

Grumpy Bugs

Collective Defenses in Social Insect Societies

CIBER Seminar, ENTM 260 | Spring quarter



The seminar addresses a wide variety of critical questions of high interest in pollinator and social insect biology. For this spring quarter, we will address the topic of collective defense behavior in social insects. **Social insects** (bees, wasps, hornets, ants) exhibit remarkable colony-level defensive behaviors. This seminar explores how defensive responses are coordinated, what triggers escalation, and how these traits evolve, vary, and are inherited.

Past outcome: In previous years, engaged students have successfully developed a manuscript that is currently under review.

Seminar objectives

- Conduct a systematic literature review
- Perform a meta-analysis on defensiveness
- Develop a cross-taxonomic synthesis
- Identify key knowledge gaps
- Contribute toward a publishable review or perspective
- Write up a manuscript for publication

Hands-on experience

- Quantitative synthesis and meta-analysis
- Critical evaluation of behavioral studies
- Integrative thinking across behavior, ecology, genetics, and evolution
- Collaborative scientific writing

Who should take this

This seminar is well suited if you are interested in **behavioral ecology, evolution, neuroethology, chemical ecology, genetics, or social insect biology**. Students from Entomology, Neuroscience, EEOB, and Genomics are welcome.

Questions? Contact: borisbar@ucr.edu

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