

Are Pathogenic Fungi Associated with Areas of Marsh Dieback?

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Study Initiated: November, 2003

Anticipated Completion Date: ongoing

Funding Source: no funding

Study Site Location(s): Sapelo Island, Melon Bluff, others (Georgia coast)

Keywords (highlight or circle): *Juncus*, *Spartina*, Plant pathology, fungi

Project Type: Descriptive

Project Outline:

Specific Aims

Are plant pathogenic fungi responsible for the dieback of *Spartina alternifolia* and *Juncus roemerianus* along the Georgia coast? We are looking specifically at the presence and diversity of water molds such as *Pythium spp.* and *Phytophthora spp.* to determine if there are differences between dieback and normal areas. Many species of these fungi are well known in terrestrial systems to be responsible for diseases of seedlings, herbaceous plants as well as trees. Other species of *Pythium* are known to be pathogens of macroalgae. In the past watermold species have been isolated from basal tissue *Spartina* shoots.

Methodology

Basal shoot, rhizome and root samples obtained from dead, dying and healthy marsh plants are plated on isolation media developed to be selective for oomycete fungi. PCR-RFLP techniques are used to characterize differences among isolates. Isolates found in most frequently in dying plants will be tested for pathogenicity on healthy plants in laboratory microcosms.

Results to Date

None

Lessons Learned

Publications, reports, or web-accessible materials

Suggested citation: Georgia Coastal Research Council, 2004. Proceedings of the Marsh Dieback Workshop, held February 3-4, 2004, Savannah Georgia.