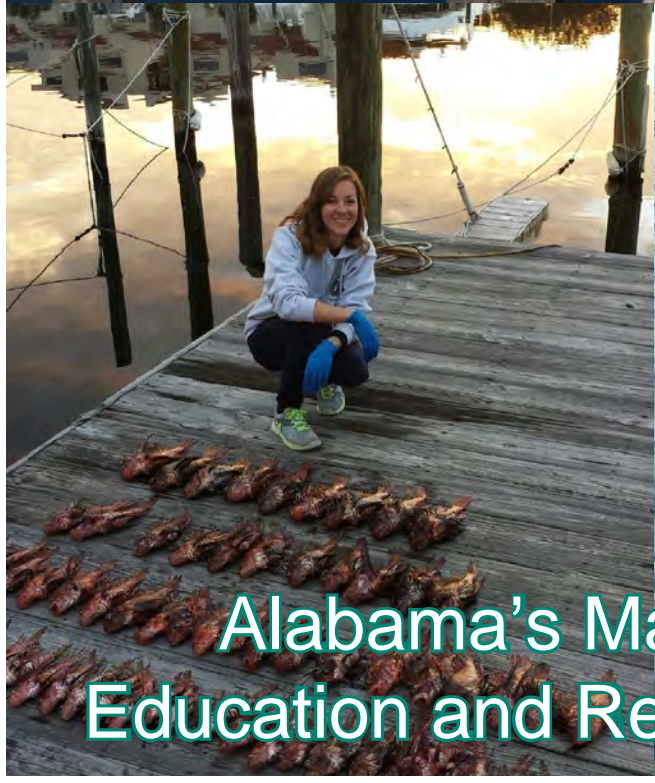




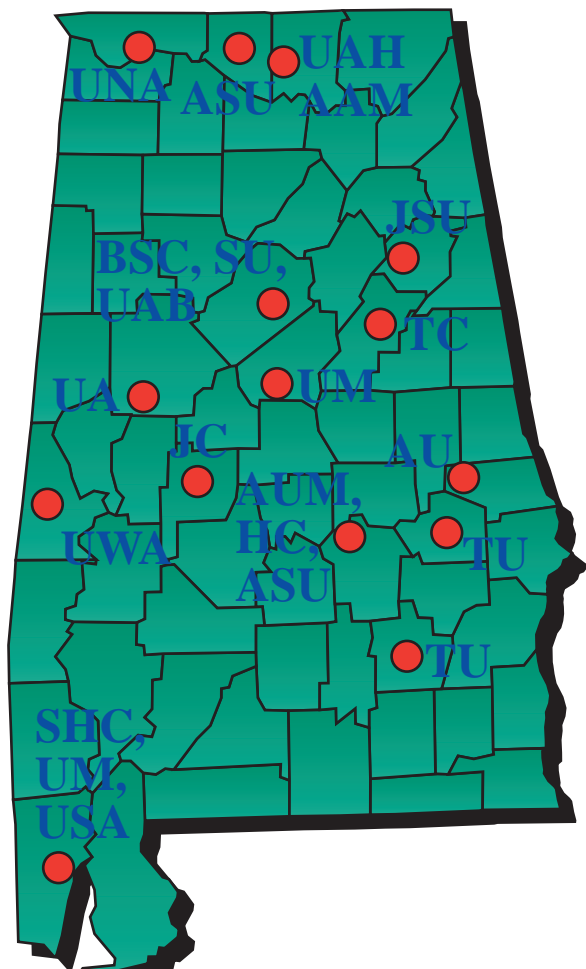
# Dauphin Island Sea Lab

2014  
Annual Report



Alabama's Marine Science  
Education and Research Institution

# The Twenty-Two Member Schools of the Dauphin Island Sea Lab/ Marine Environmental Sciences Consortium



- Alabama A&M University, Huntsville, AL\*
- Alabama State University, Montgomery, AL\*
- Athens State University, Athens, AL
- Auburn University, Auburn, AL\*
- Auburn University at Montgomery, Montgomery, AL
- Birmingham Southern College, Birmingham, AL
- Huntingdon College, Montgomery, AL
- Jacksonville State University, Jacksonville, AL\*
- Judson College, Marion, AL
- Samford University, Birmingham, AL\*
- Spring Hill College, Mobile, AL
- Talladega College, Talladega, AL
- Troy University, Troy, AL
- Tuskegee University, Tuskegee, AL\*
- University of Alabama, Tuscaloosa, AL\*
- University of Alabama at Birmingham, Birmingham, AL\*
- University of Alabama in Huntsville, Huntsville, AL\*
- University of Mobile, Mobile, AL
- University of Montevallo, Montevallo, AL
- University of North Alabama, Florence, AL
- University of South Alabama, Mobile, AL\*
- University of West Alabama, Livingston, AL

\* Schools with Graduate Degree Programs

# Statement of Purpose



The Dauphin Island Sea Lab (DISL) is Alabama’s marine research and educational institution. Founded in 1971 by the Alabama Legislature to maximize the marine sciences capabilities of several Alabama institutions and minimize duplication, DISL serves twenty-two Alabama colleges and universities, both public and private. DISL and its faculty work toward the combined purposes of conducting pure and applied research, and sponsoring structured educational programs for individuals and organizations interested in and dependent upon the marine environment.

## Table of Contents

Member Schools.....	2
Statement of Purpose/Table of Contents.....	3
Letter from the Executive Director.....	4-5
Administration and Facilities.....	6-13
• Administration	
• Business/Finance	
• Information Technology	
• Public Relations	
• Institutional Advancement	
• Facilities and Vessel Operations	
• Technical Support	
• Data Monitoring/Data Management/Metadata	
Discovery Hall Programs.....	14-18
• Academic Year Programs	
• Summer Programs	
• BayMobile	
• Professional Development	
• Professional & Service Activities	
The Estuarium.....	19-21
• Docent Program	
University Programs.....	22-24
Dauphin Island Sea Lab Foundation.....	25-26
Mobile Bay National Estuary Program/ Coastal Policy Program.....	27-32
• CCMP	
• Status and Trends: Environmental Monitoring for the Coast	
• Ecosystem Restoration and Protection	
• Education, Outreach and Capacity Building	
Resident Research Faculty.....	33-34
Faculty Activity.....	35-49
• Faculty News and Awards	
• Book Chapters and Projects	
• Peer-Reviewed Publications	
• Other Publications - Technical Reports, Miscellaneous	
• Abstracts and Presentations for Scientific Meetings	
• Other Presentations	
• Workshops, Meetings Attended or Organized	
• Public Outreach and Other Service	
• Offices, Boards, Panels, Consulting	
• Grants in Force	
• Research Projects Abroad	
• Media	
Board of Directors/Executive Committee/ Program Committee.....	50-51
Federal Awards/Grants.....	52-53
Balance Sheet.....	54
DISL Educational Impact in Alabama, by County.....	55

Dauphin Island Sea Lab/ MESC provides equal educational opportunity to, and is open and accessible to, all qualified students, without regard to race, color, creed, national origin, sex or qualified handicap/disability with respect to all of its programs and activities.

Disabled students will be provided “reasonable accommodations” when they have identified themselves and validated their special need(s). Complete confidentiality is maintained unless authorization for release or information has been given in regards to disability.

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Dauphin Island, AL 36528  
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For questions about this Annual Report, please e-mail Lisa Young, Public Relations Consultant, at [lyoung@disl.org](mailto:lyoung@disl.org).

*Cover Photos: (Top) DHP students aboard the Alabama Discovery. (Bottom left) Ph.D. student Kristen Dahl displays one day’s haul of lionfish gathered near Pensacola. (Bottom right) Dr. Ken Heck prepares to dive.*



## 2014 Letter from the Executive Director

2014 was a bittersweet, yet transformational year for all of us here on the campus of the Dauphin Island Sea Lab (DISL). 2014 was the year we began the development of a campus-wide strategic plan. We launched a number of original initiatives that will allow our programs to grow in new, exciting directions while continuing to maintain very high levels of scholarship in our historically successful education and research programs. This was the year we broke ground on the new Marine Mammal Research Center, and the annex to the publicly acclaimed Estuarium. This was also the year we acquired a \$2,000,000 bond to begin to restore aging facilities on our campus. Sadly though, this was also the year we said goodbye to several close colleagues and friends.

In reading the details in this report, you will see that The Discovery Hall Program (DHP) had another outstanding year. The DHP enrollment numbers for 2014 show that our educators continue to nurture important relationships with school systems and educators throughout the state. DHP hosted over 10,000 students and parents on the DISL campus this past year. Moreover, teacher participation in DHP science workshops show that our state's educators are very interested in developing a deeper understanding of marine research and the importance of our state's remarkable natural resources in their everyday lives. This year also marked the completion of important modernizations of DHP technology, facilities and the addition of a new BayMobile vehicle. More significantly, with new distance-learning capabilities, and BayMobile, our educators were able to reach students and educators throughout our state who are not able to enjoy in person the curricula provided on our campus. DHP also became the sponsor for the

Mobile County Public School System's Coastal Academy located at Alma Bryant High School. This new collaboration with the local school system will further enrich the experiences provided for students, both educationally and occupationally, in our coastal area.

The data in this report also show that the University Programs faculty was similarly productive in 2014. Demand for our consortium's statewide undergraduate marine curriculum continues to remain high. Our faculty delivered nearly 1200 credit hours of undergraduate coursework to students from 15 of our 22-member institutions, and their research efforts were supported by some \$3,000,000 in extramural spending generated by just 15 resident faculty. Of note, is the additional \$11,000,000 dollars in grants and contracts awarded to DISL faculty and the Mobile Bay National Estuary Program (MBNEP), now branded as a division of the DISL, in the last quarter of 2014. These numbers strongly suggest that the research and community engagement programs are growing aggressively. Importantly, faculties from our member institutions are also engaged collaboratively in a number of these studies. In terms of scholarship, our faculty and students published some 70 scientific papers in leading journals in our field. Over 90 presentations were given at national and international scientific meetings in 2014. This past year the DISL has hosted a number of research seminars given by scientists from our MESC-member institutions. To maximize this cross-institutional effort, we are also now streaming these seminars live to our member schools, then posting them later to YouTube in the interest of increasing MESC student and faculty interest in our coastal resources. These things all show that the scientists from around the



*Dr. John Valentine, DISL Executive Director*

state are working together for the good of our citizens, and that taxpayers are getting a very good return on their investment in Alabama's Marine Environmental Sciences Consortium.

