

A seminar by the Population Genetics faculty candidate

“Genomics of adaptation and speciation in butterflies”

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Adaptation and speciation are responsible for generating the amazing biodiversity found in nature. My research takes an integrative approach to better understand the processes responsible for the origin and maintenance of novel adaptive traits and new species in natural populations. My research leverages the natural diversity in butterflies to test specific predictions of the types of ecological, developmental and genomic changes involved in adaptation and speciation. Most recently, I worked with a team of collaborators to identify the genes responsible for the adaptive radiation of wing color patterns in *Heliconius* butterflies. My students and I were responsible for genome re-sequencing from natural hybrid zones to finely map the genomic regions responsible for adaptive color pattern variation. We have narrowed the major color pattern loci to candidate genes, and in some cases identified the specific regulatory switch controlling the differences in color pattern development. We are currently using similar population genomic approaches to study how study genomes diverge through the speciation process in wide variety of butterflies.

Monday 9 March, 2015: 3:00 – 4:00 PM
Science 2, room 109

For further information: www.csufresno.edu/biology