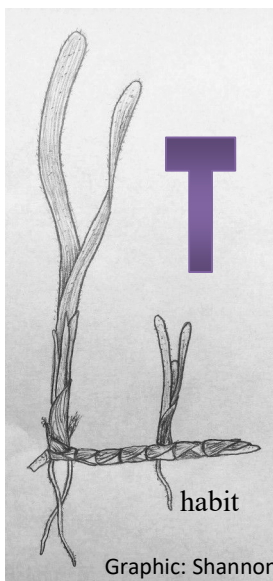


SEAGRASSES OF SOUTHWEST FLORIDA

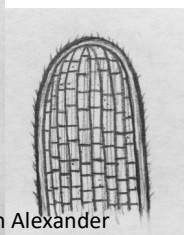
Betty Staugler, Florida Sea Grant Agent, UF/IFAS Extension



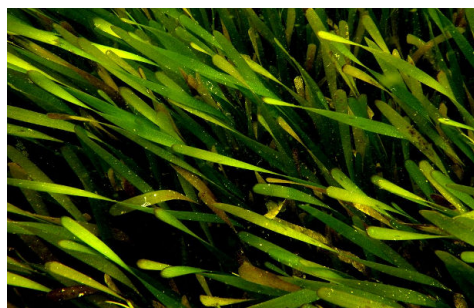
TURTLE GRASS (*Thalassia testudinum*)

- Broad flat leaf blades (3mm-1cm wide, .1-.4 inches)
- Blade tip rounded
- 2-5 blades per shoot
- Found throughout estuaries except very low salinities
- Often blades covered with algae/barnacles
- Often forms extensive meadows

Leaf tip



FWC



EYES ON SEAGRASS



Ken Dunton

SHOAL GRASS (*Halodule wrightii*)

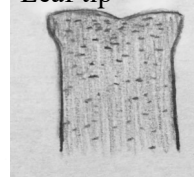
- Leaf tip is notched or dentate
- Very fine, thin and flat leaf blades
- Leaves clustered from a distinct node on a rhizome
- Often found close to shore and at seagrass deep edge
- Found throughout estuaries into very low salinities
- Can be exposed at low tides



Betty Staugler



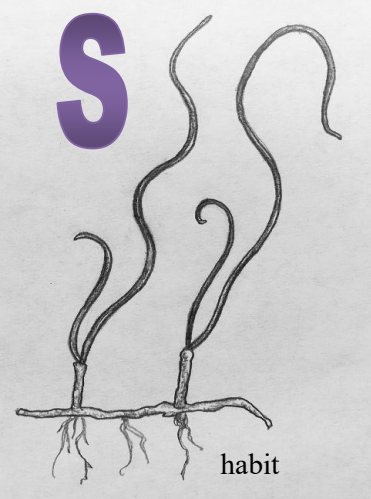
Leaf tip



Graphic: Shannon Alexander



Graphic: Shannon Alexander



MANATEE GRASS (*Syringodium filiforme*)

- Round or cylindrical leaf blade (rolls through finger tips)
- Only found in higher salinities waters (generally >20 ppt)
- Generally not found in very shallow water (less than 1 meter)
- Blade length varies but can reach 50 cm (20 inches)

FDEP

Leaf tip



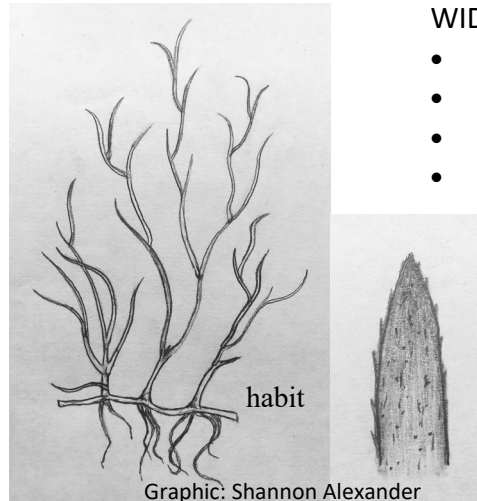
Jennifer Bronson, TPWD



SEAGRASS SPECIES LESS COMMONLY FOUND IN SOUTHWEST FLORIDA



SFWMD



WIDGEON GRASS (*Ruppia maritima*)