In addition to our efforts to provide leadership in marine research, and marine education, we seek to excel in community engagement. The MBNEP plays a critical role in determining our success in this area of endeavor. This past year the staff of the MBNEP provided an incredible number of city, county and state employees with the resources, and in some cases, funding opportunities, to apply the latest scientific findings to grow and maintain their communities in ecologically-resilient ways. Notably, the MBNEP found a way to fill some of the monitoring gaps created by state budget shortfalls. Their staff continued to implement the stakeholder-driven Comprehensive Conservation and Management Plan (CCMP), a plan that balances the efforts needed to pursue the wise stewardship of our state's remarkable natural resources in a growing coastal economy. These contributions are of great importance to our region's citizens! In other performance metrics we track, over 70,000 people visited the Estuarium, where they learned about the value of our state's

remarkable coastal resources to their lives. The Estuarium plays a key role in improving marine literacy, through increased public knowledge of marine processes. Our docents provided some 3,500 hours of service in support of the Estuarium's efforts. An additional, 58,800 individuals viewed our new website. I am betting this number will double, as the new website is now averaging over 11,000 new monthly visitors each month!!

It should be noted that none of these successes would have been possible without the important contributions of our highly professional and committed support staff. They regularly do so much for the campus that it is simply astounding. No one works harder for the good of our programs than the folks in data management, information technology, scheduling and administrative assistance, facilities and maintenance, technical support, finances, cafeteria, and custodial services.

With all that said, I want to acknowledge the past contributions of others who played a key role in determining the successes we enjoy today. This past year, we said good-bye to a number of very good friends and colleagues. Specifically, Drs. Herb Boschung, Gerald Regan and Will Schroeder, May Tillman, Lynn Bryant, and Dennis Patronus, all of whom left this earth too soon. All were important contributors to our programmatic growth. We would also be remiss if we did not note the contributions and much-deserved retirements of four long-term members of the Sea Lab staff: Judy Barber, Sue Ramsey, Carolyn Wood and Mike Dardeau. Clearly, we have had a very good year!

A handwritten signature in black ink that reads "John F. Valentine".

Dr. John F. Valentine  
Executive Director, Dauphin Island Sea Lab



## Administration and Facilities

There are presently 38 buildings on campus, including eight instructional buildings; three dormitories; nine family-style houses; and two research buildings. In 2014, ground was broken on a new Marine Mammal Research Laboratory and an addition to the Estuarium; both projects are scheduled to be completed in 2015.



*Top: Breaking ground on the new Marine Mammal Research Laboratory In 2014. Bottom: Artist's rendition of the facility, scheduled for completion in 2015.*

The DISL also houses the Auburn Shellfish Laboratory. The Richard C. Shelby Ecosystem-Based Fisheries Management Center is a LEEDS Gold certified building. The Shelby Center and the instructional buildings on the south campus are solar-powered, making the Sea Lab one of the largest solar-power producing entities in the State.

Wet Lab facilities house modular sea-water systems, kreisels, and other instruments for experimental

work on living marine organisms. Research laboratories are equipped with state-of-the-art instrumentation for biogeochemical research. Field collection equipment for marine ecological and oceanographic research is available.

DISL maintains two large research vessels, including the 65-ft. R/V *Alabama Discovery* and the 46-ft. R/ *V.E.O. Wilson*, in addition to a fleet of small boats and skiffs.

### Office of the Executive Director

Dr. John Valentine - Executive Director  
David England - Director, Finance and Administration  
Dr. Tina Miller-Way - Director, Outreach and Education  
Dr. Kenneth Heck - Director, University Programs  
Dr. John Dindo - Director, Operations and Institutional Advancement  
Michael Dardeau - Coastal Policy Programs  
Lisa Young - Consultant, Public Relations  
Lori Angelo - Administrative Assistant to the Executive Director

### Business/Finance

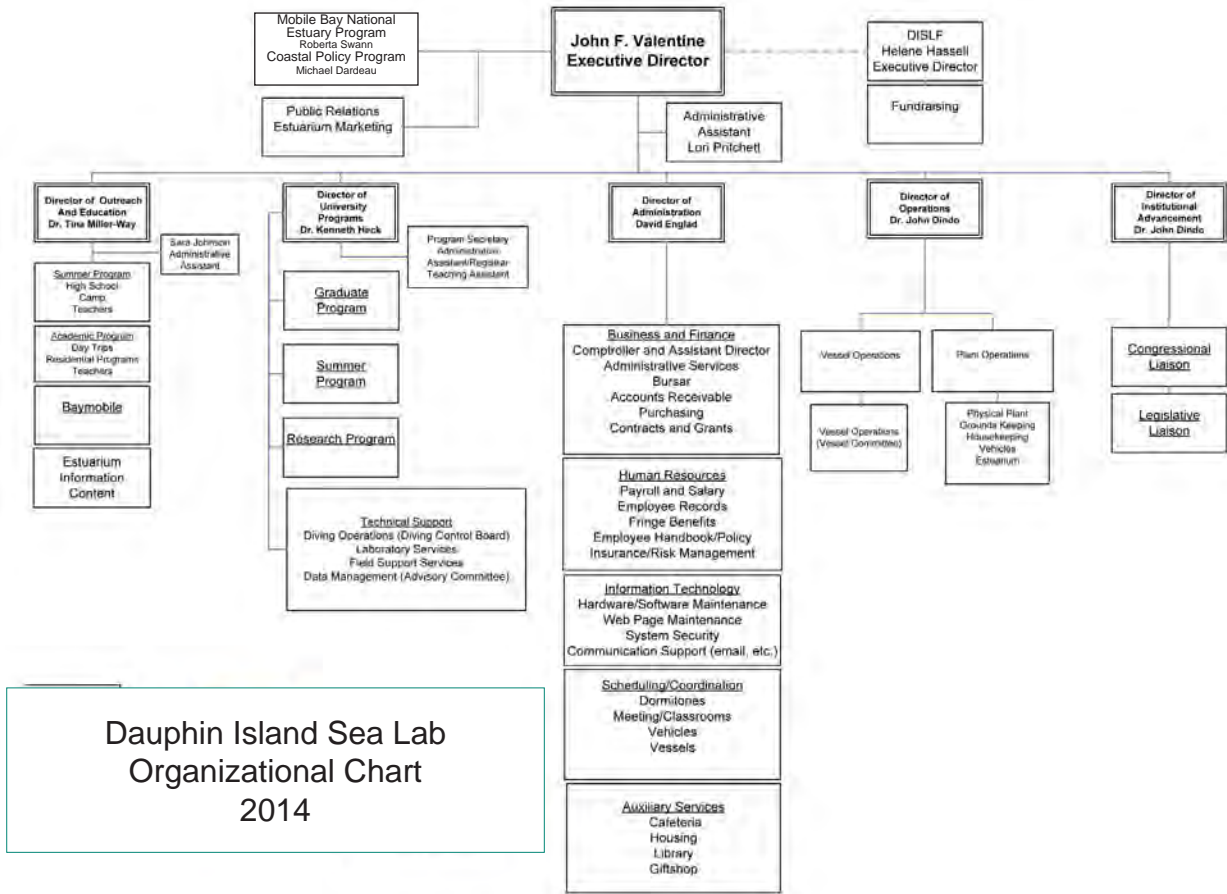
The Business Office of the DISL operates under the principles of Fund Accounting set forth by the National Association of College and University Business Officers. The State Examiners of Public Accountants audit annually the procedures, accounting records and policies of the DISL.

### Administration Personnel

Katy Blankenhorn - Scheduling Coordinator  
Mary Darby - Accounts Payable  
David England - Director of Finance & Administration  
Ashley Foster - Bursar and Purchasing Agent  
Cindy Grimes - Receptionist  
Angie McKinnell - Contracts & Grants  
Angela Rattler - Human Resources  
Daphne Wood - Contracts & Grants

### Cafeteria Personnel

Faye Bentley  
Classie Berittech - Manager  
Renee Cain  
Michael Morris



Dauphin Island Sea Lab  
Organizational Chart  
2014

Karen Saunders  
Gail Zirlott

**Gift Shop Personnel**

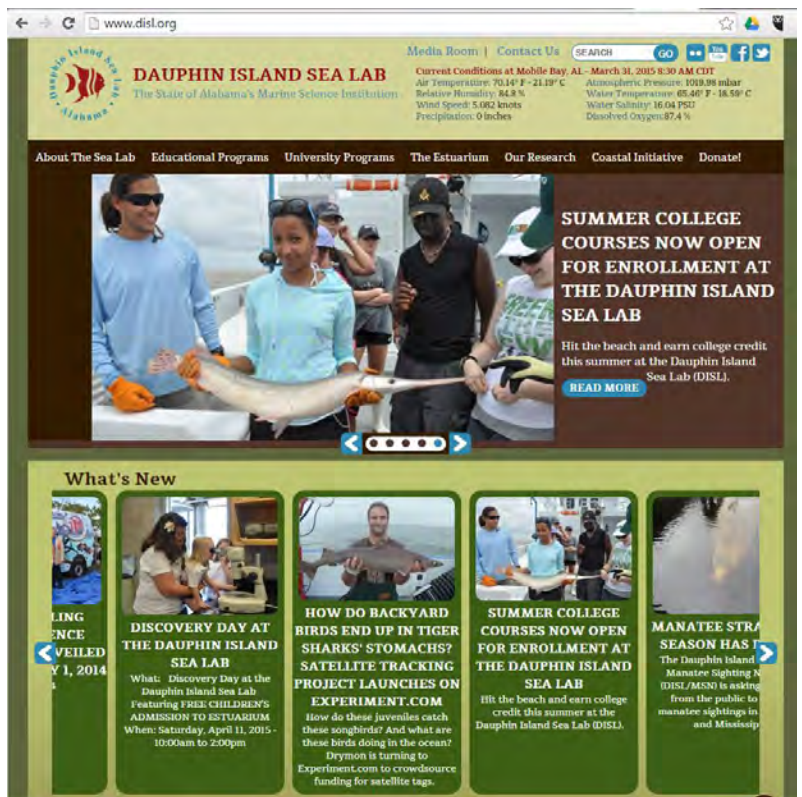
Susanne Callister  
Carol Ann Goodwin  
Amy Hannah  
Jeana Layne - Manager  
Mary Catherine Miller  
Janelle Roy - Docent Coordinator  
Janice Watanabe

**Information Technology**

During the 2014 year, Information Technology (IT) finished deploying Wi-Fi BYOD and enforcing policies for the usage of Wi-Fi. We have an online portal to help facilitate access to Wi-Fi for approved guests.

