

JOHNSON'S SEAGRASS, *Halophila johnsonii*

- Rare Marine Plant; may have the most limited distribution of any seagrass on earth.
- Grows only in coastal waters of southeastern Florida, from Sebastian Inlet to northern Biscayne Bay, and is one of the least abundant species in this range.
- Height range 1-3cm; lateral branches with stalked leaf pairs; usually found in waters <2 meters in depth; can tolerate a wide range of temperatures and salinities.
- Most abundant in the intertidal area above and the subtidal area below the other seagrass species.
- An opportunist; expands the total area covered by seagrasses through its ability to live in environments where other species cannot survive.
- Distribution is patchy and non-contiguous; patches range from few centimeters to hundreds of meters; most patches are <1 square meter; largest patches are in Lake Worth Lagoon, Palm Beach County, Florida.
- Rapid growth and decomposition relative to the larger seagrasses explain the appearance and disappearance of Johnson's seagrass.
- Limited reproductive capacity: Dependent upon vegetative growth; male flowers and seeds have never been described - which makes it vulnerable to elimination by unfavorable growing conditions and also to physical disturbances.
- Branching root and rhizome system stabilizes sediments.
- Leaves provide micro-habitats for small marine animals including juvenile fish, crabs, shrimp.
- Biodiversity is greater in Johnson's seagrass beds than in adjacent unvegetated bottoms.
- Rapid nutrient re-cycling into estuarine system; nutrients are more readily available to animal communities.
- Source of easily decomposable organic matter (food) for detrital pathways.
- Source of easily digested food for plant eating animals like manatees and green sea turtles.
- Risk of destruction from man-made activities include: 1) dredging; 2) prop scoring and anchor mooring; 3) shading from over-water structures; 4) storm surge; 5) altered water quality (such as stormwater runoff and turbidity); 6) siltation, and 7) trampling.
- The limited range of the species increases the potential for extinction from stochastic events (such as hurricanes).
- Listed as a "Threatened" species under the Endangered Species Act on September 14, 1998 by the National Marine Fisheries Service. The first marine plant species to be listed.
- Transplanting has not yet found to be effective for Johnson's seagrass; however, research in these methods continues and successful transplanting of this species appears possible.
- Maintenance dredging of existing deep water ports is not likely to affect Johnson's seagrass. New dredging into shallow waters less than 2 meters deep would be more likely to affect Johnson's seagrass habitat.

Photo: Lori Morris

References: Federal Register/Vol. 63, No. 177/Monday, Sept. 14, 1998, pp. 49035-49041.
Kenworthy, W. J. October 15, 1997. An Updated Biological Status Review for *Halophila johnsonii* Eiseman.