D (2000). *Checklist of Lepidoptera recorded from the British Isles* (2nd edition, revised). D. Bradley, Fordingbridge.

Bradley, J D, Tremewan, W G and Smith, A (1973, 1979). *British tortricoid moths* (two volumes). Ray Society, London. In CD format, Pisces Conservation Ltd, Lymington.

Buckler, W (1885–99). *Larvae of the British butterflies and moths* (nine volumes). Ray Society, London. In CD format, Pisces Conservation Ltd, Lymington.

Clancy, S, Top-Jensen, M and Fibiger, M (eds) (2012). *Moths of Great Britain and Ireland – a field guide to all the macro-moths.* Bugbook Publishing, Oestermarie.

Conrad, K F, Warren, M S, Fox, R, Parsons, M and Woiwod, I P (2006). Rapid declines of common, widespread British moths provide evidence of an insect biodiversity crisis. *Biological Conservation* 132: 279–291.

Conrad, K F, Woiwod, I P, Parsons, M, Fox, R and Warren, M S (2004). Long-term population trends in widespread British moths. *Journal of Insect Conservation* 8: 119–136.

Conrad, K F, Woiwod, I P and Perry, J N (2002). Long-term decline in abundance and distribution of the garden tiger moth (*Arctia caja*) in Great Britain. *Biological Conservation* 106: 329–337.

Crafer, T (2005). *Foodplant list for the caterpillars of Britain's butterflies and larger moths.* Atropos Publishing, Holmfirth.

Emmet, A M (1991). *The scientific names of the British Lepidoptera – their history and meaning*. Harley Books, Colchester.

Emmet, A M (ed.) (1996). *The moths and butterflies of Great Britain and Ireland. Volume 3: Yponomeutidae–Elachistidae*. Harley Books, Colchester.

Emmet, A M (ed.) (2002). *The moths and butterflies of Great Britain and Ireland. Volume 4 (part I): Oecophoridae–Scythrididae (excluding Gelechiidae)*. Harley Books, Colchester.

Emmet, A M (ed.) (2010). *A field guide to the smaller British Lepidoptera* (second edition, revised and enlarged). British Entomological and Natural History Society, Hurst.

Emmet, A M and Langmaid, J R (eds) (2002). *The moths and butterflies of Great Britain and Ireland. Volume 4 (part II): Gelechiidae*. Harley Books, Colchester.

Fox, R (2013). The decline of moths in Great Britain: a review of possible causes. *Insect Conservation and Diversity* 6: 5–19.

Fox, R, Conrad, K F, Parsons, M S and Woiwod, I P (2006). *The state of Britain's larger moths*. Butterfly Conservation and Rothamsted Research, Wareham.

Fox, R, Oliver, T H, Harrower, C, Parsons, M S, Thomas, C D and Roy, D B (2014). Long-term changes to the frequency of occurrence of British moths are consistent with opposing and synergistic effects of climate and land-use changes. *Journal of Applied Ecology* 51: 949–957.

Fox, R, Parsons, M S, Chapman, J W, Woiwod, I P, Warren, M S and Brooks, D R (2013). *The state of Britain's larger moths 2013.* Rothamsted Research and Butterfly Conservation, Wareham.

Friedrich, E (1986). *Breeding butterflies and moths – a practical guide to British and European species*. Harley Books, Colchester.

Fry, R and Waring, P (2001). A guide to moth traps and their use. *Amateur Entomologist* 24 (2nd edition). Amateur Entomologists' Society, London.

Goater, B (1986). *British pyralid moths*. Harley Books, Colchester.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Haggett, G M (1981). *Larvae of the British Lepidoptera not figured by Buckler*. British Entomological and Natural History Society, London.

Hart, C (2011). *British plume moths. A guide to their identification and biology*. British Entomological and Natural History Society, Hurst.

Harwood, W H (1903). Lepidoptera. *Victoria County History of Essex* 1: 136–177.

Heath, J and Emmet, A.M. (eds) (1979). *The moths and butterflies of Great Britain and Ireland. Volume 9: Sphingidae–Noctuidae (part I)*. Curwen, London.

Heath, J and Emmet, A M (eds) (1983). *The moths and butterflies of Great Britain and Ireland. Volume 10: Noctuidae (part II) and Agaristidae*. Harley Books, Colchester.

Heath, J and Emmet, A M (eds) (1985). *The moths and butterflies of Great Britain and Ireland. Volume 2: Cossidae–Heliodinidae*. Harley Books, Colchester.

Hill, L, Randle, Z, Fox, R and Parsons, M (2010). *Provisional atlas of the UK's larger moths.* Butterfly Conservation, Wareham.

Karsholt, O and Razowski, J (1996). *The Lepidoptera of Europe – a distributional checklist*. Apollo, Stenstrup.

Leverton, R (2001). *Enjoying moths*. Poyser, London.

Macleod, R D (1959). *Key to the names of British butterflies and moths*. Pitman, London.

Majerus, M (2002). *Moths*. New Naturalist Series. HarperCollins, London.

Manley, C (2015). *British moths. A photographic guide to the moths of Britain and Ireland* (2nd edition). Bloomsbury, London. Also available as an iPhone app.

Marren, P (1998). The English names of moths. *British Wildlife* 10: 29–38.

May, P (ed.) (2014). A handbook for lepidopterists. *Amateur Entomologist* 13. Amateur Entomologists' Society, Orpington.

Meyrick, E (1928). *A revised handbook of the British Lepidoptera*. Macmillan, London.

Newland, D, Still, R and Swash, A (2013). *Britain's day-flying moths. A field guide to the day-flying moths of Britain and Ireland*. Princeton University Press, Woodstock.

Newman, E (1869). *An illustrated history of the British butterflies and moths*. Allen, London.

Newman, L W and Leeds, H A (1913). *Textbook of British butterflies and moths*. Gibbs & Bamforth, St Albans.

Parsons, M (2003). The changing moth and butterfly fauna of Britain during the twentieth century. *Entomologist's Record and Journal of Variation* 115: 49–66.

Parsons, M (2010). The changing moth and butterfly fauna of Britain – the first decade of the twenty-first century (2000–2009). *Entomologist's Record and Journal of Variation* 122: 13–22.

Parsons, M, Green, D and Waring, P (2001). A brief review of Butterfly Conservation's Action for Threatened Moths Project (1999 and 2000). *Atropos* 13: 25–29.

Picozzi, N (2012). Adaptation of the hind legs for display by the male Gold Swift *Hepialus hecta* L. (Lep.: Hepialidae). *Entomologist's Record and Journal of Variation* 124: 165–166.

Plant, C W (2010). An examination of the status of *Diachrysia stenochrysis* (Warren), 1913 and its possible occurrence in Britain as a sibling of *D. chrysitis* (L.) (Lep.: Noctuidae). *Entomologist's Record and Journal of Variation* 122: 128–136.

Porter, J (1997). *The colour identification guide to caterpillars of the British Isles*. Viking, London.

Riley, A M and Prior, G (2003). *British and Irish pug moths – a guide to their identification*. Harley Books, Colchester.

Scoble, M J (1992). *The Lepidoptera – form, function and diversity*. Natural History Museum and Oxford University Press, Oxford.

Shirt, D B (ed.) (1987). *British Red Data Books 2. Insects*. Nature Conservancy Council, Peterborough.

Skinner, B (2009). *Colour identification guide to moths of the British Isles* (3rd edition). Viking, London.

South, R (1961). *The moths of the British Isles* (two volumes) (4th edition, first published 1907). Warne, London.

Stace, C (2010). *New flora of the British Isles* (3rd edition). Cambridge University Press, Cambridge.

Sterling, P H and Costen, P D M (2011). Southern Grass Emerald *Chlorissa cloraria* (Hübner, [1813]) (Lep.: Geometridae) new to the Channel Islands. *Entomologist's Record and Journal of Variation* 123: 1–11.

Sterling, P, Parsons, M and Lewington, R (2012). *Field guide to the micro-moths of Great Britain and Ireland*. British Wildlife Publishing, Gillingham. Also available as an in-app purchase in the iPhone app *Field Guide to the Moths of Great Britain and Ireland* (2nd edition).

Tams, W H T (1941). Some British moths reviewed. In: *AES Pamphlet* 12. A Golden Jubilee reprint (1985). Amateur Entomologists' Society, Hanworth.

Thompson, R and Nelson, B (2006). *The butterflies and moths of Northern Ireland*. National Museums Northern Ireland, Belfast.

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Townsend, M C, Clifton, J and Goodey, B (2010). *British and Irish moths: an illustrated guide to selected difficult species.* Butterfly Conservation, Wareham. Out of print but available online at www.mothscount.org.

Townsend, M, Waring, P and Lewington, R (2007). *Concise guide to the moths of Great Britain and Ireland*. British Wildlife Publishing, Gillingham.

Tutt, J W (1994). Practical hints for the field lepidopterist. *Amateur Entomologist* 23 (facsimile reprint). Amateur Entomologists' Society, Orpington.

UK Biodiversity Group (1999). *Tranche 2 action plans. Volume IV – invertebrates*. English Nature, Peterborough.

Waring, P (1989–present). Wildlife reports – moths. *British Wildlife* (every issue).

Waring, P (1994). National Moth Conservation Project. *News Bulletin* 5. Butterfly Conservation, Dunstable.

Waring, P (1997). A review of the nationally scarce and threatened macro-moths of Great Britain (updated 2000, 2003). Unpublished report for Joint Nature Conservation Committee, Peterborough.

Waring, P (1999a). The national recording network for the rarer British macro-moths. *Atropos* 6: 19–27.

Waring, P (1999b). National Moth Conservation Project. *News Bulletin* 10. Butterfly Conservation, Dedham.

Young, M R (1997). *The natural history of moths*. Poyser, London.

National journals and magazines

Atropos – 36 Tinker Lane, Meltham, Holmfirth, West Yorkshire HD9 4EX (www.atropos.info).

British Wildlife – British Wildlife Publishing, NHBS Ltd, 1–6 The Stables, Ford Road, Totnes, Devon TQ9 5LE (www.britishwildlife.com).

Entomologist's Gazette – The Editor, Pentreath, 6 Carlyon Road, Playing Place, Truro, Cornwall TR3 6EU (email: wgt.pentreath@talk21.com) (published by Pemberley Books, www.pemberleybooks.com/journals/Entomologists_Gazette.asp).

Entomologist's Record and Journal of Variation – The Editor, 14 West Road, Bishops Stortford, Hertfordshire CM23 3QP (email: cpauk1@ntlworld.com, www.entrecord.com) (published by the Amateur Entomologists' Society, www.amentsoc.org/publications/entomologists-record).

Websites

data.nhm.ac.uk/dataset/checklist-of-the-lepidoptera-of-the-british-isles-data (main species list, including updates).

mothdissection.co.uk (images of adults and preparations of genitalia of British and European Lepidoptera).

www.atropos.info/site/index.php (including Flight Arrivals news, and a synopsis of immigrant moth records).

www.eastscotland-butterflies.org.uk/mothrecords.html (including maps and flight period charts for the whole of Scotland).

www.fauna-eu.org (European checklist).

www.lepiforum.de/lepiwiki.pl (photographs of live adults, set specimens and early stages of European moths).

www.leps.it (photographs of adults and larvae of moths of Europe and North Africa).

www.mothnight.info (details of annual Moth Nights).

www.mothscount.org (National Moth Recording Scheme, including distribution maps, list of county moth recorders and news of events).

www.mothsireland.com (recording scheme for the whole of Ireland, including distribution maps and photographic archive).

www.ukmoths.org.uk (an online guide to the moths of Britain and Ireland, with photographs, summary text and distribution maps).

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Scientific species names of plants

These are larval and nectar plant species mentioned in the text. Nomenclature follows Stace (2010).

Alder *Alnus glutinosa*
Alison, Golden *Aurinia saxatilis*
Almond *Prunus dulcis*
Angelica, Wild *Angelica sylvestris*
Apple *Malus pumila*
Apple, Crab *Malus sylvestris*
Archangel, Yellow *Lamiastrum galeobdolon*
Ash *Fraxinus excelsior*
Aspen *Populus tremula*
Asphodel, Bog *Narthecium ossifragum*
Aster, China *Callistephus chinensis*
Aster, Sea *Aster tripolium*
Avens, Wood *Geum urbanum*
Azalea, Trailing *Kalmia procumbens*

Balsam, Himalayan *Impatiens glandulifera*
Balsam, Indian *Impatiens glandulifera*
Balsam, Orange *Impatiens capensis*
Balsam, Small *Impatiens parviflora*
Balsam, Touch-me-not *Impatiens noli-tangere*
Barberry *Berberis vulgaris*
Barberry, Mrs Wilson's *Berberis wilsoniae*
Barberry, Thunberg's *Berberis thunbergii*
Barley *Hordeum vulgare*
Bartsia, French *Odontites jaubertianus* ssp. *chrysanthus*
Bartsia, Red *Odontites vernus*
Bean, Runner *Phaseolus coccineus*
Bearberry *Arctostaphylos uva-ursi*
Bedstraw, Fen *Galium uliginosum*
Bedstraw, Heath *Galium saxatile*
Bedstraw, Hedge *Galium album*
Bedstraw, Lady's *Galium verum*
Bedstraw, Northern *Galium boreale*
Beech *Fagus sylvatica*
Beet *Beta vulgaris*
Beet, Sea *Beta vulgaris* ssp. *maritima*
Bellflower, Clustered *Campanula glomerata*
Bellflower, Giant *Campanula latifolia*
Bellflower, Nettle-leaved *Campanula trachelium*
Bent, Bristle *Agrostis curtisii*
Bent, Common *Agrostis capillaris*
Betony *Stachys officinalis*
Bilberry *Vaccinium myrtillus*
Bilberry, Bog *Vaccinium uliginosum*
Bindweed, Field *Convolvulus arvensis*
Bindweed, Hedge *Calystegia sepium*
Bindweed, Sea *Calystegia soldanella*
Birch, Downy *Betula pubescens*
Birch, Silver *Betula pendula*
Bird's-foot-trefoil, Common *Lotus corniculatus*
Bird's-foot-trefoil, Greater *Lotus pedunculatus*
Bitter-cress, Hairy *Cardamine hirsuta*
Bitter-vetch *Lathyrus linifolius*
Black-bindweed *Fallopia convolvulus*
Black Medick *Medicago lupulina*
Black-poplar *Populus nigra*
Blackthorn *Prunus spinosa*
Bluebell *Hyacinthoides non-scripta*
Bogbean *Menyanthes trifoliata*
Bog-myrtle *Myrica gale*
Bog-rosemary *Andromeda polifolia*
Borage *Borago officinalis*
Bracken *Pteridium aquilinum*
Bramble *Rubus fruiticosus* agg.
Brome, False *Brachypodium sylvaticum*
Broom *Cytisus scoparius*
Broom, Prostrate *Cytisus scoparius* ssp. *maritimus*
Broom, Spanish *Spartium junceum*
Broom, Sweet *Cytisus racemosus*
Buckthorn *Rhamnus cathartica*
Buckthorn, Alder *Frangula alnus*
Bugle *Ajuga reptans*
Bullace *Prunus domestica* ssp. *insititia*
Bulrush *Typha latifolia*
Bulrush, Lesser *Typha angustifolia*
Burdock, Lesser *Arctium minus*
Burnet, Salad *Poterium sanguisorba* ssp. *sanguisorba*
Burnet-saxifrage *Pimpinella saxifraga*
Bur-reed, Branched *Sparganium erectum*
Butterbur *Petasites hybridus*
Buttercup, Meadow *Ranunculus acris*

Cabbage *Brassica oleracea*
Campion, Bladder *Silene vulgaris*
Campion, Red *Silene dioica*
Campion, Sea *Silene uniflora*
Campion, White *Silene latifolia*
Canary-grass, Reed *Phalaris arundinacea*
Carob *Ceratonia siliqua*
Carrot *Daucus carota* ssp. *sativa*
Carrot, Wild *Daucus carota* ssp. *carota*
Castor-oil-plant *Ricinus communis*

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Catchfly, Nottingham *Silene nutans*
Catchfly, Spanish *Silene otites*
Cedar-of-Lebanon *Cedrus libani*
Celandine, Lesser *Ficaria verna*
Celery *Apium graveolens*
Chamomile *Chamaemelum nobile*
Chamomile, Corn *Anthemis arvensis*
Chamomile, Stinking *Anthemis cotula*
Cherry, Bird *Prunus padus*
Cherry, Wild *Prunus avium*
Chervil, Bur *Anthriscus caucalis*
Chervil, Rough *Chaerophyllum temulum*
Chestnut, Sweet *Castanea sativa*
Chickweed, Common *Stellaria media*
Chicory *Cichorium intybus*
Cinquefoil, Creeping *Potentilla reptans*
Cleavers *Galium aparine*
Clover, Hare's-foot *Trifolium arvense*
Clover, Red *Trifolium pratense*
Clover, White *Trifolium repens*
Club-rush, Common *Schoenoplectus lacustris*
Cocoa *Theobroma* spp.
Cock's-foot *Dactylis glomerata*
Colt's-foot *Tussilago farfara*
Comfrey, Common *Symphytum officinale*
Corn Spurry *Spergula arvensis*
Cotton *Gossypium herbaceum*
Cottongrass, Common *Eriophorum angustifolium*
Couch, Common *Elytrigia repens*
Couch, Sand *Elytrigia juncea*
Couch, Sea *Elytrigia atherica*
Cowberry *Vaccinium vitis-idaea*
Cowslip *Primula veris*
Cow-wheat, Common *Melampyrum pratense*
Crack-willow *Salix fragilis*
Cranberry *Vaccinium oxycoccos*
Crane's-bill, Shining *Geranium lucidum*
Crowberry *Empetrum nigrum*
Currant, Black *Ribes nigrum*
Currant, Red *Ribes rubrum*
Cypress, Lawson's *Chamaecyparis lawsoniana*
Cypress, Leyland × *Cuprocyparis leylandii*
Cypress, Monterey *Cupressus macrocarpa*

Daisy *Bellis perennis*
Daisy, Oxeye *Leucanthemum vulgare*
Dandelion *Taraxacum* spp.
Dead-nettle, Red *Lamium purpureum*
Dead-nettle, White *Lamium album*
Dewberry *Rubus* sect. *Caesii*
Dock, Broad-leaved *Rumex obtusifolius*
Dock, Curled *Rumex crispus*
Dock, Water *Rumex hydrolapathum*
Dog-rose *Rosa canina*
Dog-violet, Common *Viola riviniana*
Dogwood *Cornus sanguinea*

