


# SEAGRASSES AS INDICATORS OF ECOSYSTEM CHANGE IN FLORIDA BAY

<sup>1</sup>M.O. Hall, <sup>2</sup>M.J. Durako, <sup>1</sup>M. Merello, and <sup>1</sup>J. Christian

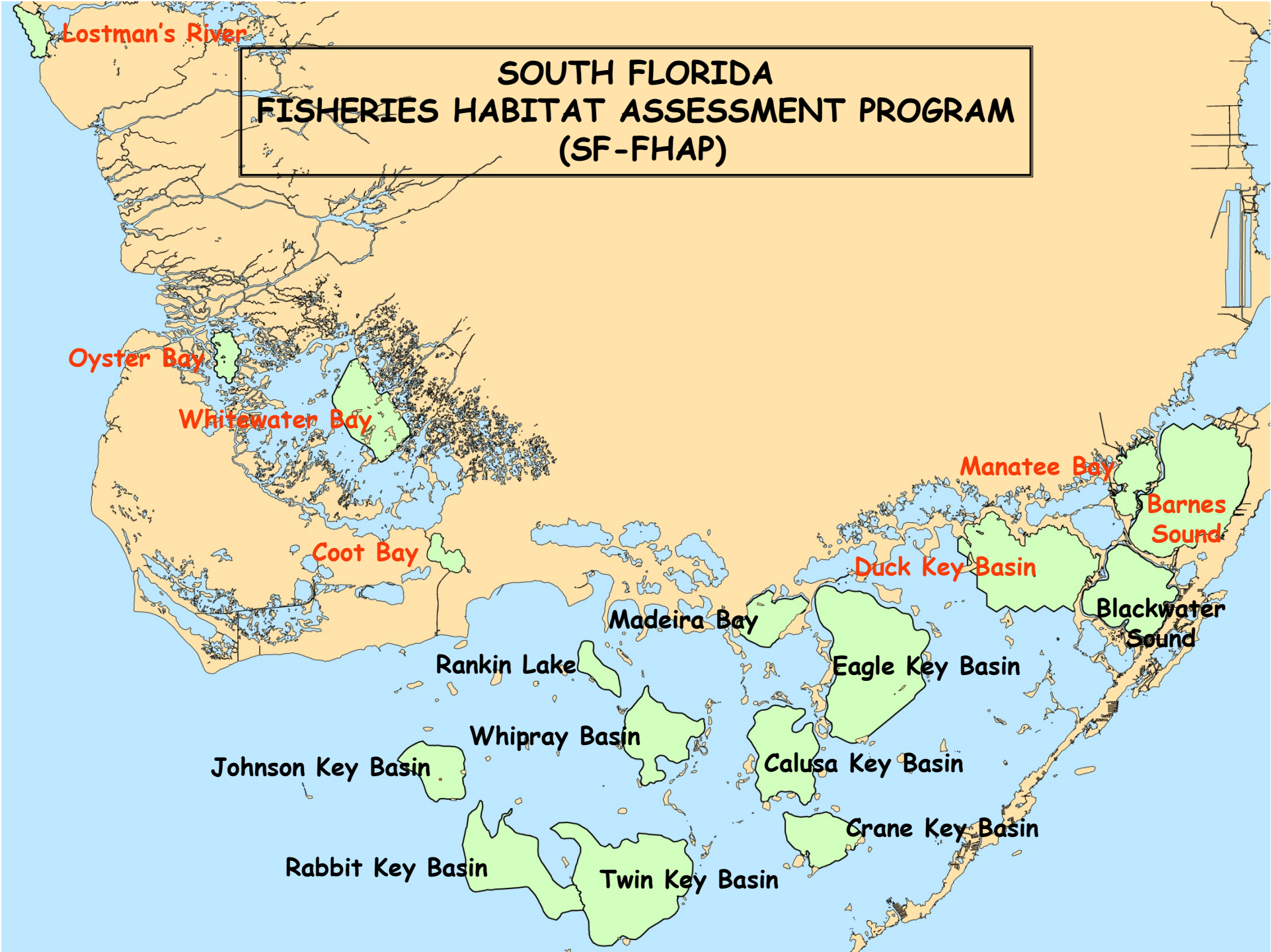
<sup>1</sup>Florida Fish and Wildlife Conservation Commission, Florida Fish and  
Wildlife Research Institute

<sup>2</sup>Center for Marine Science, University of North Carolina at Wilmington

An underwater photograph showing a dense seagrass community. The seagrass leaves are long, narrow, and green, with some showing signs of damage or discoloration. The background is filled with various other marine plants and algae, creating a complex and textured environment. The lighting is natural, highlighting the vibrant green of the seagrass against the darker, more muted colors of the surrounding vegetation.

