

Flagship Programs

FLOOR

- People are consuming oysters! We are currently collecting 20 – 30 buckets of shell a week from our partnering restaurants.
- Oyster bagging with volunteers has resumed. We held two events this month with a limited capacity of volunteers in order to maintain social distancing. With the help of 11 volunteers, we bagged 425 bags.
- Oyster spat was collected and counted mid-October. See Figure 1 for results and details.

FOSTER

- Seagrass nursery volunteers are lending a helping hand in the nursery and wet lab. Volunteers are keeping the tanks and wet lab clean and free of algae while maintaining social distance. We could not do it without them!
- Seagrass work is on hold until the spring, when seagrass is the most productive.

WaterQUEST

- Individuals that are comfortable with testing at public sites are doing so while maintaining social distancing guidelines. Out of the 29 active testing sites, we are averaging 22 sites a week, with one site tested by staff (FOS Dock).
- Weekly water quality reports are being published each week. [Click here to see the latest report.](#)
- In collaboration with the Development department, we have transitioned our current Water Quality weekly mass email to MailChimp. This has given us time to critically think about the presentation of data and information we are providing to the public. The transition took place on October 1st and has received positive feedback. [Click here](#) to subscribe to the weekly Water Quality report.

Living Shorelines

- No new updates.

Additional Projects and Activities

Research Lab Replacement – The finishing touches to the lab (carport, pavers, etc.) are still on hold.

Shoreline Tanks – The 8 long, narrow tanks behind the scenes have officially been completed. They will be used for growing plants for restoration and research purposes. Time to get to planting!

[Clam Restoration Workshop](#) – FOS will be hosting a workshop in the new EcoCenter (May 21st, 2021) with SFWMD, the University of Florida Whitney Laboratory for Marine Bioscience, and Ducks Unlimited. We are now working up a list of stakeholders in the community to invite and/or attend. To keep the ball rolling, we also submitted a proposal for a conference session at the Coastal Estuarine and Research Federation's (CERF) annual meeting and hope that the momentum of using various bivalves for restoration purposes will gain speed in this area.

Clam Restoration in the IRL – We submitted two proposals in August, in collaboration with University of Florida Whitney Laboratory for Marine Bioscience, and Ducks Unlimited, to help fund clam restoration and research in the Northern and Southern IRL. One of the proposals was unsuccessful, still waiting to hear back from the other grant committee.

Hagan Family Foundation Project – No updates.

Plastic Free Alternatives to Oyster Bags – Plastic oyster bags are being phased out of many restoration projects and we are hoping to develop and construct four plastic-free alternative oyster restoration modules. We are currently in the permitting stage of the project. We need to obtain permits from the Department of Environmental Protection and the Army Corp of Engineers in order to deploy the modules in the Indian River Lagoon. The hands on portion of the project is slated to begin in December.

Mangrove Productivity in Transitional Systems – In collaboration with the University of Alabama and the United States Geological Service (USGS) we are studying the effects of saltwater intrusion on interspecific competition between the black mangrove (*Avicennia germinans*) and black needlerush (*Juncus roemerianus*). The lab has been busy processing samples from a year-long greenhouse study. Preliminary data show that as salinity increases, *A. germinans* height, biomass, leaf area and chlorophyll content decrease. Additionally, *J. roemerianus* had low survivorship in high salinity, however the competitive interactions between the species at low salinities were not altered. This nascent data suggests that *A. germinans* has a competitive edge over *J. roemerianus* and could outcompete the freshwater species under sea-level rise scenarios.

Jensen Beach Impoundment Restoration – We were busy monitoring mangroves in the Jensen Beach impoundment last month. We are currently monitoring the growth and recovery of 55 acres of mangroves that were killed after Hurricane Irma. We are working towards expanding our protocols in collaboration with FWC and FWRI.

Seagrass Signs – Our new, show quality seagrass signs are in! They look fantastic and are ready to be mounted with the help of Operations.