On October 21, 2014 we launched our new website design. This is the first redesign that has been done to the disl.org site since 2005. It has increased visitors and brought a new layout for information about the Sea Lab. The new site is more compliant with all mobile devices which helps phone and tablet users.

Another welcome addition is new smart card door locks for out resident dorms on campus.



Come visit [www.disl.org](http://www.disl.org) and see our brand new website!



*One of the public relations projects during 2014 was promoting the Derelict Vessel Removal program, headed by Gulf of Mexico Alliance's Lee Yokel. This iconic abandoned boat was amongst the first removed. (Photo credit: Lee Yokel)*

These new door locks are an improvement over the key code ones as they can be remotely monitored and updated. It also enhances security as we can remotely remove and add cards to the locks. So far we have gotten a positive response from the groups that have used them during their stay.

One other project we were please to assist in is the installation of a video wall that was part of a Discovery Hall Programs grant. The wall has a touch screen that users can use to drive the video wall that has content related to the entire Gulf of Mexico.

#### **Information Technology Personnel**

Melissa Mills - IT Manager  
 Shane Johnson - Systems Administrator  
 Sam Hardwick - PC / Network Support Specialist

#### **Public Relations**

One of the pleasures of undertaking Public Relations for the Sea Lab is the wide range of topics we promote on behalf of the faculty, educators and staff - there is no better way of getting an education about what the Sea Lab does and why we do it!

There are long-standing programs that we promote to familiar and new audiences, such as Discovery Hall Programs (DHP) and University Programs

(UP) summer camps and courses.

There are new programs and workshops, like DHP's involvement in Alabama's Master Naturalist Program, or UP's participation in a Microbe Workshop (Dr. Allison Robertson) or a collaborative effort like the NOAA NERRS National Science Collaborative at the Grand Bay National Estuarine Research Reserve (Dr. Ruth Carmichael and Ph.D. candidate Beth Darrow).

There are programs where community involvement is critical, such as the Manatee Sighting Network and Alabama Marine Mammal Sighting Network, and the Dog River Derelict Vessel Removal event.

The Estuarium, the DISL's public aquarium, always has new events and exhibits opening, such as Coastal America's Art Contest, and the Summer Excursion Program. The Estuarium continues to receive statewide coverage (Alabama Trails magazine) for this engaging and educational facility.

The Dauphin Island Sea Lab Foundation held two well-attended events in 2014 – Cocktails with the Critters, its main fundraising occasion, and the Marine Environmental Awards, which honored former Alabama State Senator Ann Bedsole and the Mobile Big Game Fishing Club.

The DISL's annual Open House, Discovery Day, saw thousands of visitors coming down to the Sea Lab, touring the research facilities, which are open to the public this one day a year; visiting the Estuarium; and getting valuable information from our other participants. Family fun merges seamlessly with marine education on this day.

The UP's roster of researchers always has new discoveries, papers and grants churning out, thanks to their hard work and dedication. We're fortunate that national media outlets continue to cover their work (National Geographic and the Weather Channel).



This reporting year saw the Sea Lab receive a major grant from the Gulf of Mexico Research Initiative – \$6.5 million, thanks to the efforts of our Executive Director Dr. John Valentine and the whole DISL crew.

ExxonMobil provided us a wonderful Public Relations Intern this summer - Michael Short from Spring Hill College. We appreciate their continued support of this program that provides critical hands-on experience to local students.

We received 300 media hits during the reporting year, from local, state, regional and national press. Getting the word out about the Sea Lab is a 365-days a year effort, with all the existing and new research and programs coming out – but it is an effort made with great satisfaction that we are promoting the best in science and education for the state and the nation.

#### **Public Relations Personnel**

Lisa Young – Public Relations Consultant  
Lori Pritchett - Administrative Assistant to the Executive Director  
Robert Dixon - Estuarium Manager

#### **Institutional Advancement**

Dr. John Dindo heads the DISL's Institutional Advancement program. Drs. Valentine and Dindo are committed to strengthening the Lab's partnerships with national, state and local legislative bodies. They are dedicated to finding new sources of revenue, maintaining continuing support and overseeing the expansion of the physical plant of the Sea Lab.

During the reporting year, construction began of a new Marine Mammal Research Building. Dr. Ruth Carmichael is the principal investigator of this project, obtaining funds from the State. The building is scheduled for opening in mid-2015.

State funds are also providing for an additional exhibit space for the Estuarium, the DISL's public aquarium. Funds are currently being sought for exhibitry, which will focus on technology and education. This space will also contain changing exhibits to supplement the permanent displays in the main Exhibit Hall. The new space is scheduled to open in early 2016.

#### **Institutional Support Personnel**

Dr. John Dindo - Director



*Age, weather, and constant use can put a strain on the physical plant of the Sea Lab, seen here in high altitude. The Facilities and Housekeeping staff work tirelessly to maintain the campus for faculty, staff, students and visitors. (Photo credit: John Dindo)*

## Facilities and Vessel Operations

With an original physical plant built in the 1950's, the DISL campus is a unique combination of repurposed former Air Force buildings and newer structures built as funds (much obtained post-hurricane) and needs dictated. The Facilities staff's job encompasses maintaining what is old, building what is new, and doing it for as little expenditure as possible.

With that in mind, the Facilities' crew's skill set is both broad and deep – from carpentry to HVAC to electrical, they do it all.

Carpentry work included remodeling Discovery Hall by replacing all the windows, walls, ceilings, flooring, etc.; building a new Water Shed display for the Estuarium; gutting and renovating the portable houses to create more offices and living quarters; building a new welding shop; and much more.

Electrical work was extensive in 2014 as installation of new lights and rewiring old ones took place in the boat yard, Discovery Hall, the pool house and the Estuarium parking lot.

In the steamy conditions of Dauphin Island, HVAC is key, and Facilities replaced compressors, installed new ductwork, and replaced condensing units all over campus.

New sewer lines for the houses; new roof for the Challenger dorm; new ice machine in the Maintenance yard; new dryers for the laundry facility - Facilities took care of it all.

The list of what Facilities does every year is extensive. There is no typical day for the hardworking crew of Facilities – each one brings new challenges. What is typical is that they will all they can to meet those challenges successfully, economically and efficiently.

### Facilities and Vessel Operations Personnel

Dr. John Dindo - Director  
Troy McBride - Manager, Facilities and Vessel Operations

### Facilities personnel

Tommie Blocker  
Wilfred Gazzier  
Ricky Gibbs – Assistant Supervisor  
Robbie Goleman  
Joey Johnson  
Tom Pritchett  
Jody Schultz

## Vessel Days At Sea 2014

Vessel Name	Hours Used
(Vessels) Boston Whaler	310
(Vessels) Breakwater	283
(Vessels) Coquina	200.5
(Vessels) Fish Hawk	0
(Vessels) Great Blue	132
(Vessels) Nancy M	25.5
(Vessels) Oyster	326.6
(Vessels) Pelagia	356.2
(Vessels) Pelican	194
(Vessels) Pontoon	94.5
(Vessels) R/V Mullet	141
(Vessels) R/V Thalassia	309
(Vessels) R/V Vallisneria	60.5
(Vessels) RV Alabama	1029.8
(Vessels) RV E. O. Wilson	233.3
(Vessels) Spinner	76
Small Vessels	2508.8
Large Vessels	1263.1
Total Vessels	3771.9

### Housekeeping Personnel

Cindy Johnson - Assistant Supervisor  
Annette Kiper  
Tammy Ladnier  
Tammy McClantoc – Supervisor  
Myra Peters  
Maria Ryan  
Shirley Zane

### Vessel Personnel

Rodney Collier  
Tom Guoba  
William Johnston  
Russell Wilson

### Technical Support

In February 2014, an Agilent 7700 model Inductively Coupled Plasma Mass Spectrometer (ICP-MS) was installed in the Instrumentation Lab. The 7700 is a state of the art system for determining elements in a wide variety sample matrices. The unit is equipped with an autosampler for delivery/analysis of solution based chemistries and also a Laser Ablation platform from Electro Scientific Industries for the analysis of elements in solid samples. The NSF grant which supplied the funding for this instrumentation was spearheaded by Dr. Will Patterson. Several of the DISL and MESC faculty anticipate utilizing the new system.

The Analytical lab billed grants and contracts for \$1022; DISL general accounts for \$1462.50;



*DISL Technicians Renee Collini (l) and Grant Lockridge (r) prepare for a dive off the RV Wilson.*

DISL allocations for \$2870; and outside parties for \$9286.50, of which member institutions accounted for ~\$3600.

Tech Support remodeled and upgraded the flow systems in several of the Wet Lab rooms to better facilitate the current needs of DISL faculty and researchers including newly designed systems for Dr. Kelly Dorgan and Dr. Alison Robertson.

Tech Support also maintained the FOCAL mooring and its instrument cluster throughout the year, continuing to add to the long term data set of physical oceanographic parameters off Mobile Bay.

The department is making strides in expanding the research diving program at DISL with a Scientific Diving course being offered through the summer school program and plans to construct and employ a NITROX blending system to better serve the research diving needs of the faculty. Grant Lockridge received his SEI SCUBA instructor certification, instructor certification for "DAN first aid for professional divers" and also attended the AAUS conference in Stika, Alaska. Renee Collini

completed her divemaster training to further assist with and research diving needs and also help to train new divers. Technical Support personnel completed 207 dives in 2014, of which 170 were to support current research projects, 32 for diver-training during summer session, and 5 for a new round of research diver-training for current graduate students.

