Ph.D. Graduate Research Assistantship in Quantitative Ecology at North Carolina State University

Title: Aquatic Species Distribution Modeling to Inform Recovery and Conservation

Position Description: Ph.D. Graduate Research Assistantship in Geospatial Analytics/Fisheries, Wildlife, and Conservation Biology at NC State University available for Fall 2024. Ph.D. student would develop a suite of integrated species distribution models (iSDMs) at multiple spatial scales for a range of federally listed aquatic species (fish, mussels, and amphibians) in the southeastern U.S. to inform recovery. This would include estimating environmental drivers of distribution and abundance and identifying areas of potential recovery actions. The student would work with a team of federal and state partners working in aquatic conservation and be expected to lead on modeling and decision support efforts. The student would have flexibility to explore a range of research questions related to hierarchical modeling, data integration, multi-species modeling, and decision support and be a part of the Quantitative Ecology Lab at NC State (quantecolab.com) working with Dr. Krishna Pacifici in collaboration with Dr. Corey Dunn (USGS NC Cooperative Fish & Wildlife Research Unit).

Start date: August 15, 2024

Duration: 4 years

Salary: $30,000 annual stipend plus health insurance

Location: Raleigh, North Carolina, USA

Minimum Requirements/Qualifications:

1. B.S. and M.S. in fisheries, wildlife, ecology, conservation biology, statistics, or related fields.
2. Knowledge of GIS/geospatial analysis in R, statistics, and modeling with special emphasis on Bayesian hierarchical modeling and integrated modeling (IPMs/iSDMs/joint models preferred).
3. Excellent verbal and written communication skills.
4. Ability to work in an interdisciplinary research group.
5. Commitment to maintaining an inclusive work environment.

Highly Desirable:

1. Record of peer-reviewed publications
2. Proficiency with hierarchical modeling and data-integration either through existing software (JAGS/Nimble/Stan/TMB) or customizable methods
3. Spatial modeling experience (e.g., Spatial statistics, Spatial Capture-Recapture, GIS/QGIS/GRASS)
4. Experience working with and managing large heterogeneous data sets

Contact person:

Email a cover letter outlining interests and qualifications, CV, and names and contact information for three potential references as a single pdf document to Dr. Krishna Pacifici (jkpacifi@ncsu.edu) with the subject line “Aquatic SDMs PhD”. Review of applications will begin immediately and continue until a qualified candidate is identified. Please address any questions to Dr. Krishna Pacifici (jkpacifi@ncsu.edu).