



# The Florida Institute of Oceanography

## Quarterly Report

*FIO: Facilitating Marine Science Education and Research for Florida*

Spring/Summer 2017

Issue 1

### The FIO Newsletter is back!

Expanded content and additional pictures can be found at <http://fio.usf.edu>  
and on FIO's Social Media.



#### Notes from FIO

### Note from FIO Director

As an Academic Infrastructure Support Organization, FIO wears many hats from providing ships and field labs to running grants programs. One of our biggest hats is communications. Keeping our 30 member institutions informed about what FIO is up to and linking FIO's members to a growing network of marine practitioners (industry, public, educators, NGO's) are some of our main goals. As such, I am pleased to reintroduce our quarterly newsletter that will feature updates on activities FIO is involved with, as well as selected stories from our member institutions. The newsletter will initially come out quarterly (winter, spring, summer) with the fall slot reserved for our FIO annual report. As I write this piece, the big news is that long anticipated replacement for the Bellows is nearly here. The R/V W.T. Hogarth, was officially "launched" and is now floating dockside in Tarpon Springs where she will undergo final fitting out and sea trials over the coming months. As we approach the summer field season, it is encouraging to see busy schedules for FIO's other research vessels (R/V Bellows; R/V WBII) and the Keys Marine Lab (KML). We will be introducing several new programs later this year designed to increase usage of FIO's assets during the offseason (October-March). Stay tuned and please connect with us anytime to provide feedback on the newsletter or learn more about FIO and our programs.

#### Infrastructure

### Florida's New Research Vessel— W.T. Hogarth

FIO's newest research vessel, the R/V W.T. Hogarth is nearing completion 12 months after the keel was laid down in Tarpon Springs, FL. Duckworth Steel Boats, a third generation Florida boat builder, has done a remarkable job building a state-of-the-art research vessel on time and on budget. Named after FIO's former director, Bill Hogarth, she will assume her role as "Florida's floating lab", carrying students and researchers to sea by January 2018. FIO would like to thank the State of Florida and the City of St. Petersburg as well as the support of many of our full members- USF, UWF, FAU, FGCU, UNF, UF, FIT, Eckerd, FIU, FAMU, Nova Southeastern, UCF, FSU that construction of the new vessel possible. The 78-foot Vessel has room for a crew of 4, berths for 10 scientists, wet & dry labs on board, a Satellite Internet Link, Fisheries Eco-Sounders, Dual Head Swath Bathymetry (for bottom-mapping), and a Dynamic Positioning System. Florida Trends Magazine will feature the R/V Hogarth in their May High-Tech Corridor issue. FIO will be conducting sea trials of the Hogarth and making port calls around the state this fall with the schedule released later this summer. If you are interested in sailing on a transit or joining one of the port stops, please contact us. To see the christening and news stories, visit FIO's Hogarth [webpage here](http://www.fio.usf.edu/vessels/rv-construction). (<http://www.fio.usf.edu/vessels/rv-construction>)

### R/V Price Joins FIO Fleet

We are pleased to announce that FIO has acquired a small research vessel, the R/V Price, to add our fleet in St. Petersburg, FL. The Price was donated to FIO by the USF College of Marine Science though the generosity of her original users- Drs. Al Hine and Stan Locker. Hine originally named the vessel after W. Armstrong Price from the University of Texas, considered by many to be the father of modern coastal geology. The Price has logged many hundreds of hours conducting sub-bottom profiling and multi-beam mapping in Tampa Bay and across Florida. She is equipped with a four stroke 225 HP Suzuki and will be outfitted by FIO to support nearshore research operations including diving for up to six divers. Other capabilities include shallow draft (12 inch), interior dry computer space, a 3KW 110 V Generator, pole-mounts on port and bow, and a davit capable of hoisting up to 500 lbs. Her daily range will be approximately 100 miles with no overnight accommodations. The Price will be operated with a dedicated captain and can be trailered to any destination around the state with a descent boat ramp. The Price will be available for charter to support nearshore marine research and educational needs in the fall. The daily rate is still being determined and will likely be comparable to FIO's similar sized vessels at the Keys Marine Lab.





