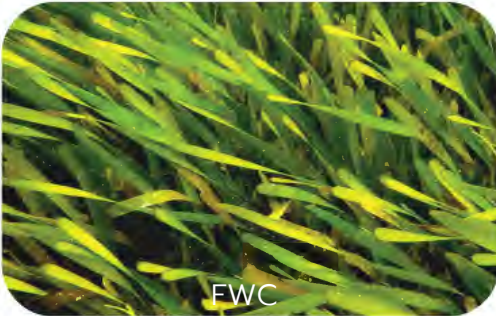


# SEAGRASSES OF SOUTHWEST FLORIDA

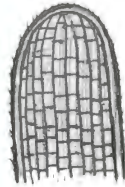
Katherine Rose, UF/IFAS Extension Florida Sea Grant Charlotte County  
Betty Staugler, NOAA Harmful Algal Bloom Liason

## TURTLE GRASS *Thalassia Testudinum*

- Broad, flat leaf blades
- Rounded blade tip
- 2-5 blades per shoot
- Low tolerance for freshwater
- Blades often covered with algae/barnacles
- Tends forms extensive meadows



Leaf tip



Graphics:  
Shannon Alexander



## SHOAL GRASS *Halodule wrightii*

- Leaf tip is notched or "dentate"
- Very fine, thin and flat leaf blades
- Often found close to shore or in deeper water
- High tolerance for freshwater
- May be exposed to air at low tides



Leaf tip



Graphics:  
Shannon Alexander



## MANATEE GRASS *Syringodium filiforme*

- Round or cylindrical leaf blade (rolls through finger tips to check)
- Prefer saltier water and deeper habitat (>1 meter/3 ft)
- Blade length can reach 50cm/20 inches

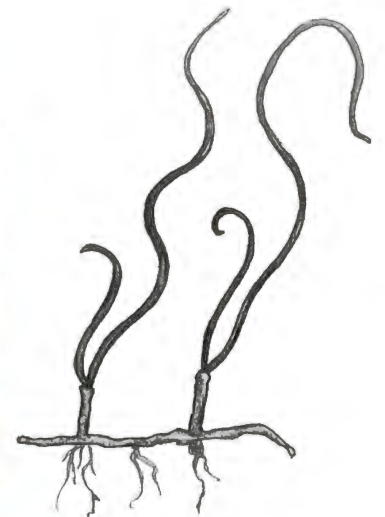
Shannon Alexander



Leaf tip

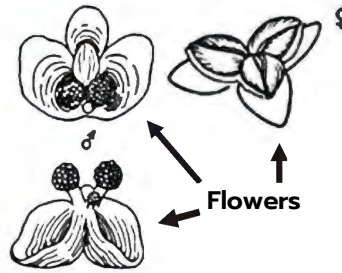


Shannon Alexander



## TAPE or EEL GRASS *Vallisneria americana*

- Similar appearance to Turtle Grass
  - Except it's found *exclusively* in freshwater
- Long, ribbon like blades that sometimes reach the surface
- Rounded leaf tips
- May have white flowers present on tall stalks



Leaf tip

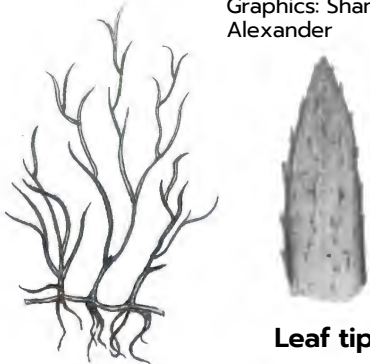


## SEAGRASS SPECIES LESS COMMONLY FOUND IN SOUTHWEST FLORIDA

### WIDGEON GRASS

*Ruppia maritima*

Graphics: Shannon Alexander



- Similar appearance to Shoal Grass
- Pointed leaf tip
- May have branching blades
- Thrives in freshwater but tolerates saltwater



### PADDLE GRASS

*Halophila decipiens*

Shannon Alexander



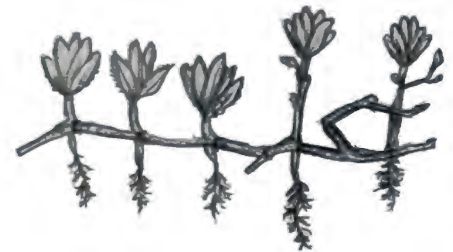
- Oval shaped leaves that grow in pairs
- Leaf tip is rounded
- Finely serrated edge
- Often found in deeper and darker waters



### STAR GRASS

*Halophila engelmannii*

Shannon Alexander



- Flower-like clusters of leaves (4-8 per cluster)
- Small, flat leaves with saw-like edges
- Often found in deeper and darker waters





# COMMON SEaweEDS OF SOUTHWEST FLORIDA

Katherine Rose, UF/IFAS Extension Florida Sea Grant Charlotte County  
Betty Staugler, NOAA Harmful Algal Bloom Liason

## GREEN ALGAE Chlorophyta

- Green unless bleached by the sun

Even closely related algae species can look drastically different.

Note the differences between species in the genus *Ulva* or *Caluierpa*!