- Leaf blades branch
- Tips pointed
- Found in stable (generally low) salinities
- Often transient in estuaries

R



Government of Bermuda

Leaf



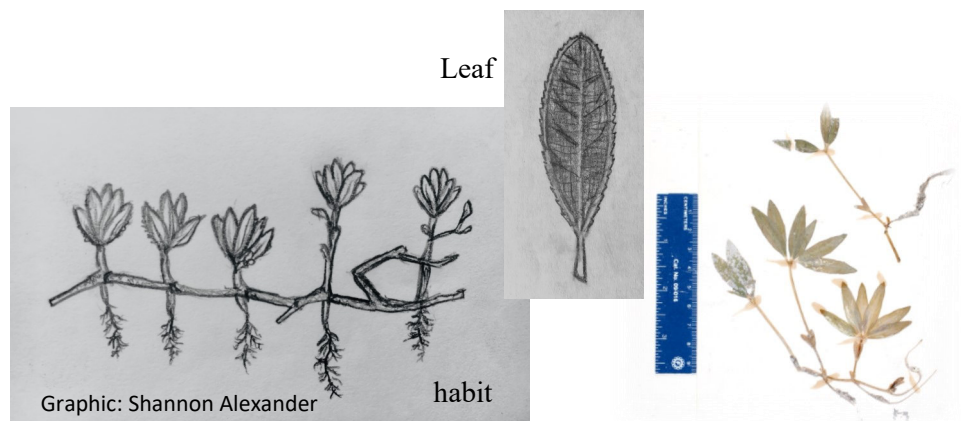
PADDLE GRASS (*Halophila decipiens*)

- Two leaves at a node
- Leaves measure 0.5-1.0 inches (10-25 mm) long and 0.12-0.23 inches (3-6 mm) wide
- Leaves elliptic, obtuse or rounded at apex
- Finely serrated leaf margin
- Often found in deeper and darker waters

STAR GRASS (*Halophila engelmannii*)

- Leaves 0.5-1.2 inch (10-30 mm) long
- Leaves clustered in groups of 4-8
- Smooth, flat leaves have distinct midribs and veins and fine-toothed edges

HE



Betty Staugler, Florida Sea Grant Agent, UF/IFAS Extension

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SEAWEEDS OF SOUTHWEST FLORIDA

Betty Staugler, Florida Sea Grant Agent, UF/IFAS Extension



EYES ON SEAGRASS

GREEN ALGAE—Chlorophyta

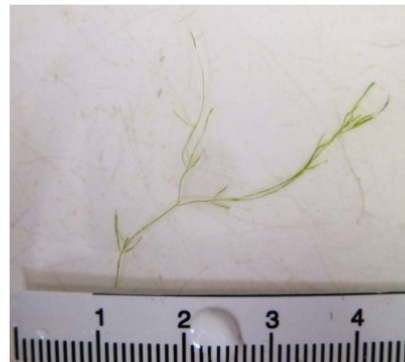
- Green unless bleached from sunlight
- Will never look red, but may bleach out clear
- Single celled
 - Filamentous
 - Some stringy others like cellophane
- Moderately complex
 - May resemble seagrass with fronds and rhizomes
 - May feel spongy



Ulva sp.



Codium sp.



Derbesia sp.



Caulerpa sp.

BROWN ALGAE—Phaeophyta

- Brown—should not appear in shades of red
- Often possess large leafy looking fronds
- If it has bubbles or air pockets, it's brown



Sargassum sp.

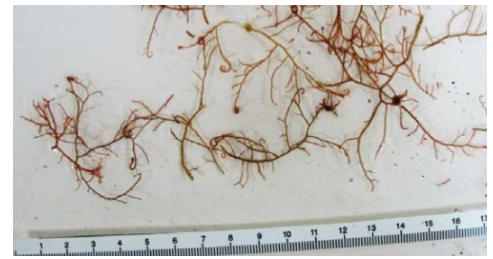


Rosenvingea sp.

