**GRADUATE ASSISTANTSHIP AVAILABLE IN ENTOMOLOGY AND PLANT PATHOLOGY AT AUBURN UNIVERSITY**

**Development and field testing of a SMART trap for improved management of *Xylosandrus* ambrosia beetles in horticulture production nurseries**

**PROJECT DESCRIPTION:** This proposed standard research and extension project takes a transdisciplinary and multistate approach to develop a SMART trap as the cornerstone of a more environmentally-sound IPM program for ambrosia beetles in commercial nurseries. *Xylosandrus* ambrosia beetles are aggressive pests of woody plants and most attacks on woody plants in production are fatal. Current monitoring tactics aren’t specific enough to provide producers with timely, accurate information to make management decisions. Therefore, insecticides are over applied with negligible impact on damage and losses. This project will investigate olfactory and visual cues used by ambrosia beetles to locate hosts. These cues will be incorporated into a prototype trap, which will be field tested and compared to conventional trap performance in nurseries. Once beetles are trapped, sensors will identify the species present based on wingbeat frequencies and determine the species and abundance of fungal symbionts. The extension component is an evolving program of education, research dissemination, and demonstrations where growers can interact directly with the researchers and participate in the project. Annually, programs will be presented that include biological information and updates of on-going research. In the final two years, on-site demonstrations and field days will enable growers to participate in the project.

**EFFECTIVE DATE:** January 2011

**QUALIFICATIONS**: The successful candidate must have an M.S. in Entomology or related field. Experience with ambrosia beetle behavior, ecology, or taxonomy is preferred. Interested students must apply to the Auburn University Graduate School and meet the minimum requirements of the department. Demonstration of independent and creative scholarly activity, publications, and presentations are preferred. In-state and out-of-state travel will be required for this project so a valid driver’s license is necessary. Proper visa requirements must be met.

**COMPENSATION:**  The successful candidate will receive an annual stipend funded for three years (and possibly a fourth if necessary) through the funded project based on availability of funding and satisfactory performance. Currently, there is a tuition waiver for qualifying students. This is subject to change during the project. If so, the successful candidate, not the department, will be responsible for tuition charges.

**QUESTIONS:** Interested persons should contact Dr. David W. Held via telephone (334-844-3818) or e-mail (david.held@auburn.edu). AA/EEO