**CHANGES IN SEAGRASS  
COMMUNITY STRUCTURE  
WILL BE USED AS THE  
CENTRAL PERFORMANCE  
MEASURE TO ASSESS  
CERP SUCCESS IN  
SOUTHERN COASTAL  
MODULE**

**SOUTH FLORIDA  
FISHERIES HABITAT ASSESSMENT PROGRAM  
(SF-FHAP)**



Lostman's River

Oyster Bay

Whitewater Bay

Coot Bay

Rankin Lake

Johnson Key Basin

Rabbit Key Basin

Twin Key Basin

Madeira Bay

Whipray Basin

Eagle Key Basin

Calusa Key Basin

Crane Key Basin

Duck Key Basin

Manatee Bay

Blackwater Sound

Barnes Sound

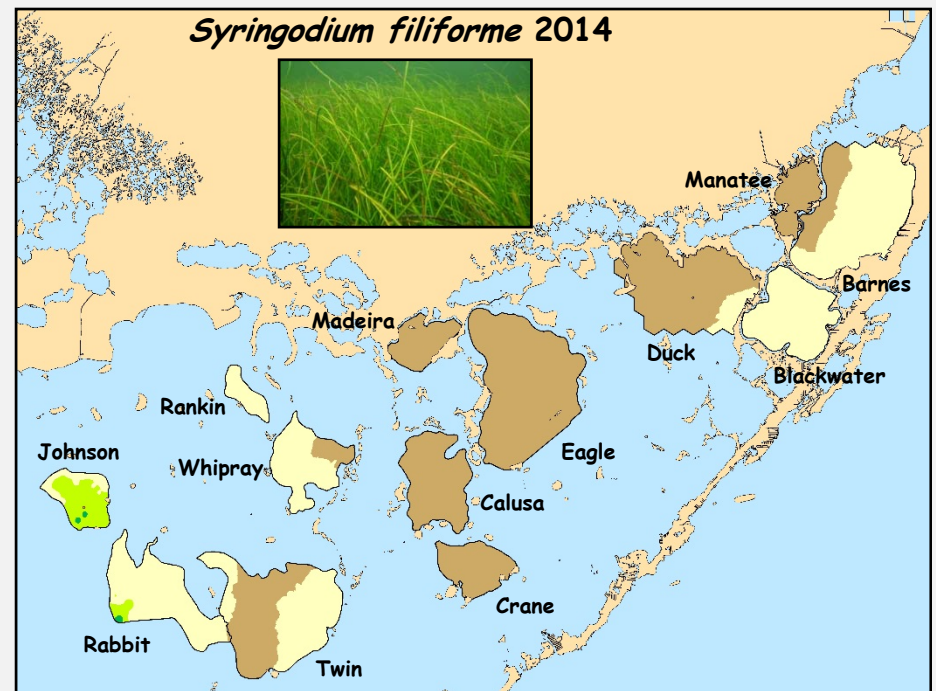
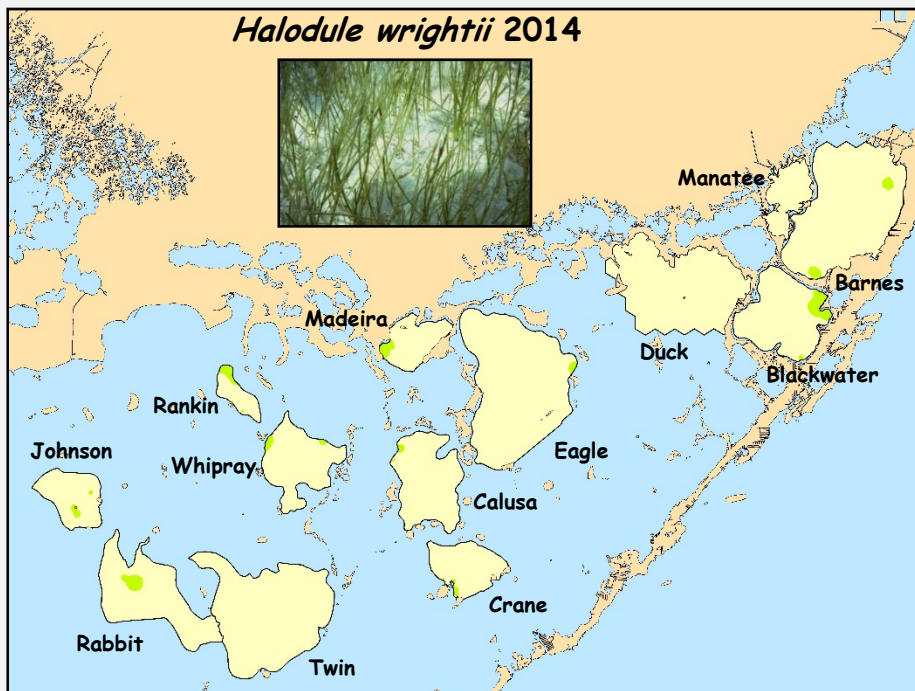
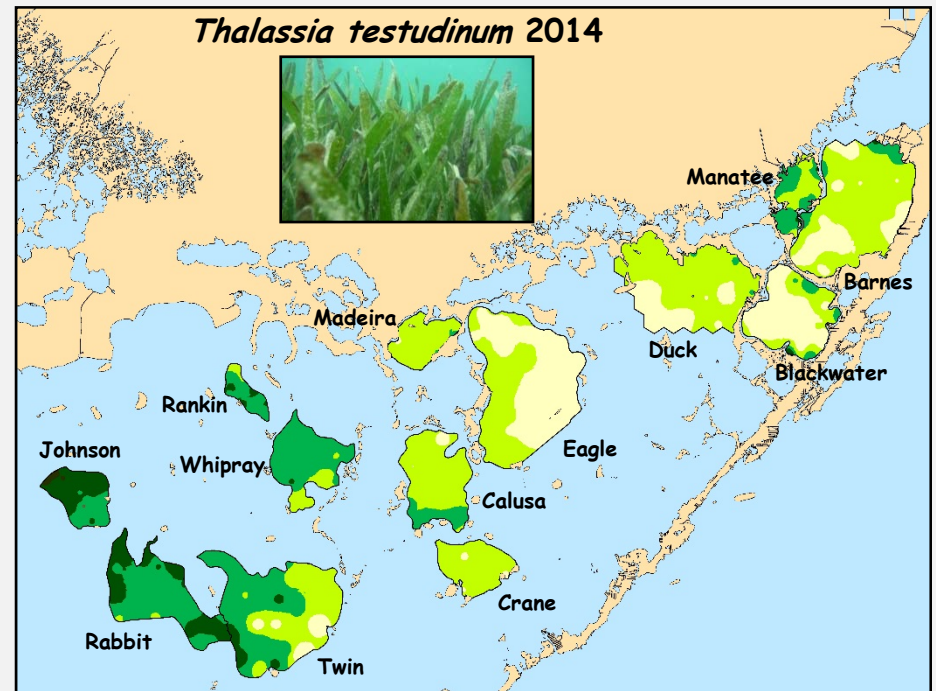
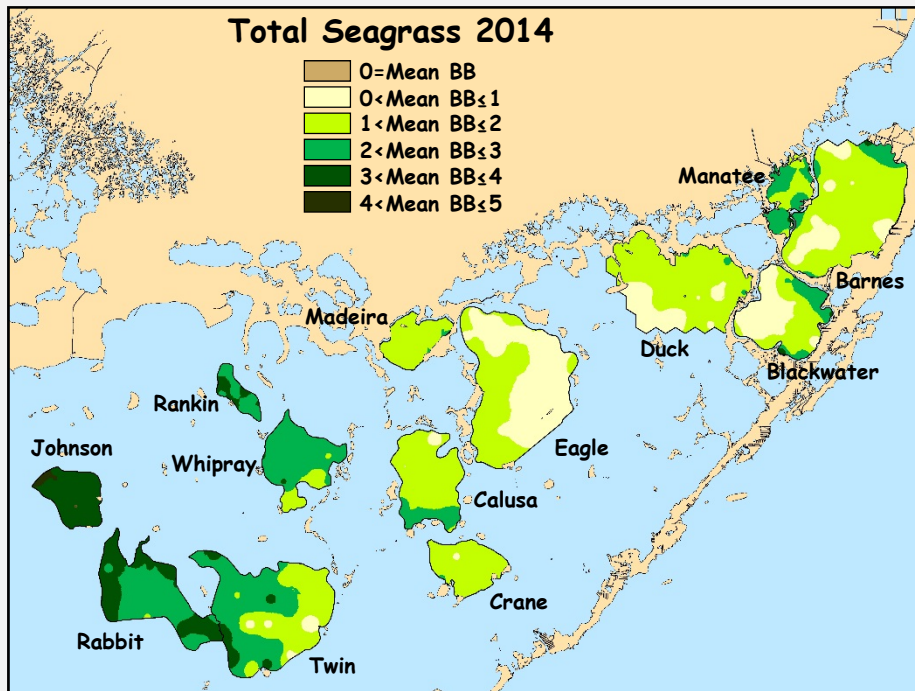