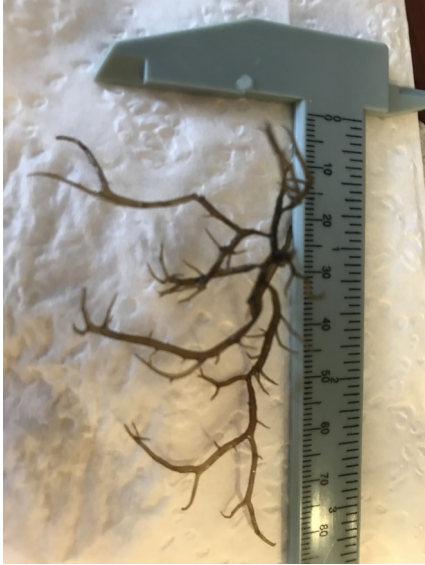


RED ALGAE—Rhodophyta

- Wide range of colors—May be yellow-green, red, maroon, brown, or black
- Most species are branching without noticeable fronds



Hypnea sp.



Gracilaria sp.



Laurencia sp.



Acanthophora sp.



Gracilaria sp.



Halymenia sp.



Polysiphonia sp.

Images by: Betty Staugler, UF/IFAS Extension, Florida Sea Grant and Eric Milbrandt, SCCF Marine Lab

Betty Staugler, Florida Sea Grant Agent, UF/IFAS Extension

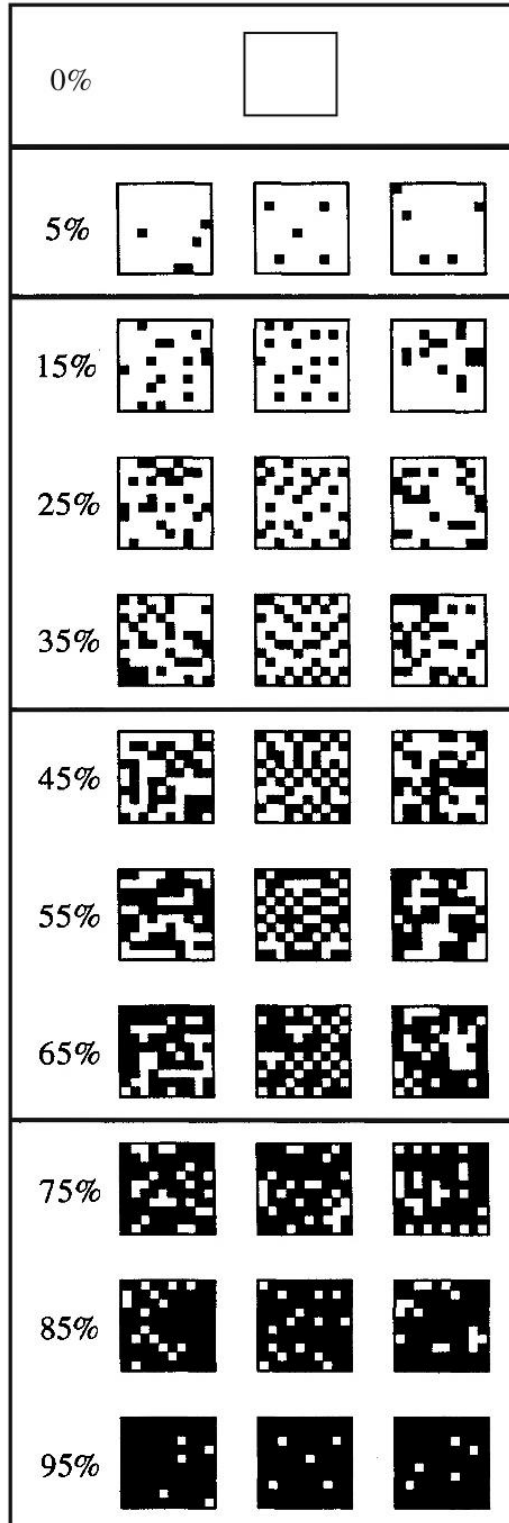
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PERCENT COVER

