



RIVERSIDE

DEPARTMENT OF ENTOMOLOGY

ENTM250 Seminar Series



Speaker:

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Date: Monday, January 8, 2024
Time: 4:00 pm - 4:50 pm
Format: In-Person Seminar & Virtual Access
Location: Genomics Auditorium 1102A
Zoom: 938 1040 4405
Passcode: 833289

Title:

“Retracing the Evolutionary Steps Towards Symbiosis”

Abstract:

Organisms exist within communities of other interacting species, but knowledge of the mechanisms underlying these relationships, and the evolutionary forces that shape them, is fragmentary. My lab has pioneered the study of rove beetles (Staphylinidae) as a model clade to explore basic questions regarding how organisms interact across species boundaries, and how and why these interactions have emerged during evolution to create the biosphere around us. Most of the >66,000 known rove beetle species are free-living predators, but from this ancestral lifestyle, hundreds of lineages have transformed into remarkable symbiotic organisms, specialized for life as impostors inside the complex societies of ants. The transition from free-living to symbiotic embodies evolution in the extreme, with dramatic changes in social behavior and chemical communication that enable the beetles to assimilate into the social fabric of host colonies. The widespread, convergent evolution of this form of symbiosis, combined with the experimental tractability of both free-living and symbiotic rove beetles, provides a unique system for understanding both how and why novel ecological relationships are forged by evolution.

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