



**Johnson Education Center, FAU Harbor Branch, Fort Pierce, Florida  
February 5-6, 2015**

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Generous sponsorship under the auspices of the Harbor Branch Oceanographic Institute Foundation has helped to underwrite the cost of this symposium, and the 2015 *Love Your Lagoon*, a dinner event on February 6 at HBOI to raise funds to support research on the Indian River Lagoon. We thank all of our donors:

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We also thank Katha Kissman, President & CEO, and Colleen Brennan, Director of Operations of the HBOI Foundation, for all of their support.

**Indian River Lagoon Symposium 2015**  
*Indian River Lagoon: Lessons, Challenges, and Opportunities*

**Program Schedule – Technical Sessions**  
**Thursday, February 5, 2015**

(Note: The presenting author of talks is the first author, unless indicated by underlining.)

- 0715 - 0815**     **Registration, Set Up Posters, and Coffee & Tea**
- 0815 - 0830**     **Welcome**  
M. Dennis Hanisak, FAU Harbor Branch
- 0830 - 0900**     **Keynote Address**  
**Indian River Lagoon: Lessons, Challenges, and Opportunities**  
Mark Perry, Florida Oceanographic Society, Stuart, FL
- 0900 - 1000**     **Oral Session 1 – Challenges**  
Session Chair: Spencer Fire, Florida Institute of Technology, Melbourne, FL
- 0900 - 0915     **Seagrasses Guide to Surviving a Superbloom!**  
Lori J. Morris and Robert H. Chamberlain  
St. Johns River Water Management District, Palatka, FL
- 0915 - 0930     **The Effects of On-site Sewage Treatment and Disposal Systems on Urbanized Canals and the St. Sebastian River in Indian River County, FL**  
Marie Tarnowski, Laura Herren, and Brian Lapointe  
Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL
- 0930 - 0945     **Fine-grained, Organic-rich Sediments (a.k.a. Muck): A Major Source of Dissolved Nitrogen and Phosphorus to the Northern Indian River Lagoon**  
Austin L. Fox, John H. Trefry, Robert P. Trocine, Yuchao Yan, and Stacey L. Fox  
Florida Institute of Technology, Melbourne FL
- 0945 - 1000     **Pathogenic *Vibrio* Bacteria in the Indian River Lagoon and their Potential Threat to Human Health**  
Gabby Barbarite and Peter J. McCarthy  
Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL
- 1000 - 1015     **Presence of the Invasive Lionfish (*Pterois* spp.) in the Indian River Lagoon: Implications for Control and Management**  
Emily Dark<sup>1,2</sup> and Jeffrey Beal<sup>2</sup>  
<sup>1</sup>Antioch University New England, NH; <sup>2</sup>Florida Fish and Wildlife Conservation Commission, Fort Pierce, FL
- 1015 - 1100**     **Break**