*Ulva sp.*

*Codium sp.*



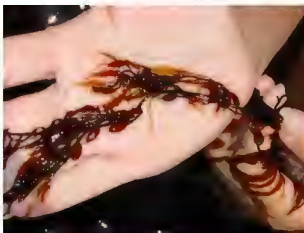
*Caluierpa sp.*



*Caluierpa sp.*

## BROWN ALGAE Phaeophyta

- Brown in color
- Often possess large leafy looking fronds & gas bubbles



*Sargassum sp.*



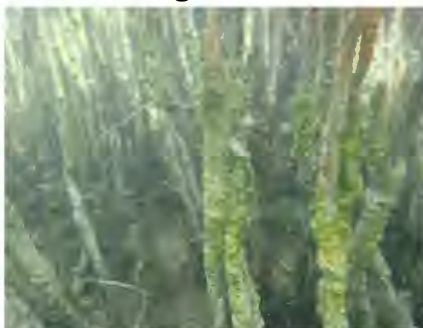
*Rosenvingea sp.*

## Cyanobacteria

Images in this section are from Berthold et al 2020

- Single-celled organisms that form mucus-like mats which can float or cover a variety of aquatic surfaces
- Wide range of colors: brown, grey, blue-green, emerald

Floating Cyanobacteria mats



Covering mangrove roots



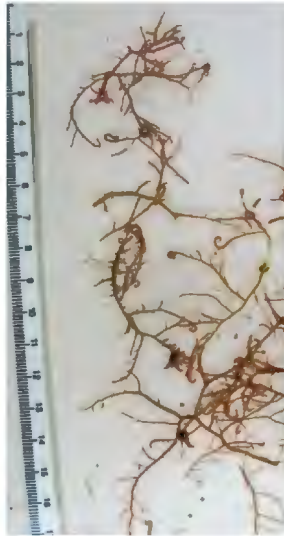


## RED ALGAE *Rhodophyta*

- Wide range of colors: Yellow-green, red, maroon, brown, or black
- Most species are branching without noticeable fronds



*Gracillaria sp.*



*Hypnea sp.*



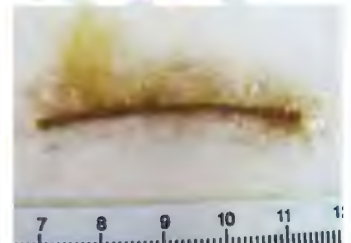
*Halymenia sp.*



*Laurencia sp.*



*Acanthophora sp.*



*Polysiphonia sp.*

## EPIBIOTA

The prefix "epi-" means "upon". So, an epibiot is something that lives on another living thing. There is such thing as epi-PHYTES, which are plants that live on other living things and epi-FAUNA, which are animals that live on other living things. Since it can be hard to tell the difference in aquatic environments, epibiot are often categorized as "fleshy" or "encrusting".

### FLESHY



↑ Tunicates are soft and fleshy

The fuzzy appearance of the grass is caused by small plants



### ENCrustING

Snails stick to seagrass blades



You would have to scrape off the plants growing the grass blades above, or barnacles!

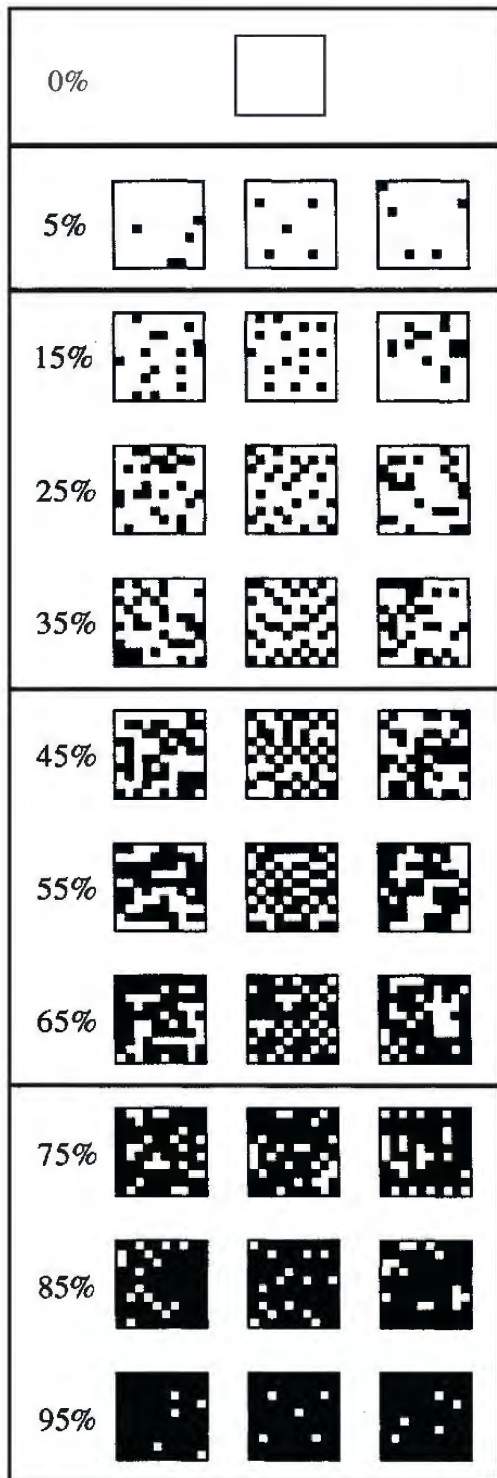


Unless otherwise noted, images in this document were provided by Betty Staugler (NOAA Harmful Algal Bloom Liason), Eric Millbrandt (Sanibel Captiva Conservation Foundation), and the Florida Department of Environmental Protection

