



RIVERSIDE

DEPARTMENT OF ENTOMOLOGY
ENTM250 Seminar Series



Speaker:

Paul Masonick, Ph. D.
Insect Systematics
Florida Museum of Natural
History

Date: Monday, October 27, 2025
Time: 4:00 pm - 4:50 pm
Format: In-Person Seminar & Virtual Access
Location: Genomics Auditorium 1102A

Zoom: 943 6687 2379
Passcode: 453393

Title:

“From Bloodsuckers to Bat Evaders: Evolutionary Tales of Assassin Bugs and Bombycoid Moths”

Abstract:

In the spirit of Halloween, I will discuss research from my recent postdoctoral appointments exploring both spooky predators and the prey that elude them. Assassin bugs (Hemiptera: Reduviidae) represent one of the largest radiations of predatory animals and exhibit remarkable morphological diversity and predatory strategies. Using a combined phylogenomic (2,291 loci) and morphological dataset spanning 195 reduvioid taxa, we reconstructed the evolutionary history of assassin bugs and proposed a revised classification that reduces the number of subfamilies to 19 and recognizes 40 tribes, including three newly described subfamilies. Shifting from hunters to the hunted, I will also highlight work on the repeated evolution of antipredatory traits in bombycoid moths (Lepidoptera). Many Saturniidae and Sphingidae have evolved acoustic-based adaptations to evade bat predation, including tail-deflected echoes and ultrasonic stridulation. Integrating ensoulification experiments, microtomography, and scanning electron microscopy, coupled with the most comprehensive phylogenies of these taxa to date, we reveal convergent patterns in the evolution of these defenses and their underlying morphology, offering new insights into the evolutionary arms race between bats and moths.

Refreshments will be served in the Entomology Building Courtyard at 3:30pm