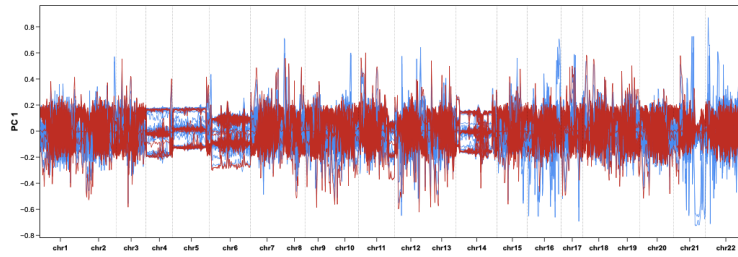


Reid Lab MScProject 2: Investigating the role of low-recombination regions in combtooth blenny biology



Recent genomic research has revealed that regions of low recombination can have an outsized role in phenotypic differentiation within species. Examples include sex-determining chromosomes and large chromosomal inversions / ‘supergenes’ affecting multiple linked traits such as reproductive behavior, migration, and morphology. Our work on Philippine fishes has identified multiple regions of low recombination in the genome of the jewelled blenny (family Blennidae: *Salarias fasciatus*), a reef fish that is also common in the aquarium trade, with currently unknown functions. The genetics of sex determination are currently unknown for many blennies including the genus *Salarias*, although it is suspected that there have been multiple transitions between XX/XY and ZZ/ZW systems within this family. This project will apply low-coverage whole-genome sequencing to identify inversion genotypes and associate those genotypes with sex, morphology, and behavioral characteristics measured in the lab, providing important insight into the basic biology of these species.