Ph.D. Assistantship: Habitat Suitability Modeling for Bottomland Hardwoods Species at Mississippi State University

Deadline:
6/30/2021 – 12:00pm

Employer:
Mississippi State University (Dr. Joshua J. Granger)

Job Field:
Other

Job Type:
Assistantship

Location:
Mississippi State University (Starkville, MS)

Job Description:
The Ph.D. student would work with Dr. Joshua Granger and the researchers from the College of Forest Resources at MSU and others from around the Southeast to explore habitat suitability modeling techniques for economically and ecologically important bottomland hardwood species within the Lower Mississippi Alluvial Valley (LMAV). This area once supported an estimated 24 million acres of bottomland hardwood forests but the anthropogenic shifts in land use have resulted in a net loss of more than 75% of these floodplain forests. Since the late 1980s, significant efforts from national and state conservation easement programs have been invested into restoring the LMAV region. Afforestation has primarily been through artificial regeneration methods such as direct seeding and planting of bareroot seedlings. Unfortunately, these efforts have often resulted in inadequate seedling survival and growth due in part to an inability to consistently match the correct species to an appropriate planting site. Without reliable, predictable, and scale-appropriate information that matches species to optimal habitats, the afforestation and reforestation efforts of land managers and conservation agencies will continue to be suboptimal. Therefore, there is a critical need for the advancement of techniques for modeling species' habitat requirements and predicting future stand success.

The selected candidate would develop a dissertation focused on modeling and contrasting important bottomland hardwood species' habitat requirements and forecasting future stand productivity. Given the nature of this project, the candidate would have project-specific

deliverables that must be fulfilled but would be given wide latitude to pursue an array of independent research questions. It would be expected that the candidate would publish peer-reviewed manuscripts, with manuscripts ready for publication prior to graduation, and they would be required to present their research at several professional venues. The candidate will also work closely with stakeholders to disseminate findings.

Qualifications:

Minimum qualifications:

1. M.S. in forestry, quantitative ecology, wildlife ecology, or related fields.
2. Knowledge of GIS/geospatial analysis in R, general statistics, and modeling.
3. Excellent verbal and written communication skills and ability to work in an interdisciplinary research group.

Highly Desirable:

1. Record of peer-reviewed publications
2. Spatiotemporal modeling experience (e.g., spatial statistics, time series, programming)
3. Experience working with and managing large heterogeneous data sets

Salary:

Competitive stipend with tuition waiver

How to Apply:

Contact person:

Please submit a cover letter that outlines your interests and qualifications, a current CV, and the names and contact information for three potential references as a single PDF file. Review of applications will begin on July 1 and continue until a qualified candidate is identified. Please address any questions to Dr. Joshua Granger at joshua.j.granger@msstate.edu.

MSU is an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, ethnicity, sex, religion, national origin, disability, age, sexual orientation, genetic information, pregnancy, gender identity, status as a U.S. veteran, and/or any other status protected by applicable law. We always welcome nominations and applications from women, members of any minority group, and others who share our passion for building a diverse community that reflects the diversity in our student population.