DENSITY CLASS



None
0%

Very Sparse
1% - 10%

Sparse
11% - 40%

Moderate
41% - 70%

Dense
71% - 100%

SEAGRASS EPIBIOTA

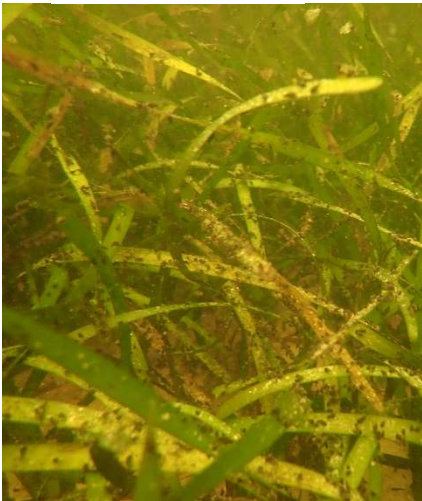
EPIPHYTES (PLANT GROWTH)



FDEP Biscayne Bay Aquatic Preserve photo

EPIFAUNA (ANIMAL GROWTH)

Snails



Barnacles



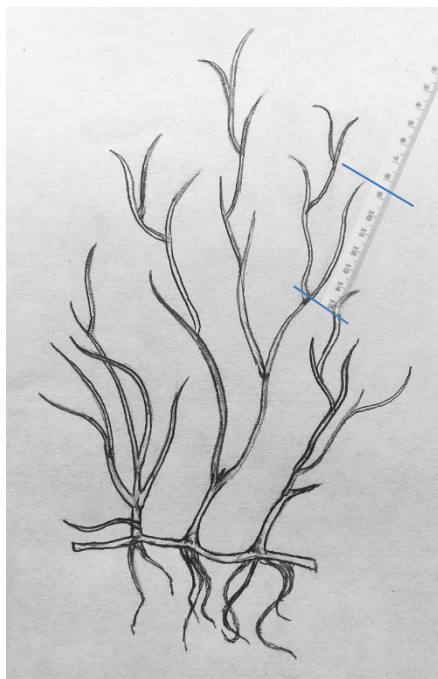
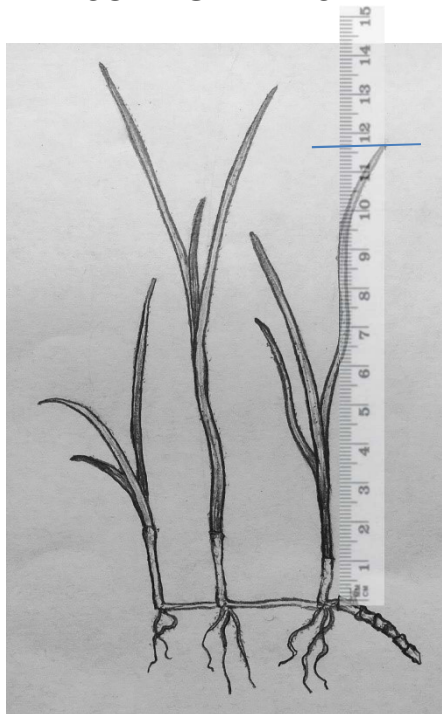
Tunicates



Photo: FDEP Charlotte Harbor Aquatic Preserves



MEASURING BLADES



Measure entire blade from shoot to tip. For branching *Ruppia*, measure from a node to tip of blade. No need to measure either *Halophila* species.

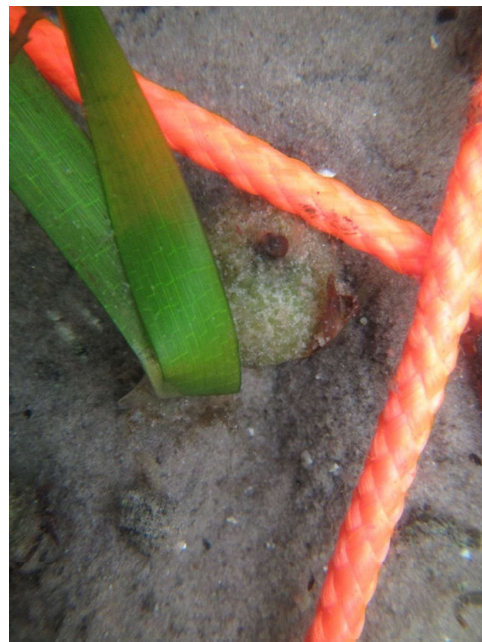
LOOK FOR FLOWERS AND FRUIT – May be flowering in April