Elder *Sambucus nigra*
Elm, English *Ulmus procera*
Elm, Japanese Golden *Ulmus davidiana* var. *japonica*
Elm, Small-leaved *Ulmus minor* ssp. *minor*
Elm, Wych *Ulmus glabra*
Enchanter's-nightshade *Circaea lutetiana*
Evening-primrose, Common *Oenothera biennis*
Everlasting, Dwarf *Helichrysum arenarium*
Everlasting, Mountain *Antennaria dioica*

Fat-hen *Chenopodium album*
Feather-moss, Silky Wall *Homalothecium sericeum*
Fennel *Foeniculum vulgare*
Fennel, Hog's *Peucedanum officinale*
Fen-sedge, Great *Cladium mariscus*
Fescue, Meadow *Schedonorus pratensis*
Fescue, Red *Festuca rubra*
Fescue, Tall *Schedonorus arundinaceus*
Feverfew *Tanacetum parthenium*
Figwort, Common *Scrophularia nodosa*
Figwort, Water *Scrophularia auriculata*
Fir, Douglas *Pseudotsuga menziesii*
Fir, Giant *Abies grandis*
Fir, Noble *Abies procera*
Flax, Fairy *Linum catharticum*
Fleabane, Common *Pulicaria dysenterica*
Flixweed *Descurainia sophia*
Foxglove *Digitalis purpurea*

Geranium, Scarlet *Pelargonium* × *hybridum*
Goldenrod *Solidago virgaurea*
Goldenrod, Canadian *Solidago canadensis*
Golden-samphire *Inula crithmoides*
Gooseberry *Ribes uva-crispa*
Goosefoot, Red *Chenopodium rubrum*
Gorse *Ulex europaeus*
Grape-vine *Vitis vinifera*
Greenweed, Dyer's *Genista tinctoria*
Gromwell, Field *Lithospermum arvense*
Ground-elder *Aegopodium podagraria*
Ground-ivy *Glechoma hederacea*
Groundsel *Senecio vulgaris*
Groundsel, Sticky *Senecio viscosus*
Guelder-rose *Viburnum opulus*

Hair-grass, Early *Aira praecox*
Hair-grass, Silver *Aira caryophyllea*
Hair-grass, Tufted *Deschampsia cespitosa*
Hair-grass, Wavy *Deschampsia flexuosa*
Harebell *Campanula rotundifolia*
Hawk's-beard, Beaked *Crepis vesicaria*
Hawk's-beard, Smooth *Crepis capillaris*
Hawk's-head, Tuberous *Aetheorhiza bulbosa*
Hawthorn *Crataegus monogyna*
Hawthorn, Midland *Crataegus laevigata*

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Hazel *Corylus avellana*
Heath, Cross-leaved *Erica tetralix*
Heather *Calluna vulgaris*
Heather, Bell *Erica cinerea*
Hemlock-spruce, Western *Tsuga heterophylla*
Hemp-agrimony *Eupatorium cannabinum*
Hemp-nettle, Common *Galeopsis tetrahit*
Henbane *Hyoscyamus niger*
Hogweed *Heracleum sphondylium*
Holly *Ilex aquifolium*
Hollyhock *Alcea rosea*
Honeysuckle *Lonicera periclymenum*
Hop *Humulus lupulus*
Horehound, Black *Ballota nigra*
Hornbeam *Carpinus betulus*
Horse-chestnut *Aesculus hippocastanum*
Horse-radish *Armoracia rusticana*
Hound's-tongue *Cynoglossum officinale*

Iris, Yellow *Iris pseudacorus*
Ivy *Hedera helix*

Jasmine, Winter *Jasminum nudiflorum*
Juniper, Common *Juniperus communis*
Juniper, Prostrate *Juniperus communis* ssp. *nana*

Knapweed, Common *Centaurea nigra*
Knapweed, Greater *Centaurea scabiosa*
Knotgrass *Polygonum aviculare*
Knotweed, Himalayan *Persicaria wallichii*
Knotweed, Japanese *Fallopia japonica*

Laburnum *Laburnum anagyroides*
Larkspur *Consolida ajacis*
Laurel, Cherry *Prunus laurocerasus*
Lettuce, Great *Lactuca virosa*
Lettuce, Prickly *Lactuca serriola*
Lettuce, Wall *Lactuca muralis*
Lilac *Syringa vulgaris*
Lily, Martagon *Lilium martagon*
Lime, Common *Tilia* × *europaea*
Lime, Large-leaved *Tilia platyphyllos*
Lime, Small-leaved *Tilia cordata*
Liquorice, Wild *Astragalus glycyphyllos*
Lombardy-poplar *Populus nigra* var. *italica*
Loosestrife, Yellow *Lysimachia vulgaris*
Lords-and-Ladies *Arum maculatum*
Lousewort *Pedicularis sylvatica*
Lucerne *Medicago sativa*
Lupin, Tree *Lupinus arboreus*
Lyme-grass *Leymus arenarius*

Madder, Wild *Rubia peregrina*
Maize *Zea mays*
Male-fern *Dryopteris filix-mas*
Mallow, Common *Malva sylvestris*
Mallow, Dwarf *Malva neglecta*
Maple, Field *Acer campestre*
Marigold, Pot *Calendula officinalis*
Marjoram, Wild *Origanum vulgare*
Marram *Ammophila arenaria*
Marsh-bedstraw, Common *Galium palustre*
Marsh-mallow *Althaea officinalis*
Mat-grass *Nardus stricta*
Mayweed, Scentless *Tripleurospermum inodorum*
Meadow-grass, Annual *Poa annua*
Meadow-grass, Bulbous *Poa bulbosa*
Meadow-grass, Rough *Poa trivialis*
Meadow-grass, Smooth *Poa pratensis*
Meadow-grass, Wood *Poa nemoralis*
Meadow-rue, Common *Thalictrum flavum*
Meadow-rue, French *Thalictrum aquilegiifolium*
Meadow-rue, Lesser *Thalictrum minus*
Meadowsweet *Filipendula ulmaria*
Medick, Black *Medicago lupulina*
Melick, Wood *Melica uniflora*
Mercury, Dog's *Mercurialis perennis*
Michaelmas-daisy *Aster* spp.
Milkwort, Common *Polygala vulgaris*
Milkwort, Heath *Polygala serpyllifolia*
Mint, Water *Mentha aquatica*
Monk's-hood *Aconitum napellus*
Moor-grass, Blue *Sesleria caerulea*
Moor-grass, Purple *Molinia caerulea*
Mouse-ear, Common *Cerastium fontanum*
Mouse-ear, Field *Cerastium arvense*
Mouse-ear, Sticky *Cerastium glomeratum*
Mouse-ear-hawkweed *Pilosella officinarum*
Mugwort *Artemisia vulgaris*
Mullein, Dark *Verbascum nigrum*
Mullein, White *Verbascum lychnitis*
Mustard, Garlic *Alliaria petiolata*
Myrtle *Myrtus* spp.

Navelwort *Umbilicus rupestris*
Nettle, Common *Urtica dioica*
Nightshade, Deadly *Atropa belladonna*

Oak, Evergreen *Quercus ilex*
Oak, Kermes *Quercus coccifera*
Oak, Pedunculate *Quercus robur*
Oak, Sessile *Quercus petraea*
Oak, Turkey *Quercus cerris*
Oat *Avena sativa*
Oat-grass, False *Arrhenatherum elatius*
Okra *Abelmoschus esculentus*
Oleander *Nerium oleander*
Orache, Common *Atriplex patula*
Orache, Grass-leaved *Atriplex littoralis*
Orchid, Fragrant *Gymnadenia conopsea*
Oregon-grape *Mahonia* spp.
Osier *Salix viminalis*

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Oxlip *Primula elatior*

Pampas-grass *Cortaderia selloana*
Parsley, Cow *Anthriscus sylvestris*
Parsnip, Wild *Pastinaca sativa*
Pea, Garden *Pisum sativum*
Pea, Marsh *Lathyrus palustris*
Peach *Prunus persica*
Peanut *Arachis hypogaea*
Pear *Pyrus communis*
Pellitory-of-the-wall *Parietaria judaica*
Periwinkle, Lesser *Vinca minor*
Petty Whin *Genista anglica*
Pignut *Conopodium majus*
Pincushion, Common *Dicranoweisia cirrata*
Pine, Corsican *Pinus nigra* ssp. *laricio*
Pine, Douglas *Pinus douglasiana*
Pine, Lodgepole *Pinus contorta*
Pine, Maritime *Pinus pinaster*
Pine, Scots *Pinus sylvestris*
Pineappleweed *Matricaria discoidea*
Plane, London *Platanus* × *hispanica*
Plantain, Buck's-horn *Plantago coronopus*
Plantain, Greater *Plantago major*
Plantain, Ribwort *Plantago lanceolata*
Plantain, Sea *Plantago maritima*
Ploughman's-spikenard *Inula conyzae*
Plum, Cherry *Prunus cerasifera*
Plum, Cultivated *Prunus domestica*
Plum, Wild *Prunus domestica*
Pond-sedge, Lesser *Carex acutiformis*
Poplar, White *Populus alba*
Poppy, Californian *Eschscholzia californica*
Potato *Solanum tuberosum*
Potato, Sweet *Ipomoea batatas*
Potato Tree *Solanum macranthum*
Primrose *Primula vulgaris*
Privet, Garden *Ligustrum ovalifolium*
Privet, Wild *Ligustrum vulgare*
Purple-loosestrife *Lythrum salicaria*

Ragged-Robin *Silene flos-cuculi*
Ragwort, Common *Senecio jacobaea*
Ragwort, Hoary *Senecio erucifolius*
Rape *Brassica napus*
Raspberry *Rubus idaeus*
Red-cedar, Japanese *Cryptomeria japonica*
Red-cedar, Western *Thuja plicata*
Redshank *Persicaria maculosa*
Reed, Common *Phragmites australis*
Reindeer-moss *Cladonia rangiferina*
Restharrow, Common *Ononis repens*
Restharrow, Spiny *Ononis spinosa*
Rhododendron *Rhododendron ponticum*
Rice *Oryza sativa*
Rocket, Sea *Cakile maritima*
Rock-rose, Common *Helianthemum nummularium*
Rose, Burnet *Rosa spinosissima*
Roseroot *Sedum rosea*
Rowan *Sorbus aucuparia*
Rush, Compact *Juncus conglomeratus*
Rush, Jointed *Juncus articulatus*
Rush, Sharp-flowered *Juncus acutiflorus*
Rustyback *Asplenium ceterach*
Rye *Secale cereale*

Sage *Salvia officinalis*
Sage, Wood *Teucrium scorodonia*
Sainfoin *Onobrychis viciifolia*
Saltmarsh-grass, Borrer's *Puccinellia fasciculata*
Saltmarsh-grass, Common *Puccinellia maritima*
Saltmarsh-grass, Reflexed *Puccinellia distans*
Saltwort, Prickly *Salsola kali* ssp. *kali*
Sandwort, Sea *Honckenya peploides*
Saw-wort *Serratula tinctoria*
Saxifrage, Mossy *Saxifraga hypnoides*
Saxifrage, Purple *Saxifraga oppositifolia*
Saxifrage, Yellow *Saxifraga aizoides*
Scabious, Devil's-bit *Succisa pratensis*
Scabious, Field *Knautia arvensis*
Scabious, Small *Scabiosa columbaria*
Sea-blite, Annual *Suaeda maritima*
Sea-buckthorn *Hippophae rhamnoides*
Sea-holly *Eryngium maritimum*
Sea-lavender, Common *Limonium vulgare*
Sea-milkwort *Glaux maritima*
Sea-purslane *Atriplex portulacoides*
Sea-spurrey, Rock *Spergularia rupicola*
Sedge, Carnation *Carex panicea*
Sedge, Glaucous *Carex flacca*
Selfheal *Prunella vulgaris*
Service-tree, Wild *Sorbus torminalis*
Sheep's-bit *Jasione montana*
Sheep's-fescue *Festuca ovina*
Shepherd's-purse *Capsella bursa-pastoris*
Silver-fir, European *Abies alba*
Silverweed *Potentilla anserina*
Small-reed, Purple *Calamagrostis canescens*
Small-reed, Wood *Calamagrostis epigejos*
Snapdragon *Antirrhinum majus*
Sneezewort *Achillea ptarmica*
Snowberry *Symphoricarpos albus*
Soapwort *Saponaria officinalis*
Soft-grass, Creeping *Holcus mollis*
Soft-rush *Juncus effusus*
Sorrel, Common *Rumex acetosa*
Sorrel, Sheep's *Rumex acetosella*
Southernwood *Artemisia abrotanum*
Speedwell, Germander *Veronica chamaedrys*
Spindle *Euonymus europaeus*
Spindle, Evergreen *Euonymus japonicus*
Spruce, Norway *Picea abies*

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Spruce, Sitka *Picea sitchensis*
Spurge, Sea *Euphorbia paralias*
Spurge, Wood *Euphorbia amygdaloides*
Spurrey, Corn *Spergula arvensis*
Spurrey, Sand *Spergularia rubra*
Stitchwort, Greater *Stellaria holostea*
Stitchwort, Lesser *Stellaria graminea*
St John's-wort, Perforate *Hypericum perforatum*
Stonecrop, Biting *Sedum acre*
Stonecrop, English *Sedum anglicum*
Strawberry, Garden *Fragaria ananassa*
Strawberry, Wild *Fragaria vesca*
Strawberry-tree *Arbutus unedo*
Swede *Brassica napus* ssp. *rapifera*
Sweet-grass, Reed *Glyceria maxima*
Sweet-William *Dianthus barbatus*
Sycamore *Acer pseudoplatanus*

Tamarisk *Tamarix gallica*
Tansy *Tanacetum vulgare*
Tare, Smooth *Vicia tetrasperma*
Thistle, Carline *Carlina vulgaris*
Thistle, Creeping *Cirsium arvense*
Thistle, Spear *Cirsium vulgare*
Thorn-apple *Datura stramonium*
Thrift *Armeria maritima*
Thyme, Wild *Thymus polytrichus*
Timothy *Phleum pratense*
Toadflax, Common *Linaria vulgaris*
Toadflax, Ivy-leaved *Cymbalaria muralis*
Toadflax, Pale *Linaria repens*
Toadflax, Purple *Linaria purpurea*
Toadflax, Small *Chaenorhinum minus*
Tomato *Solanum lycopersicum*
Tor-grass *Brachopodium pinnatum*
Tormentil *Potentilla erecta*
Traveller's-joy *Clematis vitalba*
Treacle-mustard *Erysimum cheiranthoides*
Tree-mallow *Lavatera arborea*
Trefoil, Hop *Trifolium campestre*
Trefoil, Pitch *Psorealea bituminosa*
Tufted-sedge *Carex elata*
Turnip *Brassica rapa*
Tussock-sedge, Greater *Carex paniculata*

Valerian, Common *Valeriana officinalis*
Valerian, Red *Centranthus ruber*
Vernal-grass, Sweet *Anthoxanthum odoratum*
Vetch, Bush *Vicia sepium*
Vetch, Horseshoe *Hippocrepis comosa*
Vetch, Kidney *Anthyllis vulneraria*
Vetch, Tufted *Vicia cracca*
Vetch, Wood *Vicia sylvatica*
Vetchling, Meadow *Lathyrus pratensis*
Viper's-bugloss *Echium vulgare*
Virginia-creeper *Parthenocissus quinquefolia*

Wallflower *Erysimum cheiri*
Water-plantain *Alisma plantago-aquatica*
Wayfaring-tree *Viburnum lantana*
Whorl-grass *Catabrosa aquatica*
Willow, Creeping *Salix repens*
Willow, Downy *Salix lapponum*
Willow, Eared *Salix aurita*
Willow (Sallow), Goat *Salix caprea*
Willow (Sallow), Grey *Salix cinerea*
Willow, White *Salix alba*
Willowherb, Broad-leaved *Epilobium montanum*
Willowherb, Great *Epilobium hirsutum*
Willowherb, Rosebay *Chamerion angustifolium*
Willowherb, Square-stalked *Epilobium tetragonum*
Woodruff *Galium odoratum*
Wood-rush, Field *Luzula campestris*
Wood-rush, Hairy *Luzula pilosa*
Wood-sedge *Carex sylvatica*
Wormwood *Artemisia absinthium*
Wormwood, Field *Artemisia campestris*
Wormwood, Sea *Artemisia maritima*
Woundwort, Hedge *Stachys sylvatica*

Yarrow *Achillea millefolium*
Yellow-rattle *Rhinanthus minor*
Yew *Taxus baccata*
Yorkshire-fog *Holcus lanatus*

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Index of English names

Bold numbers refer to colour artworks (those in the plate section are prefixed with 'Pl') and photographs are referenced with *italic* page numbers.

