School of Natural Resources and Environment

Fall 2024

Interdisciplinary Ecology Seminar Series

Novel Approaches May Improve Wet Prairie Restoration Outcomes

Speaker: Dr. Ashlynn Smith

Interdisciplinary Ecology PhD
Faculty Advisor: Dr. Debbie Miller, Wildlife Ecology and Conservation

Monday, September 16

1:50-2:50pm

McCarty Hall D

Room G-001

Watch on Zoom

Woody encroachment into herbaceous ecosystems represents a major threat to global biodiversity. Terrestrial wet prairies adjacent to the Gulf of Mexico coastline in the Florida panhandle are among the many ecosystems in the United States experiencing woody encroachment. These plant communities have been described for decades as an ecosystem worth our attention due to high plant species diversity and endemism. Direct loss of these species-rich ecosystems is often a result of coastal development. Degradation to remaining isolated wet prairies on protected public lands is primarily caused by fire suppression, ultimately leading to hardwood encroachment. Research related to reliable and efficient restoration strategies to return these systems to their natural herbaceous state, as well as understanding the ecological benefits of doing so, is essential for their continued existence.

In 2019, a partnership was formed between the Atlanta Botanical Garden and the University of Florida with funding from the U.S. EPA to assess novel restoration approaches such as mechanical removal of accumulated organic matter and diaspore transfer alongside conventional restoration methods. Restoration methods were assessed through the evaluation of shifts in groundcover vegetation, groundwater dynamics, and soil physical and chemical properties. This interdisciplinary approach has led to insights regarding considerations for restoration action and potential consequences of inaction. Findings related to pre-restoration seed bank dynamics as well as post-restoration groundcover vegetation and soil conditions will be presented.

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