Grant Lockridge is currently working with new DISL faculty Dr. Brian Dwzonkowski to design, construct prototypes, and deploy drifter buoys. Lockridge has participated in many efforts at DISL from being a boat operator during a manatee rescue mission in December to collecting live specimens from marine worms (in support of research) to octopus (for display in the Estuarium).

Renee Collini presented the weather station oxygen data in "Net ecosystem metabolism trends in the Mobile Bay Delta" at the Bays and Bayous Symposium. Additionally, in November Ms. Collini was awarded a subcontract from MASGC to be the Sentinel Site Cooperative Coordinator for the Northern Gulf of Mexico.

### **Technical Support Personnel**

Renee Collini – Field Technician  
Al Gunter - Field Technician  
Yantzee Hintz - Field Technician  
Laura Linn - Technical Support Coordinator,  
Analytical Technician  
Grant Lockridge - Field Technician

### Data Monitoring

Www.mymobilebay.com continued to share realtime meteorological and water conditions throughout coastal Alabama. Renee Collini, Al Gunter, Yantzee Hintz and Grant Lockridge all helped maintain the equipment at seven sites in coastal Alabama and Lei Hu ensured that the data was promptly displayed on the website. Although extramural funds for the operation of the coastal observing system have expired, the Mobile Bay National Estuary Program and the Dauphin Island Sea Lab have combined to continue to support this vital data collection until another extramural source can be found.

### Data Management

The major goals and objectives for Data Management are to manage and support data processing at Dauphin Island Sea Lab. These data are crucial for the understanding of fragile ecosystems along the Gulf Coast. They provide vital information for decision makers, researchers, and the general public.

We work closely with scientists, researchers, and administrators to design and develop customized information systems that allow data analysis, reporting, and archival storage and retrieval. In 2014 Data Management accomplished the following tasks:

1. Environmental Monitoring  
Managed the environmental monitoring data collected from seven stations in and around Mobile Bay. Data is published near real time on www.mymobilebay.com. Data is transmitted to National Data Buoy Center and Gulf of Mexico Ocean Observing Systems within thirty minutes of harvest.

We are in the fourth year of a 5-year contract with Gulf of Mexico Ocean Observing Systems titled “Continued Development of Gulf of Mexico Coastal Ocean Observing Systems.” Funding from this project has been instrumental for us to establish state-of-the-art Data Quality Assurance and Quality Control (QA/QC) standards.

### 2. Scientific Data Processing

Processed scientific data using secured online databases. These databases allow users to enter data, check data quality, generate reports, and download data to their personal PCs. All programs are developed in-house. Examples of these databases are: Fisheries Lab Online Database, and Alabama Manatee Sighting Network.



*Another day at the office for DISL Tech Support personnel Renee Collini as she cleans the solar panel so the Katrina Cut station can continue to generate power and provide information for www.mymobilebay.com. (Photo credit Yantzee Hintz)*

### 3. Administrative Data Processing

Supported data processing for administrative purposes. Databases are password protected and all programs are developed in-house and tailored to specific needs at DISL. Examples of these databases are: The REU Online Application, DISL Fellowship Application, Analytical Service Request, Fuel Usage, Faculty Evaluation.

#### Metadata

The Data Management oversees the creation and publication of federally compliant metadata to make local data sets broadly accessible and perdurable. The DISL's Data Management collaborates closely with NOAA's National Coastal Data Development Center (NCDDC) to train personnel, publish metadata on national clearinghouses, and archive datasets at federal data centers.

In 2014, fourteen metadata records were created for datasets generated at DISL, including five legacy datasets that have been archived with National Ocean Data Center using the newest standards. A metadata training class was offered to faculty and graduate students.

#### **Data Monitoring/Management/Metadata Personnel**

Michael Dardeau - Marine Scientist, Diving Safety Officer

Lei Hu - Data Manager

Mimi Tzeng - Data Management Specialist



# Discovery Hall Programs

The mission of Discovery Hall Programs (DHP) is education and outreach for K-12 students, K-12 teachers, other educators and the public. Our goal is science literacy and a better stewardship through an appreciation of the importance of the ocean and coastal areas in our lives. Thus, we focus on marine and environmental science issues using national and state science standards as well as ocean and climate science literacy principles as our scaffolding. We believe strongly in the value of a hands-on or experiential approach to education. To achieve our goals, we offer a variety of programs and activities throughout the year. In addition to the programs highlighted below, DHP educators routinely work to assist DISL research faculty in their education and outreach programs and are, in turn, assisted by faculty participation in DHP programs.



Teachers display their own ROV's (Remotely Operated Vehicles) during a teacher training workshop in Summer 2014.

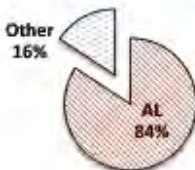
their students year after year and a field trip to the Sea Lab is an annual highlight for many of our visiting groups. As in previous years, our Salt Marsh Ecology, Estuaries & Mobile Bay and our 'Touch Lab' accompanied by a squid dissection classes continue to be the most requested. Requests for our newest class, ROVing the Gulf, in which students learn about human exploration of the deep sea and build an underwater robot, continue to increase.

## Academic Year programs

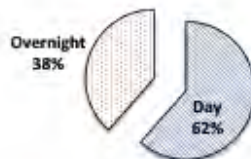
During the school year, DHP offers more than 10 different field-based classes to visiting school groups. The quality and consistency of our programs has led many teachers to return with

In 2014, DHP reached just shy of 9000 K-12 students in 241 visits of school groups to the Sea Lab. This figure does not include the more than 1000 additional parents, teachers and chaperones

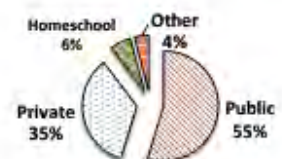
DHP Academic Year Groups  
In-state vs Out-of-state



DHP Academic Year  
Day Students vs Overnight Students



DHP Academic Year Groups  
School Type



who accompany the students who stay overnight in our dorms. DHP staff taught approximately 800 classes to these students, sometimes teaching an entire grade of students at a school and sometimes teaching only students enrolled in specific classes. These numbers reflect about 58,000 contact hours with K-12 students in 2014.

Most of our visiting groups continue to be from Alabama. These groups came from 38 counties across Alabama. Approximately 60% of our visiting students come to DISL just for the day. Approximately 55% come from public schools with other groups representing private schools, homeschool groups, scout troops, college groups or informal adult groups.

Funding from the Gulf of Mexico Research Initiative through the Deep-C Consortium supported our 2nd annual ROV (remotely operated vehicle) student competition in the Spring of 2014 as well as a training workshop for teachers in Summer of 2014. This year's competition was the first as an official Northern Gulf of Mexico regional competition site for the international Marine Advanced Technology Education (MATE) program. We continue to build interest and participation in the different facets of our marine technology program through the student competition, our ROV class and the teacher workshop as well as a new ROV outreach exhibit.

In 2014, DHP continued their collaboration with Alabama's ACCESS (Alabama Connecting Classrooms, Educators and Students Statewide) program. In 2014, we delivered monthly programs to school students statewide. Using live animals, these programs spotlighted the plants and animals of the Gulf coast and focused on a particular scientific concept or timely issue such as the invasive lionfish. The 5 programs in 2014 reached approximately 3000 students in elementary, middle and high schools across Alabama. DHP thanks Alabama's State Department of Education as well as Alabama SuperComputer for making these programs possible.

In 2014 DHP continued our Watershed Education using Bivalves (WEB) program for teachers and middle school students. Funding from NOAA's Bay Watershed & Education Training program supports this effort: in 2014, the program involved 7 schools. The program combines teacher training, teacher support in the classroom, and

2 field trips for students to their local and coastal watersheds. It also provides resources (water sampling kits and other supplies) for teachers to use in their classroom. The program includes a service component. In 2014, middle school students learned about the value of restored oyster reefs in providing habitat, improving water quality and reducing shoreline erosion. They then bagged oyster shell and deployed approximately 400 bags of shell to a living shoreline in Mobile Bay.

### Summer programs

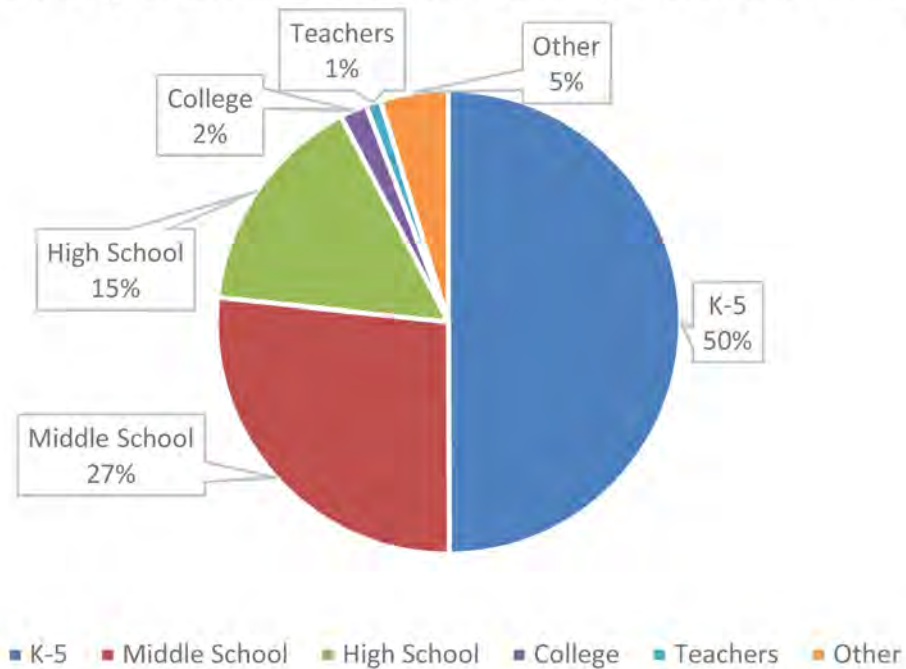
DHP offers a variety of day camps and overnight camps for school-age children. In 2014, more than 125 children participated in our day camps in 3 sessions each of Oceans Alive, Survivor Dauphin Island and Art-Sea. Our residential camps were also well-attended, filling to capacity at 167 children in 4 sessions of Gulf Island Journey, a week-long camp for 7th & 8th graders, and 3 sessions of Barrier Island Explorer, a 4 day/3 night program for 5th & 6th graders. Campers came from 17 states and 24 counties in Alabama.