Accent Gem **Pl 48**, 296
African **Pl 52**, 323
African Cotton Leafworm **Pl 53**, 327
Alchymist **Pl 47**, 218
Alder Kitten **Pl 38**, 180, *180*
Alder Moth **Pl 49**, 307, *307*
Angle-barred Pug **Pl 23**, 125
Angle Shades **Pl 54**, 13, 335
Angle-striped Sallow **Pl 60**, 369
Annulet **Pl 36**, 168, *168*
Anomalous **Pl 51**, 317
Antirrhinum Brocade **Pl 51**, 317
Antler Moth **Pl 63**, 385
Archer's Dart **Pl 67**, 410
Argent and Sable **Pl 20**, 105
Arran Carpet **Pl 18**, 97
Ash Pug **Pl 23**, 125
Ashworth's Rustic **Pl 70**, 424
Asian Cotton Leafworm 327
August Thorn **Pl 28**, 148
Autumn Green Carpet **Pl 18**, 97
Autumn Webworm **Pl 41**, 197
Autumnal Moth **Pl 19**, 102
Autumnal Rustic **Pl 71**, 425
Autumnal Snout 211

Balsam Carpet **Pl 14**, 81
Banded Pine Carpet **Pl 35**, 167
Barberry Carpet **Pl 20**, 107
Barred Carpet **Pl 21**, 112
Barred Chestnut **Pl 68**, 413
Barred Hook-tip **Pl 4**, 42
Barred Red **Pl 35**, 167
Barred Rivulet **Pl 21**, 110
Barred Sallow **Pl 58**, 358, *359*
Barred Straw **Pl 17**, 96
Barred Tooth-striped **Pl 25**, 137
Barred Umber **Pl 27**, 144
Barred Yellow **Pl 17**, 93
Barrett's Marbled Coronet **Pl 64**, 394
Beaded Chestnut **Pl 59**, 360
Beautiful Arches **Pl 62**, 379
Beautiful Brocade **Pl 64**, 389
Beautiful Carpet **Pl 16**, 87
Beautiful Golden Y **Pl 48**, 300
Beautiful Gothic **Pl 58**, 357
Beautiful Hook-tip **Pl 45**, 213
Beautiful Marbled **Pl 45**, 214
Beautiful Snout **Pl 40**, 192
Beautiful Utetheisa 202
Beautiful Yellow Underwing **Pl 63**, 386, *387*
Bedrule Brocade **Pl 62**, 379
Bedstraw Hawk-moth **Pl 11**, 59, **61**
Bee Moth 16, **17**
Beech-green Carpet **Pl 18**, 98
Belted Beauty **Pl 30**, 154, *154*
Berber **Pl 54**, 336
Bilberry Pug **Pl 21**, 116
Birch Mocha **Pl 13**, 74, *74*
Bird-cherry Ermine **17**
Bird's Wing **Pl 54**, 333
Black Arches **Pl 40**, 193
Black Collar **Pl 66**, 406
Black Mountain Moth **Pl 36**, 169
Black Rustic **Pl 61**, 377
Black V Moth **Pl 40**, 192
Black-banded **Pl 62**, 378, *379*
Black-spotted Chestnut **Pl 59**, 364
Black-veined Moth **Pl 36**, 170
Blackneck **Pl 45**, 211
Blair's Mocha **Pl 13**, 75
Blair's Shoulder-knot **Pl 60**, 368
Blair's Wainscot **Pl 56**, 342
Bleached Pug **Pl 23**, 129
Blomer's Rivulet **Pl 19**, 104
Blood-vein **Pl 13**, 73
Blossom Underwing **Pl 62**, 381, *381*
Blotched Emerald **Pl 37**, 173
Bloxworth Snout **Pl 40**, 191
Blue Underwing **Pl 46**, 215
Blue-bordered Carpet **Pl 17**, 93
Boathouse Gem **Pl 48**, 295
Bond's Wainscot **Pl 56**, 347
Bordered Beauty **Pl 27**, 146
Bordered Gothic **Pl 64**, 393
Bordered Grey **Pl 32**, 159
Bordered Pug **Pl 24**, 132
Bordered Sallow **Pl 52**, 320
Bordered Straw **Pl 52**, 322
Bordered White **Pl 35**, 164
Brick **Pl 59**, 363
Bright Wave **Pl 12**, 65, *65*
Bright-line Brown-eye **Pl 64**, 390
Brighton Wainscot **Pl 56**, 345
Brimstone Moth **Pl 27**, 145
Brindled Beauty **Pl 30**, 153, *153*
Brindled Green **Pl 61**, 374
Brindled Ochre **Pl 61**, 377
Brindled Pug **Pl 22**, 120
Brindled White-spot **Pl 34**, 163
Broad-barred White **Pl 64**, 394
Broad-bordered Bee Hawk-moth **Pl 10**, 57, **61**
Broad-bordered White Underwing **Pl 63**, 386
Broad-bordered Yellow Underwing **Pl 69**, 417
Broken-barred Carpet **Pl 17**, 93, *93*
Broom Moth **Pl 64**, 391
Broom-tip **Pl 25**, 135, *135*
Brown China-mark **17**
Brown House-moth **17**
Brown Rustic **Pl 54**, 332

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Brown Scallop **Pl 19**, 104
Brown Silver-line **Pl 26**, 144
Brown-line Bright-eye **Pl 65**, 398
Brown-spot Pinion **Pl 59**, 361
Brown-tail **Pl 40**, 194
Brown-veined Wainscot **Pl 56**, 344
Brussels Lace **Pl 36**, 169
Buff Arches **Pl 4**, 44
Buff Ermine **Pl 41**, 196, *196*
Buff Footman **Pl 44**, 204
Buff-tip **Pl 39**, 186, *186*
Bulrush Wainscot **Pl 56**, 343, *343*
Burnet Companion **Pl 47**, 218, *218*
Burnished Brass **Pl 48**, 298, *298*
Burren Green **Pl 54**, 336
Butterbur **Pl 55**, 338
Buttoned Snout **Pl 40**, 190, *191*

Cabbage Moth **Pl 64**, 392
Cameo **Pl 54**, 336
Campanula Pug **Pl 24**, 131
Campion **Pl 64**, 393
Canary-shouldered Thorn **Pl 28**, 148
Centre-barred Sallow **Pl 60**, 372
Chalk Carpet **Pl 14**, 79
Chamomile Shark **Pl 51**, 314, *314*
Channel Islands Pug **Pl 22**, 118
Chestnut **Pl 59**, 363
Chestnut-coloured Carpet **Pl 16**, 90
Chevron **Pl 17**, 94, *95*
Chevron Snout **Pl 40**, 191
Chimney Sweeper **Pl 20**, 109
Chinese Character **Pl 4**, 43
Chocolate-tip **Pl 39**, 186
Cinnabar **Pl 43**, 201, *201*
Cinnamon Sedge Caddisfly **17**
Cistus Forester **Pl 3**, 37
Clancy's Rustic **Pl 53**, 329
Clay **Pl 65**, 401
Clay Fan-foot **Pl 45**, 207
Clay Triple-lines **Pl 13**, 76
Clifden Nonpareil **Pl 46**, 215
Cloaked Carpet **Pl 15**, 86
Cloaked Minor **Pl 58**, 355
Cloaked Pug **Pl 22**, 117
Clouded August Thorn **Pl 28**, 149
Clouded Border **Pl 26**, 139
Clouded Brindle **Pl 57**, 350
Clouded Buff **Pl 42**, 198
Clouded Drab **Pl 62**, 380
Clouded Magpie **Pl 26**, 139
Clouded Silver **Pl 35**, 166
Clouded-bordered Brindle **Pl 57**, 350
Coast Dart **Pl 66**, 406
Common Carpet **Pl 15**, 85
Common Emerald **Pl 37**, 13, 175
Common Fan-foot **Pl 45**, 209
Common Footman **Pl 44**, 205
Common Forest Looper **Pl 36**, 169
Common Heath **Pl 34**, 164
Common Lutestring **Pl 4**, 45
Common Marbled Carpet **Pl 18**, 97
Common Plume 16
Common Pug **Pl 24**, 130
Common Quaker **Pl 62**, 381
Common Rustic **Pl 58**, 354
Common Swift **Pl 1**, 25
Common Wainscot **Pl 65**, 399
Common Wave **Pl 35**, 165
Common White Wave **Pl 35**, 165, *165*
Concolorous **Pl 56**, 347
Conformist **Pl 60**, 367
Confused **Pl 57**, 353
Convolvulus Hawk-moth **Pl 9**, 55, **60**
Copper Underwing **Pl 51**, 317, *318*
Coronet **Pl 50**, 312
Cosmopolitan **Pl 66**, 403
Cousin German **Pl 71**, 426
Coxcomb Prominent **Pl 39**, 184
Cream Wave **Pl 13**, 72
Cream-bordered Green Pea **Pl 72**, 430
Cream-spot Tiger **Pl 43**, 199
Crescent **Pl 54**, 337
Crescent Dart **Pl 67**, 411
Crescent Striped **Pl 57**, 352
Crimson Speckled **Pl 44**, 202
Crinan Ear **Pl 55**, 340
Cryptic Burnished Brass 298
Cudweed **Pl 51**, 314
Cumberland Gem **Pl 52**, 324
Currant Clearwing **Pl 2**, 33
Currant Pug **Pl 23**, 130
Cypress Carpet **Pl 17**, 92
Cypress Pug **Pl 22**, 121

Dark Arches **Pl 57**, 352
Dark Bordered Beauty **Pl 27**, 146
Dark Brocade **Pl 62**, 379
Dark Chestnut **Pl 59**, 364
Dark Crimson Underwing **Pl 47**, 217, *217*
Dark Dagger **Pl 50**, 308, *308*
Dark Marbled Carpet **Pl 18**, 97
Dark Mottled Willow **Pl 53**, 327
Dark Spectacle **Pl 48**, 294
Dark Spinach **Pl 16**, 87
Dark Sword-grass **Pl 68**, 412
Dark Tussock **Pl 41**, 195
Dark Umber **Pl 20**, 105
Dark-barred Twin-spot Carpet **Pl 14**, 82
Death's-head Hawk-moth **Pl 9**, 56, **60**
December Moth **Pl 5**, 47
Deep-brown Dart **Pl 61**, 376
Delicate **Pl 65**, 400
Dentated Pug **Pl 20**, 108
Devon Carpet **Pl 18**, 99
Devonshire Wainscot **Pl 65**, 403
Dew Moth **Pl 44**, 206
Dewick's Plusia **Pl 48**, 297
Dingy Footman **Pl 44**, 204
Dingy Mocha **Pl 13**, 74
Dingy Shears **Pl 61**, 373
Dingy Shell **Pl 19**, 103
Dog's Tooth **Pl 64**, 389
Dorset Cream Wave **Pl 26**, 140

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Dot Moth **Pl 64**, 391, *391*
Dotted Border **Pl 31**, 156
Dotted Border Wave **Pl 12**, 67
Dotted Carpet **Pl 33**, 161
Dotted Chestnut **Pl 59**, 364
Dotted Clay **Pl 70**, 421
Dotted Fan-foot **Pl 45**, 207
Dotted Footman **Pl 44**, 203
Dotted Rustic **Pl 68**, 416
Double Dart **Pl 70**, 420
Double Kidney **Pl 60**, 370
Double Line **Pl 65**, 398
Double Lobed **Pl 57**, 354
Double Square-spot **Pl 70**, 424
Double-spot Brocade **Pl 52**, 319
Double-striped Pug **Pl 21**, 115
Drab Looper **Pl 19**, 104
Drinker **Pl 7**, 51
Druid **Pl 49**, 305
Dumeril's Rustic **Pl 55**, 340
Dun-bar **Pl 60**, 371
Dungeness Pigmy Footman 206
Dusky Brocade **Pl 57**, 349
Dusky Clearwing **Pl 2**, 30
Dusky Fan-foot **Pl 45**, 209
Dusky Hook-tip **Pl 4**, 42
Dusky Marbled Brown **Pl 39**, 186
Dusky Peacock **Pl 26**, 141
Dusky Sallow **Pl 55**, 337
Dusky Scalloped Oak **Pl 29**, 151
Dusky Thorn **Pl 28**, 148
Dusky-lemon Sallow **Pl 58**, 359
Dwarf Cream Wave **Pl 12**, 66
Dwarf Pug **Pl 22**, 122

Early Grey **Pl 52**, 320
Early Moth **Pl 35**, 166, *166*
Early Thorn **Pl 28**, 149
Early Tooth-striped **Pl 25**, 137
Ear Moth **Pl 55**, 340
Eastern Bollworm **Pl 72**, 431
Eastern Bordered Straw **Pl 52**, 322
Eastern Death's-head Hawk-moth 56
Eastern Nycteoline **Pl 72**, 430
Eastern Pine Processionary Moth 178
Edinburgh Pug **Pl 23**, 127
Egyptian Bollworm **Pl 72**, 431
Elephant Hawk-moth **Pl 11**, **61**, 62
Emperor Moth **Pl 7**, 53, *53*
Engrailed **Pl 34**, 162, *162*
Epping Pug **Pl 22**, 120
Essex Emerald **Pl 37**, 174, *174*
Essex Y **Pl 49**, 301
Eversmann's Rustic **Pl 66**, 405
Exile **Pl 57**, 354
Eyed Hawk-moth **Pl 8**, 55, **61**

False Mocha **Pl 13**, 76
Fan-foot **Pl 45**, 208
Feathered Beauty **Pl 32**, 158
Feathered Brindle **Pl 61**, 376
Feathered Ear **Pl 64**, 388
Feathered Footman **Pl 44**, 201
Feathered Gothic **Pl 63**, 385
Feathered Ranunculus **Pl 61**, 378
Feathered Thorn **Pl 29**, 151, *151*
Fen Square-spot **Pl 68**, 415
Fen Wainscot **Pl 56**, 343
Fenn's Wainscot **Pl 56**, 348
Fern **Pl 20**, 108
Festoon **Pl 2**, 35, *35*
Fiery Clearwing **Pl 2**, 34
Figure of Eight **Pl 49**, 306
Figure of Eighty **Pl 4**, 44
Fir Carpet **Pl 16**, 91
Fisher's Estuarine Moth **Pl 55**, 338, *338*
Five-spot Burnet **Pl 3**, 40
Flame **Pl 68**, 412
Flame Brocade **Pl 61**, 375
Flame Carpet **Pl 14**, 82
Flame Shoulder **Pl 68**, 412
Flame Wainscot **Pl 66**, 404
Fletcher's Pug **Pl 22**, 123
Flounced Chestnut **Pl 59**, 361
Flounced Rustic **Pl 55**, 341, *341*
Forester **Pl 3**, 37
Fortified Carpet **Pl 14**, 79
Four-dotted Footman **Pl 44**, 203
Four-spotted **Pl 49**, 305
Four-spotted Footman **Pl 44**, 204
Fox Moth **Pl 6**, 50, *50*
Foxglove Pug **Pl 22**, 118
French Red Underwing **Pl 47**, 216
Freyer's Pug **Pl 23**, 127
Frosted Green **Pl 4**, 46
Frosted Orange **Pl 55**, 337
Frosted Yellow **Pl 26**, 143

Galium Carpet **Pl 15**, 85
Garden Carpet **Pl 14**, 81
Garden Dart **Pl 66**, 407
Garden Tiger **Pl 42**, 199, *199*
Gem **Pl 14**, 80
Geometrician **Pl 48**, 219
Ghost Moth **Pl 1**, 26
Glaucous Shears **Pl 64**, 391
Goat Moth **Pl 1**, 27
Gold Spangle **Pl 49**, 300
Gold Spot **Pl 49**, 302
Gold Swift **Pl 1**, 26
Golden Plusia **Pl 48**, 299
Golden Twin-spot **Pl 48**, 296
Golden-rod Brindle **Pl 60**, 368
Golden-rod Pug **Pl 22**, 122
Goldwing **Pl 51**, 312
Goosefoot Pug **Pl 23**, 124
Gothic **Pl 71**, 427
Grass Eggar **Pl 5**, 49
Grass Emerald **Pl 37**, 173
Grass Rivulet **Pl 21**, 111
Grass Wave **Pl 36**, 172
Great Brocade **Pl 70**, 420
Great Dart **Pl 66**, 408
Great Oak Beauty **Pl 33**, 161

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Great Peacock 53
Great Prominent **Pl 39**, 183, *183*
Green Arches **Pl 70**, 421
Green Carpet **Pl 18**, 98
Green Garden Looper 296
Green Oak Roller 16
Green Oak Tortrix 16, **17**, 430
Green Pug **Pl 21**, 116
Green Silver-lines **Pl 72**, 429
Green-brindled Crescent **Pl 52**, 319
Grey **Pl 64**, 396
Grey Arches **Pl 63**, 388
Grey Birch **Pl 34**, 164
Grey Carpet **Pl 25**, 135
Grey Chi **Pl 61**, 375
Grey Dagger **Pl 50**, 308, *308*
Grey Mountain Carpet **Pl 16**, 88
Grey Pine Carpet **Pl 17**, 91
Grey Pug **Pl 24**, 133
Grey Scalloped Bar **Pl 36**, 170
Grey Shoulder-knot **Pl 59**, 366
Grey Square **Pl 72**, 430
Ground Lackey **Pl 5**, 48
Grouville Dart **Pl 68**, 412
Guernsey Underwing **Pl 54**, 334
Gypsy Moth **Pl 40**, 193, *193*

Haworth's Minor **Pl 54**, 336
Haworth's Pug **Pl 21**, 116
Heart and Club **Pl 67**, 409
Heart and Dart **Pl 67**, 408
Heart Moth **Pl 60**, 372
Heath Rivulet **Pl 21**, 111
Heath Rustic **Pl 70**, 422
Hebrew Character **Pl 63**, 383, *383*
Hedge Rustic **Pl 63**, 384
Herald **Pl 40**, 189
Hoary Footman **Pl 44**, 205
Hornet Moth **Pl 2**, 30, *30*
Horse Chestnut **Pl 27**, 145
Hummingbird Hawk-moth **Pl 10**, 58, **61**

Ingrailed Clay **Pl 68**, 414
Irish Annulet **Pl 35**, 168
Iron Prominent **Pl 38**, 182
Isle of Wight Wave **Pl 12**, 66

Jasione Pug **Pl 24**
Jersey Black Arches **Pl 71**, 429
Jersey Emerald **Pl 37**, 173
Jersey Mocha **Pl 13**, 75
Jersey Tiger **Pl 43**, 200
Jubilee Fan-foot **Pl 45**, 209
July Belle **Pl 14**, 78
July Highflyer **Pl 16**, 89
Juniper Carpet **Pl 17**, 92, *92*
Juniper Pug **Pl 22**, 120

Kent Black Arches **Pl 71**, 428
Kentish Glory **Pl 7**, 52
Knot Grass **Pl 50**, 311, *311*

