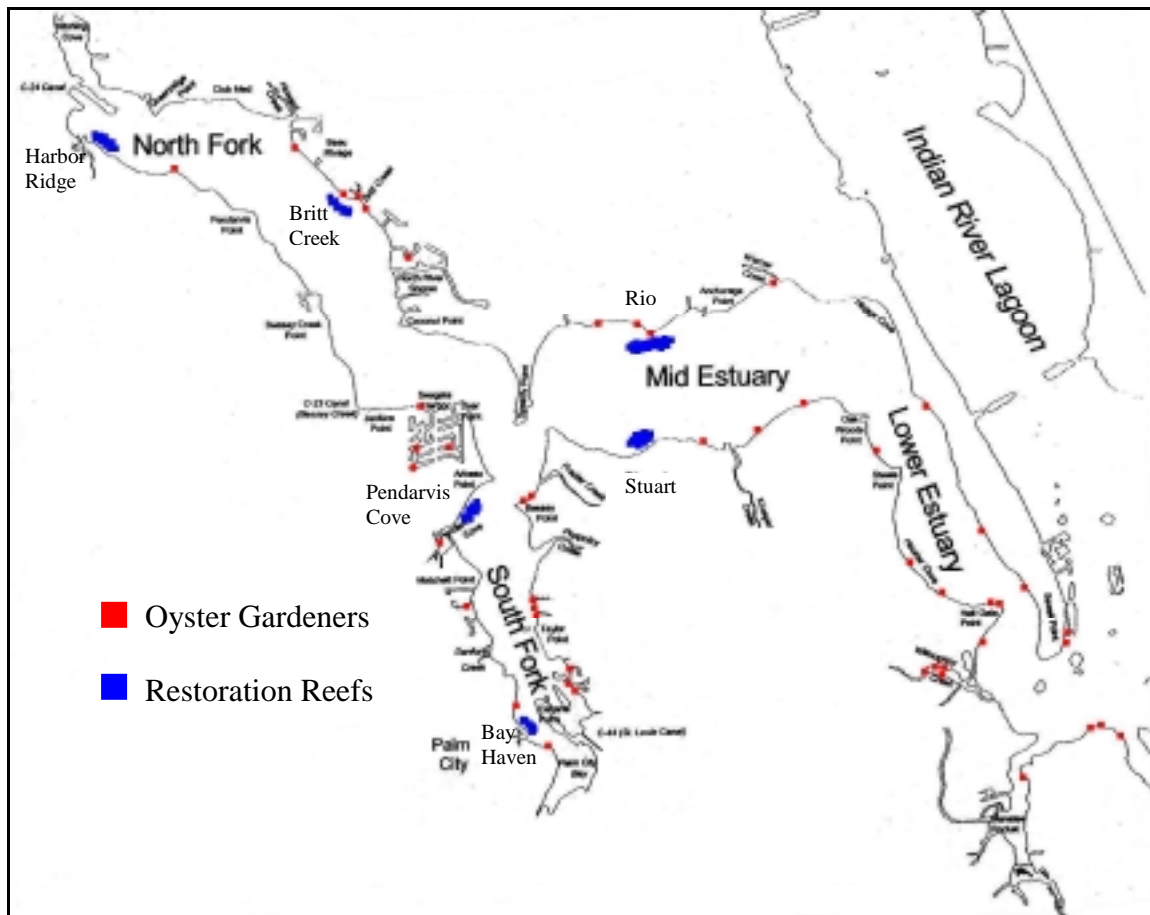
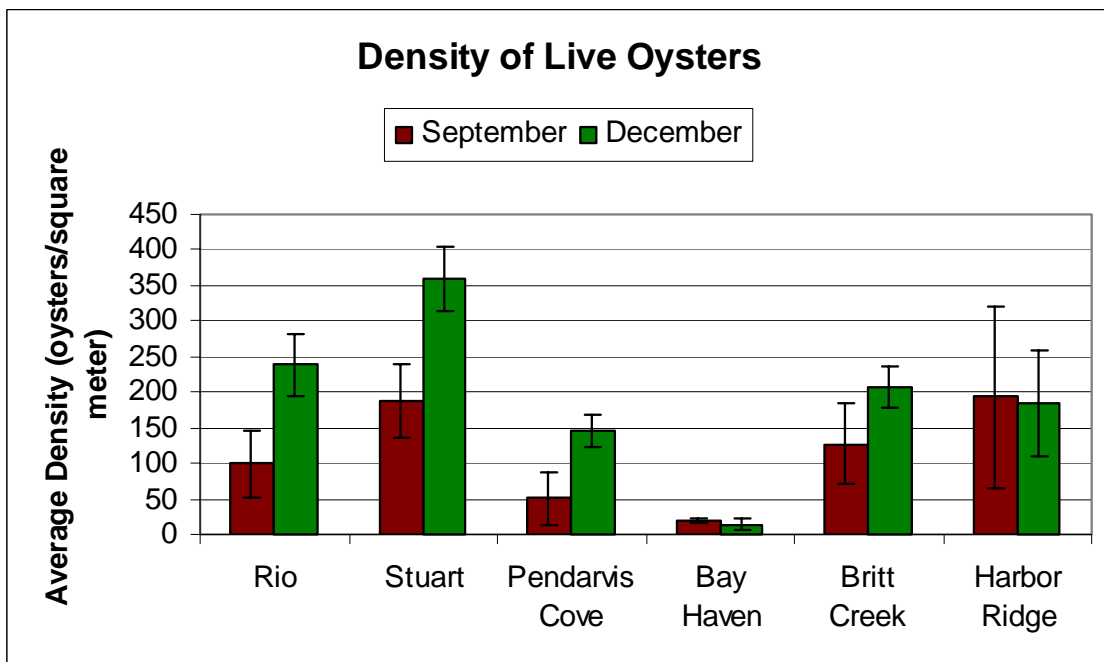
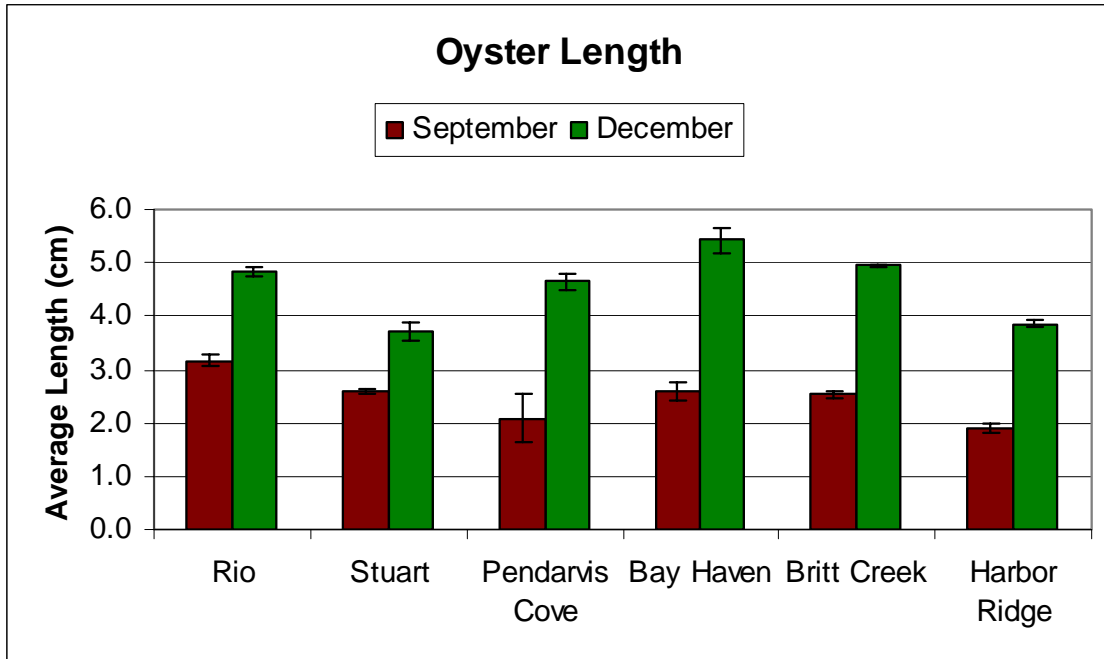