DHP offers one of the few residential intensive classes in marine science for high school students nationwide. Upper level high school students who are interested in studying marine science in college, or those who just want to learn more enroll for this month-long class. Students live at the lab for a month taking classes (and exams), conducting laboratory and field exercises, exploring research methods and exploring different marine habitats through field trips and earning high school science credit. In 2014, the class was again filled to capacity at 30 students. These students represented 9 states and 9 different counties in Alabama. This summer



*Educator Hazel Wilson (in hat) leads a middle school class in DHP's Watershed Education using Bivalves (WEB) program.*

## Discovery Hall Student Participation in 2014



DHP collaborated with Dr. Ishara Ramkissoon (University of South Alabama) and the Mobile County Public School System to increase the number of under-represented students participating. Five of these 30 students were able to attend our program with the financial assistance of Dr. Ramkissoon's Emerging Scholars in Environmental Health Sciences Academy, significantly increasing the number of students from under-represented groups in the class.

DHP would not be able to offer our residential summer programs without the assistance of our counselor staff. We have a wonderful group of dedicated counselors: some are veteran teachers who have many years of experience working with young people, some are young college students full of new and creative ideas but all are dedicated to the care, safety and education of our campers. Many have been with us for many, many years. We are indebted to Marty Dunn, our head counselor, and his crew for their excellent assistance.

As in previous years, we provide training in environmental education for 2 interns during the summer. Our 2014 interns, Ms Jennie Ford (University of Florida) and Ms Tisheena Howard (Savannah State University) were exemplary!

### BayMobile – School visits & public outreach

Throughout the school year our traveling marine science classroom, known as the BayMobile, visits primarily Title I schools throughout the state of Alabama. We are very appreciative of ExxonMobil's support of this program. In 2014, the BayMobile visited 45 different schools and reached approximately 12,700 K-12 students in 15 different Alabama counties. The primary focus of BayMobile visits are introductions to Alabama's marine animals and plants, however, DHP educators also taught classes on oil & oil spills, marine debris, watersheds & water quality, and hypoxia.



*The new BayMobile vehicle, thanks to the PNC Foundation.*



Through the generosity of the PNC Foundation, we were able to purchase a wonderful new vehicle to serve as our BayMobile. DHP staff have really enjoyed having a reliable and eye-catching vehicle to travel across the state.

As part of our mission, DHP educators participate in and conduct a variety of programs for the general public. Throughout the year, the BayMobile takes the 'show on the road' to a variety of environmentally themed events. In 2014, the BayMobile spent 31 days at these events that included Earth Day, Celebrate the Gulf, Delta Woods & Waters, Kids Day in Bienville, Kids Gulf Discovery Day (Bellingrath Gardens), Ocean Commotion, the Greater Gulf State Fair, ShrimpFest, BirdFest, My Two Boots, Environmental Studies Center Open House and a number of other community events. These events collectively reached approximately 15,800 students, K-12 teachers and members of the public.

In collaboration with several other environmental education groups in southern Alabama, DHP worked on the establishment of an Alabama Master Naturalist training program in coastal Alabama. Master Naturalist programs are relatively common across the US, and are designed to develop a group of well-informed volunteers who provide education and service for the benefit of natural resources. In 2014, DHP hosted 2 training sessions for the program at DISL highlighting Coastal Habitats and Alabama's Cultural History. This is a new effort in Alabama and for DHP, and will hopefully continue in 2015, promoting awareness, understanding and respect for Alabama's amazing natural environments.

Outreach programs are also offered through the Estuarium, DISL's public aquarium, including Boardwalk Talks, a series of informal talks between visitors and Sea Lab scientists, aquarists, technicians or other experts and Summer Excursions, a series of field trips for the public. In 2014, 16 Boardwalk Talks educated ~350 individuals about a variety of marine science topics and recent

research at the lab. We offer a series of short field trips for the public known as Summer Excursions. These are a great way for families, visitors to the island and other special groups to learn a bit of coastal ecology and appreciate the importance of our coastal habitats. In 2014, there were 7 such field trips that hosted 192 participants. Throughout the summer, DHP also hosted a number of special groups such as Mobile County's Engaging Youth in Engineering program and the Audubon Aquarium (New Orleans) Aqua Kids.

### **Professional development for K-12 teachers and informal educators**

In 2014, DHP offered 5 professional development opportunities to K-12 teachers and informal educators. These included workshops on Watershed Education using Bivalves (watersheds, water quality, oysters & mussels), funded by



*Educator Joan Nichols captivates a class during one of BayMobile's classroom visits.*

NOAA's BWET program; Fins, Fisheries, Fisheries (fish & fisheries management issues in the Gulf of Mexico), funded by the Mississippi-Alabama Sea Grant Consortium; Marine Technology: Underwater Robots, (ROVs and other marine technology), funded by the Deep-C Consortium (Gulf of Mexico Research Initiative); and Alabama's Biodiverse Coast (Alabama's unique biodiversity and its importance), funded by Legacy: Alabama's Partners in Environmental Education. These week-long workshops provided intensive training to 63 teachers and informal educators. In addition, DHP hosted How Do We Explore, facilitated by Charlene Dindo, NOAA Ocean Explorer Facilitator, and funded by

## Dauphin Island Sea Lab's Discovery Hall Program Totals

Year	K-5	Middle School	High School	College	Teachers	Other	Total
		School	School				
1990	7,382	1,364	905	473	185	397	<b>10,706</b>
1991	2,296	745	329	127	254	620	<b>4,371</b>
1992	6,103	2,005	1,187	671	254	351	<b>10,571</b>
1993	7,128	1,784	2,123	765	238	529	<b>12,567</b>
1994	7,634	2,083	1,533	603	356	478	<b>12,687</b>
1995	5,981	1,763	1,137	634	213	336	<b>10,064</b>
1996	6,915	2,318	1,411	456	300	126	<b>11,526</b>
1997	6,312	1,630	1,170	648	269	284	<b>10,313</b>
1998	6,233	2,079	1,484	364	230	352	<b>10,742</b>
1999	4,232	2,055	1,397	479	225	301	<b>8,689</b>
2000	6,567	2,141	1,746	476	199	368	<b>11,497</b>
2001	6,239	1,918	2,485	540	177	277	<b>11,636</b>
2002	4,196	2,924	1,865	460	175	430	<b>10,050</b>
2003	4,605	2,845	2,215	278	230	293	<b>10,466</b>
2004	4,737	1,385	1,435	262	150	188	<b>8,157</b>
2005	3,897	1,102	1,592	316	167	98	<b>7,172</b>
2006	6,576	2,326	2,877	566	117	374	<b>12,836</b>
2007	3,064	1,440	1,591	432	86	111	<b>6,724</b>
2008	3,268	2,621	1,551	46	138	173	<b>7,797</b>
2009	4,349	2,839	1,532	50	69	166	<b>9,005</b>
2010	6,296	2,662	1,130	101	66	95	<b>10,350</b>
2011	5,133	3,077	1,827	127	70	92	<b>10,326</b>
2012	5,218	2,765	1,991	109	85	290	<b>10,458</b>
2013	4,489	2,973	1,928	71	117	308	<b>9,886</b>
2014	4,505	2,415	1,408	170	93	429	<b>9,020</b>
<b>Total</b>	<b>133,355</b>	<b>53,259</b>	<b>39,849</b>	<b>9,224</b>	<b>4,463</b>	<b>7,466</b>	<b>247,616</b>

### DHP Personnel

The staff of Discovery Hall has had a busy year, both professionally and personally. We have new babies, a wedding, and even a new knee for better walking along the beach. We have also been fortunate in having a new staff member Rachel Gamble McDonald join our group. Rachel completed her Master's degree in 2014 at the Sea Lab and has been working with our remotely operated vehicle program as well as a few other projects.

The current Discovery Hall Programs staff includes:

NOAA's Office of Ocean Exploration and Research. This single day workshop provided training to an additional 14 teachers.

### Professional & Service Activity

DHP educators continue to make scholarly contributions to the field of environmental literacy and education. In 2014 we gave presentations at the annual meetings of the National Science Teachers Association, the Alabama Science Teachers Association, the Environmental Education Association of Alabama, Bays and Bayous Symposium, the National Marine Educators Association and the Southern Association of Marine Educators.

DHP staff continues to serve as judges for the local, county and state-wide science fairs and participating in a number of other events designed to spotlight and encourage careers in STEM (science, technology, engineering and mathematics) disciplines such as Alabama Math and Science Technology Initiative (AMSTI) Science Festivals and Girls in Engineering, Math and Science (GEMS) events.

Jenny Cook, Marine Educator III, MS (1991, University of South Alabama)  
 Greg Graeber, Marine Educator III, ME (2008, University of South Alabama)  
 Sara Johnson - Administrative Assistant; BS (2004, Pennsylvania State University)  
 Jennifer Latour, Marine Educator I, BS (2004, Thomas University)  
 Tina Miller-Way, Chair; MS, Ph.D. (1995, Louisiana State University)  
 Rachel McDonald, ROV Program Coordinator, MS (2014, University of South Alabama)  
 JoAnn Moody, Marine Educator I, MAT (2005, University of West Alabama)  
 Joan Nichols, Marine Educator III, BA (1999, University of Alabama - Huntsville)  
 Hazel Wilson, Marine Educator III, BS (1981, Memphis State University).



## The Estuarium

251.861.7500

Toll Free: 866.403.4409

[www.sealabestuarium.org](http://www.sealabestuarium.org)

The Estuarium continues to be a much-visited local attraction. The Estuarium posted an attendance of 72,786 during the 2014 calendar year.

The Estuarium again hosted the Coastal America Ocean Art Contest 2013-2014 as part of the Coastal Ecosystem Learning Center Network. Over one hundred students submitted artwork and photographs and the winners of the five categories were sent to Washington DC for the national contest at Coastal America. The Estuarium hosted the exhibit from July 16 to September 17, 2014.

The Estuarium also displayed the 72 winning pieces of artwork from the Alabama Department of Conservation and Natural Resources' yearly calendar contest.