- 1100 - 1200 Oral Session 2 – Opportunities**  
Session Chair: Linda Walters, University of Central Florida, Orlando, FL
- 1100 - 1115 **Oyster Reef Restoration in Mosquito Lagoon: 7 Years of Data and Success**  
Linda Walters<sup>1</sup>, Paul Sacks<sup>1</sup>, and Jody Palmer<sup>2</sup>  
<sup>1</sup>University of Central Florida, Orlando, FL; <sup>2</sup>Brevard Zoo, Melbourne, FL
- 1115 - 1130 **The Power of Partnerships: Working with Regional Partners and Local Citizens to Restore and Monitor the Northern Indian River Lagoon**  
Annie Morgan<sup>1</sup>, Jody Palmer<sup>2</sup>, Linda Walters<sup>3</sup>, and Jessy Wayles<sup>1</sup>  
<sup>1</sup>Marine Discovery Center, New Smyrna Beach, FL; <sup>2</sup>Brevard Zoo, Melbourne, FL; <sup>3</sup>University of Central Florida, Orlando, FL
- 1130 - 1145 **Examination of the Use of Floating Individuals of *Halodule wrightii* for Restoration**  
Jacob J. Berninger  
Harbor Branch Oceanographic Institution at Florida Atlantic University, Fort Pierce, FL
- 1145 - 1200 **Florida Atlantic Coast Terrapin Team: Diamondback Terrapin Conservation through Partnerships, Citizen Participation, and Educational Outreach**  
Amy Reaume<sup>1</sup>, Marc Virgilio<sup>2</sup>, Michael Grace<sup>3</sup>, and Paul Haydt<sup>4</sup>  
<sup>1</sup>Brevard Zoo, Melbourne, FL; <sup>2</sup>Florida Department of Environmental Protection, Sebastian, FL; <sup>3</sup>Florida Institute of Technology, Melbourne, FL; <sup>4</sup>St Johns River Water Management District, Palatka, FL
- Biology and Conservation Status of the Florida East Coast Diamondback Terrapin (*Malaclemys terrapin tequesta*) in the Indian River Lagoon System**  
Michael S. Grace<sup>1</sup>, Amy Reaume<sup>2</sup>, and Marc Virgilio<sup>3</sup>  
<sup>1</sup>Florida Institute of Technology, Melbourne, FL; <sup>2</sup>Brevard Zoo, Melbourne, FL; <sup>3</sup>Florida Department of Environmental Protection, Sebastian, FL
- 1200 - 1230 Three Minutes, Three Slides**  
Session Chair: M. Dennis Hanisak, FAU Harbor Branch
- My 7th Grade Science Project: The Effect of Nutrients on the IRL**  
Robert Virnstein  
Seagrass Ecosystems Analysts, East Palatka, FL, and Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL
- Water Quality and Algal Bloom Update for the Northern and Central Indian River Lagoon**  
Margaret A. Lasi, Wendy A. Tweedale, and Charles Jacoby  
St. Johns River Water Management District, Palatka, FL
- Effects of Land Use on Nitrogen and Phosphorus Inputs to the St Lucie Estuary**  
Katelyn K. Lynch<sup>1</sup>, Laura W. Herren<sup>1</sup>, Brian E. Lapointe<sup>1</sup>, Eric Noonburg<sup>2</sup>  
<sup>1</sup>Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL; <sup>2</sup>Florida Atlantic University, Davie, FL
- The Use of Pulse Amplitude Modulated (PAM) Fluorometry to Measure Nutrient Limitation in Indian River Lagoon Macroalgae**  
Brian Lapointe, Laura Herren, Marie Tarnowski, and Alison Feibel  
Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL

**$\delta^{13}\text{C}$  Evidence of Light-limited Growth of *Thalassia testudinum* in the Indian River Lagoon**

Laura Herren, Margaret Vogel, Marie Tarnowski, and Brian Lapointe  
Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL

**Dolphin-Vessel Collisions: What Have We Learned and What Can We Do to Minimize Future Impacts?**

Amy L. Brossard, Marilyn S. Mazzoil, and Elisabeth M. Howells  
Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL

**Seahorse Roundup: Establishing a Genetic Baseline for the Lined Seahorse through Citizen Science**

Nancy Kim Pham Ho, Adeljean L.F.C. Ho, Griffin Fairchok, and Junda Lin  
Vero Beach Marine Laboratory at Florida Institute of Technology

**Community-based Oyster Gardening, Monitoring and Restoration in the Indian River Lagoon, Florida**

Samantha Anderson<sup>1</sup>, Jody Palmer<sup>1</sup>, Virginia Barker<sup>2</sup>, Holly Abeels<sup>3</sup>, and Linda Walters<sup>4</sup>  
<sup>1</sup>Brevard Zoo, Melbourne, FL; <sup>2</sup>Brevard County Natural Resources Management, Melbourne, FL; <sup>3</sup>Brevard County IFAS Extension Office, Cocoa, FL; <sup>4</sup>University of Central Florida, Orlando, FL

1230 - 1345      **Lunch (provided)**

1345 - 1445      **Oral Session 3 – Benthic Ecology**

Session Chair: Valerie Paul, Smithsonian Marine Station

1345 - 1415      **General Survey and Grazing Characteristics of Infauna and Epifauna in the Northern Indian River Lagoon System**

