

REU summer internship in host-parasitoid interactions and global change in the Pacific Northwest (Binghamton University SUNY)

Overview: The Prior Ecology Lab at Binghamton University SUNY is seeking one undergraduate student for an NSF Research Experience for Undergraduate (REU) internship this summer. The successful applicant will develop an independent project that contributes to NSF-funded research investigating how insect host-parasitoid communities are altered under global change in the Pacific Northwest. Please see the Prior Lab website for the type of research projects that we work on (www.priorecologylab.com).

We seek a highly motivated and enthusiastic undergraduate student for a ~10-week full-time, paid internship. The majority of the time (~ 6-8 weeks) will be spent conducting field research in the Pacific Northwest (northern Oregon and Washington State), with the remaining weeks in the lab at Binghamton University, NY analyzing results and writing a report. Dates are somewhat flexible, between mid/late-May and mid-August 2020.

The selected student will conduct research in conjunction with an NSF-funded research project, "Uncovering the role of altered cryptic interactions in driving the demographic success of a range-expanding species." This project focuses on how insect communities (oak gall wasps and parasitoids) are altered under range expansions. One gall wasp species recently expanded its range from mainland western North America to Vancouver Island, British Columbia, where it is outbreaking and has become a tree pest. We're investigating how interactions with other gall wasps (competitors), parasitoids (enemies), and the host plant (oak) are altered when this species expands its range, and how these altered interactions facilitate outbreaks. We perform field surveys and experiments in the species' native and expanded ranges to understand how interactions are altered and contribute to outbreaks. There are several research project ideas that the selected student could develop within this study system and will work with Dr. Prior and Ph.D. students to develop a project.

Benefits: The selected student will receive a \$5000 stipend and housing during the 10-week program. Additionally, funds will be provided to travel to the Pacific Northwest. There are also funds for research supplies. The student will live in a shared residence with Ph.D. students. The student will pay for their own food with the use of a field vehicle that can be used to get groceries and a kitchen to prepare food.

Eligibility: Applicants must be rising sophomore, junior, or senior undergraduate students currently enrolled in a degree program. Due to NSF funding restrictions, only U.S. citizens, nationals, or permanent residents are eligible. Students must have a valid passport and driver's license. Applicants should be willing and able to work under sometimes strenuous field conditions, work and live with others, and be able to adapt to flexible and irregular hours that are needed when conducting field research.

To Apply: Applications should be submitted to Dr. Kirsten Prior by email (kprior@binghamton.edu). Please put "Summer REU position" in the subject line. **Applications will be considered until March 21st, 2021.** Applications should include the following documents: (1) letter of interest that describes your educational background, career goals, and how this internship will contribute towards those goals (4 paragraphs maximum), (2) current curriculum vitae/resume, and (3) names and contact information for two references. We strongly encourage undergraduates in underrepresented groups in STEM to apply.