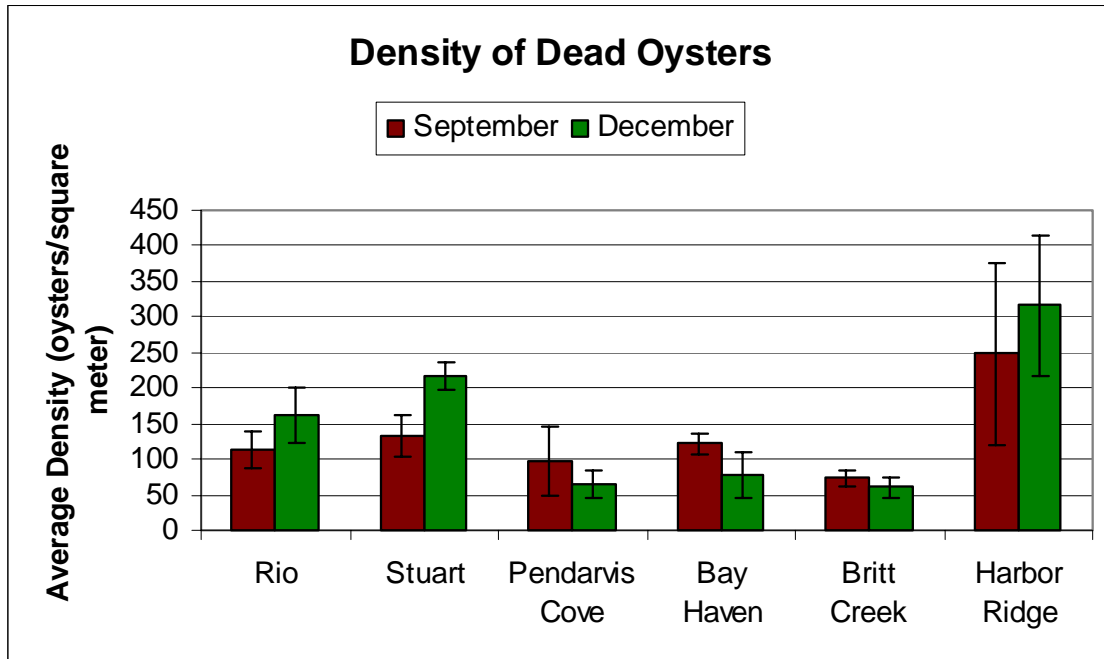
## Florida Oceanographic's December 2006 Oyster Gardening Update