Valerie Paul, Dean Janiak, Jessica Lunt, Christopher Freeman, Richard Osman, Michelle Stephens, Erin Fryauff, Katrina Bayliss, Sherry Reed, and Seabird McKeon  
Smithsonian Marine Station, Fort Pierce, FL

**Infaunal Communities within the Northern Indian River Lagoon**

Jessica Lunt, Seabird McKeon, and Valerie Paul  
Smithsonian Marine Station, Fort Pierce, FL

**Epifaunal Communities within the Northern Indian River Lagoon: Methodology, Initial Trends, and Future Directions**

Dean S. Janiak<sup>1</sup>, Richard Osman<sup>2</sup>, and Valerie Paul<sup>1</sup>  
<sup>1</sup>Smithsonian Marine Station, Fort Pierce, FL, <sup>2</sup>Smithsonian Environmental Research Center, Edgewater, MD

**Sources and Fate of Particulate Organic Matter within the Indian River Lagoon: Using Stable Isotopes to Investigate the Role of Epifaunal Communities in Particulate Removal**

Christopher J. Freeman<sup>1</sup>, Dean S. Janiak<sup>1</sup>, Richard Osman<sup>2</sup>, Seabird McKeon<sup>1</sup>, and Valerie Paul<sup>1</sup>  
<sup>1</sup>Smithsonian Marine Station, Fort Pierce, FL; <sup>2</sup>Smithsonian Environmental Research Center, Edgewater, MD

**Temporal and Spatial Variation in the Recruitment of Epifauna in the Indian River Lagoon**

Richard Osman<sup>1</sup>, Dean Janiak<sup>2</sup>, and John Hamilton<sup>3</sup>  
<sup>1</sup>Smithsonian Environmental Research Center, Edgewater, MD; <sup>2</sup>Smithsonian Marine Station, Fort Pierce, FL; <sup>3</sup>University of Connecticut, Groton, CT

- 1415 - 1430 **Responses of Tropical Seagrass Meadows (*Thalassia testudinum*) to Experimental Manipulations of Nutrient Supply and Grazer Abundance**  
Justin Campbell<sup>1</sup>, Valerie Paul<sup>1</sup>, Andrew Altieri<sup>2</sup>, and Emmett Duffy<sup>3</sup>  
<sup>1</sup>Smithsonian Marine Station, Fort Pierce, FL; <sup>2</sup>Smithsonian Tropical Research Institute, Panama City, Panama; <sup>3</sup>Smithsonian Institution, Washington, DC
- 1430 - 1445 **Genetic Diversity of the Red Mangrove (*Rhizophora mangle* L.) in Florida: Contrasting Patterns in the Northern and Southern Indian River Lagoon**  
John Paul Kennedy<sup>1,2</sup>, Donna J. Devlin<sup>1</sup>, Nathan K. Truelove<sup>2</sup>, Stephen J. Box<sup>2</sup>, and Ilka C. Feller<sup>3</sup>  
<sup>1</sup>Florida Atlantic University, Fort Pierce, FL; <sup>2</sup>Smithsonian Marine Station, Fort Pierce, FL; <sup>3</sup>Smithsonian Environmental Research Center, Edgewater, MD
- 1445 - 1500 **Bacterial Biofilms in the IRL: Invisible Influencers of Ecosystem Structure**  
L. Holly Sweat and Kevin B. Johnson  
Florida Institute of Technology, Melbourne, FL
- 1500 - 1530 Break**
- 1530 - 1615 Oral Session 4**  
Session Chair: Hyun J. Cho, Bethune-Cookman University
- 1530 - 1545 **Constructing a High-Resolution Fetch Map of the Indian River Lagoon to Verify the Accuracy of Relative Exposure Index over the Lagoon**  
Bryan P. Holman, Steven M. Lazarus, Michael E. Splitt, and Jeffrey A. Colvin  
Florida Institute of Technology, Melbourne, FL
- 1545 - 1600 **Fetch Climatology over the Indian River Lagoon: An Investigation of the Frequency of Significant Wind Exposure Events since 1979**  
Jeffrey A. Colvin, Steven M. Lazarus, Michael E. Splitt, and Bryan P. Holman  
Florida Institute of Technology, Melbourne, FL
- 1600 - 1615 **Spectral Photoresponses of Four Copepods with Consideration of Ancestry and Modern Habitat**  
Xiao Ma and Kevin B. Johnson  
Florida Institute of Technology, Melbourne, FL
- 1615 - 1630 **Morphological diversity of *Halodule wrightii* genotypes of the Indian River Lagoon, Florida**  
Kathryn A. Tiling and C. Edward Proffitt  
Florida Atlantic University, Fort Pierce, FL
- 1630 - 1700 Three Minutes, Three Slides**  
Session Chair: Seabird McKeon, Smithsonian Marine Station, Fort Pierce, FL
- Demersal Copepod Survival in the Immediate Proximity of IRL Muck Sediments**  
Anthony Cox, Daniel Hope, Angelica Zamora-Duran, and Kevin B. Johnson  
Florida Institute of Technology, Melbourne, FL
- Do Irregular Sample Sizes Affect Benthic Species Abundance in Field Samples?**  
Fabio Filla, Jessica Lunt, and Seabird McKeon  
Smithsonian Marine Station, Fort Pierce, FL