## 7th Anniversary– Deepwater Horizon Oil

April 20th marked the 7th anniversary of the Deepwater Horizon oil rig explosion which initially killed 11 workers and lead to the largest oil spill in U.S. history, leaking 210 million gallons of oil over the span of 87 days. FIO took a leading national role in the scientific assessment of the impact of the spill and was one of the first teams on the scene collecting baseline data thanks to an early action grant from USF. The early actions of FIO and our member institutions lead to FIO being selected under the Florida RESTORE Act as the coordinator for the Centers of Excellence Program (FLRACEP). Over the past seven years, FIO has facilitated funding over 40 research projects to our member institutions. Moreover, within the \$500 million dollar Gulf of Mexico Research Initiative (GOMRI), Florida institutions have received a significant portion of the available funding to study the recovery and resilience of the Gulf following the spill. The FLRACEP program will continue to support marine research related to monitoring, fisheries and wildlife with Florida’s gulf region for the next 15 years.

## SHELF Project Egg Sampling

Dr. Ernst Peebles from USF’s College of Marine Science is set to begin work on a 2-year project titled Spawning Habitat and Early-Life Linkages to Fisheries (SHELF). The project will attempt to apply the Daily Egg Production Method (DEPM) for fish population assessments, using innovations in planktonic (drifting) egg identification made possible by DNA barcoding. Fish eggs will be collected using Bongo nets towed from a variety of platforms including the R/V Bellows around the time that red snapper and other species spawn. While the eggs themselves may look similar across species (which makes them difficult or impossible to identify visually) their DNA signatures (“barcodes”) can be analyzed like fingerprints for comparison with DNA databases. This Florida RESTORE Act Centers of Excellence-funded effort builds on Dr. Peebles’ previous FLRACEP grant to ensure that DNA barcoding methods were reliable enough to be applied to Gulf reef-fish species; his prior work set the table for the DEPM population assessment method.



(Credit– Dr. Ernst Peebles/USF)

## Shark-Tagging in the Gulf

Thirty-four sharks were tagged along Florida’s Gulf Coast for studies designed to benefit their populations during a successful research cruise conducted April 17-21 by five scientists, two graduate and 40 undergraduate students from New College of Florida, Eckerd College, Mote Marine Laboratory and the Nature Conservancy (TNC). The team attached identification tags to 21 blacktip sharks, including 10 females revealed to be pregnant by ultrasound; six bull sharks; three blacknose sharks; and four tiger sharks. Of those, one blacktip and five bull sharks received acoustic tags that will ping when the sharks pass underwater receivers within Sarasota Bay. In addition, one bull shark and one tiger shark were tagged with satellite transmitters to track their migratory movements across the Gulf of Mexico. Florida has perhaps the greatest variety of shark species in the United States and also consistently holds onto top spot for the number shark bites. Increasing our understanding of shark life cycles and movement patterns can improve state and federal management policies towards sharks.



(Dr. Jayne Gardiner of New College of Florida (blue shirt, right) works with a tiger shark, joined by students and colleagues on the R/V Bellows in April. Credit- New College of Florida/Chip Litherland.)

## Education

### FIO Field Studies Course

May 22<sup>nd</sup>, the FIO Field Studies Summer Course kicked off at the University of North Florida in Jacksonville. Now in it’s fourth year, the 5-week summer course offers a unique field intensive experience designed to expand students’ knowledge of the biodiversity, geochemistry, and human impact of Florida’s coastal and offshore ecosystems. The round robin format will take students around the entire state of Florida, immersing themselves in the Atlantic, Caribbean, Gulf, and Panhandle’s unique marine ecosystems. The group spends a week each at the following locations: Jacksonville– including the Matanzas National Estuarine Research Reserve (hosted by UNF), Florida Keys– at the Keys Marine Lab in Layton (hosted by FAU), Fort Meyers– at the Vester Field station (hosted by FGCU), St. Petersburg- featuring a 14-hour research cruise aboard the R/V Weatherbird II (hosted by USFSP), and Pensacola– on Santa Rosa Island (hosted by UWF). From shark tagging to deep water trawling, students experience the fundamentals of marine science taught by some of Florida’s most talented and accomplished professors. The 2017 class is composed of approximately 20 undergraduate marine science students from various universities throughout the state. You can check out the student’s blog posts about the experience and see photos [here](http://marinefieldstudies2017.blogspot.com/). (<http://marinefieldstudies2017.blogspot.com/>)





