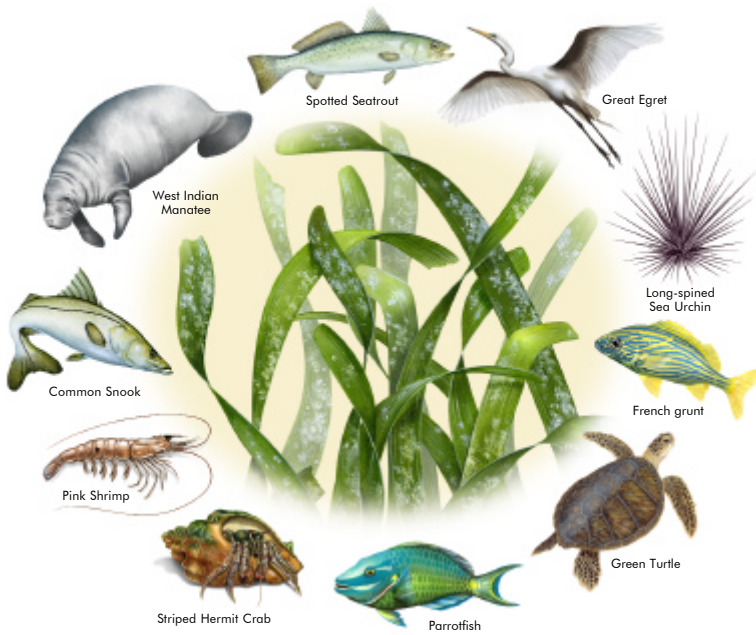


Seagrasses Are Important



- Seagrasses and associated attached algae convert nutrients and sunlight into organic matter forming the base of food webs that support manatees, sea turtles, and other valuable species.
- Economically and ecologically important species such as grouper and snapper use seagrass beds as nursery habitats and hunting grounds.

- Wave energy is reduced by seagrasses in coastal areas making them more habitable for plant and animal species.
- Seagrasses capture sediments and absorb nutrients, which helps increase water clarity. Clear water promotes photosynthesis and increases the amount of dissolved oxygen available in the water for other marine life.

FLORIDA'S Seagrasses

Florida has 7 species of seagrasses



Turtle Grass *Thalassia testudinum*
Turtle grass grows in areas with near-ocean salinities (30 to 40 parts per thousand or ppt). It thrives in tropical areas and is the dominant species in many parts of Florida including the Florida Keys and Florida Bay.



Manatee Grass *Syngodium filiforme*
Manatee grass cannot tolerate large swings in salinity and prefers salinity greater than 20 ppt. It is distinguished by its cylindrical leaves.



Shoal Grass *Halodule wrightii*
Shoal grass can tolerate a large range in salinity and is often considered a pioneer species for disturbed areas. It is commonly found in estuaries near sources of freshwater such as river mouths. Blades are narrow and flat with a blunt square tip.



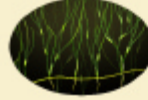
Paddle Grass *Halophila decipiens*
Paddle grass is the only annual seagrass species, coming back from seeds every year. It can be found in very deep water with low light levels.



Johnson's Grass *Halophila johnsonii*
Johnson's grass is the rarest seagrass and is listed as Threatened under the U.S. Endangered Species Act. It occurs only between Biscayne Bay and Sebastian Inlet on the east coast of Florida.



Star Grass *Halophila engelmanni*
Star grass is the easiest of the three *Halophila* species to identify because of its whorl of 5-7 leaves.



Widgeon Grass *Ruppia maritima*
Widgeon grass is the only seagrass able to tolerate a full range of salinity (0-50 ppt). It is typically found in estuaries due to its tolerance of lower salinities and low light requirements. Flowers of this species release pollen at the water's surface.



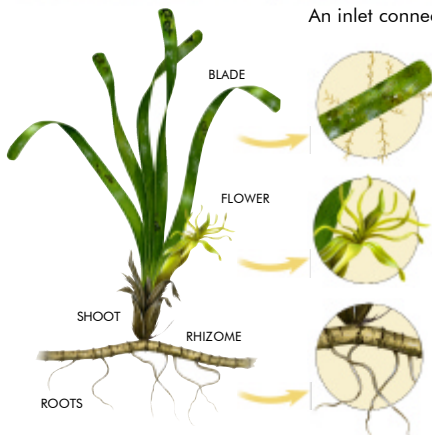
Estuary

A semi-enclosed body of water, such as a lagoon, that has both a saltwater tidal influence and a freshwater influx from rivers and canals.

Backreef

A system of connected habitats that extends from the coast to the coral reef crest. It includes mangroves, seagrasses, patch reefs, and other coastal marine habitats.

An inlet connects the estuary, dune, and backreef habitats where seagrasses may be found.



Attached algae and a variety of small animals associated with seagrass are an important source of food for many species living in and around seagrass beds.

Seagrasses reproduce sexually with flowers and seeds; however, the most common method of reproduction is asexual by horizontal growth of rhizomes.

Rhizomes and roots anchor the plant to the substrate. Oxygen produced through photosynthesis is transported through the roots into the surrounding sediments.

Seagrasses Need Protection

- Prop-scarring from boats can cause severe damage to seagrass beds.
- Eutrophication, or excess nutrients from run off, can reduce water clarity and stress seagrass beds.
- Large freshwater influx into estuaries via canals or stormwater can drastically alter salinities and water quality and severely stress seagrasses.
- Dredging canals and waterways removes seagrass and often fill is placed over seagrass areas.

You Can Help

- When boating, avoid shallow seagrass areas.
- Use time-released fertilizer on landscaping to reduce nutrient runoff to storm drains and surface waters.
- Convert from septic systems to sewer to improve water quality by eliminating nutrients from septic tank leaching.
- Avoid trampling seagrasses. Trampled seagrasses often do not recover.



Water Quality is Critical

Salinity: the measure of salt in the water. Plants and animals are adapted to living in a variety of salinities from ocean, to brackish, to fresh water. Most seagrasses are harmed by large fluctuations in salinity.

Water Clarity: a measure of how "clear" the water is. Plants, including seagrasses, convert sunlight to produce food/energy, a process called photosynthesis. Sediments and other particles that become suspended in water can block sunlight from reaching seagrasses and may cause them to die. The better the clarity of the water, the more sunlight will penetrate to the seagrasses.



Loxahatchee River District

"Preserving Nature by Design"

Poster Series, No. 1

www.loxahatcheeriver.org

The Loxahatchee River District monitors all 7 seagrass species in the Loxahatchee River and southern Indian River Lagoon as part of its mission to protect and preserve the Loxahatchee River.