

## **Interdisciplinary PhD Research Assistantships in Entomology**

Up to three Ph.D. research assistantships in Entomology will be available to join interdisciplinary teams working on aspects of conservation, sustainable production and resilience of managed ecosystems in Idaho and Costa Rica. With funding from the National Science Foundation's Integrative Graduate Education and Research Traineeship program (IGERT), students will pursue disciplinary research and work collaboratively to address cross-disciplinary issues. Students will interact with members of other IGERT-sponsored student/faculty teams pursuing similar objectives in other ecosystems in which sustainability and conservation in the face of changing conditions and pressures is desired.

**PhD Assistantship in Entomology and Landscape Ecology.** Seeking a highly motivated and qualified student to pursue studies on communities of introduced pests and native insects in coffee agroforestry systems (CAFS) within the Volcánica Central-Talamanca Biological Corridor near Turrialba, Costa Rica. Research will focus on determining 1) how coffee management practices influence the colonization, persistence, and movement of key invasive pests in the landscape, 2) how the spatial arrangement of CAFS and forest fragments within the landscape impact the movement of agricultural pests and beneficial organisms, and 3) how trends in changing landuse patterns affect movement of pests and beneficial organisms. In addition, the student will conduct collaborative research to examine interdisciplinary aspects of conservation in the dynamic, human-dominated landscape that constitutes the corridor with team members in fields such as rural sociology, natural resource economics, soil science, and hydrology and watershed management. Contact Nilsa Bosque-Pérez ([nbosque@uidaho.edu](mailto:nbosque@uidaho.edu)), Sanford Eigenbrode ([sanforde@uidaho.edu](mailto:sanforde@uidaho.edu)), and Fabrice De Clerk ([fdeclerck@catie.ac.cr](mailto:fdeclerck@catie.ac.cr)).

**PhD Assistantship in Entomology and Landscape Genetics.** Seeking a highly motivated and qualified student to pursue the study of populations of native insects linked to the ecological communities specific to the Palouse Prairie in northern Idaho and southeastern Washington, now existing exclusively as widely distributed small remnants. Target populations will be key pollinators, specialist herbivores affecting predominant plant species and other indicator species. Research will focus on: 1) determining the genetic diversity and structure of arthropod populations, 2) examining how behavioral and ecological correlates of genetic structure influence level of landscape connectivity, and 3) assessing elements required to sustain connectivity as part of conservation plans. In addition, the student will conduct collaborative research to examine interdisciplinary aspects of conservation of Palouse

Prairie within a dynamic, human dominated landscape with team members in fields such as soil science, conservation/restoration plant ecology, virus ecology, and rural and community economics. Contact Sanford D. Eigenbrode ([sanforde@uidaho.edu](mailto:sanforde@uidaho.edu)) and Lisette Waits ([lwaits@uidaho.edu](mailto:lwaits@uidaho.edu)).

**PhD Assistantship in Virus-Vector Ecology and Virology.** Seeking a highly motivated and qualified student to pursue the study of plant viruses and virus-vector ecology in the endangered Palouse Prairie and surrounding agricultural landscape in northern Idaho and southeastern Washington. Research will focus on studies to: 1) reveal the breadth of viruses in native plants and invasive species in the Palouse Prairie, 2) assess vector transmission and virus spread and their role on dynamics of virus populations in the landscape, and 3) examine the role of viruses on plant and vector fitness. The student will use a variety of sequencing and bioinformatics methods applied to field-collected material, and conduct controlled field and greenhouse experiments. In addition, the student will conduct collaborative research to examine interdisciplinary aspects of conservation of Palouse Prairie within a dynamic, human dominated landscape with team members in fields such as soil science, entomology, conservation/restoration plant ecology, and rural and community economics. Contact Nilsa Bosque-Pérez ([nbosque@uidaho.edu](mailto:nbosque@uidaho.edu)) and Alexander Karasev ([akarasev@uidaho.edu](mailto:akarasev@uidaho.edu)).

**This unique graduate education program will provide students:**

- Team-based interdisciplinary education
- International perspective
- Broad geographic and ecological exposure
- Participation in integrated interdisciplinary teams
- Cross-cultural experience

**Requirements: Applicants must be American citizens or permanent residents of the USA.** Successful applicants must have obtained a research-based M.S. degree in a discipline of relevance to the project, and demonstrate interest and/or experience in team-based projects. Students will join the program to begin course work at the end of July 2010.

**Review of applications will begin Dec 1<sup>st</sup> 2009 and end Jan 4<sup>th</sup> 2010. Earlier applications are highly encouraged.** Interviews of top applicants will be conducted at the University of Idaho campus in March 2010.

For application information visit the web page:

<http://www.students.uidaho.edu/gradadmissions/IGERT>

For information on our previous IGERT project visit the web page:

<http://www.cals.uidaho.edu/igert/>