

The Forest Entomology Research Group in the Department of Entomology at Louisiana State University is currently seeking a PhD student in behavioral and chemical ecology to start in Fall 2025. Our recently established research group seeks individuals who are creative, curious about the natural world, and seek to challenge themselves with interesting problems. In our lab, we ask fundamental questions about the role of abiotic and biotic factors on the evolution and maintenance of chemical diversity, communication, and tri-trophic interactions in forest ecosystems. We are especially interested in developing and testing hypotheses relating to how natural enemies shape the ecology and evolution of woodboring insects. Ultimately, we seek to contribute to our understanding of biotic interactions, as well as use our knowledge of behavior and chemistry to optimize biological control of pests and conservation of forest ecosystems.

PhD project: The emerald ash borer (Coleoptera: Buprestidae: *Agrilus planipennis*; EAB) is one of the most destructive forest pests in North America. Since its introduction in the mid-1990s, this beetle has spread rapidly throughout the range of its hosts (*Fraxinus* spp.), killed hundreds of millions of ash trees, and caused immense damage to forest ecosystems and the nursery/timber industries. A recent arrival to the deep south, it is not well-known how EAB and its associates will perform in subtropical ecosystems. The successful candidate will contribute to answering this question, as well as building fundamental and applied understanding of woodborers and their host trees, by investigating how volatile compounds produced by ash trees (*Fraxinus*) mediate interactions with the invasive emerald ash borer (Coleoptera: *Agrilus planipennis*), and its classical biological control agents in the southeastern United States.

Located in Baton Rouge, Louisiana, the Department of Entomology at Louisiana State University has fifteen faculty members with strengths that include: insect behavior, chemical ecology, integrated pest management, public health, insect physiology and molecular biology. Further, the Department is home to the Louisiana State Collection of Arthropods, which contains over one million research specimens. Opportunities exist to collaborate and interact with individuals from nearby Departments which include Biological Sciences, Plant Pathology and Crop Physiology, and Renewable and Natural Resources. Lastly, LSU is home to 15 [research centers and institutes](#), including an [instrumentation facility](#) which offers access to sophisticated analytical and microscopic equipment.

Qualifications: All interested candidates interested in pursuing a doctoral education are expected to have completed a masters degree in botany, entomology, or ecology/evolution. Preference will be given to candidates with experience and interest in the collection and analysis of plant chemicals, and insect behavioral and electrophysiological (i.e., GC-EAD) assays.

Compensation: Admitted students will be provided with a competitive stipend, partial coverage of their health insurance, and tuition waiver.

Interested students should send Dr. Todd D. Johnson (Todd.Johnson@agcenter.lsu.edu; <http://www.forestentomology.com>): a CV, unofficial transcripts, contact information for 3 references, and a statement of research interests and experience (1 pg). Successful applicants will be required to submit an application to LSU Graduate School. Please visit the LSU Department of Entomology website for more information: http://www.lsu.edu/agriculture/entomology/programs/how_to_apply.php