Thalassia Flower



Photos: FDEP Charlotte Harbor Aquatic Preserves

Thalassia Fruit



Staugler, UF/IFAS Extension, Charlotte County

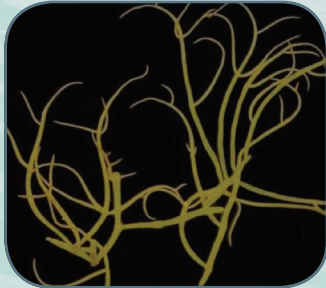
17. *Hypnea musciformis*

Red, red-brown, orange-brown, often tangled. Branches sparse, wiry, with curved, hook-like tips. The hook tips are flattened while the branches are rounded.



18. *Lomentaria baileyana*

Pink-red, green, to red-purple, tangled and soft. Branches sparse, delicate, uneven, rounded, with tapering, blunt tips.



19. *Sargassum filipendula*

Green, brown-green, to tan. The tough, wiry, stem has few branches, but has regularly spaced long narrow blade-like "leaves" and grape-like, air filled vesicles.



20. *Ulva lactuca*

Green to bright or neon green, soft, and slippery. The lettuce-like structure is thin, ruffled, and delicate. Often occurring in lettuce head-like clumps but can occur as single ruffled layer.



The works of Dawes, Mathieson, and the Littlers were used as references for the algal descriptions. Sources: Dawes C. J, Mathieson C. 2008. The seaweeds of Florida. Gainesville: University Florida Press. 591 p. Littler D. S., Littler M. M., 2000. Caribbean reef plants. Washington D.C.: Offshore Graphics. 541 p.

SEA GRASSES IDENTIFICATION GUIDE

Sea grasses are grass-like flowering plants that live completely submerged in marine and estuary waters. Sea grasses occur in protected bays and lagoons and also in deeper waters along the continental shelf of Florida.

A. *Syringodium filiforme* Manatee Grass

Elongated, cylindrical leaves. Similar to spaghetti.



B. *Thalassia testudinum* Turtle Grass

Elongated, flat blade leaves. Similar to fettuccini pasta.



C. *Halodule wrightii* Shoal Grass

Length usually less than 6", thin, flat blades. Can be distinguished from Manatee Grass by having flat versus cylindrical blades.



Halophila engelmannii Stargrass

These are smaller, more fragile sea grasses. Only limited information about them exists, although surveys are underway to define their ecological role.



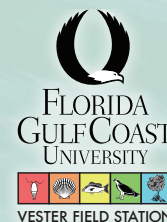
What is algae and why is it important?

- Algae are not true plants, but a large and diverse group of eukaryotic (complex-celled) photosynthetic organisms. They provide food and shelter for many aquatic animals including small fish, crabs and shrimp.
- Algae drifting and washing ashore is a natural process.
- Seagrasses are plants and not algae.

How to report an algae event:

- Call 239-745-3052 to report large mats of algae that have washed ashore.
- On the phone recording, report the following information:
 - Where did you find the algae? You may report a close public beach access, address or description of location.
 - Day and time:
 - How much?
 - How large an area is covered by algae?
 - How deep is the algal mat?
- Based on this FGCU Seaweed Identification Guide, state which algae number located next to its photo you believe it to be. You are welcome to offer 2 or 3 best guesses if it helps!!! Please note, sometimes colorful algae will sun bleach to white or opaque.

The content of this guide was created with the help of FGCU's Bob Wasno, Katie McFarland & Taylor Walker Cover photo and brochure design by FGCU's James Greco



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www.fgcu.edu/vestermarine
www.fgcu.edu/cwi
Funding provided by West Coast Inland Navigation District www.wcind.net

ALGAE IDENTIFICATION GUIDE



FLORIDA GULF COAST UNIVERSITY



VESTER FIELD STATION

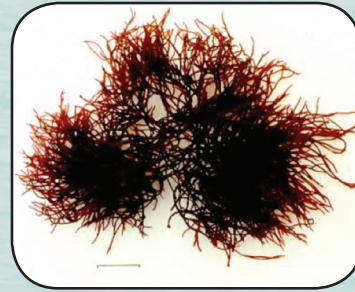
1. *Agardhiella subulata*

Deep red in color, stems are round, slippery, and firm. Branches are pinched or tapered at base and pointed at the tips.



