Striped cucumber beetle feeding on foliage (Photo: Nick Sloff).

# BIOCOMMUNICATION AND ENTOMOLOGY

Answering important basic science questions about the role of chemical signaling in ecology that have practical relevance for sustainable food production and other pressing societal challenges.

**Research Areas**

- Plant-insect interactions;
- Chemical ecology of vector-borne disease;
- Chemically mediated interactions between plants;
- Plant responses to olfactory cues;
- Evolutionary ecology of plant signaling and defense;
- Biological communication and information-mediated ecological interaction.

**Regions**

Switzerland, Kenya, USA, Greece, and Brazil.

**Partners**

International Center of Insect Physiology and Ecology (ICIPE), Kenya, Pennsylvania State University, University of Virginia, and Institute Nacional de Ciência e Tecnologia - Centro de Energia, Ambiente e Biodiversidade (INCT-CEAB), Brazil.

**Contribution to the WFSC**

The Biocommunictaion and Enotomology group explores the role of chemical signaling in mediating ecological interactions among species, with a particular focus on characterizing olfactory cues and signals and their role in information transfer. Most of the work focuses on multitrophic interactions among plants, insects, and microbes, and on the interactions of insect disease vectors with their plant and animal hosts. The diverse empirical techniques employed range from molecular biology and analytical chemistry to ecological field studies. The overarching goal is to answer key basic-science questions in ecology and evolution with implications for human health and the sustainable management of natural and agricultural ecosystems.

**Contact**

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