**Benthic Habitat Mapping in Indian River Lagoon Using Hyperspectral Imager for the Coastal Oceans (HICO) Data**

Shizhen Huang<sup>1,2</sup>, Rachael N. Isphording<sup>1,2</sup>, and Hyun Jung Cho<sup>1</sup>

<sup>1</sup>Bethune-Cookman University, Daytona Beach, <sup>2</sup>FL; Embry-Riddle Aeronautical University, Daytona Beach, FL

**Harmful Algal Bloom Detection Methods for the Indian River Lagoon through the Hyperspectral Imager for the Coastal Oceans (HICO)**

Kwanza C. Johnson and Hyun J. Cho

Bethune-Cookman University, Daytona Beach, FL

**Application of Molecular and Flow-Cytometric Tools for Characterizing Pico- and Nano-Plankton Communities in the Indian River Lagoon**

Eric Muhlbach, Katherine Hubbard, and Alina A. Corcoran

Florida Fish and Wildlife Conservation Commission, St. Petersburg, FL

**My Brevard Yard: Creating Beautiful Lawns and Protecting Our Waterways**

Matthew Lenhardt, Sally Scalera, and Linda Seals, UF/IFAS Extension Brevard County, Cocoa, FL

**“Tiger Stripe” Phenomena in Indian River Lagoon Dolphins**

Jessie Stevens<sup>1</sup>, Bryanna Lum<sup>1</sup>, Cameron Blocker<sup>1</sup>, Molly Ferch<sup>1</sup>, Marilyn S. Mazzoil<sup>2</sup>, John S. Reif<sup>3</sup> and Elizabeth Murdoch Titcomb<sup>2</sup>

<sup>1</sup>Florida Atlantic University, Boca Raton, FL; <sup>2</sup>Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL; <sup>3</sup>Colorado State University, Colorado Springs, CO

1700

**Closing Comments and Transition to Poster Session & Reception**

## **1730 - 1900 Poster Session & Reception (Open to the public, too!)**

Posters will be displayed all day in the Education Annex (Posters #1-26) and the Gallery (Posters #27-36). During the poster session, presenters of odd-numbered posters will be at their posters between 1730 and 1815; presenters of even-numbered posters will be at their posters between 1815 and 1900.

There will be a coffee station at both locations during breaks. We also encourage all students to be at their posters during the morning coffee break and the second half of lunch break.