L-album Wainscot **Pl 65**, 402
Lace Border **Pl 12**, 71
Lackey **Pl 5**, 48
Langmaid's Yellow Underwing **Pl 69**, 419
Lappet **Pl 7**, 51
Larch Pug **Pl 22**, 122
Large Dark Prominent **Pl 39**, 182
Large Ear **Pl 55**, 340
Large Emerald **Pl 37**, 173
Large Fruit-tree Tortrix 16, **17**
Large Nutmeg **Pl 57**, 350
Large Ranunculus **Pl 62**, 378
Large Red-belted Clearwing **Pl 2**, 31
Large Thorn **Pl 27**, 147
Large Twin-spot Carpet **Pl 15**, 83
Large Wainscot **Pl 56**, 342
Large Yellow Underwing **Pl 69**, 417, *417*
Latin **Pl 52**, 324
Latreille's Latin **Pl 52**, 324
Latticed Heath **Pl 26**, 143
Lead Belle **Pl 14**, 78
Lead-coloured Drab **Pl 62**, 382
Lead-coloured Pug **Pl 22**, 119
Least Black Arches **Pl 71**, 428
Least Carpet **Pl 12**, 65
Least Minor **Pl 56**, 346
Least Yellow Underwing **Pl 69**, 418
Lempke's Gold Spot **Pl 49**, 302
Leopard Moth **Pl 1**, 27
Lesser Belle **Pl 45**, 213
Lesser Broad-bordered Yellow Underwing **Pl 69**, 419
Lesser Common Rustic **Pl 58**, 355
Lesser Cream Wave **Pl 13**, 72
Lesser Swallow Prominent **Pl 39**, 183
Lesser Treble-bar **Pl 24**, 134
Lesser Yellow Underwing **Pl 69**, 13, 418
Lesser-spotted Pinion **Pl 60**, 371
Levant Blackneck **Pl 45**, 212
Lewes Wave **Pl 12**, 70
Light Arches **Pl 57**, 352
Light Brocade **Pl 64**, 388
Light Crimson Underwing **Pl 47**, *20*, 217
Light Emerald **Pl 35**, 167
Light Feathered Rustic **Pl 67**, 408
Light Knot Grass **Pl 50**, 310
Light Orange Underwing **Pl 25**, 138
Lilac Beauty **Pl 27**, 147
Lime Hawk-moth **Pl 8**, 54, **61**
Lime-speck Pug **Pl 23**, 126
Ling Pug **Pl 23**, 128
Little Emerald **Pl 37**, 174
Little Thorn **Pl 26**, 144
Lobster Moth **Pl 38**, 181, *181*
Lorimer's Rustic **Pl 53**, 329
Lunar Double-stripe **Pl 48**, 219
Lunar Hornet Moth **Pl 2**, 30
Lunar Marbled Brown **Pl 38**, 181
Lunar Thorn **Pl 28**, 149
Lunar Underwing **Pl 59**, 363
Lunar Yellow Underwing **Pl 69**, 418
Lunar-spotted Pinion **Pl 60**, 371
Lychnis **Pl 64**, 395

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Lydd Beauty **Pl 32**, 158
Lyme Grass **Pl 56**, 343

Magpie **Pl 25**, 138
Maiden's Blush **Pl 13**, 76
Maize Wainscot **Pl 58**, 357
Mallow **Pl 16**, 87
Manchester Treble-bar **Pl 24**, 133
Many-lined **Pl 15**, 84
Map-winged Swift **Pl 1**, 26
Maple Prominent **Pl 39**, 185, *185*
Maple Pug **Pl 21**, 117
Marbled Beauty **Pl 53**, 325
Marbled Brown **Pl 38**, 181
Marbled Clover **Pl 52**, 321
Marbled Coronet **Pl 64**, 395
Marbled Green **Pl 53**, 326
Marbled Grey **Pl 53**, 325
Marbled Minor **Pl 58**, 356
Marbled Pug **Pl 23**, 125
Marbled White Spot **Pl 49**, 302
March Moth **Pl 30**, 152
Marsh Carpet **Pl 21**, 112, *113*
Marsh Dagger **Pl 50**, 309
Marsh Mallow Moth **Pl 55**, 339
Marsh Moth **Pl 54**, 332, *332*
Marsh Oblique-barred **Pl 45**, 210
Marsh Pug **Pl 22**, 119
Mathew's Wainscot **Pl 65**, 399
May Highflyer **Pl 16**, 89
Mediterranean Brocade **Pl 53**, 327
Mere Wainscot **Pl 56**, 346
Mere's Pug **Pl 23**, 127
Merveille du Jour **Pl 61**, 374
Middle-barred Minor **Pl 58**, 357
Miller **Pl 50**, 309
Minor Shoulder-knot **Pl 61**, 372
Minsmere Crimson Underwing **Pl 46**, 215
Mocha **Pl 13**, 74
Morris's Wainscot **Pl 56**, 347
Mother of Pearl 16, **17**
Mother Shipton **Pl 47**, 218
Mottled Beauty **Pl 33**, 160
Mottled Grey **Pl 18**, 98
Mottled Pug **Pl 24**, 131, *131*
Mottled Rustic **Pl 53**, 328
Mottled Umber **Pl 31**, 156, *157*
Mountain Burnet 38
Mouse Moth **Pl 52**, 318
Mulberry Moth **Pl 41**, 197
Mullein **Pl 51**, 316, *316*
Mullein Wave **Pl 13**, 71
Muslin Footman **Pl 44**, 202
Muslin Moth **Pl 42**, 197

Narrow-bordered Bee Hawk-moth **Pl 10**, 57, **61**
Narrow-bordered Five-spot Burnet **Pl 3**, 40
Narrow-winged Pug **Pl 23**, 124
Neglected Rustic **Pl 70**, 422
Netted Carpet **Pl 17**, 94
Netted Mountain Moth **Pl 26**, 142
Netted Pug **Pl 22**, 119
New Forest Burnet **Pl 3**, 39, *39*
Ni Moth **Pl 48**, 295
Nine-spotted 434, **434**
Nonconformist **Pl 60**, 367
Northern Arches **Pl 57**, 354
Northern Dart **Pl 71**, 424
Northern Deep-brown Dart **Pl 61**, 376, 377
Northern Drab **Pl 63**, 383, *383*
Northern Eggar **Pl 6**, 49
Northern Footman **Pl 44**, 205
Northern Rustic **Pl 68**, 417
Northern Spinach **Pl 17**, 95
Northern Winter Moth **Pl 19**, 100
November Moth **Pl 19**, 101
Nut-tree Tussock **Pl 49**, 305
Nutmeg **Pl 63**, 385

Oak Beauty **Pl 30**, 155
Oak Eggar **Pl 6**, 49
Oak Hook-tip **Pl 4**, 42
Oak Lutestring **Pl 4**, 45
Oak Nycteoline **Pl 72**, 430
Oak Processionary Moth **Pl 38**, 178
Oak Rustic **Pl 61**, 373
Oak Yellow Underwing **Pl 46**, 215
Oak-tree Pug **Pl 22**, 120
Oblique Carpet **Pl 14**, 80
Oblique Striped **Pl 14**, 77
Obscure Wainscot **Pl 65**, 402
Ochraceous Wave **Pl 12**, 64
Ochreous Pug **Pl 23**, 125
Old Lady **Pl 54**, 333
Old World Bollworm **Pl 52**, 322
Oleander Hawk-moth **Pl 10**, 58
Olive **Pl 60**, 370
Olive Crescent **Pl 45**, 213
Olive-tree Beauty **Pl 31**, 158
Orache Moth **Pl 54**, 333
Orange Footman **Pl 44**, 206
Orange Moth **Pl 27**, 147
Orange Sallow **Pl 58**, 358
Orange Swift **Pl 1**, 25
Orange Underwing **Pl 25**, 137
Orange Upperwing **Pl 59**, 365
Orange-tailed Clearwing **Pl 2**, 32
Orchard Ermine 16

Paignton Snout **Pl 40**, 191
Pale Brindled Beauty **Pl 30**, 152, *153*
Pale Eggar **Pl 5**, 47
Pale Grass Eggar **Pl 5**, 49
Pale Mottled Willow **Pl 53**, 329
Pale November Moth **Pl 19**, 101
Pale Oak Beauty **Pl 33**, 161
Pale Pinion **Pl 59**, 366
Pale Prominent **Pl 39**, 184
Pale Shining Brown **Pl 63**, 387
Pale Shoulder **Pl 49**, 304
Pale Stigma **Pl 59**, 360
Pale Tussock **Pl 41**, 195
Pale-lemon Sallow **Pl 58**, 359
Pale-shouldered Brocade **Pl 64**, 389

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Pale-shouldered Cloud **Pl 54**, 335
Palm Moth 433, **433**
Passenger **Pl 48**, 219
Patton's Tiger **Pl 43**, 200
Pauper Pug **Pl 22**, 123
Peach Blossom **Pl 4**, 43
Peacock Moth **Pl 26**, 140
Pearly Underwing **Pl 66**, 405
Pease Blossom **Pl 52**, 323
Pebble Hook-tip **Pl 4**, 42
Pebble Prominent **Pl 38**, 182, *182*
Peppered Moth **Pl 30**, 155, *155*
Phoenix **Pl 17**, 94
Pigmy Footman **Pl 44**, 206
Pimpinel Pug **Pl 23**, 123
Pine Beauty **Pl 62**, 380
Pine Carpet **Pl 16**, 90
Pine Hawk-moth **Pl 9**, 14, 56, **60**
Pine Processionary Moth **Pl 38**, 178
Pine-tree Lappet **Pl 6**, 50
Pinion-spotted Pug **Pl 23**, 126
Pinion-streaked Snout **Pl 45**, 210
Pink-barred Sallow **Pl 58**, 358
Pink-spotted Hawk-moth 55
Plain Clay **Pl 71**, 426
Plain Golden Y **Pl 49**, 300
Plain Pug **Pl 23**, 123
Plain Wave **Pl 12**, 70
Plumed Fan-foot **Pl 45**, 209
Plumed Prominent **Pl 39**, 185
Pod Lover **Pl 65**, 397, *397*
Poplar Grey **Pl 50**, 311
Poplar Hawk-moth **Pl 8**, 55, **61**
Poplar Kitten **Pl 38**, 180
Poplar Lutestring **Pl 4**, 44
Porter's Rustic **Pl 54**, 333
Portland Moth **Pl 66**, 405
Portland Ribbon Wave **Pl 12**, 69
Powdered Quaker **Pl 62**, 382
Powdered Rustic **Pl 53**, 330
Powdered Wainscot **Pl 49**, 307
Pretty Chalk Carpet **Pl 20**, 108
Pretty Marbled **Pl 49**, 303
Pretty Pinion **Pl 21**, 111
Privet Hawk-moth **Pl 9**, 56, **60**
Purple Bar **Pl 17**, 94
Purple Clay **Pl 68**, 413
Purple Cloud **Pl 54**, 334
Purple Marbled **Pl 45**, 214
Purple Thorn **Pl 29**, 150
Purple Treble-bar **Pl 24**, 134
Purple-bordered Gold **Pl 12**, 64
Purple-shaded Gem **Pl 48**, 298
Puss Moth **Pl 38**, 179, *179*

Radford's Flame Shoulder **Pl 68**, 413
Rannoch Brindled Beauty **Pl 30**, 153, *154*
Rannoch Looper **Pl 26**, 142
Rannoch Sprawler **Pl 52**, 319
Raspberry Clearwing **Pl 2**, 29
Red Carpet **Pl 14**, 80
Red Chestnut **Pl 68**, 415
Red Sword-grass **Pl 60**, 369
Red Twin-spot Carpet **Pl 14**, 81
Red Underwing **Pl 46**, 216
Red-belted Clearwing **Pl 2**, *21*, 33
Red-green Carpet **Pl 18**, 96
Red-headed Chestnut **Pl 59**, 365
Red-line Quaker **Pl 59**, 361, *361*
Red-necked Footman **Pl 44**, 204
Red-tipped Clearwing **Pl 2**, 32, *32*
Reddish Buff **Pl 52**, 323, *324*
Reddish Light Arches **Pl 57**, 353
Reed Dagger **Pl 49**, 307
Reed Leopard **Pl 1**, 28
Reed Tussock **Pl 41**, 194
Remm's Rustic 355
Rest Harrow **Pl 37**, 172
Riband Wave **Pl 12**, 69
Ringed Border **Pl 26**, 140
Ringed Carpet **Pl 32**, 159
Rivulet **Pl 21**, 110
Rosy Footman **Pl 44**, 202
Rosy Marbled **Pl 53**, 328
Rosy Marsh Moth **Pl 71**, 425, *425*
Rosy Minor **Pl 58**, 355
Rosy Rustic **Pl 55**, 338
Rosy Underwing **Pl 46**, 216
Rosy Wave **Pl 13**, 73
Round-winged Muslin **Pl 44**, 202
Royal Mantle **Pl 15**, 83
Ruby Tiger **Pl 42**, 198
Ruddy Carpet **Pl 15**, 83
Ruddy Highflyer **Pl 16**, 89
Rufous Minor **Pl 58**, 357
Rush Wainscot **Pl 57**, 349
Rustic **Pl 53**, 330
Rustic Shoulder-knot **Pl 57**, 351
Rusty Wave 433, **433**

Sallow **Pl 58**, 359
Sallow Clearwing **Pl 2**, 32
Sallow Kitten **Pl 38**, 179
Sallow Nycteoline **Pl 72**, 430
Saltern Ear **Pl 55**, 339
Sand Dart **Pl 67**, 410
Sandhill Rustic **Pl 55**, 341
Sandy Carpet **Pl 21**, 112
Satellite **Pl 60**, 369
Satin Beauty **Pl 32**, 160
Satin Lutestring **Pl 4**, 45
Satin Wave **Pl 12**, 67
Satyr Pug **Pl 23**, 128
Saxon **Pl 54**, 334
Scalloped Hazel **Pl 29**, 150
Scalloped Hook-tip **Pl 4**, 41
Scalloped Oak **Pl 29**, 150
Scallop Shell **Pl 20**, 106
Scar Bank Gem **Pl 48**, 296
Scarce Arches **Pl 56**, 342
Scarce Black Arches **Pl 71**, 428
Scarce Blackneck **Pl 45**, 211
Scarce Bordered Straw **Pl 52**, 322
Scarce Brindle **Pl 57**, 353

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Scarce Burnished Brass **Pl 48**, 297, *298*
Scarce Chocolate-tip **Pl 39**, 187
Scarce Dagger **Pl 50**, 310
Scarce Footman **Pl 44**, 205
Scarce Forester **Pl 3**, 37
Scarce Hook-tip **Pl 4**, 43, *43*
Scarce Marbled **Pl 45**, 214
Scarce Merveille du Jour **Pl 49**, 306, *307*
Scarce Prominent **Pl 39**, 185
Scarce Pug **Pl 23**, 128, *129*
Scarce Silver Y **Pl 49**, 301
Scarce Silver-lines **Pl 72**, 429
Scarce Tissue **Pl 20**, 106, *106*
Scarce Umber **Pl 31**, 156
Scarce Vapourer **Pl 41**, 196
Scarce Wormwood **Pl 51**, 313
Scarlet Tiger **Pl 43**, 200
Scorched Carpet **Pl 26**, 139
Scorched Wing **Pl 27**, 145, *145*
Scotch Annulet **Pl 35**, 168
Scotch Burnet **Pl 3**, 38
September Thorn **Pl 28**, 149
Seraphim **Pl 25**, 136
Setaceous Hebrew Character **Pl 70**, 423
Shaded Broad-bar **Pl 14**, 79
Shaded Fan-foot **Pl 45**, 208
Shaded Pug **Pl 24**, 133
Shark **Pl 51**, 313
Sharp-angled Carpet **Pl 15**, 86
Sharp-angled Peacock **Pl 26**, 140
Shears **Pl 64**, 392
Shining Marbled **Pl 53**, 326
Shore Wainscot **Pl 65**, 402
Short-cloaked Moth **Pl 71**, 428
Shoulder Stripe **Pl 16**, 86
Shoulder-striped Clover **Pl 52**, 321
Shoulder-striped Wainscot **Pl 65**, 402
Shuttle-shaped Dart **Pl 68**, 411
Silky Wainscot **Pl 53**, 331
Silky Wave **Pl 12**, 65
Silurian **Pl 66**, 404
Silver Barred **Pl 49**, 303
Silver Cloud **Pl 63**, 384
Silver Hook **Pl 49**, 303
Silver Y **Pl 48**, 299
Silver-ground Carpet **Pl 15**, 82
Silver-striped Hawk-moth **Pl 11**, 62
Silvery Arches **Pl 63**, 387
Silvery Gem **Pl 52**, 324
Single-dotted Wave **Pl 12**, 67
Six-belted Clearwing **Pl 2**, 34
Six-spot Burnet **Pl 3**, 39
Six-striped Rustic **Pl 70**, 423
Slender Brindle **Pl 57**, 351
Slender Burnished Brass **Pl 48**, 295
Slender Pug **Pl 21**, 117
Slender Scotch Burnet **Pl 3**, 38
Slender-striped Rufous **Pl 20**, 107, *107*
Sloe Carpet **Pl 35**, 166
Sloe Pug **Pl 21**, 115, *115*
Small Angle Shades **Pl 54**, 335
Small Argent and Sable **Pl 15**, 84
Small Autumnal Moth **Pl 19**, 102
Small Black Arches **Pl 71**, 427
Small Blood-vein **Pl 13**, 72
Small Brindled Beauty **Pl 30**, 152
Small Chocolate-tip **Pl 39**, 187
Small Clouded Brindle **Pl 57**, 351
Small Dark Yellow Underwing **Pl 63**, 386
Small Dotted Buff **Pl 56**, 347
Small Dotted Footman **Pl 44**, 203
Small Dusty Wave **Pl 12**, 66
Small Eggar **Pl 5**, 48
Small Elephant Hawk-moth **Pl 11**, **61**, 62
Small Emerald **Pl 37**, 174
Small Engrailed **Pl 34**, 162, 163
Small Fan-foot **Pl 45**, 208, *208*
Small Fan-footed Wave **Pl 12**, 68
Small Grass Emerald **Pl 37**, 175
Small Lappet **Pl 7**, 51
Small Magpie 16, **17**
Small Marbled **Pl 45**, 214
Small Mottled Willow **Pl 53**, 327
Small Phoenix **Pl 18**, 96
Small Purple-barred **Pl 45**, 212
Small Quaker **Pl 62**, 382
Small Ranunculus **Pl 64**, 394
Small Rivulet **Pl 21**, 110
Small Rufous **Pl 56**, 345
Small Scallop **Pl 12**, 69
Small Seraphim **Pl 25**, 136
Small Square-spot **Pl 68**, 414
Small Wainscot **Pl 56**, 345
Small Waved Umber **Pl 20**, 108
Small White Wave **Pl 19**, 102
Small Yellow Underwing **Pl 51**, 312
Small Yellow Wave **Pl 19**, 103
Smoky Wainscot **Pl 65**, 399
Smoky Wave **Pl 13**, 72
Snout **Pl 40**, 190
Softly's Shoulder-knot **Pl 60**, 367
Sombre Brocade **Pl 61**, 375
Sorcerer **Pl 49**, 304
Southern Brindled Green **Pl 61**, 374
Southern Chestnut **Pl 59**, 362, *362*
Southern Grass Emerald **Pl 37**, 176
Southern Rustic **Pl 68**, 416
Southern Wainscot **Pl 65**, 400
Spalding's Dart **Pl 67**, 410
Spanish Carpet **Pl 14**, 78
Speckled Beauty **Pl 34**, 162
Speckled Footman **Pl 44**, 201
Speckled Yellow **Pl 27**, 146
Spectacle **Pl 48**, 294
Spinach **Pl 17**, 95
Spindle Ermine 16
Spiny Bollworm **Pl 72**, 431
Splendid Brocade **Pl 64**, 390
Spotted Clover **Pl 52**, 320
Spotted Sulphur **Pl 49**, 304
Sprawler **Pl 52**, 318, *319*
Spring Usher **Pl 31**, 155
Spruce Carpet **Pl 16**, 91
Spurge Hawk-moth **Pl 11**, 58