In case you were wondering where your baby oysters have and will be going, below is a map showing the restoration oyster reefs (in blue). The oysters from the gardeners (in red) in the Lower and Middle Estuary have and will go to the reefs in Rio and Stuart in the Middle Estuary. The oysters from the gardeners in the South Fork went to the Bay Haven reef, furthest upstream in the South Fork, but after the next round they will be divided between Bay Haven (previously known as Cabana Point, but renamed to be more accurate) and Pendarvis Cove. The oysters from the gardeners in the North Fork went to the Britt Creek reef in September, but after the next round they will also be divided between Harbor Ridge and Britt Creek. However, if there proves to be too many oysters from the Lower and Middle Estuary to go in the eventually one-acre area designated on the reefs in the Middle Estuary, the oysters raised by the gardeners in the Middle Estuary may have to be placed on either the Britt Creek or Pendarvis Cove reefs. The map also shows all the oyster gardeners (48 in total) signed up for the January exchange. Wow, that's awesome! There are also several backup gardeners (not pictured) located in the Indian River Lagoon that are standing by in case a low salinity event occurs in the North or South Forks. By the way, all of the North and South Fork gardeners will be receiving oysters in January again (unless I was notified otherwise).



Below are the results for the monitoring of the oyster reefs in September before the first exchange, so they represent the pre-restoration (background) data and in December after the first exchange. From now on, oyster monitoring on the reefs will occur every six months (instead of every three months), but water quality analyses will still occur every three months. The error bars at the top of each of the bars represent the standard error in the averages. On the x-axis (across the bottom) are the six different reefs that are being used in this restoration project. On the y-axis (on the left hand side) are the parameters that were measured and their units.





Since adult oysters can filter up to 50 gallons of water a day, it is expected that as water passes over the oyster reef the turbidity (a measurement of the amount of dissolved and suspended solids in the water that reduces the visibility) will decrease. Also, as the number of oysters on the reefs increase, the turbidity will decrease. So, while I'm out monitoring the oyster density and length, I take a turbidity reading upstream, over the middle, and downstream of the oyster reefs. The results are shown in the table below. Turbidity is measured in Nephelometric Turbidity Units and is based on the amount of light that passes through the sample of water.

September Turbidity (NTU)	Rio	Stuart	Pendarvis Cove	Bay Haven	Britt Creek	Harbor Ridge
Upstream	17.6		5.6	24.3	125	2.0
Middle	12.8	6.7	6.7	24.4	110	1.3
Downstream	8.8		5.2	23.0	110	1.7

December Turbidity (NTU)	Rio	Stuart	Pendarvis Cove	Bay Haven	Britt Creek	Harbor Ridge
Upstream	6.8	13.9	26.5	6.5	4.7	1.4
Middle	5.3	14.6	19.7	8.7	2.2	2.4
Downstream	8.2	11.1	10.8	10.5	1.8	1.8

For the most part, results are as expected. In September, the reefs in the South Fork were in the worst condition and the reefs in the Middle Estuary were in the best condition. This was most likely due being exposed to terrible water conditions in the South Fork over the last few years and they were just starting to make a comeback. In

December they seemed to be doing much better in the South Fork, practically surpassing the Middle Estuary in oyster length. The density at Bay Haven being lower in December than in September is probably due to the randomness of the sampling technique. In some cases the turbidity increased downstream, which was most likely due to the wind picking up between samples and not being able to sample them simultaneously.

I am continuing to apply for grants to continue this project. As you may have seen in the paper we were awarded some funding from the IRL License Plate Program through the South Florida Water Management District. I have also put applications into the NOAA Community-based Habitat Restoration Grant and reapplied for the Community Foundation for Palm Beach and Martin Counties Grant that enabled us to start this project. Soon I will have a research/office trailer thanks to a donation from the Free Family Foundation (just need lab equipment now so that I can perform more water quality tests in-house). We also recently received a 20 ft boat donated from TwinVee for use in this project (still need a truck to tow it with though).

It is very exciting to be a part of the upcoming Research Department at FOS, especially with so much help and support from the local community. We are very happy with the results of the project so far and could not have done it without you. Thank you all so much and keep up the good work!