5. *Solieria filiformis*

Pink-red to deep red, bushy, and densely branched. Branches are fleshy, pointed at the tips, and sharply tapered at the base.



9. *Gracilaria mammillaris*

Dark red to red-brown, bushy and tough. The main branches are flattened and strap-like, with tips divided into two or more hornlike sections.



13. *Champia parvula*

Red, red-brown, to brown, delicate, jelly-like, and slippery. The branches are short, slightly flattened or rounded, and covered in band-like constrictions.



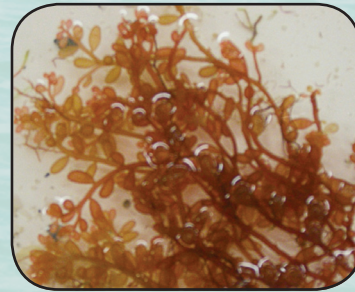
2. *Agardhiella ramosissima*

Plant pinkish-red to brown, with very flat, strap-like stems and branches. The smallest branches are rounded and not flattened.



6. *Botryocladia occidentalis*

Red to orange-brown, main stem tough and wiry. Branches covered with oblong, oval shaped, grape like clusters that appear to be filled with air.



10. *Gracilaria tikvahiae*

Red, red-brown, or green-brown with many rounded to partially flattened branches. Branches are delicate, slippery and sharply pointed.



14. *Caulerpa racemosa*

Commonly called "sea grapes". Green in color, distinguished by spherical branchlets ("grapes") arising from a horizontal runner (stolon).



3. *Gracilaria blodgettii*

Red to brownish, with many, rounded, tough, slippery branches. The tips of branches are often very tapered and pointed; older specimen may have blunt tips.



7. *Dasya ramosissima*

Red to red-brown, bushy, fluffy, and soft. Branches are dense, very delicate, and covered with many fine feathery hair like filaments.



11. *Caulerpa sertularioides*

Fern-like, green to light green, branches feather or fern-shaped, and sparse. The main stem of the algae is darker colored, wiry, and tough. The branches are more stretched out and elongated than the *Caulerpa mexicana* variety.



15. *Dictyota cervicornis*

Light green to olive green, densely branched. Branches extend at wide angles from the main stem, are flattened, spiraled, and have branching antler-like tips.



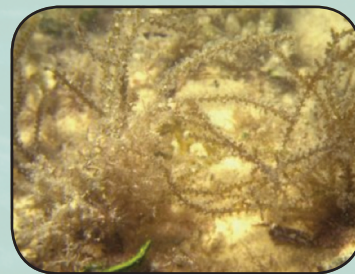
4. *Eucheuma isiforme*

Gold, red, or red-brown. Branches are sparse, tough, firm and cartilaginous. The main stem of the plant is often wider or swollen at the base.



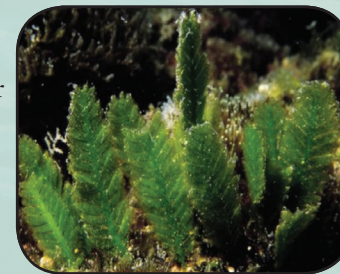
8. *Acanthophora spicifera*

Sandy to red-brown with few branches. Branches are rounded and covered with spiny, spur-like projections.



12. *Caulerpa mexicana*

Green to light green, delicate, creeping plant. Branches fern or feather-shaped shorter and more compressed than *Caulerpa sertularioides*.



16. *Hincksia mitchelliae*

Deep red in color, stems are round, slippery, and firm. Branches are pinched or tapered at base and pointed at the tips



If you have any information about algae washing up on the beach, call this number: 239-745-3052. Please report the types of algae seen, (according to this guide) as well as, date, time, general location, and approximate size of the algae event.