

QUANTIFYING MACROALGAE, SUBMERGED AQUATIC VEGETATION, AND FLOW IN FOUR FLORIDA SPRING-FED RIVERS

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This work documents the diversity, biomass, and community structure of the macrophytic submerged aquatic vegetation (SAV) communities along the length of four spring-fed rivers in west-central Florida. Field measurements of SAV cover (of individual species/group and total areal) and water velocity were collected at fixed transects (each with five stations) along the Chassahowitzka (25 transects), Homosassa (26 transects), Rainbow (28 transects), and Weeki Wachee (21 transects) rivers in summer 2019 and will be repeated in winter 2020. Plant/algal material was collected from above the sediment surface in 0.25 m² quadrats and the material sorted and weighed (wet and dry weight) in the laboratory.

The most diverse SAV community was found in the Chassahowitzka and the least diverse was the Weeki Wachee. Filamentous algal biomass was more abundant in the first 2.5 kilometers of the Chassahowitzka and Homosassa, but, in contrast, increasingly abundant moving away from the headspring in the Rainbow. The Weeki Wachee showed no upstream/downstream pattern of algal abundance. Water velocity was not correlated with algal biomass in the Weeki Wachee or the Rainbow. Highest algal biomass was found in the Rainbow and lowest in the Homosassa.

PRESENTER BIO: Dr. Bedinger has a background in community ecology. Her doctoral research consisted mainly of field experiments focused on seagrass/algal communities in Florida. Her work over the last six years has included the design, execution, data analysis, and reporting on aquatic benthic (both SAV and faunal) monitoring studies.