### **1. Pilot Oyster Reefs in Brevard County – From Oyster Gardening to Reef Deployment**

Lacie Anderson<sup>1</sup>, Sammy Anderson<sup>2</sup>, Virginia Barker<sup>3</sup>, Paul Sacks<sup>1</sup>, Jody Palmer<sup>2</sup>, and Linda Walters<sup>1</sup>

<sup>1</sup>University of Central Florida, Orlando, FL; <sup>2</sup>Brevard Zoo, Melbourne, FL; <sup>3</sup>Brevard County Natural Resources Management, Melbourne, FL

### **2. Interactions between Foundation Species and Their Critical Role in Structuring Mangrove Ecosystems**

Jessene Aquino-Thomas and C. Edward Proffitt  
Florida Atlantic University, Fort Pierce, FL

### **3. Effect of Invasive Species on the Soil Chemistry of the Coastal Oaks Preserve**

Deanna Bowman<sup>1,3</sup> and Keeshia Escobar<sup>2,3</sup>

<sup>1</sup>Sebastian River High School, Sebastian, FL; <sup>2</sup>Vero Beach High School, Vero Beach, FL; <sup>3</sup>Scientist Fellows Program

### **4. The Impact of Crown Conch, *Melongena corona*, on the Eastern Oyster, *Crassostrea virginica*, in Mosquito Lagoon, Florida**

Courtney Buck, Casey Craig, Jordan Filipponi, and Chelsea Landau  
University of Central Florida, Orlando, FL

### **5. Utilizing Volunteers to Rescue a Dolphin Trapped in a Shallow Water Lagoon**

Steve P. Burton

Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL

### **6. Quantifying the Effects of Boat Wakes on Intertidal Oyster Reefs in Mosquito Lagoon**

Donna Campbell<sup>1</sup>, Steven Jachec<sup>2</sup>, Pedro Quintana-Ascencio<sup>1</sup>, and Linda Walters<sup>1</sup>

<sup>1</sup>University of Central Florida, Orlando, FL; <sup>2</sup>Florida Institute of Technology, Melbourne, FL

### **7. A Two-Season Experiment Determining Effective Cultivation Methods for the Marsh Cordgrass *Spartina alterniflora* for Transplantation Success**

Steven A. Carrion, Ellis D. Hartley, Keith M. Brinsko, Peter C. Gonzalez, and Linda J. Walters  
University of Central Florida, Orlando, FL

### **8. Lurking Nutrients: The Unaccounted Reality Learned from the 2011 Superbloom**

Robert H. Chamberlain, Lori J. Morris, and Whitney Green  
St. Johns River Water Management District, Palatka, FL

### **9. Oyster Restoration Programming in the Indian River Lagoon Estuary, Florida: A Multi-faceted Initiative Focused on Community-based Environmental Stewardship**