Oyster Spat Monitoring – We are four months into our monthly monitoring program. We monitor oyster spat recruitment at three sites in the SLE (0.25 – 12 ppt) and three sites in the IRL (15 – 27 ppt). Each month we put out oyster shells and then collect them a month later. The number of spat per shell is counted. Spat counts are significantly higher in the IRL (ideal salinity range for oyster productivity) than in the SLE (poor to fair salinity for oyster productivity) (Figure 1).

Amazon Wish list – We have populated the [FOS Amazon wish list](#) with items our department desperately needs (along with the Animal Care Department). Please share with your family and friends.

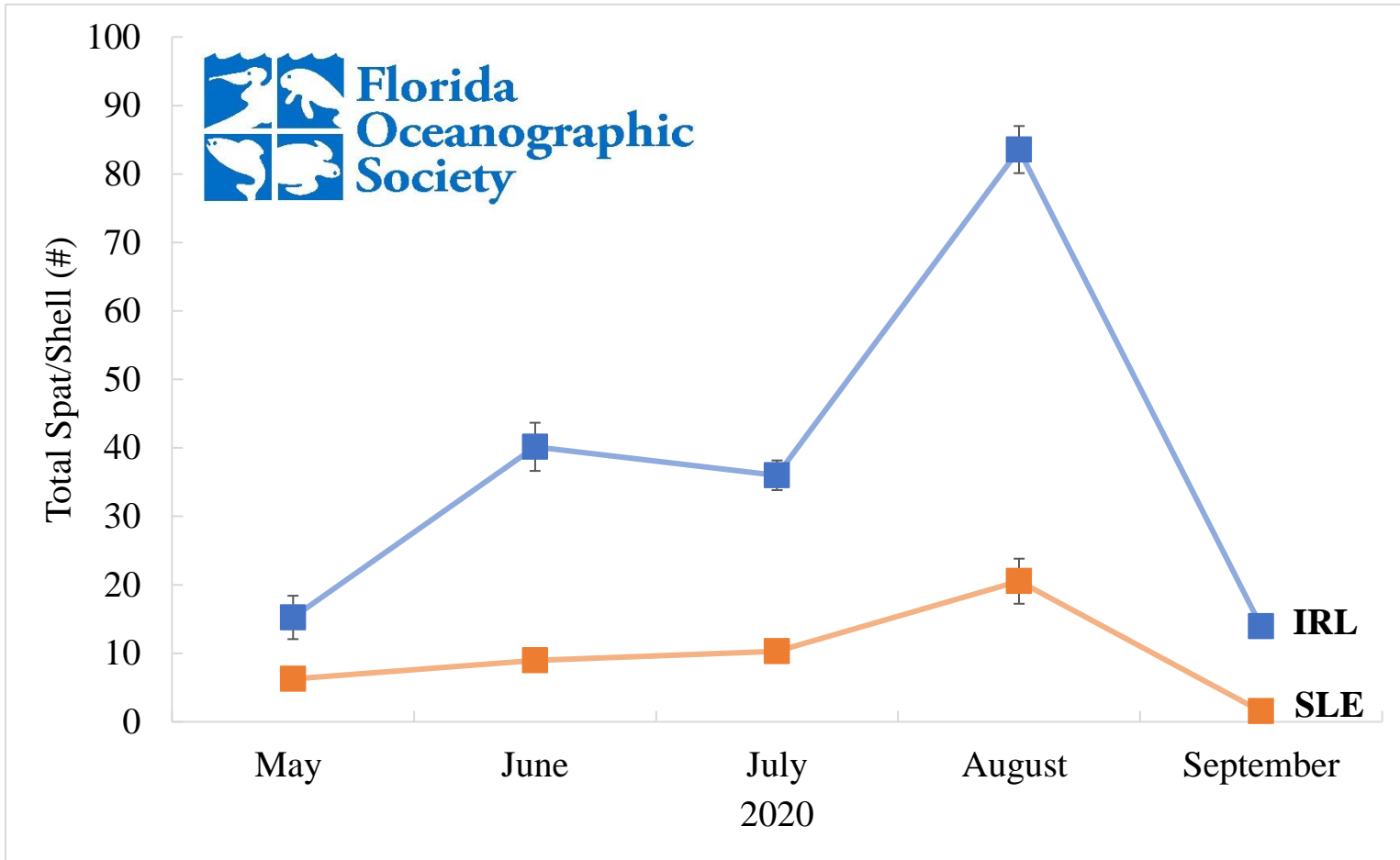


Figure 1. Oyster spat per shell in the Indian River Lagoon (IRL) (blue) and St. Lucie Estuary (SLE) (orange). Data are means \pm SE. Each month oyster shells are deployed at 6 sites and then collected a month later. The number of spat per shell is counted.