## SEAGRASS DISTRIBUTION AND ABUNDANCE:

- SAV COVER IS VISUALLY ASSESSED USING A MODIFIED BRAUN-BLANQUET COVER ABUNDANCE ANALYSIS.
- EIGHT 0.25 M<sup>2</sup> QUADRATS ARE EXAMINED AT EACH STATION.
- MONITORING CONDUCTED ANNUALLY AT THE END OF THE DRY SEASON (MAY OR JUNE).

### Braun/Blanquet Cover Abundance Scale

- 0.1 = Solitary shoot with small cover
- 0.5 = Few shoots with small cover
- 1.0 = Numerous shoots, < 5% cover
- 2.0 = Any number of shoots, 5-25% cover
- 3.0 = Any number of shoots, 26-50% cover
- 4.0 = Any number of shoots, 51-75% cover
- 5.0 = Any number of shoots, 76-100% cover



# SEAGRASS DISTRIBUTION AND ABUNDANCE 1984

Mainland - *Thalassia* dominant; Monotypic, dense *Halodule*; *Ruppia* along margins in low salinity.

Northeast - Sparse, patchy *Thalassia*; Locally abundant *Halodule*

Interior - Dense *Thalassia*; *Halodule* in isolated patches

East Central - Sparse, patchy *Thalassia* (but dense when there is enough sediment); Small *Halodule* patches

Gulf - Dense *Thalassia* interspersed with *Halodule* and *Syringodium* (especially in depths > 3 meters).

Atlantic - Sparse *Thalassia* in basins; Dense *Thalassia* on banks.