# ESTIMATING PERCENT COVER

Katherine Rose, UF/IFAS Extension Florida Sea Grant Charlotte County  
Betty Staugler, NOAA Harmful Algal Bloom Liason

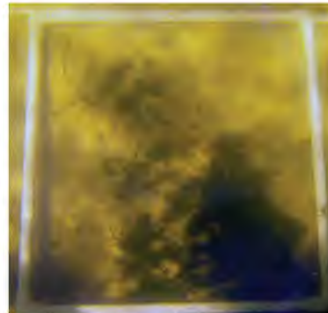
## PERCENT COVER



Roger Williams, 2010.  
Simply Science: Biomass Survey.

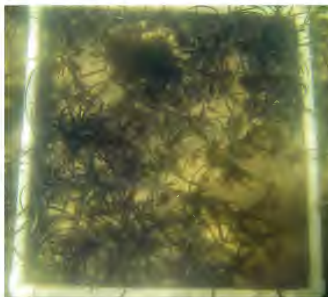
Estimating Percent Cover is, by nature, subjective. Have each member of your team estimate percent cover and come to a consensus. A 5% difference among team-mates is small. Talk it through if your estimates are more than 20% different.

## According to Seagrass Biologists...



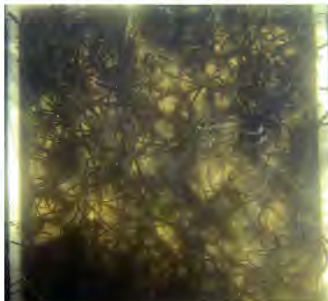
25% algae

5% seagrass



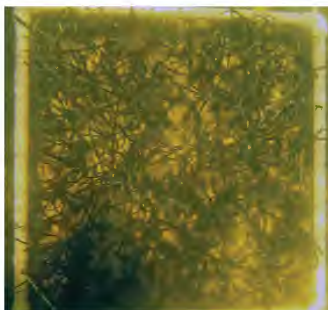
5% algae

45% seagrass



0-5% algae

60-70% seagrass\*



0-5% algae

60-70% seagrass\*

\*Some might estimate higher percent cover in these quadrats. Note that sand is still visible through the seagrass.



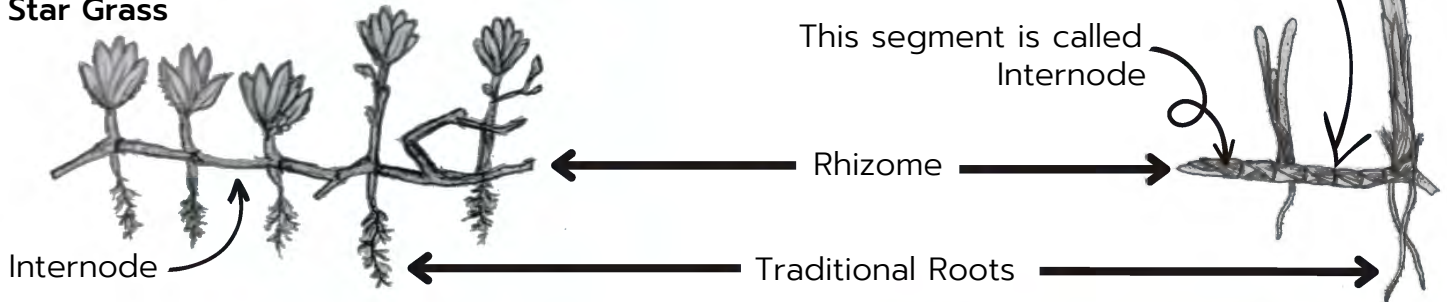
# SEAGRASS REPRODUCTIVE STRUCTURES

Katherine Rose, UF/IFAS Extension Florida Sea Grant Charlotte County  
Betty Staugler, NOAA Harmful Algal Bloom Liason

## RHIZOMES Graphics in this section are by Shannon Alexander

- Root like structures that connect seagrass shoots beneath the ground
- Brown or white depending on species
- Grow horizontally and sprout new seagrass shoots
- Integral to seagrass meadow expansion and recovery
- Often damaged by propeller scars
- Don't absorb nutrients like roots

### Star Grass



### Turtle Grass

This line between segments is a Node

This segment is called Internode

## FRUITS & FLOWERS Pictures in this section provided by Arielle Taylor-Manges, FDEP/CHAP

- Seagrasses are flowering plants
- Currents and wave movement help transport "pollen"
- Most common in spring time



Turtle Grass Fruit



Manatee Grass Flower



Star Grass Flower



Turtle Grass Flower