Additional details on all projects and programs are available by contacting Dr. Simpson at: lsimpson@floridaocean.org – 772.225.0505 x 114. Or check out our [website!](#)

Externally Funded Projects - In Progress								
Project Title	Status Details	Funding Type	Source	Lead Institution	Funding Amount to FOS	Fiscal Year	Income Expected at?	Income Expected Date?
Seagrass Nursery Expansion	Funds received, but are still being spent out. Finalizing shoreline nursery. Anticipated Completion by April 2020	Donations	Oceans Alive Cash Call	FOS	\$72,000	2018-2020		Actual - Mar. 2018
Lululemon	Funds received, but are still being spent out. Used to support FLOOR as needed in FY 19 and FY 20.	Donation	Lululemon	FOS	\$3,000	2019 - 2020	Initiation	Actual - Dec. 2018
Research Lab Replacement Trailer	Carport and outside area is last big project. Anticipate to finish up in by December 2020	Donations	Private	FOS	\$40,000	2019 - 2020		Actual - ???
Living Shorelines to Save Our Waters	Working on permitting for 2 Living Shorelines. Will complete by May 2021	Competitive Grant	Impact 100 Martin County	FOS	\$25,000	2019 - 2020	Initiation	Paid
Jensen Beach Impoundment Restoration	Water quality sites established. Vegetation work done in March, June and October 2020. Water quality sampling occurs weekly.	Competitive FWC IRMA funds	FWC Funds for IRMA Recovery	Martin County	\$10,925	2020	Completion	Expected - Jun. 2020 & Jun. 2021
Water Quality Monitoring Network	Waiting for MOU to be signed by MRC.	Competitive Grant	IRL NEP	MRC	None	2020		
Samsons Island Submerged Lands Restoration (SISLR)	Project was fully funded; awaiting contract executions and permitting. Due to COVID project has been pushed back to March 2021	Competitive Grant	IRL NEP	City of Satellite Beach	\$11,310 (TBF)	2020 - 2021	Completion	Expected - Nov. 2021
Developing plastic-free alternatives for community-based oyster restoration in the Indian River Lagoon	Supports developing plastic-free alternatives to current shell bagging. Currently deciding on what prototypes to make	Competitive Grant	IRL NEP	FOS	\$22,364	2021	Completion	Nov. 2021
Creating a Citizen Science Seagrass Monitoring Network	Recruiting volunteers and buying supplies to begin	Competitive Grant	IRL NEP	FOS	\$3,119	2020 - 2021	Completion	July 2021
Restoring Shorelines in Martin County	Working on permitting.	Competitive Grant	Hagan Family Foundation	FOS	\$10,000	2021	Initiation	Paid
Clam Restoration Workshop	Workshop will be held in May or June 2021. Currently working with collaborators on logistics	Competitive Grant	CERF	SEERS	\$2,000	2021	Completion	June 2021

Externally Funded Projects - Complete - Awaiting Payment

Project Title	Status Details	Funding Type	Source	Lead Institution	Funding Amount to FOS	Fiscal Year	Income Expected at?	Income Expected Date?
Microplastics, Oysters and the Indian River Lagoon	Invoice was submitted and awaiting payment	Competitive Grant	IRL NEP	UCF	\$14,998	2019 - 2020	Completion	Ocotber 2020

Externally Funded Projects - Proposals Submitted

Project Title	Status Details	Funding Type	Source	Lead Institution	Funding Amount to FOS	Fiscal Year	Income Expected at?	Income Expected Date?
Leveraging natural selection in clam populations for improved water quality in the Indian River Lagoon	Full proposal submitted on August 21, 2020	Competitive Grant	SJRWMD	Whitney Laboratory	\$130,000.00	2021 - 2022		