Modified from Zieman, Fourqurean & Iverson, 1989

An aerial photograph of a bay system, likely the Chesapeake Bay, with various colored overlays representing environmental drivers. The land is shown in shades of green and brown, while the water is dark blue. The bay is filled with numerous smaller, interconnected water bodies and channels. The text 'BAY-SCALE DRIVERS' is prominently displayed at the top in yellow. Below it, four other drivers are listed in red and yellow: 'SALINITY', 'LIGHT', 'SEDIMENT DEPTH', and 'PHOSPHORUS AVAILABILITY'.

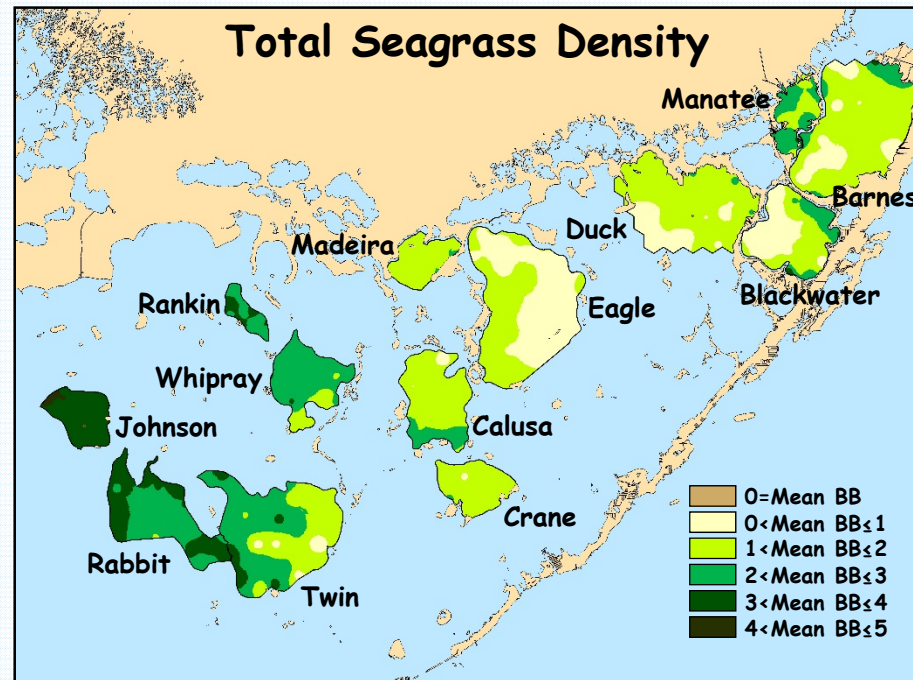
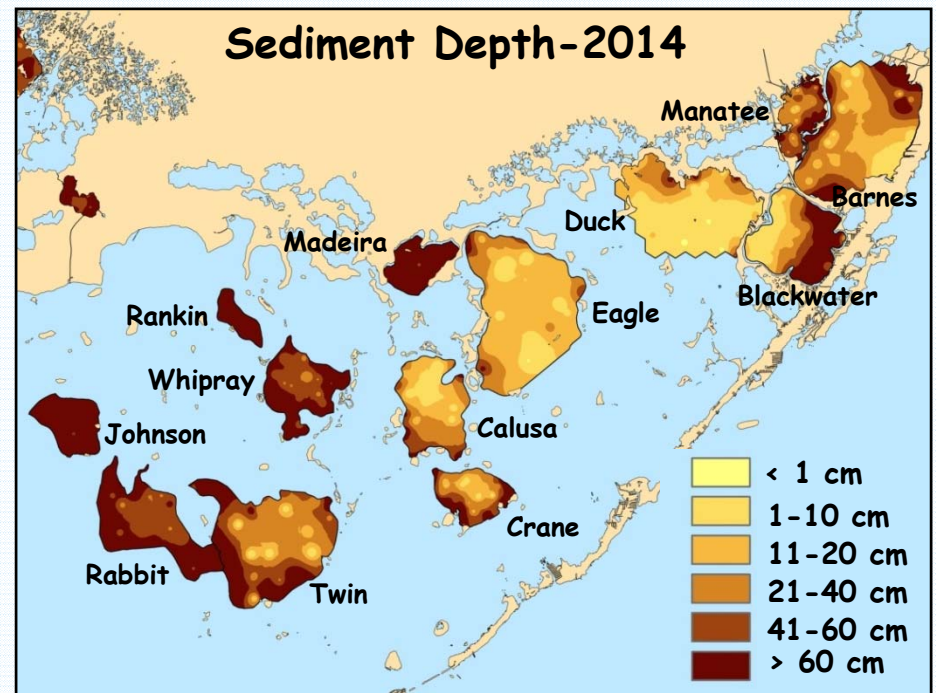
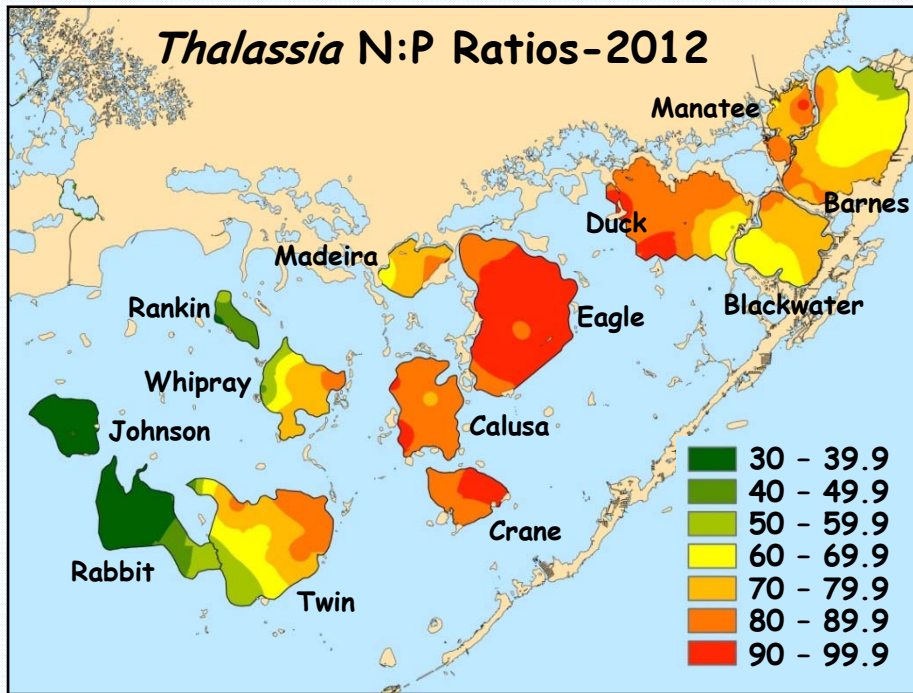
# BAY-SCALE DRIVERS

