

## GRADUATE ASSISTANTSHIP (M.S.) AVAILABLE IN ENTOMOLOGY AND PLANT PATHOLOGY AT THE UNIVERSITY OF TENNESSEE-KNOXVILLE

### Molecular systematics of the *Simulium jenningsi* species group (Diptera: Simuliidae)



QuickTime™ and a  
TIFF (Uncompressed) decompressor  
are needed to see this picture.

**PROJECT DESCRIPTION:** The *Simulium jenningsi* species group is comprised of 22 morphospecies, at least four of which likely contain two or more sibling species based upon examination of polytene chromosome banding patterns. Larvae, pupae, and males can be separated, with difficulty, using structural characters. Females, however, are currently inseparable, a conundrum given the group's importance as nuisance and biting pests of humans and other vertebrates. Prior research has shown that nuclear genes are more informative than mitochondrial ones within this group so the successful applicant will concentrate on obtaining sequences from a second single-copy nuclear coding gene, likely one that has never before been used in insect systematics.

**PROJECT OBJECTIVES:** (1) Elucidate species boundaries, characterize intraspecific variability using molecular sequences, and formally describe, with involvement from other team members, any unnamed cryptic species encountered; (2) Infer phylogenetic relationships among group members using sequences from the mitochondrial and nuclear genomes; and (3) Publish results in peer-reviewed journal articles.

**EFFECTIVE DATE:** August 2009 or until suitable candidate found.

**STIPEND:** \$18,000 per year for at least 2 years, with both in- and out-of-state tuition waived and health insurance included.

**QUALIFICATIONS:** The successful M.S. candidate will have a B.S. or B.A. in biology or a related science. Applicants will be evaluated on the basis of undergraduate grades, letters of recommendation, GRE scores, resume, and letter of intent. The University of Tennessee is an EEO/AA/Title IX/Section 504/ADA employer.

**ENVIRONMENT:** The Department of Entomology and Plant Pathology is located on the Agricultural Campus of UT and is separate from (but close to) the main campus. The department is partially housed in the new Plant Biotechnology Building that is equipped with the most modern equipment for biotechnology research including DNA sequencing, fragment analysis and fingerprinting, real time PCR, micro arrays, tissue culture, insect and disease physiology, and cytology. Knoxville, a city of 180,000, is the economic and cultural center of eastern Tennessee. It is consistently ranked as one of the ten most livable cities in the nation and lies just 40 miles west of The Great Smoky Mountains National Park. There are myriad outdoor activities, including hiking, camping, canoeing, and fishing.

The University of Tennessee Entomology & Plant Pathology Department offers graduate assistantships on a competitive basis, with waivers of in-state and out-of-state tuition. Learn more about our graduate program at: <http://eppserver.ag.utk.edu/default.html>. Interested persons should contact Dr. John K. Moulton via telephone (865-974-7950; 865-974-8411) or e-mail ([jmoulton@utk.edu](mailto:jmoulton@utk.edu)).

*All qualified applicants will receive equal consideration for employment and admissions without regard to race, color, national origin, religion, sex, pregnancy, marital status, sexual orientation, gender identity, age, physical or mental disability, or covered veteran status.*

*Eligibility and other terms and conditions of employment benefits at The University of Tennessee are governed by laws and regulations of the State of Tennessee, and this non-discrimination statement is intended to be consistent with those laws and regulations.*

*In accordance with the requirements of Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990, The University of Tennessee affirmatively states that it does not discriminate on the basis of race, sex, or disability in its education programs and activities, and this policy extends to employment by the University.*

*Inquiries and charges of violation of Title VI (race, color, national origin), Title IX (sex), Section 504 (disability), ADA (disability), Age Discrimination in Employment Act (age), sexual orientation, or veteran status should be directed to the Office of Equity and Diversity (OED), 1840 Melrose Avenue, Knoxville, TN 37996-3560, telephone (865) 974-2498 (V/TTY available) or 974-2440. Requests for accommodation of a disability should be directed to the ADA Coordinator at the Office of Equity and Diversity.*