ULM biology professor awarded grant to fund wildlife habitat research

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Wildlife in the Ouachita Wildlife Management Area, located about 12 miles southeast of Monroe, will soon benefit from the research of a University of Louisiana at Monroe professor and his graduate students.

Louisiana Department of Wildlife and Fisheries awarded Dr. Joydeep Bhattacharjee, ULM associate biology professor, a $34,000 grant to evaluate the wildlife habitat in the restored bottomland hardwood forest. Bhattacharjee will conduct the research with Matthew Herron, a biology graduate student from Baton Rouge.

Herron said, “I am extremely excited to work on a grant concerning habitat restoration. I’ve long had a passion for biodiversity, and I’m looking forward to studying the dynamics of forest succession. I'd like to see how pit-mound microtopography influences

diversity in bottomland hardwood communities. We have exciting contributions to make, and I see the potential for new methods in bottomland forest management to come from this.”

Part of the project will focus on evaluating three novel tree-thinning formulations, which are designed to improve the wildlife habitat through the generation of heterogeneous vegetation strata (different layers of vegetation). Such vegetation is vital to healthy habitat conditions for both game and non-game species, Bhattacharjee said.

"Most old-field acquisitions — about 222,400 acres worth — carried out by the Louisiana Department of Wildlife and Fisheries in the early 1960s have been reforested (replanted with trees). However, such reforested areas lack the structural diversity that is deemed necessary for creating a good wildlife habitat.

This is also true for other reforestation efforts throughout the country,” he said. “Therefore, through our research, we intend to develop management guidelines to functionally restore these bottomland hardwoods, which are home to 34 species of concern, including 17 species of birds, five species of mammals, five species of amphibians, four species of reptiles, and three species of butterflies."

The other component of this project will be to evaluate secondary succession in bottomland hardwoods — a phenomenon still “poorly understood,” Bhattacharjee said.

Currently, in the ULM Plant Ecology

Lab, Bhattacharjee and Matthew Reid, a biology graduate student from Memphis, Tenn., are evaluating vegetation assembly patterns in 15 acres of land in the Ouachita Wildlife Management Area that was left fallow for 28 years.

Bhattacharjee said, “Results are interesting and indicate that parts of the land could have entered ‘arrested succession,’ an alternate stable state in which hardwood regeneration is excluded. This is a rarely documented stage in forest succession.”

The new funding

will help expand ULM’s ongoing research efforts.

“This will help us better understand the dynamics of forest succession in the bottomlands," he said. "Overall, this research will result in a comprehensive habitat assessment of the Ouachita Wildlife Management Area. Such assessments provide valuable guidelines in preparing management recommendations and in understanding reforestation efforts in the long term."