SALINITY

LIGHT

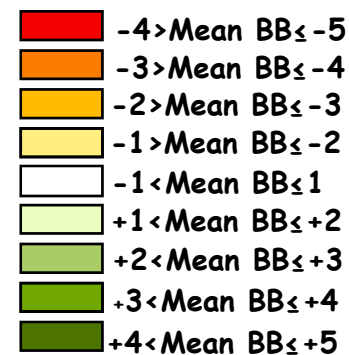
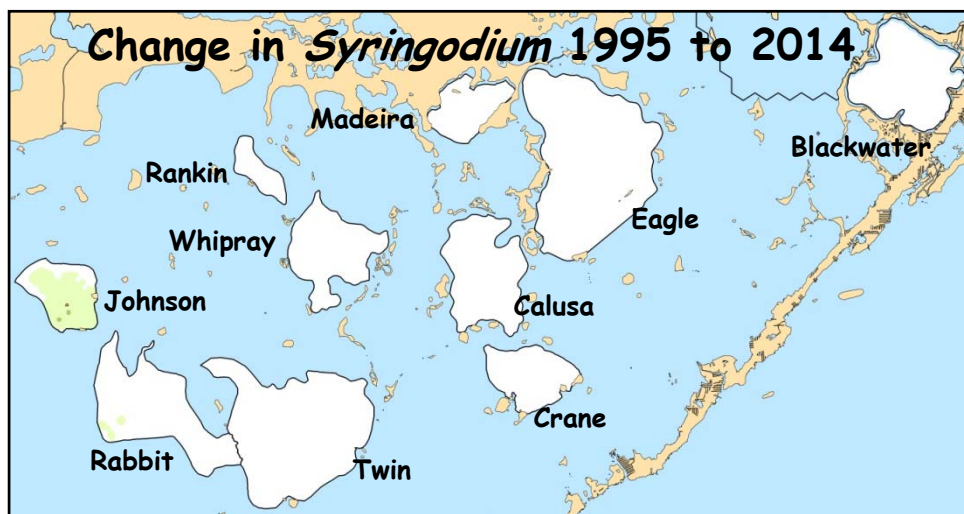
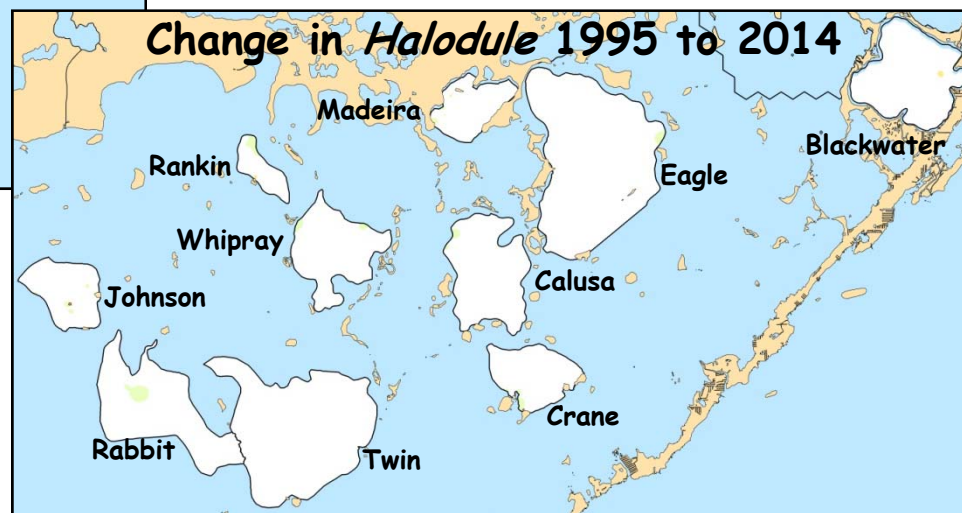
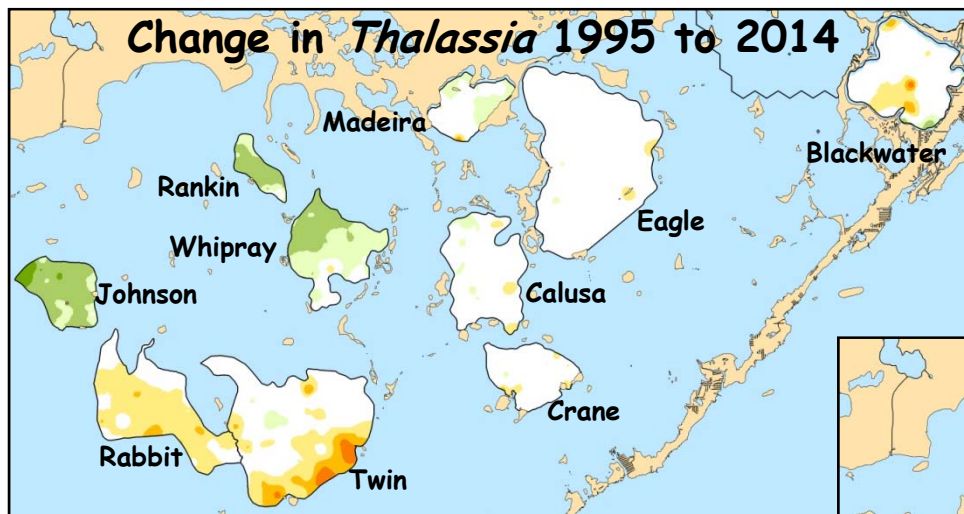
SEDIMENT DEPTH

