Understanding the Role of Benthic Microalgae in Seagrass Response to Heat Stress

Seagrass beds are an important feature of productive, shallow coastal ecosystems, supporting a range of fish species and trapping carbon. Unfortunately, seagrass beds are threatened by the increasing frequency of marine heat waves due to climate change. Benthic microalgae living with the seagrass may be able to facilitate recovery after these heat waves if the microalgae are able to survive the increased temperatures. In this project, we will examine the effects of heat stress on benthic microalgae populations and their production of extracellular polysaccharides, a slime-like substance that stabilizes sediment, making the site more suitable for seagrass. During the summer research program, we will design a controlled experiment in which we will expose benthic microalgae to elevated temperatures.

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