

PhD Assistantship, Molly Hunter's laboratory, Department of Entomology, The University of Arizona

In this position funded by a USDA NIFA grant, the student will study the ecology of interactions between a leaf-footed bug, *Leptoglossus zonatus*, and its environmentally-acquired bacterial gut symbiont *Burkholderia*. *Leptoglossus* nymphs require *Burkholderia* for normal growth and survivorship, but must locate and ingest it in the 2nd instar nymphal stage. We are asking what role the acquisition and strain of symbiont play in the biology of this pest species. E.g. is transmission of the symbiont ever limiting in an arboreal environment in nature? Does the relative abundance of different strains of bacterium associating with the bug in nature reflect the rank of each strain for bug fitness? We are also interested in the capacity for *Burkholderia* strains to evolve resistance to commonly used insecticides and whether, as has been shown by Kikuchi et al. for a different insecticide, these strains may confer resistance to bugs that acquire them. I am seeking a curious, independent, self-motivated student. Some background in microbiology would be a plus, but is not a requirement. For more information about the Hunter laboratory visit my website: www.hunterlaboratory.org

The University of Arizona is the home of the Graduate Interdisciplinary Program for Entomology & Insect Science, a highly ranked graduate program with an engaged and dedicated group of students and faculty. Tucson is in the Sonoran Desert, an area that is surrounded by high mountains ("sky islands") and supports an extraordinarily diverse insect fauna, as well as many opportunities to hike and be outdoors year-round. Tucson is also a culturally diverse city that was the first US city to be named a UN "city of gastronomy" for the role that local foods, and food in general, plays in the city culture.

Contact Martha S. ("Molly") Hunter: mhunter@ag.arizona.edu for more information, and note that the deadline for applications for Fall 2020 start in the GIDP EIS program is Dec. 1, 2019.