

PhD Graduate Student Positions Available  
Olson Lab, Texas Tech University

The Olson lab at Texas Tech University is recruiting PhD Graduate students interested in the field of plant ecological genetics to start in the fall of 2016. Our lab studies a variety of questions including local adaptation to latitude in relation to climate change, the evolution of breeding systems, sex chromosome evolution, and the evolution of gender dimorphism in plants. We use a variety of experimental techniques including common garden studies, field ecology, transmission genetics, genomics and bioinformatics. For the past decade we have studied these processes in forest trees and expect that this will continue to be the main taxonomic focus of our research.

Funding is available for support as a Graduate Research Associate on an NSF-funded grant to study the ecological and genetic factors influencing the dynamic movement of sex determination regions and sex chromosome evolution within the *Salicaceae* (poplars and willows). The overall project focuses on mapping sex determination regions from representatives throughout the family, understanding the genetic basis of gender dimorphism in defense and pollinator attraction chemistry, and the assessment of population genetic patterns across the sex determination and pseudo-autosomal regions of the sex chromosomes. Graduate students working on this project will have the opportunity to choose from a variety of projects including, but not limited to, mapping the locations of previously unknown sex determination regions, development of phylogenies for important plant groups, and studying the evolution of sexual dimorphism in plant defensive and pollinator attraction compounds. Moreover, the grant provides for a unique multi-institutional and international training environment, with potential funding to visit labs at the University of West Virginia, the University of Wisconsin, Cornell University, and Sichuan University and Nanjing Forestry University in China for cross-disciplinary training.

The Olson lab is part of a dynamic Ecology and Evolutionary Biology group at Texas Tech. Courses and focused training in ecology, bioinformatics, and genomics are available from a highly interactive faculty. Texas Tech boasts excellent laboratory and research resources as well as easy access to some of the most beautiful and remote regions of the lower 48 United States.

Please contact Matt Olson directly at [matt.olson@ttu.edu](mailto:matt.olson@ttu.edu) for more information regarding opportunities and application information. Additional information about the Olson lab can be found at [www.faculty.biol.ttu.edu/olson/Research.html](http://www.faculty.biol.ttu.edu/olson/Research.html) and general information concerning the Department of Biological Sciences can be found at [www.depts.ttu.edu/biology/](http://www.depts.ttu.edu/biology/).