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Square Spot **Pl 34**, 163
Square-spot Dart **Pl 66**, 406
Square-spot Rustic **Pl 70**, 422
Square-spotted Clay **Pl 70**, 421, *421*
Star-wort **Pl 51**, 314, *315*
Stephens' Gem **Pl 49**, 301
Stout Dart **Pl 70**, 420
Stranger **Pl 64**, 390
Straw Belle **Pl 36**, 171
Straw Dot **Pl 40**, 190
Straw Underwing **Pl 54**, 334
Streak **Pl 24**, 135
Streaked Plusia **Pl 48**, 296
Streamer **Pl 16**, 87
Striped Hawk-moth **Pl 11**, 59, **61**
Striped Lychnis **Pl 51**, 315, *315*
Striped Twin-spot Carpet **Pl 18**, 99
Striped Wainscot **Pl 65**, 398
Sub-angled Wave **Pl 12**, 70
Suspected **Pl 61**, 373
Sussex Emerald **Pl 37**, 175
Svensson's Copper Underwing **Pl 51**, 318, *318*
Swallow Prominent **Pl 39**, 183
Swallow-tailed Moth **Pl 29**, 151
Sweet Gale Moth **Pl 50**, 310
Sweet Potato Hornworm 55
Sword-grass **Pl 60**, 368
Sycamore **Pl 50**, 309, *309*

Talisker Burnet 40
Tamarisk Peacock **Pl 26**, 143
Tamarisk Pug 125
Tawny Marbled Minor **Pl 58**, 356
Tawny Pinion **Pl 59**, 366
Tawny Prominent **Pl 38**, 180
Tawny Shears **Pl 65**, 397
Tawny Speckled Pug **Pl 24**, 132
Tawny Wave **Pl 12**, 71
Tawny-barred Angle **Pl 26**, 141
The Feline **Pl 38**, 179
Three-humped Prominent **Pl 39**, 182
Thrift Clearwing **Pl 2**, 34
Thyme Pug **Pl 23**, 126
Tissue **Pl 20**, 106
Toadflax Brocade **Pl 51**, 316
Toadflax Pug **Pl 22**, 118
Transparent Burnet **Pl 3**, 38
Traveller **Pl 15**, 84
Treble Brown Spot **Pl 12**, 68
Treble Lines **Pl 54**, 331
Treble-bar **Pl 24**, 134
Tree-lichen Beauty **Pl 53**, 325
Triangle **Pl 2**, 36
Triple-spotted Clay **Pl 70**, 423
Triple-spotted Pug **Pl 23**, 127
True Lover's Knot **Pl 68**, 416
Tunbridge Wells Gem **Pl 48**, 297
Turnip Moth **Pl 67**, 409
Twenty-plume Moth 16, **17**
Twin-spot Carpet **Pl 20**, 109
Twin-spotted Quaker **Pl 63**, 384
Twin-spotted Wainscot **Pl 56**, 344
Uncertain **Pl 53**, 330
Union Rustic **Pl 57**, 349

V-Moth **Pl 26**, 141
V-Pug **Pl 21**, 115
Valerian Pug **Pl 23**, 129, *130*
Vapourer **Pl 41**, 195, *196*
Varied Coronet **Pl 64**, 395
Vestal **Pl 13**, 77
Vine's Rustic **Pl 53**, 331
Viper's Bugloss **Pl 65**, 397

Water Betony **Pl 51**, 315
Water Carpet **Pl 18**, 99
Water Ermine **Pl 41**, 197
Waved Black **Pl 45**, 212
Waved Carpet **Pl 19**, 103
Waved Umber **Pl 31**, 157
Wax Moth 16, **17**
Weaver's Wave **Pl 12**, 68
Webb's Wainscot **Pl 56**, 348
Wedgeling **Pl 53**, 328
Welsh Clearwing **Pl 2**, 31
Welsh Wave **Pl 19**, 103
White Colon **Pl 64**, 392
White Ermine **Pl 41**, 197
White Plume 16, **17**
White Prominent **Pl 39**, 184
White Satin Moth **Pl 40**, 192
White Spot **Pl 64**, 396
White-banded Carpet **Pl 16**, 88
White-barred Clearwing **Pl 2**, 31
White-line Dart **Pl 66**, 407
White-line Snout **Pl 45**, 211
White-lined Hawk-moth 59
White-mantled Wainscot **Pl 56**, 344
White-marked **Pl 68**, 415
White-pinion Spotted **Pl 35**, 165
White-point **Pl 65**, 401
White-speck **Pl 65**, 401
White-spotted Pinion **Pl 60**, 370, *371*
White-spotted Pug **Pl 22**, 121
Wild Cherry Sphinx 56
Willow Beauty **Pl 31**, 157
Willowherb Hawk-moth **Pl 10**, 58
Winter Moth **Pl 19**, 100, *100*
Wood Carpet **Pl 15**, 85
Wood Tiger **Pl 42**, 198
Woods's Dart **Pl 67**, 409
Wormwood **Pl 51**, 313
Wormwood Pug **Pl 23**, 128, *129*

Yarrow Pug **Pl 24**, 132
Yellow Belle **Pl 36**, 171, *171*
Yellow Horned **Pl 4**, 46
Yellow Shell **Pl 15**, 84
Yellow-barred Brindle **Pl 25**, 136
Yellow-legged Clearwing **Pl 2**, 33
Yellow-line Quaker **Pl 59**, 362
Yellow-ringed Carpet **Pl 16**, 88
Yellow-tail **Pl 40**, 194, *195*

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Index of scientific names

Bold numbers refer to colour artworks (those in the plate section are prefixed with 'Pl') and photographs are referenced with *italic* page numbers.

abbreviata, *Eupithecia* **Pl 22**, 120
abietaria, *Eupithecia* **Pl 22**, 117
Abraxas 138
Abrostola 294
abruptaria, *Menophra* **Pl 31**, 157
absinthiata, *Eupithecia* **Pl 23**, 128, *129*
absinthii, *Cucullia* **Pl 51**, 313
Acasis 136
accentifera, *Ctenoplusia* **Pl 48**, 296
aceris, *Acronicta* **Pl 50**, 309, *309*
acetosellae, *Mesogona* **Pl 59**, 360
Acherontia 56
Achlya 46
Acontia 304
Acontiinae **Pl 49**, 304
Acosmetia 323
Acronicta 307
Acronictinae **Pl 49–50**, 306–12
Actebia 405
Actinotia 334
acuta, *Chrysodeixis* **Pl 48**, 297
Adscita 37
adusta, *Mniotype* **Pl 62**, 379
adustata, *Ligdia* **Pl 26**, 139
advenaria, *Cepphis* **Pl 26**, 144
Aedia 304
Aediinae **Pl 49**, 304–5
aerugula, *Nola* **Pl 71**, 428
aescularia, *Alsophila* **Pl 30**, 152
aestimaria, *Chiasmia* **Pl 26**, 143
aestivaria, *Hemithea* **Pl 37**, 13, 175
Aethalura 164
affinis, *Cosmia* **Pl 60**, 371
affinitata, *Perizoma* **Pl 21**, 110
agathina, *Xestia* **Pl 70**, 422
Agriopis 155
Agrius 55
Agrochola 360
Agrotis 408
albicillata, *Mesoleuca* **Pl 16**, 87
albimacula, *Hadena* **Pl 64**, 396
albipuncta, *Mythimna* **Pl 65**, 401
albipunctata, *Cyclophora* **Pl 13**, 74
albovenosa, *Simyra* **Pl 49**, 307
albula, *Meganola* **Pl 71**, 428
albulata, *Asthena* **Pl 19**, 102
albulata, *Perizoma* **Pl 21**, 111
alchemillata, *Perizoma* **Pl 21**, 110
alchymista, *Catephia* **Pl 47**, 218
Alcis 160
Aleucis 166
algae, *Cryphia* **Pl 53**, 325
algae, *Globia* **Pl 57**, 349
algira, *Dysgonia* **Pl 48**, 219
Allophyes 319
alni, *Acronicta* **Pl 49**, 307, *307*
alniaria, *Ennomos* **Pl 28**, 148
alpicola, *Xestia* **Pl 71**, 424
alpium, *Moma* **Pl 49**, 306, *307*
Alsophila 152
alternata, *Epirrhoe* **Pl 15**, 85
alternata, *Macaria* **Pl 26**, 140
Alucitidae 16
ambigua, *Hoplodrina* **Pl 53**, 331
amethystina, *Eucarta* **Pl 52**, 324
Amphipoea 339
Amphipyra 317
Amphipyrinae **Pl 51–2**, 317–18
anachoreta, *Clostera* **Pl 39**, 187
Anaplectoides 421
Anarta 385
anceps, *Apamea* **Pl 57**, 350
anceps, *Peridea* **Pl 39**, 183, *183*
andalusica, *Conisania* **Pl 64**, 394
andrenaeformis, *Synanthedon* **Pl 2**, 32
Angerona 147
annularia, *Cyclophora* **Pl 13**, 74
anomala, *Stilbia* **Pl 51**, 317
Anorthoa 384
Anticlea 87
Anticollix 108
antiqua, *Orgyia* **Pl 41**, 195, *196*
Antitype 375
Apamea 349
Apeira 147
apiformis, *Sesia* **Pl 2**, 30, *30*
Aplasta 172
Aplocera 134
Apocheima 152
Apoda 35
Aporophyla 376
aprilina, *Griposia* **Pl 61**, 374
Apterogenum 373
Archanara 344
Archiearinae **Pl 25**, 137–8
Archiearis 137
archon, *Paysandisia* 433, **433**
Arctia 199
Arctiinae **Pl 41–4**, 196–207
Arctornis 192
arenaria, *Fagivorina* **Pl 34**, 162
Arenostola 343
areola, *Xylocampa* **Pl 52**, 320
armigera, *Helicoverpa* **Pl 52**, 322
artemisiae, *Cucullia* **Pl 51**, 313
asella, *Heterogenea* **Pl 2**, 36
ashworthii, *Xestia* **Pl 70**, 424
asiatica, *Nycteola* **Pl 72**, 430
Aspitates 171
assimilata, *Eupithecia* **Pl 23**, 130

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

asteris, *Cucullia* **Pl 51**, 314, *315*
Asteroscopus 318
Asthena 102
Atethmia 372
Athetis 332
Atolmis 204
atomaria, *Ematurga* **Pl 34**, 164
atrata, *Odezia* **Pl 20**, 109
atriplicis, *Trachea* **Pl 54**, 333
atropos, *Acherontia* **Pl 9**, 56, **60**
augur, *Graphiphora* **Pl 70**, 420
aulica, *Hyphoraia* 200
aurago, *Tiliacea* **Pl 58**, 358
aurantiaria, *Agriopis* **Pl 31**, 156
auricoma, *Acronicta* **Pl 50**, 310
australis, *Aporophyla* **Pl 61**, 376
Autographa 299
autumnaria, *Ennomos* **Pl 27**, 147
autumnata, *Epirrita* **Pl 19**, 102
aversata, *Idaea* **Pl 12**, 69
Axylia 412

badiata, *Earophila* **Pl 16**, 86
baja, *Xestia* **Pl 70**, 421
bajularia, *Comibaena* **Pl 37**, 173
bankiana, *Deltote* **Pl 49**, 303
batis, *Thyatira* **Pl 4**, 43
Bembecia 34
bembeciformis, *Sesia* **Pl 2**, 30
Bena 429
berbera, *Amphipyra* **Pl 51**, 318, *318*
berberata, *Pareulype* **Pl 20**, 107
betularia, *Biston* **Pl 30**, 155, *155*
biangulata, *Euphyia* **Pl 15**, 86
bicolorana, *Bena* **Pl 72**, 429
bicolorata, *Hecatera* **Pl 64**, 394
bicoloria, *Leucodonta* **Pl 39**, 184
bicruris, *Hadena* **Pl 64**, 395
bicuspis, *Furcula* **Pl 38**, 180, *180*
bidentata, *Odontopera* **Pl 29**, 150
bifaciata, *Perizoma* **Pl 21**, 110
bifasciata, *Grammodes* 219
bifida, *Furcula* **Pl 38**, 180
bigramma, *Agrotis* **Pl 66**, 408
bilineata, *Camptogramma* **Pl 15**, 84
biloba, *Megalographa* **Pl 49**, 301
bimaculata, *Lomographa* **Pl 35**, 165
bimaculosa, *Meganephria* **Pl 52**, 319
binaria, *Watsonalla* **Pl 4**, 42
biplaga, *Earias* **Pl 72**, 431
bipunctaria, *Scotopteryx* **Pl 14**, 79
biren, *Papestra* **Pl 64**, 391
biriviata, *Xanthorhoe* **Pl 14**, 81
biselata, *Idaea* **Pl 12**, 68
Biston 155
blanda, *Hoplodrina* **Pl 53**, 330
blandiata, *Perizoma* **Pl 21**, 111
blenna, *Lacanobia* **Pl 64**, 390
blomeri, *Venusia* **Pl 19**, 104
Boletobiinae **Pl 45**, 212–15
bombycina, *Polia* **Pl 63**, 387
borelii, *Gortyna* **Pl 55**, 338, *338*
Boudinotiana 138
Brachionycha 319
Brachylomia 372
bractea, *Autographa* **Pl 49**, 300
brassicae, *Mamestra* **Pl 64**, 392
brevilinea, *Protarchanara* **Pl 56**, 348
britannica, *Thera* **Pl 16**, 91
brumata, *Operophtera* **Pl 19**, 100, *100*
brunnea, *Diarsia* **Pl 68**, 413
brunnearia, *Selidosema* **Pl 32**, 159
brunneata, *Macaria* **Pl 26**, 142
Bryophila 325
Bryophilinae **Pl 53**, 325–6
bucephala, *Phalera* **Pl 39**, 186, *186*
buettneri, *Sedina* **Pl 56**, 342
Bupalus 164

c-nigrum, *Xestia* **Pl 70**, 423
Cabera 165
caeruleocephala, *Diloba* **Pl 49**, 306
caesia, *Hadena* **Pl 64**, 396
caesiata, *Entephria* **Pl 16**, 88
cagnagella, *Yponomeuta* 16
caja, *Arctia* **Pl 42**, 199, *199*
Calamia 336
caliginosa, *Acosmetia* **Pl 52**, 323, *324*
Callimorpha 200
Calliteara 195
Callopistria 324
Calophasia 316
cambrica, *Venusia* **Pl 19**, 103
Campaea 167
Camptogramma 84
candidula, *Pseudeustrotia* **Pl 53**, 326
caniola, *Eilema* **Pl 44**, 205
capensis, *Condica* **Pl 52**, 323
capreolaria, *Pungeleria* **Pl 35**, 167
captiuncula, *Photedes* **Pl 56**, 346
capucina, *Ptilodon* **Pl 39**, 184
Caradrina 328
cararia, *Stegania* **Pl 26**, 140
carbonaria, *Macaria* **Pl 26**, 142
carmelita, *Odontosia* **Pl 39**, 185
carpinata, *Trichopteryx* **Pl 25**, 137
Carsia 133
castaneae, *Phragmataecia* **Pl 1**, 28
castanea, *Xestia* **Pl 70**, 422
Castniidae 433
castrensis, *Malacosoma* **Pl 5**, 48
catalaunensis, *Agrotis* **Pl 68**, 412
Catarhoe 83
Catephia 218
Catocala 215
Celaena 336
celerio, *Hippotion* **Pl 11**, 62
centaureata, *Eupithecia* **Pl 23**, 126
centrago, *Atethmia* **Pl 60**, 372
centrostrigaria, *Costaconvexa* **Pl 15**, 84
Cepphis 144
Ceramica 391
Cerapteryx 385
cerasi, *Orthosia* **Pl 62**, 381