LeRoy Creswell

University of Florida Sea Grant Program, Fort Pierce, FL

10. **The Distribution of Seagrass Species Adjacent to the Coastal Oaks Preserve**  
 Ian Debus<sup>1,3</sup>, Valerie dos Santos<sup>1,3</sup>, and Jackson Oberlink<sup>1,3</sup>  
<sup>1</sup>Vero Beach High School, Vero Beach, FL; <sup>2</sup>Indian River Charter High School, Vero Beach, FL;  
<sup>3</sup>Junior Scientist Fellows Program
11. **Biodiversity of Natural and Altered Shorelines in Mosquito Lagoon**  
 Melinda Donnelly, Michelle Shaffer, and Linda Walters  
 University of Central Florida, Orlando, FL
12. **Paleoenvironmental Reconstruction at the Jupiter Inlet I Site: An Archaeomalacological Approach**  
 Jennifer Green  
 Florida Atlantic University, Boca Raton, FL
13. **Continuous Water Quality Monitoring in the Indian River Lagoon**  
 Lauren M. Hall<sup>1</sup>, Ashley Parks<sup>1</sup>, Whit Green<sup>2</sup>, Melissa Adams<sup>1</sup>, and Matthew Badolato<sup>1</sup>  
<sup>1</sup>St. Johns River Water Management District, Palm Bay, FL; <sup>2</sup>St. Johns River Water Management District, Palatka, FL
14. **Indian River Lagoon Observatory: Real-time Water Quality Data Network for Research, Education, and Outreach**  
 M. Dennis Hanisak, Kristen S. Davis, and Ben Metzger  
 Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL
15. **On the Biogeography of the Giant Free-living Ciliated Protozoan *Loxodes rex*, an Alleged Endemic Ciliate, with First Recording in the Americas**  
 Hunter N. Hines<sup>1,2</sup>, Peter J. McCarthy<sup>2</sup>, and Genoveva F. Esteban<sup>1</sup>  
<sup>1</sup>Bournemouth University, Bournemouth, England; <sup>2</sup>Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL
16. **Tunicates as a Potential Bioremediator of the Brown Tide Alga *Aureoumbra lagunensis* in the Indian River Lagoon**  
 Phyllis A. Klarmann  
 Florida Atlantic University, Boca Raton, FL
17. **Microscopic Meat-Eaters and Voracious Vegetarians: Temporal and Spatial Changes in Indian River Lagoon Mesozooplankton Communities**  
 Hannah G. Kolb<sup>1</sup>, L. Holly Sweat<sup>1</sup>, Kevin B. Johnson<sup>1</sup>, and Chuck Jacoby<sup>2</sup>  
<sup>1</sup>Florida Institute of Technology, Melbourne, FL; <sup>2</sup>St. John's River Water Management District, Palatka, FL
18. **Manatee Grazing Impacts on a Mixed Species Seagrass Bed in the Indian River Lagoon**  
 Lynn W. Lefebvre<sup>1</sup>, Jane A. Provancha<sup>2</sup>, Daniel S. Slone<sup>1</sup>, and W. Judson Kenworthy<sup>3</sup>  
<sup>1</sup>US Geological Survey, Gainesville, FL; <sup>2</sup>InoMedic Health Applications, Inc., Kennedy Space Center, FL; <sup>3</sup>NOAA (Retired)
19. **Fish Diversity and Abundance within the Coastal Oaks Preserve**  
 Andrew Lovelady<sup>1,3</sup>, Guilia Grumblis<sup>1,3</sup>, Kamelya Kizar<sup>1,3</sup>, Hannah Binford<sup>1,3</sup>, Sammy Loutfi<sup>1,3</sup>, and Pedro Tellez<sup>2,3</sup>  
<sup>1</sup>Vero Beach High School, Vero Beach, FL; <sup>2</sup>Indian River Charter High School, Vero Beach, FL;  
<sup>3</sup>Junior Scientist Fellows Program