A beautiful sculpture of three Cownose rays, created by Mr. Frank Ledbetter out of stainless steel, and sponsored by the Dauphin Island Sea Lab Foundation, was installed on a brick pedestal at the entrance to the Estuarium.

A Watershed Pavilion was constructed near the front doors of the Estuarium by DISL's skilled maintenance department. Placed within the Pavilion is another sculpture and water feature created by Mr. Ledbetter depicting the rivers and the watershed of Mobile Bay.

New exhibits also included Eco Hero, an interactive game for younger visitors. A PIT Video Wall was constructed, as was the implementation of environmental touch screens focusing on the GOMA Priority Issues of water quality, coastal community resiliency, nutrient reduction, ecosystem integration

and assessment, and habitat conservation and restoration.

On Saturday, Nov. 1, Seafood, Science & Celebrity held its traditionally sold-out annual "Sustaining Heritage" Gala from at the Estuarium. Sponsored by the South Mobile County Tourism Authority, this year's gala allowed guests to see and taste firsthand the creative combination of culinary innovation and Gulf Coast customs, while enjoying live



*The new Watershed Pavilion, with water feature created by artist Frank Ledbetter.*



*This is one turtle you are welcome to climb aboard! Thanks to Legacy, Inc. for their grant to support the Sea Turtle Stranding Project at the Estuarium.*

music from Jesse Keith Whitley, son of famed country music stars Lorrie Morgan and Keith Whitley, and his wife Ashlee Hewitt.

Estuarium Educator Mendel Graeber worked on a number of grants and projects during the 2014 reporting year, including:

- Site improvement and signage for the Dauphin Island Audubon Bird Sanctuary and the DISL

campus (sponsored by Alabama Department of Conservation and Natural Resources [ADCNR])

- Sea Turtle Stranding Project, which included a life-sized model of a female loggerhead at the Estuarium; a three-dimensional model of a sea turtle nest; summer children's classes and activities about sea turtles; and four informal talks, led by The Sea Turtle Stranding and Salvage Network and Share the Beach about general sea turtle ecology, morphology, life cycles, and work the volunteer groups do (sponsored by Legacy, Inc).

- The Watershed Pavilion, which highlights the Mobile Bay watershed. Its central piece is a metal water feature, made by metal artist, Frank Ledbetter, which depicts a map of the watershed of Mobile Bay with water flowing from the heads of its major rivers to a basin at the bottom (sponsored by ADCNR/NOAA).

#### **Docent Program**

Like all museums and aquariums around the nation, the Estuarium could not function at the level that

## The Estuarium at the Dauphin Island Sea Lab Visitor Totals

<b>Year</b>	<b>Students</b>	<b>Adults</b>	<b>Seniors</b>	<b>Members Passes</b>	<b>Total</b>
				<b>Employees, Comps</b>	
1998	26,661	16,468	7,774	2,343	<b>53,246</b>
1999	34,557	18,842	10,427	2,455	<b>66,281</b>
2000	38,223	20,283	11,887	2,662	<b>73,055</b>
2001	36,213	21,305	12,112	2,718	<b>72,348</b>
2002	35,327	21,966	12,638	3,056	<b>72,987</b>
2003	38,622	23,200	12,435	3,218	<b>77,475</b>
2004	34,458	21,300	12,742	3,356	<b>71,856</b>
2005	26,501	13,050	6,728	2,533	<b>48,812</b>
2006	31,059	15,745	8,030	2,940	<b>57,774</b>
2007	34,152	18,689	10,586	3,220	<b>66,647</b>
2008	37,027	19,075	10,138	4,116	<b>70,356</b>
2009	37,931	18,677	10,532	2,798	<b>71,947</b>
2010	29,209	11,399	8,069	2,926	<b>53,613</b>
2011	37,094	18,756	10,799	2,994	<b>69,643</b>
2012	40,263	19,375	10,946	3,326	<b>73,910</b>
2013	39,287	21,344	12,050	3,633	<b>76,314</b>
2014	37,459	19,838	11,847	3,916	<b>73,060</b>
<b>Total</b>	<b>410,731</b>	<b>228,600</b>	<b>126,029</b>	<b>35,415</b>	<b>660,481</b>

it does today without the dedicated involvement of our docent volunteer force. Currently, we have over 50 docents who volunteer their time in the Estuarium or around the campus in other capacities helping to explain the Mobile Bay ecosystem to visitors to greening up our campus. Our stalwart crew of docents provided over 3534 hours of service in 2014. There is no question that they are a tremendous resource for us.

If you are interested in volunteering at the Estuarium, please contact Ms. Jamelle Roy at [jroy@disl.org](mailto:jroy@disl.org).

### **Estuarium Personnel**

Lauren Beasley, Full Time Aquarist – Partial Year  
Tiffany Christiansen, Part Time Aquarist, now Full Time Aquarist  
Robert Dixon, Estuarium Manger  
Mendel Graeber, Estuarium Educator  
Logan Holfelder, ExxonMobil Summer Intern Aquarist  
Joe Ingraham, Aquarist

Brian Jones, Senior Aquarist  
Alex Shealy, ExxonMobil Summer Intern Aquarist

Gift Shop  
Amy Hannah  
Jeana Layne, Giftshop Manager  
Jamelle Roy, Estuarium Docent Coordinator

Part-time  
Susanne Callister  
Carol Ann Goodwin  
Mary Catherine Ladnier  
Janice Watanabe  
Sallie Jo Williams



*DISL Docents prepare to go on their annual boat trip aboard the RV Discovery.*



## University Programs

University Programs (UP) oversees summer undergraduate and year round graduate (M.S. and Ph.D.) education, as well as faculty research.

A full accounting of faculty activity, including peer-reviewed papers, grants and invited talks, can be found on pages 35-49.

Fifteen (15) of the 22 member institutions sent students to the DISL for the 2014 Summer Program. UP delivered 1,115 undergraduate hours and 74 non-DISL graduate hours during the summer. The academic graduate programs produced 423 semester hours. Altogether, UP conducted 1,612 hours for undergraduates and graduates.

Eight graduate students who conducted their research at the DISL received their degrees from their home institutions during the reporting period of October 1, 2013 to September 30, 2014 (Table 1). Four of these were Ph.D. graduates.

The UP Faculty contributed \$2,770,089 in extramural funding. Of this total, \$222,974 was faculty extramural funding through the University of Alabama and University of South Alabama (USA).

During the reporting period, the faculty produced 56 refereed publications; 12 technical reports; 2 book chapter; and 91 scientific abstracts/presentations.

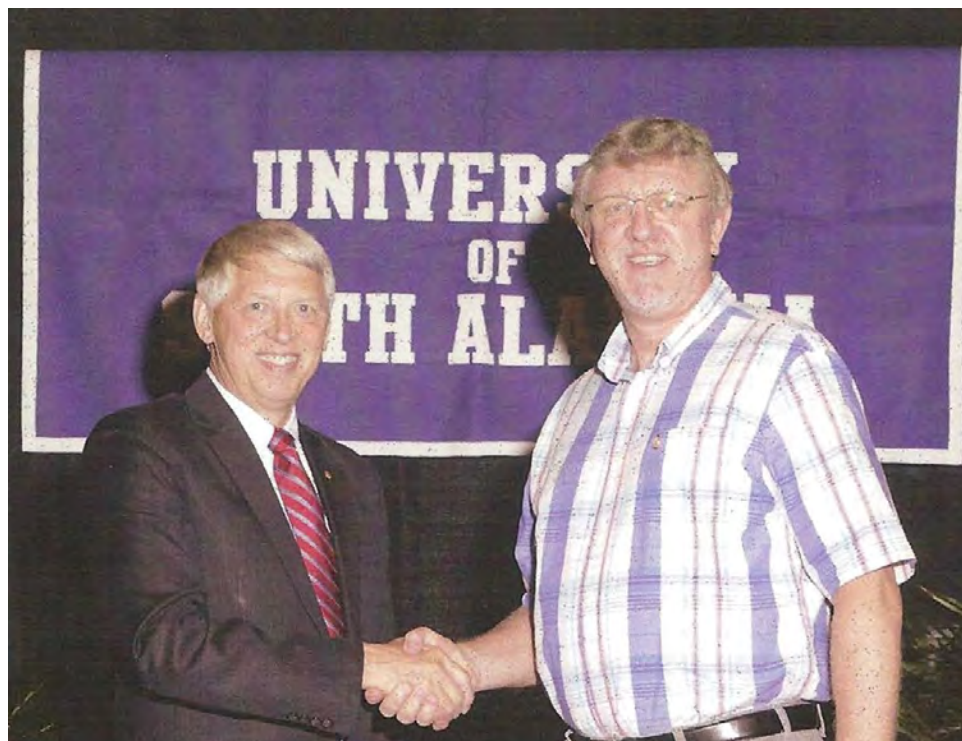
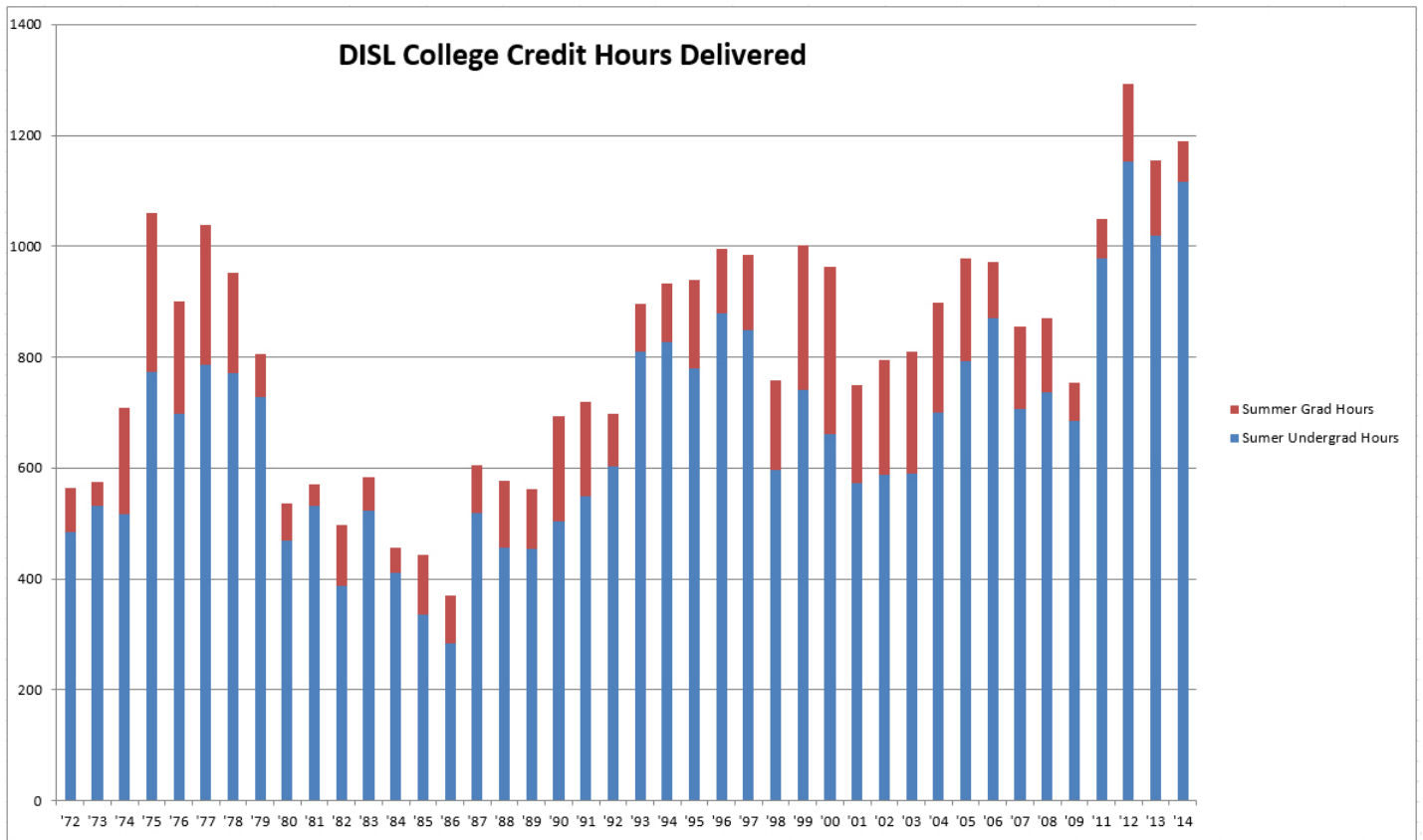
Of note, Dr. Ron Kiene was awarded the 2014 Olivia Rambo McGlothren Outstanding Scholar Award from the USA National Alumni Association and the 2014 Dean's Lecture Award from USA's College of Arts and Sciences for career excellence in scholarship. We extend our warmest congratulations to Dr. Kiene for these tremendous accomplishments.

