

Graduate Research Assistant(s) – MSc or PhD

Southeast Conservation Genetics Lab

Auburn University

Dr. Nathan Whelan, nathan_whelan@fws.gov, nwhelan@auburn.edu

www.nathanwhelan.com

www.fws.gov/southeast/warm-springs-fish-technology-center/conservation-genetics-lab/

The Whelan Lab at Auburn University and the U.S. Fish and Wildlife Service Southeast Conservation Genetics Lab (SEGL) are seeking graduate student applications for the MSc or PhD degree to study freshwater organismal evolution and conservation. At least one MSc and one PhD position will be available to start in January or August 2024. Potential masters and PhD projects include conservation genetics and molecular ecology of freshwater mollusks, phylogenetics and systematics of freshwater gastropods, genetics management of Tripterygion, environmental DNA (eDNA) related research, and projects related to using genomic tools for Black Bass management. Students will work in museum, lab, and field environments.

SEGL is a joint U.S. Fish and Wildlife Service and Auburn University research lab. We are located in Swingle Hall on Auburn University's main campus. Our research includes both basic and applied science, and students work in an academic research environment while collaborating with government researchers and on-the-ground conservation scientists. Students will have the opportunity to work directly with conservation practitioners and perform cutting-edge research. Current research projects in the lab include (1) phylogenomics of freshwater gastropods, with an emphasis on Pleuroceridae, (2) conservation genomics and molecular ecology of freshwater mollusks, including threatened and endangered mussels and snails, (3) taxonomy of terrestrial snails, freshwater mussels, and freshwater snails, (4) freshwater gastropod life history evolution, (5) conservation genomics of threatened and endangered freshwater fishes, and (5) black bass genetics management. The lab will be constructing and starting an eDNA lab in 2024. We also work with the National Fish Hatchery program and use genetic data to evaluate and improve hatchery efforts.

SEGL has outstanding facilities, equipment, and capacity for lab- and field-based research. We have all the equipment needed for next-generation library prep and other molecular data generation, including an Agilent Fragment Analyzer, Blue Pippin, Qubit, and Opentrons OT-2 liquid handling robot. We also have multiple computers for bioinformatics (e.g., an 80-core, 512GB RAM machine) and access to additional computing resources through Auburn University and the Alabama Supercomputer Authority. The lab has a 4WD SUV and other equipment for fieldwork.

Auburn University is a public land-, sea-, and space-grant institution with internationally recognized research and academics. Auburn and nearby Opelika, Alabama are vibrant towns with excellent quality of life and a relatively low cost of living.

GRA Stipends and Start Dates: Students will receive a stipend of at least \$2,292/month and a tuition waiver. Available start dates are January 2024 or August 2024.

To apply: Send a letter of interest, current CV, contact information for 2-3 references, and unofficial transcripts to: Dr. Nathan Whelan, nathan_whelan@fws.gov. Members of historically underrepresented groups are particularly encouraged to apply.