20. **Does *Aureoumbra lagunensis* (Brown Tide) Negatively Affect Eastern Oysters (*Crassostrea virginica*)?**  
Panayiota Makris and Linda J. Walters  
University of Central Florida, Orlando, FL
21. **Engaging Our Future Generations through Service Learning by Adopting Mangroves for the Indian River Lagoon Shoreline Restoration Project**  
Dana Maira  
Florida Department of Environmental Protection, Fort Pierce, FL
22. **Morphometric Comparisons in Stranded Bottlenose Dolphins from the Indian River Lagoon and Atlantic Coast, FL**  
Wendy Marks<sup>1</sup>, Steve Burton<sup>1</sup>, John S. Reif<sup>2</sup>, and Adam M. Schaefer<sup>1</sup>  
<sup>1</sup>Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL; <sup>2</sup>Colorado State University, Colorado Springs, CO
23. **Blue Crab Population in Peril in the Indian River Lagoon: Trends in the Population (Abundance and Diversity) of *Callinectes* Crabs in the Goat Creek Region**  
Jesse Martin, Odyssey Charter School Junior Senior High, Palm Bay, FL
24. **The “Best Places for Dolphins to Live” Index: Creating a Metric for Local Citizen and Government Involvement in Protecting IRL Dolphins**  
Marilyn Mazzoil  
Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL
25. **The Manatee Project at Harbor Branch, a Five-Year Summary**  
Jon A. Moore<sup>1,2</sup>, Susan L. Richardson<sup>1,2</sup>, Claire F. Robinson<sup>1</sup>, Lauren Nys<sup>3</sup>, and Marilyn S. Mazzoil<sup>2</sup>  
<sup>1</sup>Wilkes Honors College, FAU, Jupiter, FL; <sup>2</sup> Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL; <sup>3</sup>Virginia Institute of Marine Science, Gloucester Point, VA
26. **Restoring Habitat for the Selfless Shellfish: Community-Based Restoration, Research and Monitoring of Intertidal Oyster Reefs in Mosquito Lagoon, FL**  
Jody B. Palmer<sup>1</sup>, Kathryn Brown<sup>1</sup>, and Linda Walters<sup>2</sup>  
<sup>1</sup>Brevard Zoo, Melbourne, FL; <sup>2</sup>University of Central Florida, Orlando, FL
27. **Moving Oysters to Save the Indian River Lagoon: Assessing Growth Rate and Survival of *Crassostrea virginica* in New Location**  
Antony Papadia, Wei Samantha Yuan, and Linda Walters  
University of Central Florida, Orlando, FL.
28. **Modeling the Flushing Response to the Construction of a Low Crested Weir in the Banana River**  
Atousa Saberi and Robert J. Weaver  
Florida Institute of Technology, Melbourne, FL
29. **Chronic Interstitial Pneumonia and Lobomycosis in a Stranded Indian River Lagoon Bottlenose Dolphin: A Case Study**  
Adam M. Schaefer<sup>1</sup>, David Kilpatrick<sup>1</sup>, Sushan Han<sup>1</sup>, Wendy Marks<sup>1</sup>, Steve Burton<sup>1</sup>, and John S.Reif<sup>2</sup>  
<sup>1</sup>Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL; <sup>2</sup>Colorado State University, Colorado Springs, CO
30. **Propagule Trapping: A Field Study to Determine if Shoreline Restoration Facilitates Additional Recruitment of the Red Mangrove, *Rhizophora mangle***  
Michelle Shaffer, Melinda Donnelly, and Linda Walters  
University of Central Florida, Orlando

- 31. Effects of St. Lucie Estuarine Discharge Water and Temperature on Corals and their Symbionts**  
Alycia Shatters<sup>1</sup>, Joshua Voss<sup>1</sup>, and Jeff Beal<sup>2</sup>  
<sup>1</sup>Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL; <sup>2</sup>Florida Fish and Wildlife Conservation Commission, Fort Pierce, FL
- 32. Variation in Growth and Biomass Partitioning of *Rhizophora mangle* in Response to Flotation Time and Light Availability**  
Lorae' T. Simpson<sup>1,2</sup> and Ilka C. Feller<sup>1</sup>  
<sup>1</sup>Smithsonian Environmental Research Center, Edgewater, MD; <sup>2</sup>Smithsonian Marine Station, Fort Pierce FL
- 33. Do Porcelain Crabs Prefer Flow Generating Substrate from Oysters?**  
Janis Spanier, Katherine Skura, Jessica Lunt, and C. Seabird McKeon  
Smithsonian Marine Station, Fort Pierce, FL
- 34. Ecological Disturbances in the St. Lucie Estuary and the Southern Indian River Lagoon, Elucidated Through Macrobenthic Monitoring**  
Michelle Stephens, Katrina Bayliss, and Erin Fryauff  
Smithsonian Marine Station, Fort Pierce, FL
- 35. Model Based Estimate of Nutrient Budget for the St. Lucie Estuary**  
Detong Sun and Yongshan Wan  
South Florida Water Management District, West Palm Beach, FL
- 36. Water Quality in the Coastal Oaks Preserve's DOT Canal and Neighboring Impoundments**  
Van Williamson<sup>1,3</sup>, James Chorma<sup>1,3</sup>, and Melvin Baker<sup>1,3</sup>  
<sup>1</sup>Sebastian River High School, Sebastian, FL; <sup>2</sup>Vero Beach High School, Vero Beach, FL; <sup>3</sup>Junior Scientist Fellows Program