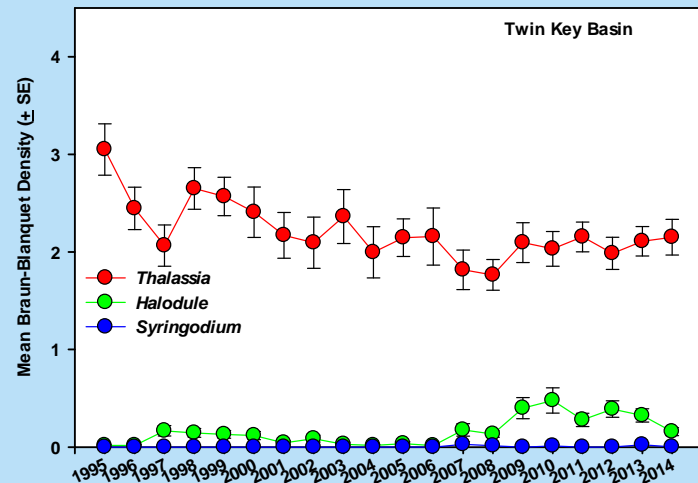
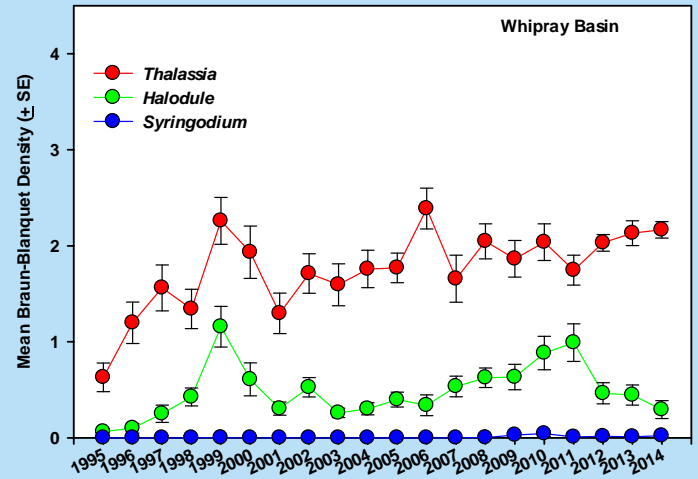
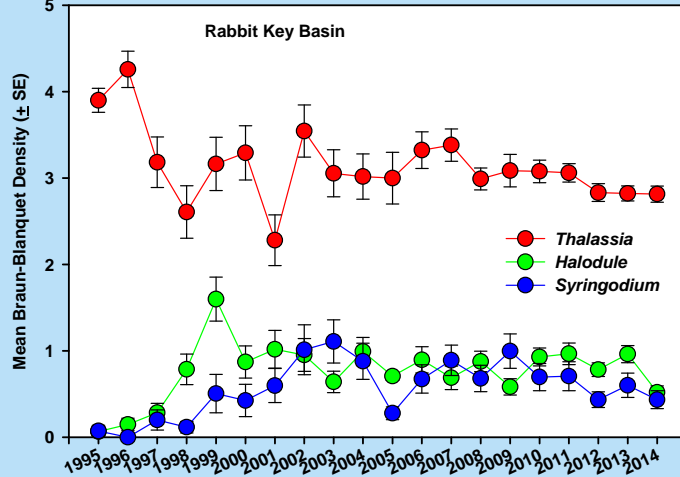
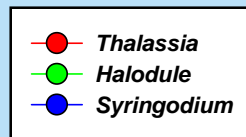
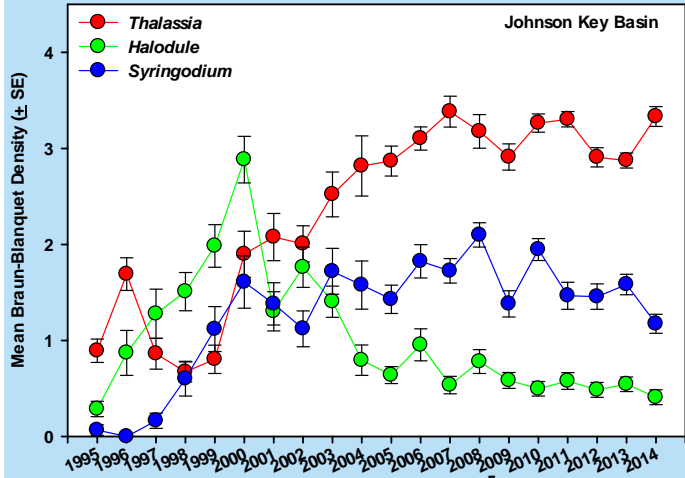
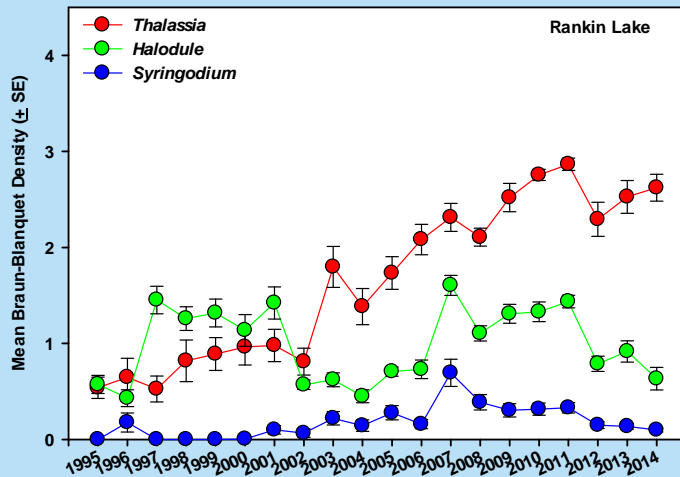
PHOSPHORUS AVAILABILITY