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Cerastis 415
Cerura 179
Cerurinae **Pl 38**, 179–80
cervinalis, *Hydria* **Pl 20**, 106, *106*
cespitis, *Tholera* **Pl 63**, 384
chalcites, *Chrysodeixis* **Pl 48**, 296
chamomillae, *Cucullia* **Pl 51**, 314, *314*
Charanyca 331
Charissa 168
chenopodiata, *Scotopteryx* **Pl 14**, 79
Chesias 135
chi, *Antitype* **Pl 61**, 375
Chiasmia 143
Chilodes 331
chlamitulalis, *Nola* **Pl 71**, 429
Chloantha 335
Chloephorinae **Pl 72**, 429–31
chloerata, *Pasiphila* **Pl 21**, 115, *115*
Chlorissa 175
Chloroclysta 96
Chloroclystis 115
chlorosata, *Petrophora* **Pl 26**, 144
christyi, *Epirrita* **Pl 19**, 101
chrysidiformis, *Pyropteron* **Pl 2**, 34
chrysitis, *Diachrysia* **Pl 48**, 298, *298*
Chrysodeixis 296
chryson, *Diachrysia* **Pl 48**, 297, *298*
chrysoprasaria, *Hemistola* **Pl 37**, 174
chrysorrhoea, *Euproctis* **Pl 40**, 194
Cidaria 93
cilium, *Spodoptera* **Pl 53**, 327
Cilix 43
cinctaria, *Cleora* **Pl 32**, 159
cinerea, *Acronicta* **Pl 50**, 310
cinerea, *Agrotis* **Pl 67**, 408
cingulata, *Agrius* 55
circellaris, *Agrochola* **Pl 59**, 363
circumflexa, *Cornutiplusia* **Pl 49**, 301
Cirrhia 359
citrago, *Tiliacea* **Pl 58**, 358
citrata, *Dysstroma* **Pl 18**, 97
clathrata, *Chiasmia* **Pl 26**, 143
clavaria, *Larentia* **Pl 16**, 87
clavipalpis, *Caradrina* **Pl 53**, 329
clavis, *Agrotis* **Pl 67**, 409
Cleora 159
Cleorodes 169
clorana, *Earias* **Pl 72**, 430
cloraria, *Chlorissa* **Pl 37**, 176
Clostera 186
Coenobia 345
Coenocalpe 107
Coenophila 425
coenosa, *Laelia* **Pl 41**, 194
Coenotephria 99
cognata, *Thera* **Pl 16**, 90
Colobochyla 213
Colocasia 305
Colostygia 98
Colotois 151
comae, *Timandra* **Pl 13**, 73
comes, *Noctua* **Pl 69**, 13, 418
Comibaena 173
comitata, *Pelurga* **Pl 16**, 87
comma, *Leucania* **Pl 65**, 402
complana, *Eilema* **Pl 44**, 205
compta, *Hadena* **Pl 64**, 395
Condica 323
Condicinae **Pl 52**, 323–4
confusa, *Hadena* **Pl 64**, 395
confusalis, *Nola* **Pl 71**, 428
confusa, *Macdunnoughia* **Pl 48**, 297
conigera, *Mythimna* **Pl 65**, 398
Conisania 394
conjuncta, *Catocala* **Pl 46**, 215
consocia, *Lithophane* **Pl 60**, 367
consonaria, *Paradarisa* **Pl 34**, 163
conspicillaris, *Egira* **Pl 63**, 384
contigua, *Lacanobia* **Pl 64**, 389
contiguaria, *Idaea* **Pl 12**, 68
convolvuli, *Agrius* **Pl 9**, 55, **60**
coracina, *Glacies* **Pl 36**, 169
Coranarta 386
cordigera, *Coranarta* **Pl 63**, 386
Cornutiplusia 301
coronillaria, *Pseudoterpna* **Pl 37**, 173
corylata, *Electrophaes* **Pl 17**, 93, *93*
coryli, *Colocasia* **Pl 49**, 305
Coscinia 201
Cosmia 370
Cosmorhoe 94
Cossidae **Pl 1**, 27–8
Cossinae **Pl 1**, 27
Cossus 27
cossus, *Cossus* **Pl 1**, 27
Costaconvexa 84
costaestrigalis, *Schrankia* **Pl 45**, 210
craccae, *Lygephila* **Pl 45**, 211
Crambinae 16
Craniophora 312
crassalis, *Hypena* **Pl 40**, 192
crassicornis, *Trigonophora* 375
crataegi, *Trichiura* **Pl 5**, 47
crenata, *Apamea* **Pl 57**, 350
crenata, *Gluphisia* **Pl 39**, 186
crepuscularia, *Ectropis* **Pl 34**, 162, *162*
cretica, *Sesamia* 357
cribraria, *Coscinia* **Pl 44**, 201
cribrumalis, *Macrochilo* **Pl 45**, 207
crinanensis, *Amphipoea* **Pl 55**, 340
Crocallis 150
croceago, *Jodia* **Pl 59**, 365
cruda, *Orthosia* **Pl 62**, 382
Cryphia 325
Crypsedra 336
crypta, *Euxoa* 407
Ctenoplusia 296
cuculata, *Catarhoe* **Pl 15**, 83
cucullatella, *Nola* **Pl 71**, 428
Cucullia 313
Cucullinae **Pl 51**, 313–16
cucullina, *Ptilodon* **Pl 39**, 185, *185*
culiciformis, *Synanthedon* **Pl 2**, 31
cultraria, *Watsonalla* **Pl 4**, 42

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

cunea, *Hyphantria* **Pl 41**, 197
cupressata, *Thera* **Pl 17**, 92
cursoria, *Euxoa* **Pl 66**, 406
curtula, *Clostera* **Pl 39**, 186
curvatula, *Drepana* **Pl 4**, 42
Cybosia 203
Cyclophora 74
Cymatophorina 45

dahlii, *Diarsia* **Pl 68**, 413
Daphnis 58
dardoinaria, *Crocallis* **Pl 29**, 151
Dasypolia 377
daubei, *Thysanoplusia* **Pl 48**, 295
debiliata, *Pasiphila* **Pl 21**, 116
deceptoria, *Deltote* **Pl 49**, 303
decimalis, *Tholera* **Pl 63**, 385
decoloraria, *Xanthorhoe* **Pl 14**, 80
defoliaria, *Erannis* **Pl 31**, 156, *157*
degenerana, *Nycteola* **Pl 72**, 430
degeneraria, *Idaea* **Pl 12**, 69
Deilephila 62
Deileptenia 160
dejeani, *Hyphoraia* 200
delphinii, *Periphanes* **Pl 52**, 323
Deltote 302
Dendrolimus 50
denotata, *Eupithecia* **Pl 24**, 131
dentaria, *Selenia* **Pl 28**, 149
Denticucullus 345
depressa, *Eilema* **Pl 44**, 204
depuncta, *Eugnorisma* **Pl 71**, 426
derivata, *Anticlea* **Pl 16**, 87
designata, *Xanthorhoe* **Pl 14**, 82
Diachrysia 297
Diacrisia 198
Diaphora 197
Diarsia 413
Dicallomera 195
Dichagyris 406
Dicranurinae **Pl 38**, 180–1
Dicycla 372
didyma, *Mesapamea* **Pl 58**, 355
didymata, *Mesotype* **Pl 20**, 109
diffinis, *Cosmia* **Pl 60**, 370, *371*
Diloba 306
Dilobinae **Pl 49**, 306
diluta, *Cymatophorina* **Pl 4**, 45
dilutaria, *Idaea* **Pl 12**, 65
dilutata, *Epirrita* **Pl 19**, 101
dimidiata, *Idaea* **Pl 12**, 67
disjuncta, *Catocala* 215
dispar, *Lymantria* **Pl 40**, 193, *193*
dissoluta, *Archanara* **Pl 56**, 344
distinctaria, *Eupithecia* **Pl 23**, 126
distinctata, *Aleucis* **Pl 35**, 166
ditrapezium, *Xestia* **Pl 70**, 423
dodonaea, *Drymonia* **Pl 38**, 181
dodoneata, *Eupithecia* **Pl 22**, 120
dolabraria, *Plagodis* **Pl 27**, 145, *145*
domestica, *Bryophila* **Pl 53**, 325
dominula, *Callimorpha* **Pl 43**, 200
Drepana 42
Drepanidae **Pl 4**, 41–6
Drepaninae **Pl 4**, 41–3
dromedarius, *Notodonta* **Pl 38**, 182
drupiferarum, *Sphinx* 56
Drymonia 181
Dryobota 373
Dryobotodes 374
dubitata, *Triphosa* **Pl 20**, 106
dumerilii, *Luperina* **Pl 55**, 340
dumetata, *Gnophos* **Pl 35**, 168
duplaris, *Ochropacha* **Pl 4**, 45
Dypterygia 333
Dyscia 170
Dysgonia 219
dysodea, *Hecatera* **Pl 64**, 394
Dysstroma 97

Earias 430
Earophila 86
Ecliptopera 96
Ectropis 162
efformata, *Aplocera* **Pl 24**, 134
egenaria, *Eupithecia* **Pl 22**, 123
Egira 384
Eilema 204
Elaphria 328
electa, *Catocala* **Pl 46**, 216
Electrophaes 93
elinguaria, *Crocallis* **Pl 29**, 150
elocata, *Catocala* **Pl 47**, 216
elpenor, *Deilephila* **Pl 11**, **61**, 62
elymi, *Longalatedes* **Pl 56**, 343
emarginata, *Idaea* **Pl 12**, 69
Ematurga 164
emortualis, *Trisateles* **Pl 45**, 213
emutaria, *Scopula* **Pl 13**, 73
Enargia 369
Endromidae **Pl 7**, 52
Endromis 52
Ennominae **Pl 26–36**, 138–172
Ennomos 147
Entephria 88
Epione 146
Epirrhoe 84
Epirrita 101
epomidion, *Apamea* **Pl 57**, 350
Erannis 156
Erebidae **Pl 40–7**, 187–219, 434
Erebinae **Pl 46–8**, 215–19
eremita, *Dryobotodes* **Pl 61**, 374
Eremobia 337
Eriogaster 48
Eriopinae **Pl 52**, 324–5
Eriopygodes 404
eriosoma, *Chrysodeixis* 296
erminea, *Cerura* **Pl 38**, 179
erosaria, *Ennomos* **Pl 28**, 149
eruta, *Euxoa* 407
erythrocephala, *Conistra* **Pl 59**, 365
Eublemma 214
Eucarta 324

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Euchalcia 298
Euchoeca 103
Euclidia 218
Eugnorisma 425
Eulithis 94
euphorbiae, *Hyles* **Pl 11**, 58
Euphyia 86
Eupithecia 116
Eupitheciini 113
Euplagia 200
Euplexia 335
Euproctis 194
Eupsilia 369
Eurois 420
Eustroma 94
Eustrotiinae **Pl 49**, 302–3
Euthrix 51
Euxoa 406
evonymella, *Yponomeuta* **17**
exanthemata, *Cabera* **Pl 35**, 165
exclamationis, *Agrotis* **Pl 67**, 408
exigua, *Spodoptera* **Pl 53**, 327
exiguata, *Eupithecia* **Pl 24**, 131, *131*
expallidata, *Eupithecia* **Pl 23**, 129
exsiccata, *Tathorhynchus* **Pl 45**, 212
exsoleta, *Xylena* **Pl 60**, 368
extensaria, *Eupithecia* **Pl 23**, 128, *129*
extrema, *Photedes* **Pl 56**, 347
exulans, *Zygaena* **Pl 3**, 38
exulis, *Apamea* **Pl 57**, 354

Fabula 342
fagaria, *Dyscia* **Pl 36**, 170
fagata, *Operophtera* **Pl 19**, 100
fagi, *Stauropus* **Pl 38**, 181, *181*
Fagivorina 162
Falcaria 41
falcataria, *Drepana* **Pl 4**, 42
fascelina, *Dicallomera* **Pl 41**, 195
fasciaria, *Hylaea* **Pl 35**, 167
fasciuncula, *Oligia* **Pl 58**, 357
favicolor, *Mythimna* **Pl 65**, 399
fennica, *Actebia* **Pl 66**, 405
ferrago, *Mythimna* **Pl 65**, 401
ferrugata, *Xanthorhoe* **Pl 14**, 82
ferruginea, *Rusina* **Pl 54**, 332
festucae, *Plusia* **Pl 49**, 302
filigrammaria, *Epirrita* **Pl 19**, 102
filipendulae, *Zygaena* **Pl 3**, 39
fimbrialis, *Thalera* **Pl 37**, 175
fimbriata, *Noctua* **Pl 69**, 417
firmata, *Pennithera* **Pl 16**, 90
fixa, *Synthymia* **Pl 51**, 312
flammatra, *Dichagyris* **Pl 66**, 406
flammea, *Panolis* **Pl 62**, 380
flammea, *Senta* **Pl 66**, 404
flammea, *Trigonophora* **Pl 61**, 375
flammeolaria, *Hydrelia* **Pl 19**, 103
flavago, *Gortyna* **Pl 55**, 337
flavicincta, *Polymixis* **Pl 62**, 378, *379*
flavicinctata, *Entephria* **Pl 16**, 88
flavicornis, *Achlya* **Pl 4**, 46
flavirena, *Caradrina* **Pl 53**, 329
flaviventris, *Synanthedon* **Pl 2**, 32
flavofasciata, *Perizoma* **Pl 21**, 112
flexula, *Laspeyria* **Pl 45**, 213
florida, *Diarsia* **Pl 68**, 415
floslactata, *Scopula* **Pl 13**, 72
fluctuata, *Xanthorhoe* **Pl 14**, 81
fluctuosa, *Tetheella* **Pl 4**, 45
fluxa, *Photedes* **Pl 56**, 346
formicaeformis, *Synanthedon* **Pl 2**, 32, *32*
fraxini, *Catocala* **Pl 46**, 215
fuciformis, *Hemaris* **Pl 10**, 57, **61**
fucosa, *Amphipoea* **Pl 55**, 339
fuliginaria, *Parascotia* **Pl 45**, 212
fuliginosa, *Phragmatobia* **Pl 42**, 198
fulvata, *Cidaria* **Pl 17**, 93
funesta, *Aedia* **Pl 49**, 305
furcata, *Hydriomena* **Pl 16**, 89
furcifera, *Lithophane* **Pl 60**, 367
Furcula 179
furcula, *Furcula* **Pl 38**, 179
furuncula, *Mesoligia* **Pl 58**, 355
furva, *Apamea* **Pl 57**, 353
fuscantaria, *Ennomos* **Pl 28**, 148
fusconebulosa, *Korscheltellus* **Pl 1**, 26
fuscovenosa, *Idaea* **Pl 12**, 66

Gagitodes 112
Galgula 328
galiata, *Epirrhoe* **Pl 15**, 85
gallii, *Hyles* **Pl 11**, 59, **61**
gamma, *Autographa* **Pl 48**, 299
Gandaritis 96
Gastropacha 51
geminipuncta, *Lenisa* **Pl 56**, 344
gemmea, *Crypsedra* **Pl 54**, 336
Geometra 173
Geometridae **Pl 12–37**, 63–176, 433
Geometrinae **Pl 37**, 172–6
geryon, *Adscita* **Pl 3**, 37
gilvago, *Cirrhia* **Pl 58**, 359
gilvaria, *Aspitates* **Pl 36**, 171
Glacies 169
glareosa, *Eugnorisma* **Pl 71**, 425
glaucata, *Cilix* **Pl 4**, 43
Globia 348
globulariae, *Jordanita* **Pl 3**, 37
Gluphisia 186
glyphica, *Euclidia* **Pl 47**, 218, *218*
gnaphalii, *Cucullia* **Pl 51**, 314
gnoma, *Pheosia* **Pl 39**, 183
Gnophos 168
Gortyna 337
gothica, *Orthosia* **Pl 63**, 383, *383*
gracilis, *Orthosia* **Pl 62**, 382
graminis, *Cerapteryx* **Pl 63**, 385
Grammodes 219
Graphiphora 420
graslini, *Agrotis* **Pl 67**, 409
Griposia 374

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

grisealis, *Herminia* **Pl 45**, 208, *208*
griseata, *Lithostege* **Pl 25**, 135
griseola, *Eilema* **Pl 44**, 204
grossulariata, *Abraxas* **Pl 25**, 138
Gymnoscelis 115

Habrosyne 44
Hada 392
Hadena 395
Hadeninae **Pl 62–6**, 380–404
haematidea, *Agrochola* **Pl 59**, 362, *362*
halterata, *Lobophora* **Pl 25**, 136
harpagula, *Sabra* **Pl 4**, 43, *43*
Harpyia 180
hastata, *Rheumaptera* **Pl 20**, 105
haworthiata, *Eupithecia* **Pl 21**, 116
haworthii, *Celaena* **Pl 54**, 336
Hecatera 394
hecta, *Phymatopus* **Pl 1**, 26
Helicoverpa 322
Heliothinae **Pl 52**, 320–3
Heliothis 321
Helotropha 337
helvola, *Agrochola* **Pl 59**, 361
Hemaris 57
Hemistola 174
Hemithea 175
hepatica, *Polia* **Pl 63**, 387
Hepialidae **Pl 1**, 25–6
Hepialus 26
Herminia 208
Herminiinae **Pl 45**, 207–10
herzogi, *Agrotis* **Pl 67**, 410
Heterogenea 36
hexadactyla, *Alucita* 16, **17**
hippocastanaria, *Pachycnemia* **Pl 27**, 145
Hippotion 62
hirtaria, *Lycia* **Pl 30**, 153, *153*
hispidaria, *Apocheima* **Pl 30**, 152
Hoplodrina 330
Horisme 108
hortulata, *Anania* 16, **17**
hospes, *Athetis* **Pl 54**, 333
humidalis, *Hypenodes* **Pl 45**, 210
humiliata, *Idaea* **Pl 12**, 66
humuli, *Hepialus* **Pl 1**, 26
Hydraecia 338
Hydrelia 103
Hydria 106
Hydriomena 89
Hylaea 167
hylaeiformis, *Pennisetia* **Pl 2**, 29
Hyles 58
Hypena 190
Hypeninae **Pl 40**, 190–2
Hypenodes 210
Hypenodinae **Pl 45**, 210–11
hyperici, *Chloantha* **Pl 54**, 335
Hyphantria 197
Hyphoraia 200
Hypomecis 161
Hyppa 334

ichneumoniformis, *Bembecia* **Pl 2**, 34
icterata, *Eupithecia* **Pl 24**, 132
icteritia, *Cirrhia* **Pl 58**, 359
Idaea 64
ilicaria, *Peribatodes* **Pl 32**, 158
ilicifolia, *Phyllodesma* **Pl 7**, 51
imbecilla, *Eriopygodes* **Pl 66**, 404
imitaria, *Scopula* **Pl 13**, 72
immorata, *Scopula* **Pl 12**, 70
immutata, *Scopula* **Pl 13**, 72
impluviata, *Hydriomena* **Pl 16**, 89
impura, *Mythimna* **Pl 65**, 399
incerta, *Orthosia* **Pl 62**, 380
indigata, *Eupithecia* **Pl 23**, 125
innotata, *Eupithecia* **Pl 23**, 125
inquinata, *Idaea* 433, **433**
insigniata, *Eupithecia* **Pl 23**, 126
insulana, *Earias* **Pl 72**, 431
interjecta, *Noctua* **Pl 69**, 418
intermedialis, *Schrankia* 211
interrogationis, *Syngrapha* **Pl 49**, 301
intricata, *Eupithecia* **Pl 23**, 127
inturbata, *Eupithecia* **Pl 21**, 117
Ipimorpha 370
ipsilon, *Agrotis* **Pl 68**, 412
irregularis, *Hadena* **Pl 65**, 397
irriguata, *Eupithecia* **Pl 23**, 125
irrorella, *Setina* **Pl 44**, 206
Isturgia 143

jacobaeae, *Tyria* **Pl 43**, 201, *201*
janthe, *Noctua* **Pl 69**, 419
janthina, *Noctua* **Pl 69**, 419
Jodia 365
jodia, *Trigonophora* 375
Jodis 174
Jordanita 37
jota, *Autographa* **Pl 49**, 300
jubata, *Alcis* **Pl 33**, 161
juniperata, *Thera* **Pl 17**, 92, *92*
juventina, *Callopistria* **Pl 52**, 324

kadenii, *Caradrina* **Pl 53**, 329
Korscheltellus 25

l-album, *Mythimna* **Pl 65**, 402
l-nigrum, *Arctornis* **Pl 40**, 192
labecula, *Dryobota* **Pl 61**, 373
Lacanobia 388
lacertinaria, *Falcaria* **Pl 4**, 41
lactearia, *Jodis* **Pl 37**, 174
Laelia 194
lamda, *Lithophane* **Pl 60**, 367
Lampropteryx 99
lanestris, *Eriogaster* **Pl 5**, 48
Laothoe 55
lapidata, *Coenocalpe* **Pl 20**, 107, *107*
lapponaria, *Lycia* **Pl 30**, 153, *154*
Larentia 87
Larentiinae **Pl 14–25**, 77–137
lariciata, *Eupithecia* **Pl 22**, 122
Lasiocampa 49