## FIO Subsidized Ship Days Program



FIO awarded the equivalent of 74.5 subsidized ship days to 11 member institutions during the FY16/17 year. In total, 16 proposals ranging from 2-day student educational only trips to week long excursions to the Dry Tortugas and Bahamas were funded with the success rate of nearly 70%. Since 2012 (when only 7 ship days were awarded due to budget cutbacks), FIO has been steadily increasing the number of days awarded each year by between 10 and 20% as our budget allows. For the FY17/18 year, we received some 23 proposals for approximately 100 ship days and anticipate sending out award letters by June 30<sup>th</sup>, 2017.

### Community

## Oceans Day 2017



Florida Oceans Day—Florida's Economy Built on Land & Sea took place on March 16th at the Florida Capitol in Tallahassee. Thirteen of our Member Institutions took part in the annual event which included exhibits set up on the second floor of the Capital Building. Oceans Day next year is set tentatively for February 8th, 2018. We have reserved the 22nd Floor for an Oceans Day luncheon that will have a marine algae theme- both macro and micro algae. We are inviting our members to put together displays highlighting their research on Florida's marine algae. We are also looking for industry reps and start-ups willing to feature economic uses of marine algae in the aquaculture, seafood, energy, fertilizer, and plastic industries.

## New FIO Funds Created



A generous donation to FIO has allowed us to set up two new funds within the USF Foundation. The FIO Education Fund will be used to support an onsite intern program integrating undergraduate and graduate students from member institutions with the operations and research activities of the Keys Marine Laboratory or aboard FIO research vessels. In addition, the fund may be used for awards associated with FIO sponsored competitive poster sessions. The FIO Innovation fund will be used to create, sustain or grow innovative projects in marine research and technology. Now that they are established, we hope to grow the funds over time to increase the overall impact. The funds are housed within the USF Foundation's [Giving Website here](http://usffdn.usf.edu/ua-giving/Default.aspx?a=DEPT093) (<http://usffdn.usf.edu/ua-giving/Default.aspx?a=DEPT093>)

### Cruises, Events & Opportunities

## FIO Education/Research Cruises of Note



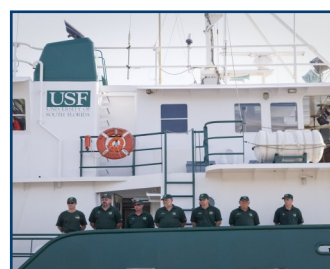
- Cuba Cruise with USF Marine Science. Principle Investigators: Steve Murawski/Dave Hollander on R/V Weatherbird II. Focus: Gulf of Mexico oil spill impacts on sediments and fisheries. May 8—May 26.
- Key West Cruise with FIT. Principle Investigator: Stephen Wood on R/V Bellows. Focus: Education on water quality, hydrographic surveying, marine meteorological observations, tides and currents, plankton tow and general marine operations training for rising seniors. June 1-15.
- Dry Tortugas Cruise with FIT. Principle Investigator: Jon Shenker on R/V Bellows. Focus: Research studies on larval pelagic fishes and spawning activities. June 16-19.

## Upcoming Events



- First Annual Marine Science Symposium. Fish & Wildlife Research Institute, St. Petersburg, FL: October 25th
- FLRACEP All-Hands Meeting. TradeWinds Resort, St. Pete Beach: October 26-27th
- R/V Hogarth Florida 10-Ports Tour. Coasts of Florida: Planned for October/November.
- American Fisheries Society 147th Annual Meeting. Tampa Convention Center: August 20-24th. Look for FIO and KML Exhibition Display.
- Ft. Lauderdale International Boat Show. Ft. Lauderdale: November 1-5. Featuring the R/V Hogarth.

## Grant/Research Opportunities



- National Centers for Coastal Ocean Science (NCCOS): <http://coastalscience.noaa.gov/funding/>
- Florida Sea Grant: <http://flseagrant.org>
- National Ocean Scholar Program: <http://nosb.org>

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