



Spring 2026 Virtual Seminar Series

“WHAT CAN WE LEARN FROM COASTAL VEGETATION?”

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Monday, February 9, 2026
3:30 PM EST

Zoom link

Meeting ID: 976 7529 5270
Passcode: 441993

Abstract

Plant-dominated habitats are often used to describe coastal landforms (e.g., marsh, mangrove, seagrass, kelp forests, etc). In these coastal habitats, the plants are integrating abiotic conditions, such as salinity, energy, water depth, nutrients, among others and responding over to them over time, leading to observable coastal change. Such change can happen at local, regional, or even larger scales and may occur rapidly after extreme events or more slowly over years or decades, depending largely on the interaction of the dominant plant species and the agent(s) of change.

In this seminar, I will summarize three example studies from the southeastern U.S. that illustrate change happening over multiple decades. Specifically, I will focus on (1) how seagrasses are responding to a wide range of human-induced alterations along the northern Gulf coast, (2) what coastal salt marshes can tell us about sediment supply and implications for accelerating sea-level rise, and (3) whether restoration practices are actually resulting in the suite ecosystem benefits and services that are often implied.

In all three case studies, I will illustrate what plants and their habitats are telling us about causative agents of change. I will conclude with how a better understanding of plant responses can be used to potentially improve restoration and management of coastal systems.

Biography

Dr. Biber is an associate professor in the Department of Coastal Science and Center for Plant Restoration and Coastal Plant Research (CPR), Gulf Coast Research Laboratory at the University of Southern Mississippi (USM). He earned a B.Sc. Hons in Zoology from the University of Queensland and a Ph.D. in Marine Biology and Fisheries from the University of Miami. His main research interest is the role the environment plays in the lives of aquatic plants and other marine photosynthetic organisms. In 2010 he established the Center for Plant Restoration and Coastal Plant Research (CPR) at USM. The Center has evaluated artificial reef, marsh Beneficial Use and Living Shoreline projects resulting in 5 MS and 3 Honors theses. Over the past 10 years, the CPR has provided a number of web-based resources for plant propagation, including the use of phytoremediation in marine aquaculture, and partnered with MS Native Plants Producer Network to provide germplasm and knowledge exchange between nurseries growers and restoration practitioners.

<https://www.odu.edu/coastal-physical-oceanography/seminar-series>