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Lasiocampidae **Pl 5–7**, 46–51
Lasiocampinae **Pl 5–6**, 48–50
Laspeyria 213
lateritia, *Apamea* **Pl 57**, 353
Lateroligia 354
latreillei, *Callopistria* **Pl 52**, 324
latruncula, *Oligia* **Pl 58**, 356
leautieri, *Lithophane* **Pl 60**, 368
legatella, *Chesias* **Pl 24**, 135
Lenisa 344
leporina, *Acronicta* **Pl 50**, 309
Leucania 402
Leucodonta 184
leucogaster, *Ochropleura* **Pl 68**, 413
leucographa, *Cerastis* **Pl 68**, 415
Leucoma 192
leucomelas, *Aedia* **Pl 49**, 304
leucophaearia, *Agriopis* **Pl 31**, 155
leucostigma, *Helotropha* **Pl 54**, 337
libatrix, *Scoliopteryx* **Pl 40**, 189
lichenaria, *Cleorodes* **Pl 36**, 169
lichenea, *Polymixis* **Pl 61**, 378
Ligdia 139
ligula, *Conistra* **Pl 59**, 364
ligustri, *Craniophora* **Pl 50**, 312
ligustri, *Sphinx* **Pl 9**, 56, **60**
limacodes, *Apoda* **Pl 2**, 35, *35*
Limacodidae **Pl 2**, 35–6
limbaria, *Isturgia* **Pl 26**, 143
limbirena, *Ctenoplusia* **Pl 48**, 296
linariata, *Eupithecia* **Pl 22**, 118
linearia, *Cyclophora* **Pl 13**, 76
lineata, *Hyles* 59
lineata, *Siona* **Pl 36**, 170
literosa, *Litoligia* **Pl 58**, 355
Lithophane 366
Lithosia 204
Lithostege 135
lithoxylaea, *Apamea* **Pl 57**, 352
Litoligia 355
litoralis, *Mythimna* **Pl 65**, 402
littoralis, *Spodoptera* **Pl 53**, 327
litura, *Agrochola* **Pl 59**, 361
litura, *Spodoptera* 327
liturata, *Macaria* **Pl 26**, 141
lividalis, *Hypena* **Pl 40**, 191
livornica, *Hyles* **Pl 11**, 59, **61**
Lobophora 136
Lomaspilis 139
Lomographa 165
Longalatedes 343
lonicerae, *Zygaena* **Pl 3**, 40
loreyi, *Leucania* **Pl 66**, 403
lota, *Agrochola* **Pl 59**, 361, *361*
loti, *Zygaena* **Pl 3**, 38
lubricipeda, *Spilosoma* **Pl 41**, 197
lucens, *Amphipoea* **Pl 55**, 340
lucernea, *Standfussiana* **Pl 68**, 417
lucida, *Acontia* **Pl 49**, 304
lucipara, *Euplexia* **Pl 54**, 335
lucipeta, *Rhyacia* **Pl 68**, 416
luctuata, *Spargania* **Pl 16**, 88
luctuosa, *Tyta* **Pl 49**, 305
lueneburgensis, *Aporophyla* **Pl 61**, 376, 377
lunalis, *Zanclognatha* **Pl 45**, 209
lunaris, *Minucia* **Pl 48**, 219
lunosa, *Omphaloscelis* **Pl 59**, 363
lunula, *Calophasia* **Pl 51**, 316
lunularia, *Selenia* **Pl 28**, 149
Luperina 340
lupulina, *Korscheltellus* **Pl 1**, 25
luridata, *Scotopteryx* **Pl 14**, 78
lurideola, *Eilema* **Pl 44**, 205
lutea, *Spilosoma* **Pl 41**, 196, *196*
luteolata, *Opisthograptis* **Pl 27**, 145
lutosa, *Rhizedra* **Pl 56**, 342
lutulenta, *Aporophyla* **Pl 61**, 376
lychnidis, *Agrochola* **Pl 59**, 360
lychnitis, *Cucullia* **Pl 51**, 315, *315*
Lycia 153
Lycophotia 416
Lygephila 211
Lymantria 193
Lymantriinae **Pl 40–1**, 192–6

Macaria 140
Macdunnoughia 297
macilenta, *Agrochola* **Pl 59**, 362
Macrochilo 207
Macroglossinae **Pl 10–11**, 57–9, 62
Macroglossum 58
Macrothylacia 50
macularia, *Pseudopanthera* **Pl 27**, 146
Malacosoma 48
Malacosomatinae **Pl 5**, 47–8
Mamestra 392
margaritaria, *Campaea* **Pl 35**, 167
marginaria, *Agriopis* **Pl 31**, 156
marginata, *Lomaspilis* **Pl 26**, 139
marginepunctata, *Scopula* **Pl 13**, 71
maritima, *Chilodes* **Pl 53**, 331
maritima, *Heliothis* **Pl 52**, 321
Martania 112
massiliata, *Eupithecia* **Pl 22**, 120
matura, *Thalpophila* **Pl 54**, 334
maura, *Mormo* **Pl 54**, 333
megacephala, *Subacronicta* **Pl 50**, 311
Megalographa 301
Meganephria 319
Meganola 427
Melanchra 391
melanopa, *Anarta* **Pl 63**, 386
Melanthia 108
mellinata, *Eulithis* **Pl 17**, 95
mellonella, *Galleria* 16, **17**
mendica, *Diaphora* **Pl 42**, 197
mendica, *Diarsia* **Pl 68**, 414
Menophra 157
menyanthidis, *Acronicta* **Pl 50**, 310
Mesapamea 354
Mesogona 360
Mesoleuca 87
Mesoligia 355
mesomella, *Cybosia* **Pl 44**, 203

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Mesotype 109
meticulosa, *Phlogophora* **Pl 54**, 13, 335
Metoponiinae **Pl 51**, 312
mi, *Euclidia* **Pl 47**, 218
miata, *Chloroclysta* **Pl 18**, 97
micacea, *Hydraecia* **Pl 55**, 338
milhauseri, *Harpyia* **Pl 38**, 180
millefoliata, *Eupithecia* **Pl 24**, 132
Miltochrista 202
Mimas 54
miniata, *Miltochrista* **Pl 44**, 202
minima, *Photedes* **Pl 56**, 347
miniosa, *Orthosia* **Pl 62**, 381, *381*
Minoa 104
minorata, *Perizoma* **Pl 21**, 111
Minucia 219
minutata, *Eublemma* **Pl 45**, 214
Mniotype 379
moeniata, *Scotopteryx* **Pl 14**, 79
Moma 306
monacha, *Lymantria* **Pl 40**, 193
moneta, *Polychrysia* **Pl 48**, 299
monodactyla, *Emmelina* 16
monoglypha, *Apamea* **Pl 57**, 352
montanata, *Xanthorhoe* **Pl 15**, 82
Mormo 333
morpheus, *Caradrina* **Pl 53**, 328
morrisii, *Photedes* **Pl 56**, 347
mucronata, *Scotopteryx* **Pl 14**, 78
multistrigaria, *Colostygia* **Pl 18**, 98
munda, *Anorthoa* **Pl 63**, 384
mundana, *Nudaria* **Pl 44**, 202
muralis, *Nyctobrya* **Pl 53**, 326
muricata, *Idaea* **Pl 12**, 64
murinata, *Minoa* **Pl 19**, 104
muscaeformis, *Pyropteron* **Pl 2**, 34
muscerda, *Pelosia* **Pl 44**, 203
musculosa, *Oria* **Pl 56**, 345
myopaeformis, *Synanthedon* **Pl 2**, *21*, 33
myrtilli, *Anarta* **Pl 63**, 386, *387*
Mythimna 398

Naenia 427
nanata, *Eupithecia* **Pl 23**, 124
nebulata, *Euchoeca* **Pl 19**, 103
nebulosa, *Polia* **Pl 63**, 388
nerii, *Daphnis* **Pl 10**, 58
neurica, *Archanara* **Pl 56**, 344
neustria, *Malacosoma* **Pl 5**, 48
ni, *Trichoplusia* **Pl 48**, 295
nickerlii, *Luperina* **Pl 55**, 341
nigra, *Aporophyla* **Pl 61**, 377
nigricans, *Euxoa* **Pl 66**, 407
nigrofusca, *Euxoa* 407
nigropunctata, *Scopula* **Pl 12**, 70
Noctua 417
Noctuidae **Pl 48–71**, 292–427
Noctuinae **Pl 66–71**, 404–27
Nola 428
Nolidae **Pl 71–72**, 427–31
Nolinae **Pl 71**, 427–9
Nonagria 343
nonagrioides, *Sesamia* **Pl 58**, 357
notata, *Macaria* **Pl 26**, 140
notha, *Boudinotiana* **Pl 25**, 138
Notodonta 182
Notodontidae **Pl 38–9**, 176–87
Notodontinae **Pl 38–9**, 181–5
nubeculosa, *Brachionycha* **Pl 52**, 319
nubigera, *Heliothis* **Pl 52**, 322
Nudaria 202
nupta, *Catocala* **Pl 46**, 216
Nycteola 430
Nycterosea 80
Nyctobrya 326
nymphaeata, *Elophila* **17**
nymphagoga, *Catocala* **Pl 46**, 215

obelisca, *Euxoa* **Pl 66**, 406
obeliscata, *Thera* **Pl 17**, 91
obesalis, *Hypena* **Pl 40**, 191
obfuscata, *Gnophos* **Pl 35**, 168
oblonga, *Apamea* **Pl 57**, 352
obscurata, *Charissa* **Pl 36**, 168, *168*
obsitalis, *Hypena* **Pl 40**, 191
obsoleta, *Leucania* **Pl 65**, 402
obstipata, *Nycterosea* **Pl 14**, 80
obtusa, *Pelosia* **Pl 44**, 203
occulta, *Eurois* **Pl 70**, 420
ocellaris, *Cirrhia* **Pl 58**, 359
ocellata, *Cosmorhoe* **Pl 17**, 94
ocellata, *Smerinthus* **Pl 8**, 55, **61**
ochrata, *Idaea* **Pl 12**, 65, *65*
ochrearia, *Aspitates* **Pl 36**, 171, *171*
ochroleuca, *Eremobia* **Pl 55**, 337
Ochropacha 45
Ochropleura 412
octogenaria, *Hoplodrina* **Pl 53**, 330
ocularis, *Tethea* **Pl 4**, 44
oculea, *Amphipoea* **Pl 55**, 340
Odezia 109
oditis, *Leucochlaena* **Pl 58**, 357
Odontopera 150
Odontosia 185
oleracea, *Lacanobia* **Pl 64**, 390
Oligia 356
olivata, *Colostygia* **Pl 18**, 98
Omphaloscelis 363
Oncocnemidinae **Pl 51**, 316–17
ononaria, *Aplasta* **Pl 37**, 172
oo, *Dicycla* **Pl 60**, 372
Operophtera 100
ophiogramma, *Lateroligia* **Pl 57**, 354
opima, *Orthosia* **Pl 63**, 383, *383*
Opisthograptis 145
optata, *Catocala* 216
or, *Tethea* **Pl 4**, 44
orbona, *Noctua* **Pl 69**, 418
Orgyia 195
Oria 345
orichalcea, *Thysanoplusia* **Pl 48**, 295
ornata, *Scopula* **Pl 12**, 71
ornatrix, *Utetheisa* 202
ornitopus, *Lithophane* **Pl 59**, 366

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Orthonama 80
Orthosia 380
osseola, *Hydraecia* **Pl 55**, 339
ostrina, *Eublemma* **Pl 45**, 214
otregiata, *Lampropteryx* **Pl 18**, 99
Ourapteryx 151
oxyacanthae, *Allophyes* **Pl 52**, 319

pabulatricula, *Pabulatrix* **Pl 57**, 349
Pabulatrix 349
Pachetra 388
Pachycnemia 145
padella, *Yponomeuta* 16
paleacea, *Enargia* **Pl 60**, 369
pallens, *Mythimna* **Pl 65**, 399
pallustris, *Athetis* **Pl 54**, 332, *332*
palpina, *Pterostoma* **Pl 39**, 184
paludella, *Calamotropha* 331
Panemeria 312
Panolis 380
Pantheinae **Pl 49**, 305–6
Papestra 391
papilionaria, *Geometra* **Pl 37**, 173
Paracolax 207
Paradarisa 163
Paranthrene 30
Parascotia 212
Parasemia 198
Parastichtis 373
Parectropis 163
Pareulype 107
parthenias, *Archiearis* **Pl 25**, 137
partita, *Galgula* **Pl 53**, 328
parva, *Eublemma* **Pl 45**, 214
pascuella, *Crambus* **17**
Pasiphila 115
pastinum, *Lygephila* **Pl 45**, 211
pavonia, *Saturnia* **Pl 7**, 53, *53*
Pechipogo 209
pectinataria, *Colostygia* **Pl 18**, 98
Pelosia 203
peltigera, *Heliothis* **Pl 52**, 322
Pelurga 87
pendularia, *Cyclophora* **Pl 13**, 74
pennaria, *Colotois* **Pl 29**, 151, *151*
Pennisetia 29
Pennithera 90
pentadactyla, *Pterophorus* 16, **17**
Perconia 172
Peribatodes 157
peribolata, *Scotopteryx* **Pl 14**, 78
Peridea 183
Peridroma 405
Periphanes 323
Perizoma 110
perplexa, *Hadena* **Pl 65**, 397, *397*
persicariae, *Melanchra* **Pl 64**, 391, *391*
petasitis, *Hydraecia* **Pl 55**, 338
Petrophora 144
Phalera 186
Phalerinae **Pl 39**, 186
phegea, *Amata* 434, **434**
Pheosia 183
Phibalapteryx 77
Phigalia 152
Philereme 104
Phlogophora 335
phoeniceata, *Eupithecia* **Pl 22**, 121
Photedes 346
Phragmataecia 28
Phragmatobia 198
phragmitella, *Chilo* 331
phragmitidis, *Arenostola* **Pl 56**, 343
Phyllodesma 51
Phymatopus 26
Phytometra 212
pigra, *Clostera* **Pl 39**, 187
pilosaria, *Phigalia* **Pl 30**, 152, *153*
pimpinellata, *Eupithecia* **Pl 23**, 123
Pinarinae **Pl 6–7**, 50–1
pinastri, *Sphinx* **Pl 9**, 14, 56, **60**
piniaria, *Bupalus* **Pl 35**, 164
pini, *Dendrolimus* **Pl 6**, 50
pinivora, *Thaumetopoea* 178
pisi, *Ceramica* **Pl 64**, 391
pityocampa, *Thaumetopoea* **Pl 38**, 178
plagiata, *Aplocera* **Pl 24**, 134
Plagodis 144
plantaginis, *Parasemia* **Pl 42**, 198
platyptera, *Calophasia* **Pl 51**, 317
plebeja, *Hada* **Pl 64**, 392
plecta, *Ochropleura* **Pl 68**, 412
Plemyria 93
plumbeolata, *Eupithecia* **Pl 22**, 119
plumigeralis, *Pechipogo* **Pl 45**, 209
plumigera, *Ptilophora* **Pl 39**, 185
Plusia 302
Plusiinae **Pl 48–9**, 294–302
podana, *Archips* 16, **17**
Poecilocampa 47
Poecilocampinae **Pl 5**, 47
Polia 387
Polychrysia 299
polycommata, *Trichopteryx* **Pl 25**, 137
polygrammata, *Costaconvexa* **Pl 15**, 84
Polymixis 378
polyodon, *Actinotia* **Pl 54**, 334
Polyphaenis 334
Polyploca 46
populata, *Eulithis* **Pl 17**, 95
populeti, *Orthosia* **Pl 62**, 382
populi, *Laothoe* **Pl 8**, 55, **61**
populi, *Poecilocampa* **Pl 5**, 47
porata, *Cyclophora* **Pl 13**, 76
porcellus, *Deilephila* **Pl 11**, **61**, 62
porphyrea, *Lycophotia* **Pl 68**, 416
potatoria, *Euthrix* **Pl 7**, 51
praecox, *Actebia* **Pl 66**, 405
praeformata, *Aplocera* **Pl 24**, 134
prasina, *Anaplectoides* **Pl 70**, 421
prasinana, *Pseudoips* **Pl 72**, 429
primaria, *Theria* **Pl 35**, 166, *166*
proboscidalis, *Hypena* **Pl 40**, 190
procellata, *Melanthia* **Pl 20**, 108

