

Post-doctoral position in the phylogenetics of the Coreidae (leaf-footed bugs)

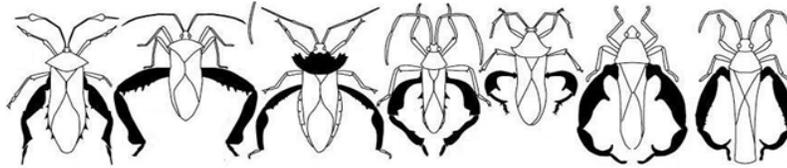


Figure 1. Insect species in the family Coreidae differ tremendously in the shape of their hind legs. These legs often serve as weapons in male-male competitions (Figure modified from Emlen 2008).

A post-doc position is available at the University of Florida (Gainesville, Florida) to work with Drs. Christine Miller and Rebecca Kimball on the phylogeny and evolution of the Coreidae. There are more than 2000 species of these insects worldwide, and male hind femurs (a sexually-selected weapon) are impressively diverse in size and shape. Males in many species use their hind legs as weapons to wrestle over access to females and territories. A major goal of this project is to examine the evolutionary interplay between fighting style and weapon diversification.

This project will involve sequence capture and next-generation sequencing of 1000's of loci from morphologically diverse members of the Coreidae, along with morphological differences in limb morphology, and behavioral assays of fighting styles. The phylogeny will then be used to test hypotheses about the evolution of morphological traits. The postdoc will be responsible for helping to develop sequence probes, obtaining specimens for analysis, library construction and sequence capture, sequence capture, phylogenetic analyses, and testing hypotheses about trait evolution. In addition, the postdoc will help in behavioral assays and microevolutionary studies to understand the incipient stages of weapon diversification.

Integration of research and education is an important element of the post-doctoral position. The postdoc will receive training in innovative teaching methods, including bringing authentic research into the classroom through CURE (Classroom-Undergraduate Research Experience) courses. These courses have the potential to engage dozens of undergraduates in the scientific process including data collection and interpretation. The post-doc should expect to co-teach one of these CURE courses each year. Further, the post-doc will engage in broader impact activities including public outreach through "Bug Fest" at the University of Florida and public speaking in other venues.

Candidates should have completed a PhD (or will very soon) and have a good knowledge of phylogenetic theory, analyses and molecular techniques. Ideal candidates will also have experience in bioinformatics, computational phylogenetics, managing large phylogenetic datasets, comparative methods and/or animal behavior studies.

Questions and applications should be addressed to Christine W. Miller, cwmiller@ufl.edu. Applications should include: 1) a cover letter outlining your research experiences, interests and career goals; 2) a C.V. including the names and contact information for at least 3 references; and 3) copies of up to 3 publications or manuscripts in review. Applications received by December 15, 2015 will receive the highest consideration but applications through January 1, 2016 may also be considered. The position could begin as early as March 1, 2016.