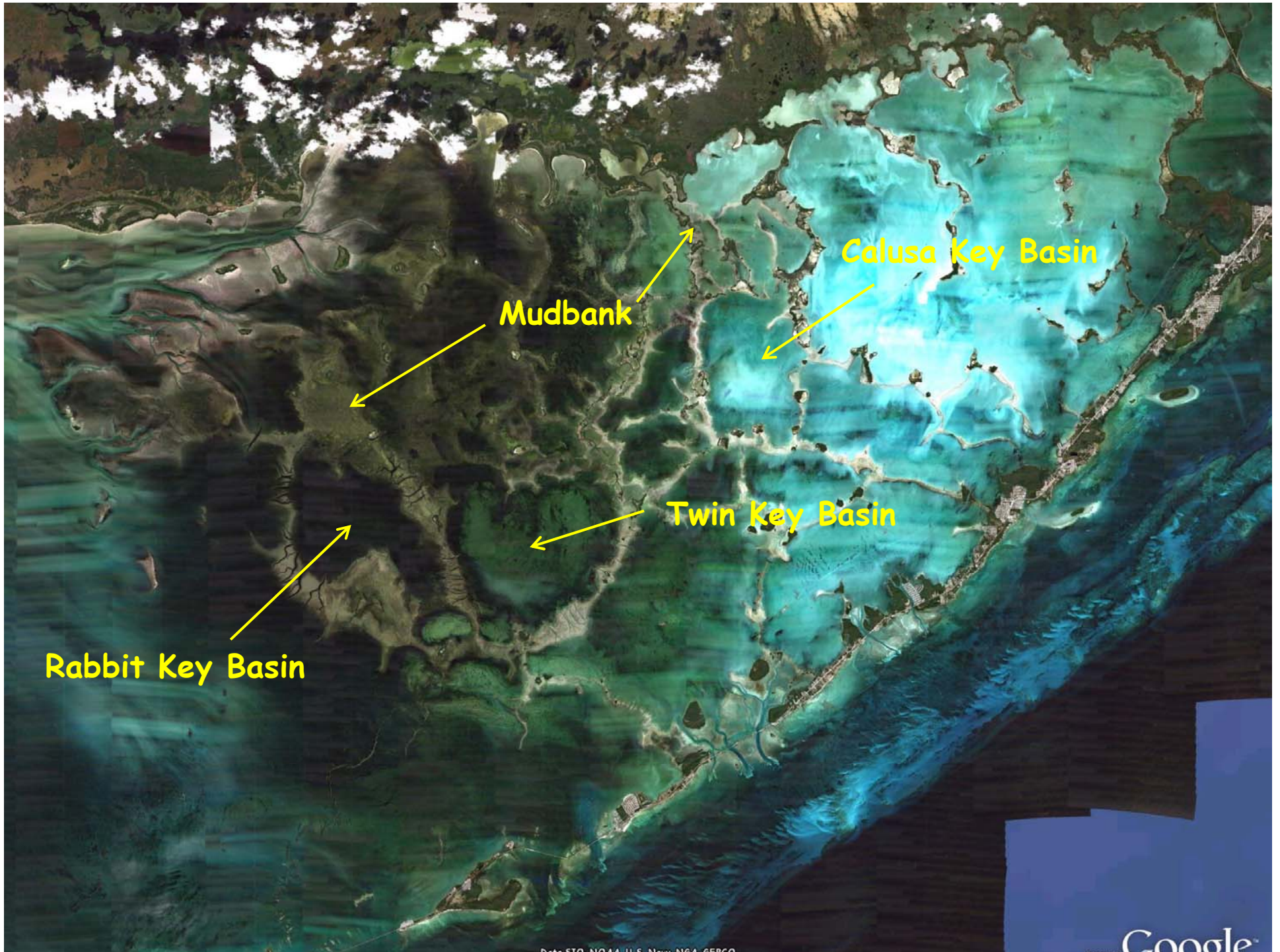










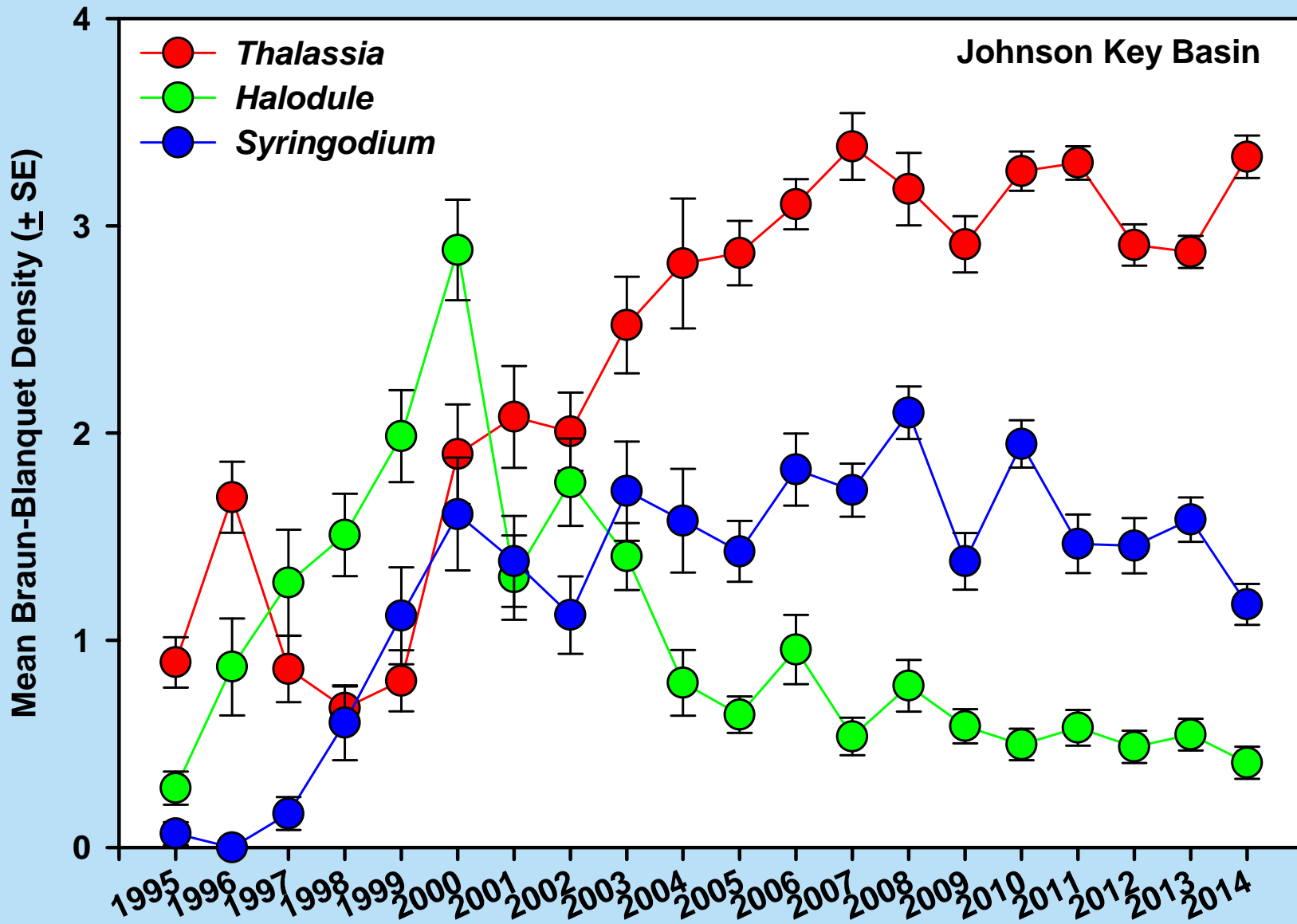


Rabbit Key Basin

Mudbank

Twin Key Basin

Calusa Key Basin



Acknowledgements: FHAP-SF is currently supported by funding from **RECOVER**. Funding during the early years was provided by Everglades National Park, USGS, and the State of Florida. Incredible logistical support for this program has been provided by the Everglades National Park since 1995. FHAP would never have happened without the assistance of numerous FWRI and UNCW Seagrass Rangers. Many thanks to all.