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

processionea, *Thaumetopoea* **Pl 38**, 178
Procridinae **Pl 3**, 37–8
promissa, *Catocala* **Pl 47**, *20*, 217
pronuba, *Noctua* **Pl 69**, 417, *417*
proserpina, *Proserpinus* **Pl 10**, 58
Proserpinus 58
Protarchanara 348
Protolampra 426
Protoschinia 320
pruinata, *Pseudoterpna* **Pl 37**, 173
prunaria, *Angerona* **Pl 27**, 147
prunata, *Eulithis* **Pl 17**, 94
Psaphidinae **Pl 52**, 318–20
Pseudenargia 336
Pseudeustrotia 326
Pseudocoremia 169
Pseudoips 429
Pseudopanthera 146
pseudospretella, *Hofmannophila* **17**
Pseudoterpna 173
psi, *Acronicta* **Pl 50**, 308, *308*
Pterapherapteryx 136
Pterophoridae 16
Pterostoma 184
Ptilodon 184
Ptilophora 185
pudibunda, *Calliteara* **Pl 41**, 195
pudorina, *Mythimna* **Pl 65**, 398
pulchellata, *Eupithecia* **Pl 22**, 118
pulchella, *Utetheisa* **Pl 44**, 202
pulchrina, *Autographa* **Pl 48**, 300
pulveraria, *Plagodis* **Pl 27**, 144
punctaria, *Cyclophora* **Pl 13**, 76
punctinalis, *Hypomecis* **Pl 33**, 161
punctulata, *Aethalura* **Pl 34**, 164
Pungeleria 167
puppillaria, *Cyclophora* **Pl 13**, 75, *75*
purpuralis, *Pyrausta* **17**
purpuralis, *Zygaena* **Pl 3**, 38
purpurina, *Eublemma* **Pl 45**, 214
pusaria, *Cabera* **Pl 35**, 165, *165*
pusillata, *Eupithecia* **Pl 22**, 120
puta, *Agrotis* **Pl 68**, 411
putnami, *Plusia* **Pl 49**, 302
putrescens, *Leucania* **Pl 65**, 403
putris, *Axylia* **Pl 68**, 412
Pygaerinae **Pl 39**, 186–7
pygarga, *Deltote* **Pl 49**, 302
pygmaeata, *Eupithecia* **Pl 22**, 119
pygmaeola, *Eilema* **Pl 44**, 206
pygmina, *Denticucullus* **Pl 56**, 345
pyraliata, *Gandaritis* **Pl 17**, 96
Pyralidae 16
pyralina, *Cosmia* **Pl 60**, 371
pyramidea, *Amphipyra* **Pl 51**, 317, *318*
Pyrausta 16
pyrina, *Zeuzera* **Pl 1**, 27
pyri, *Saturnia* 53
pyritoides, *Habrosyne* **Pl 4**, 44
Pyropteron 34
Pyrrhia 320

quadra, *Lithosia* **Pl 44**, 204
quadrifasiata, *Xanthorhoe* **Pl 15**, 83
quadripunctaria, *Euplagia* **Pl 43**, 200
quercaria, *Ennomos* **Pl 28**, 149
quercifolia, *Gastropacha* **Pl 7**, 51
quercinaria, *Ennomos* **Pl 28**, 148
quercus, *Lasiocampa* **Pl 6**, 49

raptricula, *Bryophila* **Pl 53**, 325
ravida, *Spaelotis* **Pl 70**, 420
reaumurella, *Adela* **17**
recens, *Orgyia* **Pl 41**, 196
rectangulata, *Pasiphila* **Pl 21**, 116
rectilinea, *Hyppa* **Pl 54**, 334
remissa, *Apamea* **Pl 57**, 349
remmi, *Mesapamea* 355
repandaria, *Epione* **Pl 27**, 146
repandata, *Alcis* **Pl 33**, 160
reticulata, *Eustroma* **Pl 17**, 94
reticulata, *Sideridis* **Pl 64**, 393
retusa, *Ipimorpha* **Pl 60**, 370
revayana, *Nycteola* **Pl 72**, 430
Rheumaptera 105
Rhizedra 342
Rhodometra 77
rhombicus, *Limnephilus* **17**
rhomboidaria, *Peribatodes* **Pl 31**, 157
Rhyacia 416
ribeata, *Deileptenia* **Pl 32**, 160
ridens, *Polyploca* **Pl 4**, 46
ripae, *Agrotis* **Pl 67**, 410
rivata, *Epirrhoe* **Pl 15**, 85
Rivula 190
rivularis, *Sideridis* **Pl 64**, 393
Rivulinae **Pl 40**, 190
roboraria, *Hypomecis* **Pl 33**, 161
roboris, *Dryobotodes* **Pl 61**, 374
rostralis, *Hypena* **Pl 40**, 190, *191*
ruberata, *Hydriomena* **Pl 16**, 89
rubidata, *Catarhoe* **Pl 15**, 83
rubi, *Diarsia* **Pl 68**, 414
rubi, *Macrothylacia* **Pl 6**, 50, *50*
rubiginata, *Plemyria* **Pl 17**, 93
rubiginata, *Scopula* **Pl 12**, 71
rubiginea, *Conistra* **Pl 59**, 364
rubiginosa, *Conistra* **Pl 59**, 364
rubricollis, *Atolmis* **Pl 44**, 204
rubricosa, *Cerastis* **Pl 68**, 415
rufa, *Coenobia* **Pl 56**, 345
rufata, *Chesias* **Pl 25**, 135, *135*
ruficiliaria, *Cyclophora* **Pl 13**, 75
ruficornis, *Drymonia* **Pl 38**, 181
rufifasciata, *Gymnoscelis* **Pl 21**, 115
rumicis, *Acronicta* **Pl 50**, 311, *311*
ruralis, *Pleuroptya* 16, **17**
Rusina 332
rusticata, *Idaea* **Pl 12**, 65

Sabra 43
sacraria, *Rhodometra* **Pl 13**, 77
sagittata, *Gagitodes* **Pl 21**, 112, *113*
sagittigera, *Pachetra* **Pl 64**, 388

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

salicalis, *Colobochyla* **Pl 45**, 213
salicata, *Coenotephria* **Pl 18**, 99
salicis, *Leucoma* **Pl 40**, 192
sambucaria, *Ourapteryx* **Pl 29**, 151
sannio, *Diacrisia* **Pl 42**, 198
satura, *Mniotype* **Pl 62**, 379
Saturnia 53
Saturniidae **Pl 7**, 52–53
Saturniinae **Pl 7**, 53
satyrata, *Eupithecia* **Pl 23**, 128
saucia, *Peridroma* **Pl 66**, 405
scabriuscula, *Dypterygia* **Pl 54**, 333
Schrankia 210
scoliaeformis, *Synanthedon* **Pl 2**, 31
Scoliopteryginae **Pl 40**, 189
Scoliopteryx 189
scolopacina, *Apamea* **Pl 57**, 351
Scopula 70
Scotopteryx 78
scrophulariae, *Cucullia* **Pl 51**, 315
scutosa, *Protoschinia* **Pl 52**, 320
secalis, *Mesapamea* **Pl 58**, 354
secundaria, *Peribatodes* **Pl 32**, 158
Sedina 342
segetum, *Agrotis* **Pl 67**, 409
Selenia 149
Selidosema 159
semibrunnea, *Lithophane* **Pl 59**, 366
senex, *Thumatha* **Pl 44**, 202
Senta 404
seriata, *Idaea* **Pl 12**, 66
sericata, *Polyphaenis* **Pl 54**, 334
sericealis, *Rivula* **Pl 40**, 190
serpentata, *Idaea* **Pl 12**, 64
Sesamia 357
Sesia 30
Sesiidae **Pl 2**, 28–35
Sesiinae **Pl 2**, 30–5
Setina 206
sexalata, *Pterapherapteryx* **Pl 25**, 136
sexstrigata, *Xestia* **Pl 70**, 423
Sideridis 392
signaria, *Macaria* **Pl 26**, 141
silaceata, *Ecliptopera* **Pl 18**, 96
similaria, *Parectropis* **Pl 34**, 163
similis, *Euproctis* **Pl 40**, 194, *195*
simpliciata, *Eupithecia* **Pl 23**, 123
simulans, *Rhyacia* **Pl 68**, 416
Simyra 307
sinuosaria, *Eupithecia* **Pl 23**, 124
Siona 170
siterata, *Chloroclysta* **Pl 18**, 96
smaragdaria, *Thetidia* **Pl 37**, 174, *174*
Smerinthinae **Pl 8**, 54–5
Smerinthus 55
sobrina, *Protolampra* **Pl 71**, 426
socia, *Lithophane* **Pl 59**, 366
sociella, *Aphomia* 16, **17**
solidaginis, *Xylena* **Pl 60**, 368
solieri, *Mniotype* **Pl 62**, 379
sordens, *Apamea* **Pl 57**, 351
sororcula, *Eilema* **Pl 44**, 206
sororiata, *Carsia* **Pl 24**, 133
spadicearia, *Xanthorhoe* **Pl 14**, 81
Spaelotis 420
Spargania 88
sparganii, *Globia* **Pl 56**, 348
sparsata, *Anticollix* **Pl 20**, 108
spheciformis, *Synanthedon* **Pl 2**, 31
Sphingidae **Pl 8–11**, 53–62
Sphinginae **Pl 9**, 55–7
Sphinx 56
sphinx, *Asteroscopus* **Pl 52**, 318, *319*
Spilosoma 196
splendens, *Lacanobia* **Pl 64**, 390
Spodoptera 327
sponsa, *Catocala* **Pl 47**, 217, *217*
Standfussiana 417
statices, *Adscita* **Pl 3**, 37
Stauropus 181
Stegania 140
stellatarum, *Macroglossum* **Pl 10**, 58, **61**
stenochrysis, *Diachrysia* 298
Sterrhinae **Pl 12–13**, 64–77
stigmatica, *Xestia* **Pl 70**, 421, *421*
Stilbia 317
stolida, *Grammodes* **Pl 48**, 219
straminata, *Idaea* **Pl 12**, 70
straminea, *Mythimna* **Pl 65**, 400
strataria, *Biston* **Pl 30**, 155
striata, *Coscinia* **Pl 44**, 201
strigilata, *Pechipogo* **Pl 45**, 209
strigilis, *Oligia* **Pl 58**, 356
strigillaria, *Perconia* **Pl 36**, 172
strigosa, *Acronicta* **Pl 50**, 309
strigula, *Meganola* **Pl 71**, 427
styx, *Acherontia* 56
suasa, *Lacanobia* **Pl 64**, 389
suavis, *Pseudocoremia* **Pl 36**, 169
Subacronicta 311
subchlamydula, *Nola* 429
subfuscata, *Eupithecia* **Pl 24**, 133
sublustris, *Apamea* **Pl 57**, 353
subrosea, *Coenophila* **Pl 71**, 425, *425*
subsericeata, *Idaea* **Pl 12**, 67
subtusa, *Ipimorpha* **Pl 60**, 370
subumbrata, *Eupithecia* **Pl 24**, 133
succenturiata, *Eupithecia* **Pl 24**, 132
suffumata, *Lampropteryx* **Pl 18**, 99
superstes, *Hoplodrina* **Pl 53**, 330
suspecta, *Parastichtis* **Pl 61**, 373
sylvata, *Abraxas* **Pl 26**, 139
sylvata, *Hydrelia* **Pl 19**, 103
sylvestraria, *Idaea* **Pl 12**, 67
sylvina, *Triodia* **Pl 1**, 25
Synanthedon 31
Syngrapha 301
Synthymia 312
syringaria, *Apeira* **Pl 27**, 147

tabaniformis, *Paranthrene* **Pl 2**, 30
taenialis, *Schrankia* **Pl 45**, 211
taeniata, *Martania* **Pl 21**, 112
tantillaria, *Eupithecia* **Pl 22**, 122

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

tarsicrinalis, *Herminia* **Pl 45**, 208
tarsipennalis, *Herminia* **Pl 45**, 208
Tathorhynchus 212
temerata, *Lomographa* **Pl 35**, 166
templi, *Dasypolia* **Pl 61**, 377
tenebrata, *Panemeria* **Pl 51**, 312
tenebrosa, *Dryobotodes* **Pl 61**, 375
tenuiata, *Eupithecia* **Pl 21**, 117
ternata, *Scopula* **Pl 13**, 72
tersata, *Horisme* **Pl 20**, 108
testacea, *Luperina* **Pl 55**, 341, *341*
testata, *Eulithis* **Pl 17**, 94, *95*
testudinaria, *Hyphoraia* **Pl 43**, 200
Tethea 44
Tetheella 45
tetralunaria, *Selenia* **Pl 29**, 150
thalassina, *Lacanobia* **Pl 64**, 389
Thalera 175
Thalpophila 334
Thaumetopoea 178
Thaumetopoeinae **Pl 38**, 178–9
Thera 90
Theria 166
Thetidia 174
Tholera 384
Thumatha 202
Thyatira 43
Thyatirinae **Pl 4**, 43–6
Thysanoplusia 295
Tiliacea 358
tiliae, *Mimas* **Pl 8**, 54, **61**
Timandra 73
Tinthiinae **Pl 2**, 29
tipuliformis, *Synanthedon* **Pl 2**, 33
tityus, *Hemaris* **Pl 10**, 57, **61**
togata, *Xanthia* **Pl 58**, 358, *359*
torrida, *Dysgonia* 219
Tortricoidea 16
torva, *Notodonta* **Pl 39**, 182
Toxocampinae **Pl 45**, 211–12
trabealis, *Acontia* **Pl 49**, 304
Trachea 333
tragopoginis, *Amphipyra* **Pl 52**, 318
transversa, *Eupsilia* **Pl 60**, 369
transversata, *Philereme* **Pl 20**, 105
trapezina, *Cosmia* **Pl 60**, 371
tremula, *Pheosia* **Pl 39**, 183
triangulum, *Xestia* **Pl 70**, 424
Trichiura 47
Trichoplusia 295
Trichopteryx 137
tridens, *Acronicta* **Pl 50**, 308, *308*
tridens, *Calamia* **Pl 54**, 336
trifolii, *Anarta* **Pl 63**, 385
trifolii, *Lasiocampa* **Pl 5**, 49
trifolii, *Zygaena* **Pl 3**, 40
trigeminata, *Idaea* **Pl 12**, 68
Trigonophora 375
trigrammica, *Charanyca* **Pl 54**, 331
trimaculata, *Stegania* **Pl 26**, 140
Triodia 25
tripartita, *Abrostola* **Pl 48**, 294
Triphosa 106
triplasia, *Abrostola* **Pl 48**, 294
tripunctaria, *Eupithecia* **Pl 22**, 121
Trisateles 213
trisignaria, *Eupithecia* **Pl 23**, 127
tristalis, *Paracolax* **Pl 45**, 207
tristata, *Epirrhoe* **Pl 15**, 84
tritici, *Euxoa* **Pl 66**, 407
tritophus, *Notodonta* **Pl 39**, 182
truncata, *Dysstroma* **Pl 18**, 97
trux, *Agrotis* **Pl 67**, 411
turbida, *Sideridis* **Pl 64**, 392
turca, *Mythimna* **Pl 65**, 398
typhae, *Nonagria* **Pl 56**, 343, *343*
typica, *Naenia* **Pl 71**, 427
Tyria 201
Tyta 305

ulicis, *Pseudenargia* **Pl 54**, 336
ultimaria, *Eupithecia* **Pl 22**, 118
umbra, *Pyrrhia* **Pl 52**, 320
umbraria, *Peribatodes* **Pl 31**, 158
umbratica, *Cucullia* **Pl 51**, 313
unangulata, *Euphyia* **Pl 15**, 86
unanimis, *Apamea* **Pl 57**, 351
uncula, *Deltote* **Pl 49**, 303
undulata, *Hydria* **Pl 20**, 106
unipuncta, *Mythimna* **Pl 65**, 401
urticae, *Spilosoma* **Pl 41**, 197
Utetheisa 202

v-ata, *Chloroclystis* **Pl 21**, 115
vaccinii, *Conistra* **Pl 59**, 363
valerianata, *Eupithecia* **Pl 23**, 129, *130*
variabilis, *Euchalcia* **Pl 48**, 298
venosata, *Eupithecia* **Pl 22**, 119
Venusia 103
venustula, *Elaphria* **Pl 53**, 328
verbasci, *Cucullia* **Pl 51**, 316, *316*
versicolora, *Endromis* **Pl 7**, 52
versicolor, *Oligia* **Pl 58**, 357
vespertaria, *Epione* **Pl 27**, 146
vespiformis, *Synanthedon* **Pl 2**, 33
vestigialis, *Agrotis* **Pl 67**, 410
vetulata, *Philereme* **Pl 19**, 104
vetustata, *Thera* **Pl 16**, 91
vetusta, *Xylena* **Pl 60**, 369
viciae, *Zygaena* **Pl 3**, 39, *39*
villica, *Arctia* **Pl 43**, 199
viminalis, *Brachylomia* **Pl 61**, 372
vinula, *Cerura* **Pl 38**, 179, *179*
viretata, *Acasis* **Pl 25**, 136
virgata, *Phibalapteryx* **Pl 14**, 77
virgaureata, *Eupithecia* **Pl 22**, 122
virgo, *Eucarta* **Pl 52**, 324
virgulana, *Pardasena* **Pl 72**, 430
viridana, *Tortrix* 16, **17**
viridaria, *Phytometra* **Pl 45**, 212
viridata, *Chlorissa* **Pl 37**, 175
viriplaca, *Heliothis* **Pl 52**, 321
vitalbata, *Horisme* **Pl 20**, 108
vitellina, *Mythimna* **Pl 65**, 400

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025

Vittaplusia 296
vittata, *Orthonama* **Pl 14**, 80
vittata, *Vittaplusia* **Pl 48**, 296
vittella, *Earias* **Pl 72**, 431
vulgata, *Eupithecia* **Pl 24**, 130

w-latinum, *Lacanobia* **Pl 64**, 388
Watsonalla 42
wauaria, *Macaria* **Pl 26**, 141

Xanthia 358
xanthographa, *Xestia* **Pl 70**, 422
xanthomista, *Polymixis* **Pl 62**, 378
Xanthorhoe 80
Xestia 421
Xylena 368
Xyleninae **Pl 53–62**, 326–80
Xylocampa 320

Yponomeuta 16
Yponomeutidae 16
ypsillon, *Apterogenum* **Pl 61**, 373

Zanclognatha 209
zelleralis, *Zanclognatha* **Pl 45**, 209
Zeuzera 27
Zeuzerinae **Pl 1**, 27–8
ziczac, *Notodonta* **Pl 38**, 182, *182*
zollikoferi, *Fabula* **Pl 56**, 342
zonaria, *Lycia* **Pl 30**, 154, *154*
Zygaena 38
Zygaenidae **Pl 3**, 36–40
Zygaeninae **Pl 3**, 38–40

This ebook belongs to Victor Brans (victor.brans@uclouvain.be), purchased on 17/09/2025