

Fall 2017 EEB Seminar Series

Postdocs (October 16, 2017)

Pierre-André Eyer (Entomology)

Title: Population Genetics and Colony Breeding Structure of the Invasive Ant *Brachyponera chinensis*

Talk summary: The invasion success of many species comes with rapid changes in life histories. Paradoxically, introduced populations are often genetically impoverished due to population bottleneck, questioning their adaptive abilities. We investigated the processes that underlie invasion of the Asian needle ant, assessing whether its introduction induced a shift in population and colonies structures. Using microsatellite and mitochondrial markers, we show that colonies are highly inbred and comprise several interconnected nests in both native and introduced range. Remarkably, despite overall bottleneck, colonies of introduced population do not experience a loss of diversity, as native colonies are already so inbred, considering an inbreeding tolerance in this species.

Travis Rusch (Entomology)

Title: Beyond lethality – costs of varying thermal resources under the perceived risk of predation

Talk Summary: Predation risk discourages animals from obtaining desired resources. However, the distribution of said resources should influence how animals perceive and respond to risk. I studied both the thermoregulatory and foraging behaviors of lizards under simulated predation risk in spatially explicit landscapes. I placed lizards in outdoor arenas with either a clumped or patchy distribution of shade and exposed them to an artificial aerial predator. Additionally, food was placed in an open area of each arena, forcing lizards to make both foraging and thermoregulatory decisions while under predation risk. Lizards thermoregulated and foraged more effectively in patchy thermal landscapes, revealing an interactive effect between predation risk and thermal patchiness of the environment.