### University Programs Personnel

Dr. Kenneth L. Heck, Jr. - Director  
Sally Brennan - University Programs Registrar  
Carolyn Wood - Department Secretary

Table 1. 2013-2014 Graduates:

**Bart Christiaen, Ph.D.**, Natural and Human Drivers of Seagrass Ecosystems: Detection, Impact and Restoration (USA)  
**Rachel B. Gamble, M.S.**, Fish and Macroinvertebrate Communities in Shallow Coastal Waters of the Northern Gulf of Mexico: A Comparison among Coastal Lagoons with Varying Seagrass Cover (USA)  
**Marshal Johnson, M.S.**, Trophodynamic Characteristics of Larval Gulf Menhaden (*Brevoortia patronus*) Collected off Coastal Alabama (USA)  
**Christian M. Jones, Ph.D.**, Growth and Mortality of Pre- and Post-Settlement Age-0 Red Snapper, *Lutjanus campechanus* (Poey 1860), in the Gulf of Mexico (USA).  
**Larissa Lee, M.S.**, Effects of Coral Species Richness and Predation Threat on Herbivore Behavior (USA)  
**Heather Patterson, Ph.D.**, Dissolved Oxygen Stress on the Eastern Oyster, *Crassostrea virginica*: Implications for Physiology, Management and Restoration Efforts (USA)  
**Daniel Presley, M.S.**, Combining Multiple Microbial Source Tracking Methods to Determine the Source of Fecal Contamination in Little Lagoon (USA)  
**Eric Sparks, Ph.D.**, Restoration Effectiveness, Nutrient Filtration and Grazing in *Juncus roemerianus* (Black Needlerush) Marshes (USA)

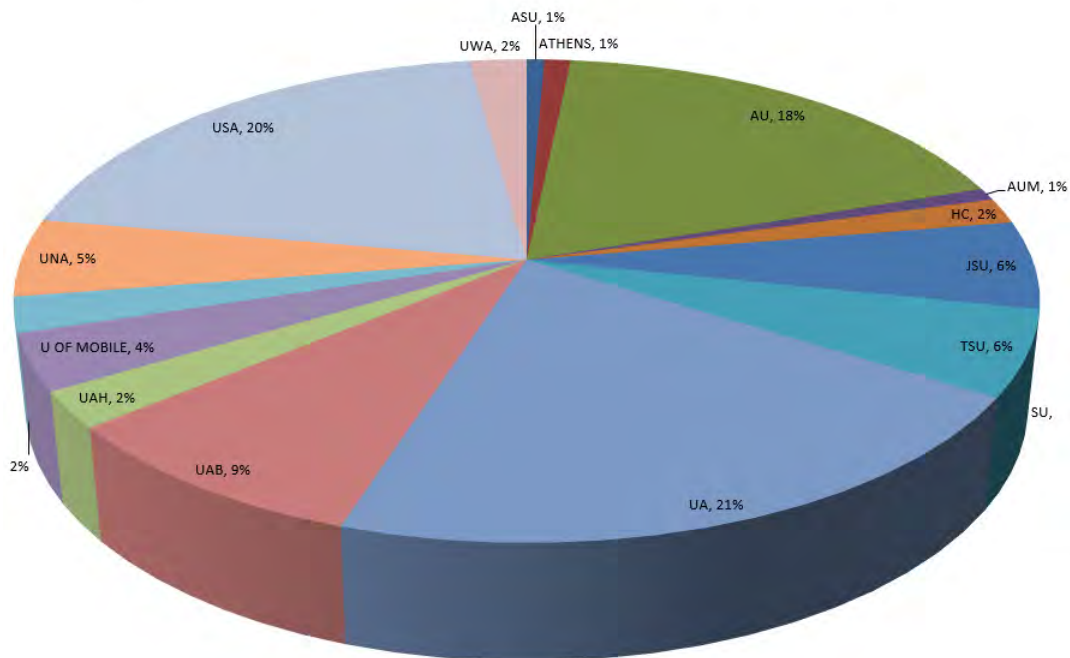


*University of South Alabama President Tony Waldrop (l) and Dr. Ron Kiene (r). Dr. Kiene received the 2014 Olivia Rambo McGlothren Outstanding Scholar Award from the USA National Alumni Association and the 2014 Dean's Lecture Award from USA's College of Arts and Sciences for career excellence in scholarship.*



In April 2014, members of Drs. Mortazavi, Ortmann, Krause and Kiene labs travelled up to the Georgia Tech campus in Atlanta, GA, for a two-day meeting on all things biogeochemistry. Front row (l-r): Natalie Ortell and Lei Wang (Ortmann lab); Jessie Motard-Cote and Alison Rellinger (Kiene lab); and Jennifer Anders (Mortazavi lab). (Photo credit: Ron Kiene)

### Summer - 2014 Total Credit Hour Breakdown by Institution







## Dauphin Island Sea Lab Foundation

PO Box 82151, Mobile, AL 36689

251-605-6624

[www.sealabfoundation.org](http://www.sealabfoundation.org)

The Dauphin Island Sea Lab Foundation supports the Dauphin Island Sea Lab in its mission, “ to provide wise stewardship of the marine environment through education and research”. The foundation provides funds to sustain the activities of the Sea Lab and promotes awareness of the Sea Lab and its environmental issues. The Foundation is also building the George C. Crozier Endowment for the Dauphin Island Sea Lab.

The Foundation, established in 2004, is overseen by a governing board, which currently has 29 members. An advisory board to the governing board was established in 2011 and consists of 24 non-voting members. Executive Director, Helene Hassell, has served as director since 2010.

The Foundation raises funds and promotes the Sea Lab through various means.

### Cocktails with the Critters

The primary event is Cocktails with the Critters held each year the first Thursday in May. It is an exciting band party with a wildly successful silent auction. Income for CWC is realized through sponsorships, ticket sales and the silent auction. The event has grown in popularity over the years. In 2014, its ninth year, the event was moved to a new location, which has proven to be an even bigger draw. There were 450 in attendance this year.

### The Marine Environmental Awards Luncheon

In 2014 The Dauphin Island Sea Lab Foundation hosted its third Marine Environmental Awards luncheon on November. The awards were originally devised by Dr. George Crozier to recognize individuals in the community who had a positive impact on the sustainability of the marine environment. The Speaker was world renowned scientist and explorer, David Gallo. There were two awards

given; one to an individual, Ann Bedsole and to an organization, The Mobile Big Game Fishing Club. A luncheon was held to showcase the awards and the recipients. It is an honor for members of the Gulf Coast Community to be selected for these awards by the Sea Lab we applaud their efforts. There were 240 people in attendance.

### The Friends of the Sea Lab

The Friends of the Sea Lab (FOSL) formerly the Friends of the Estuarium was established in 2010 and is administered by the Foundation. Letters are sent out each year and the members of the Friends receive certain benefits based upon their level of sponsorship. Currently there are 153 Friends.

DISLF hosted a Friends of the Sea Lab reception to unveil two new sculptures at the Estuarium. Both purchased with funds donated to the Foundation.

The Foundation also seeks grants to fund special projects at the Sea Lab.



*Bennet Long accepts the MEAL Award for the big game Fishing Club from Executive Director, Helene Hassell and DISL Executive Director John Valentine.*



Great Blue Heron in memory of Director Freda Roberts. Sculptor Casey Downing (l) with former DISL Director, George Crozier.

