

**From:** Diaz, Rodrigo  
**Subject:** MS assistantship on invasive plant ecology- LSU

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Measuring demographic changes of the invasive Chinese tallow during the implementation of biological control

MS Assistantship Available at LSU for Fall 2017 and Spring 2018

Chinese tallow, *Triadica sebifera* (Euphorbiaceae) is a rapidly-growing, invasive tree in the United States. Chinese tallow invades both wetland and upland habitats including coastal prairies, riparian areas, flood plains, wetlands, lake margins of agricultural areas, forestlands, and natural areas. For its rapid growth rate and tolerance to a wide range of environmental conditions this tree is considered one of the "ten worst alien plant invaders" in the United States. Due to the limitations of mechanical, physical and chemical control, biological control is considered as a safe and cost effective option for control of Chinese tallow. *Bikasha collaris* (Baly) (Coleoptera: Chrysomelidae) is a flea beetle considered for release in United States. The goals of the project will be to establish long-term monitoring plots of Chinese tallow, quantify changes in Chinese tallow demographics before and after the release of *B. collaris*, and measure the impact of local herbivores and plant pathogens on Chinese tallow saplings. This project will provide baseline information on Chinese tallow demography in Louisiana before and after biological control is initiated. In addition, the impact of *B. collaris* will be quantified. This outcome will help improve biological control efforts against Chinese tallow in regions of southeastern United States, and serve as a model for other biological control programs. The student will be able to incorporate several novel tools in ecological research including modeling software (Netlogo), and Geographical Information Systems (GIS), among others. The candidate will join an interdisciplinary team with expertise on Biological Control, Forest Management, and Plant Ecology.

**Background Information:** The Department of Entomology is part of LSU AgCenter located in Baton Rouge, Louisiana. The Department of Entomology was established in 1889 year and includes 16 faculty involved in applied research related to bees, mosquitos, termites, taxonomy, integrated pest management, toxicology, genetics, and insect physiology. Current research in the biological control and invasive species ecology laboratory includes the evaluation of parasitoids of emerald ash borer (*Agrilus planipennis*), the biology and ecology of the crape myrtle bark scale (*Acanthococcus lagerstroemiae*), and the biological control of giant salvinia (*Salvinia molesta*). Located just one hour northwest of New Orleans, Baton Rouge offers plenty of entertainment for people of all ages including great food, music, art exhibits and outdoor activities.

**Minimum Requirements:** A bachelor degree in Agriculture, Entomology, Forestry or closely related discipline is required. We seek a candidate with a high standard in scientific writing and oral communication.

**Application:** Please send a one-page letter of interest, and complete CV including GPA and GRE scores to [rdiaz@agcenter.lsu.edu](mailto:rdiaz@agcenter.lsu.edu).

**Preferred Qualifications:** Experience in Forest Ecology, Invasive species.

**Contact Information:**

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