THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

Department of Entomology

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Do you wonder how invasive insects influence ecological communities?
Are you interested in plant-insect interactions in vineyard systems?

Ohio has a thriving grape and wine industry and invasive fruit pests, like the Spotted-wing drosophila (SWD), have the potential to reduce grape yield and quality by damaging berries to lay their eggs. This egg-laying wound can also create entry points for pathogens, which may reduce the quality of grapes used for juice and wine.

I am seeking a motivated graduate student to conduct research on fruit fly communities unique to the Midwestern US, with emphasis on the invasive SWD and its role in shaping insect communities in vineyard systems. This research will address big picture questions about the ecological role of invasive insects in altering interspecific interactions, like competition and predation, and the factors that contribute to their success. This project may also offer the opportunity to explore plant-insect-disease interactions in grapes that have consequences for fruit and wine quality. Applied aspects of this project will include evaluating SWD preferences for popular grape cultivars in Ohio, and the use of DNA-based methods to improve the detection and discrimination of SWD from other native and invasive fruit flies in Ohio. This student will also have the opportunity to participate in extension and outreach events with growers, with the goals of increasing awareness of pest and beneficial insects in vineyard systems and sharing research-based knowledge to promote sustainable pest management practices.

The successful candidate will conduct field work at OSU-affiliated research vineyards, and lab work with Drs. Long and Michel at the OSU Wooster Campus. Students who have hands-on experience with field research, molecular techniques (DNA extraction, PCR, and gel electrophoresis), and insect sampling are strongly encouraged to apply.

Preferred Start Date: Spring 2019

Minimum requirements to apply: An undergraduate degree in Biology, Entomology, or a related field, previous research experience, a 3.6 or higher undergraduate GPA, and a 75th percentile or higher average on the verbal and quantitative portions of the GRE.

To learn more about this project, please email a brief statement of your interests along with a CV or resume to:

Dr. Elizabeth Long
E-mail: long.1541@osu.edu
Long Insect Ecology Lab (http://u.osu.edu/longlab)