



Speaker:



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Date: Monday November 4, 2024
Time: 4:00 pm - 4:50 pm
Format: In-Person Seminar & Virtual Access
Location: Genomics Auditorium 1102A
Zoom: 952 1906 3064
Passcode: 505445

Title:

"Combined UCE and Sanger phylogeny reconstructs the complex evolution of body shape and coloration patterns in the largest plant bug subfamily Mirinae (Heteroptera: Miridae)"

Abstract:

The Miridae, or plant bugs, are one of the largest insect families, comprising about 25% of all true bug species (Heteroptera). The most species-rich subfamily of that group, Mirinae, includes more than 320 genera and 4,100 species, found in all biogeographic regions. Many representatives of the subfamily are economically important pests such as tarnished plant bug (*Lygus* spp.) and alfalfa plant bug (*Adelphocoris* spp.) Mirinae are extremely diverse morphologically with several myrmecomorphic or seed-like elongated genera as well as aposematically colored lineages. For the present study, we combined UCE loci with four genetic markers to construct the first data-rich phylogeny, resolve the relationships between tribes of the subfamily, and uncover the problems of the current Mirinae classification. Obtaining a robust phylogeny is crucial to not only develop a system for the group but also to serve as a starting point for dating analysis, biogeography, trait and diet evolution, as well as species richness and conservation areas estimation. Here we provide insights into the evolution of body shape and coloration of Mirinae which is especially problematic in large and taxonomically challenging groups of insects.