

**Speaker:**

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Date: Monday, Mar. 01, 2021**Time:** 4:00 pm - 4:50 pm**Zoom:** 952-3324-4564**Passcode:** 835322**Title:**

"Beyond Bees: Documenting Pathogen Prevalence in Wild Hymenopteran Communities"

Abstract:

Flowers are not only critical sources of nectar to floral visitors, but they can also be pathogen-infested hubs of pollinator disease. While this is best studied in honey bees and bumble bees under lab conditions, it is still unclear what influences pathogen prevalence for wild bees and other Hymenoptera in the field. To examine landscape patterns in resource use and pathogen prevalence in sage scrub ecosystems, I documented the presence of *Crithidia* and *Nosema* in bees and ants at Motte Rimrock Reserve from 9 different locations over the course of a year. I detected both *Crithidia* and *Nosema* in bees and ants. I found *Nosema* in ~70% of the total bee genera collected. However, I only found *Crithidia* in ~40% of the total bee genera collected. *Crithidia* prevalence was positively correlated with bee visitations to *Eriogonum* and *Amsinckia*. *Nosema* prevalence in bees was positively correlated with co-occurrence of *Crithidia*. Pathogen prevalence followed similar temporal trends for both taxonomic groups, with peak prevalence occurring during the summer. Curiously, there was a relationship between ant density and bee pathogen prevalence. Our findings demonstrate that there are both temporal and spatial processes as well as potential interspecific interactions influencing pathogen prevalence in wild Hymenoptera communities.