PhD Assistantship in Sediment Biogeochemistry and Paleolimnology of Isolated Wetlands

A PhD Assistantship at Auburn University is available to study the sediment dynamics of geographically isolated wetlands receiving non-point source agricultural runoff. Co-advised by Dr. Matthew Waters of Auburn (cses.auburn.edu/matthew-waters/) and Dr. Steve Golladay of the Jones Center at Ichauway (www.jonesctr.org/about/staff/golladay.php), the student will reconstruct sediment nutrient delivery and storage by applying paleolimnological techniques (C, N, P, 210Pb, organic matter, charcoal) to multiple agricultural and reference isolated wetlands in southwestern Georgia. Through collaboration with the project team, these results will be integrated with nutrient distribution and transport models to understand the trajectory of soil and wetland alteration during agricultural intensification and develop a prioritization framework for wetland restoration and conservation. The project offers the opportunity to gain experience in field data collection, paleolimnological techniques, statistical analysis, interdisciplinary collaboration, and stakeholder interaction.

Applicants from a range of disciplinary backgrounds will be considered, including ecology, agricultural sciences, geosciences, soil sciences, and engineering. Experience with soil/sediment analysis, sediment fingerprinting, paleolimnology or limnology is preferred. The student will be enrolled in the Crop, Soil, and Environmental Sciences PhD program at Auburn University, an R1 public research university in Auburn, Alabama, USA. Work will be in close collaboration with the Jones Center at Ichauway, a 28,500-acre Research Center located between Albany and Bainbridge, Georgia. The Center’s research, education, and conservation programs focus on ecology and natural resource management. The site includes 16,000 acres of longleaf pine forests, over 1,000 acres of wetlands, and 26 miles of stream and river ecosystems. On-site housing at Ichauway is provided to the successful candidate as-needed for the duration of their project. Further information can be found on the web site at http://www.jonesctr.org/. A competitive stipend and tuition waiver will be provided over the three-year duration of project. Expected start date is summer or fall 2020.

Interested students should contact Dr. Matthew Waters (mwaters@auburn.edu) with a CV and brief statement of research experience and interests.