- |                        |                          |
|------------------------|--------------------------|
| Kinley Bell            | Goldie Burkholder        |
| Bob Collins            | Suzanne Damrich          |
| Rick Courtney          | Karlos Finley            |
| Kevin Cross            | Tom Gaillard             |
| Fred Cushing           | Lisa Goodloe             |
| John Dindo, PhD.       | Robert Harlin            |
| George Davis           | Doug Hungerford          |
| David England          | Dr. Ben King             |
| Russ Ford              | Austill Lott             |
| John Goodloe           | Tara Marshall            |
| Bill Haffner           | Tomi Sue Mayer           |
| Grant Harkness         | Dottie McKean            |
| Scott Heggeman         | Sonny Middleton          |
| Dr. John B. Howell, IV | Eliska Morgan            |
| Luella Hunt            | William Mote             |
| Neil Kennedy           | Jocko Potts              |
| Russell Ladd, III      | Chuck Stapleton          |
| Angela Payne           | Marty Stapleton          |
| Julie Sirmon           | Patrick Wilson           |
| Jay Thompson           |                          |
| Richard Tremayne       | <u>Honorary Trustees</u> |
| Bud Urquhart           | George Crozier, PhD      |
| Marc Whitehead         | E.O. Wilson, PhD         |

- Advisory Board  
 Erin Wheeler, Chair  
 Melissa Baker  
 Fred Brock

- DISL Representative  
 John Valentine, PhD

**Grants 2014**

- Crampton Trust: \$20,000 to purchase new analytical equipment for the discovery Hall Program
- Wells Fargo: \$5000 additional funds for the aforementioned equipment
- Poarch Creek Indians: \$5000 to underwrite the awards luncheon
- Glaze Foundation: \$7500 for general purposes
- WKRG \$20,000 in in-kind publicity for Cocktails with the Critters (CWC)
- PNC Bank \$5000 for CWC
- Iberia bank \$5000 for CWC

**Personnel**

Helene Hassell, Executive Director

Board of Trustees:

Bryan Thames, Chair  
 Mary Ellingwood, Vice Chair  
 Scott Browning, Treasurer  
 Margaret VanLoock, Secretary

Trustees

Walsh Arendall



Rays of the Bay - John Dindo (l) and Helene Hassell (center) with Sculptor, Frank Ledbetter (r).



# Mobile Bay National Estuary Program

118 North Royal Street, #601, Mobile, AL 36602  
 251-431-6409  
[www.mobilebaynep.com](http://www.mobilebaynep.com)

## Mobile Bay National Estuary Program Annual Report 2013-2014

The mission of the Mobile Bay National Estuary Program (MBNEP) is to promote wise stewardship of the water quality and living resources of the Alabama's estuarine systems. Funding in part by the US EPA and administratively sponsored by the DISL, MBNEP is a non-regulatory program, bringing together citizens; local, state, and federal government agencies; businesses and industries; conservation and environmental organizations; and academic institutions to meet the environmental challenges that face the unique and imperiled resources that characterize our coastal estuaries. The MBNEP is part of the Sea Lab's Coastal Policy Program.

The past year has been transformative for the MBNEP and its management conference committees. Awarded three National Fish and Wildlife Foundation Gulf Environmental Benefit Fund (GEBF) grants, the MBNEP joined partners on both sides of the bay to continue laying the foundation for coastal restoration through watershed planning and implementation. These grants were added to ten current active grants including awards from the EPA, Alabama Department of Conservation and Natural Resources, Alabama Clean Water Partnership, the U.S. Fish and Wildlife Service, and the Alabama Department of Environmental Management. In addition, non-federal match funding was received from the State of Alabama, Alabama Department of Conservation and Natural Resources and several Mobile and Baldwin County municipalities. These diverse sources of funding grew the MBNEP budget to over \$11.5 million dollars in the past year to support projects affecting water quality and living resources of coastal Alabama, including significant activity in the D'Olive and Fowl River watersheds.

### THE CCMP

In October of 2013, MBNEP began implementation of a ***Comprehensive Conservation and Management Plan for Protecting Alabama's***



MBNEP's *Comprehensive Conservation and Management Plan 2013-2018*

**estuaries and Coast 2013-2018 (CCMP).** This road map to protection of Alabama's coastal resources was produced to support what people along the coast value most: Access to the water and open spaces (for recreation and vistas); Beaches and Shorelines (Protection, economy, beauty); Fish (Fish and wildlife habitats, abundance, livelihood); Heritage and Culture (Protecting the legacy); Environmental Health/Resiliency (Protecting ); Water quality (drinking water quality and quantity, rivers, creeks, bay- fishable, swimmable, drinkable).

The CCMP is organized by five sections: Status and trends; Ecosystem restoration; Technical



*Before photo of Joe's Branch taken in 2012, Ashley Campbell, City Daphne's Environmental Manager.*

assistance and capacity building; community stewardship; and program implementation. What follows is an overview of accomplishments achieved by over 100 community leaders, academics, businesses, government entities, and grassroots and environmental groups in their efforts to implement the strategies of the CCMP:

#### STATUS AND TRENDS: ENVIRONMENTAL MONITORING FOR THE COAST

The Science Advisory Committee (SAC) focused their activities on maintaining existing levels of coastal monitoring by evaluating funding and organizational capacity to manage historical, ongoing, and future coastal and estuarine data.

*Real Time Monitoring-* The MBNEP provided funding to DISL to continue operation of real-time monitoring sites at Meaher Park, Dauphin Island, Weeks Bay, and Middle Bay lighthouse. These monitoring stations provide real-time data that can be viewed at [www.mymobilebay.com](http://www.mymobilebay.com), a website also containing links to the Mobile River, Fort Morgan, and the Farewell Buoy as part of the Physical Oceanographic Real-Time System of the National Ocean Service (with data more pertinent to shipping interests) as well as data from Weeks Bay and Grand Bay through the NOAA Weather Service Hydrometeorological Automated Data System.

*Measuring Changes in Biological Condition-* With a goal of measuring changes in ecosystem function

resulting from watershed management and restoration activities, the SAC continued a multi-year focus on the development of a conceptual framework for measuring biological conditions. This framework includes tracking conditions of wetlands and intertidal marshes and flats using the relative proportion of acreage having "good," "fair," and "poor" biological condition within an assessment area, accounting for wetlands lost or gained. Condition will be assessed using landscape development indices (LDIs), wetland rapid assessment procedures (WRAP), and hydrogeomorphic models (HGMs). For coastal streams, condition will be assessed using macroinvertebrate indices of biological integrity (MIBI). While MIBIs have as yet not been calibrated for Alabama streams, Mississippi DEQ and Florida DEP have both developed indices which may be applicable in Alabama.

This framework will be tested in the D'Olive watershed where a significant amount of restoration is occurring in addition to passage of enhanced sub-division regulations. Distribution of submerged aquatic vegetation in D'Olive Bay will be used as an assay of downstream condition related to restoration of these upstream streams and wetlands.

*Healthy Watersheds Initiative-* In partnership with EPA Headquarters, MBNEP and agency partners, an integrated assessment of watershed health using existing data across the Mobile Bay watershed

was completed in June, 2014. This modeling and mapping effort resulted in mapping of healthy as well as impacted catchment areas throughout the State. Information contained in this assessment will be used to support the Science Advisory Committee and its activities related to measuring watershed health over time.

#### ECOSYSTEM RESTORATION AND PROTECTION AT A WATERSHED SCALE

*D'Olive Creek Watershed Restoration* – By the end of 2013, MBNEP was awarded a \$6.85M GEBF grant to continue restoration of substantially degraded tributaries in the D'Olive and Tiawasee creek and Joe's Branch sub-watersheds to "stop the bleeding" and mitigate 303(d)-listed impairments resulting from stormwater runoff. With an initial focus on completing the restoration of Joes Branch sub-watershed, engineering and design activities were put to the test after the "500-year" storm event in April of 2014. Although the initial restoration project of a tributary to Joes Branch performed very well, the targeted restoration areas experienced significantly more erosion. As a result, additional engineering was required for Joes Branch, pushing back restoration to April 2015. Engineering and design began earlier than planned in D'Olive Creek, downstream of I-10, with construction planned for October 2015.

*Mon Louis Island/Fowl River Watershed*- At the end of 2013, MBNEP was awarded a \$2.05M grant from the GEBF to undertake a sediment loading analysis to identify areas of erosion concern, prepare a comprehensive management plan for Fowl River watershed and stabilize the tip of Mon Louis Island at the mouth of the river, creating up to 7 acres of marsh. The project proposed dredging the Fowl River channel and beneficially using the material to support the project. MBNEP jumpstarted the engineering and design using EPA funding. As part of the initial design, an Alternatives Evaluation was prepared, comparing different designs, materials, and footprints for the restoration, with creation of a rock sill as the preferred alternative. Concurrently, an investigation of sediment quality was conducted at the mouth of the river and within the channel. Based on poor quality findings, project development has since focused on finding a suitable and financially feasible sediment source.

*Three Mile Creek Watershed*- In September 2014, the Three Mile Creek Watershed Plan was published. The Plan includes an assessment of watershed conditions; identification of critical issues, data gaps and new data; sea level rise models and projections; management options; potential restoration and management measures; financing strategies and supporting framework; partnership



*Completion of Joe's Branch Restoration.*

opportunities; and adaptive management prescriptions. In addition it re-introduces the concept of establishing Three Mile Creek as a City of Mobile recreation and eco-tourism destination, including the development of a trail system connecting the University of South Alabama to Langan Park, then Tricentennial Park and ending at Conception St. Road. This comprehensive watershed management plan was funded by MBNEP, EPA, Gulf Coast Asphalt through the Alabama Department of Environmental Management, Alabama Department of Conservation and Natural Resources, Mobile Area Water and Sewer System, and Mobile County. Funding for implementation has begun with a grant application ending to the National Park Services p for construction of the first leg of the trail system, City CDBG funds are slated to pay for trail engineering and design, and EPA has chosen the watershed as one of seven Trash Free Waterways projects across the United States.

*Orange Beach: Highway 161 Wetlands Restoration and Enhancement-* With \$27,500 funding from the MBNEP's Community Ecosystem Restoration Partnership, the City of Orange Beach completed a wetlands expansion and enhancement project along Highway 161 adjacent to Cotton Bayou. At a total cost of \$57,281, the city created a community walking path amenity between the highway and the sidewalk to demonstrate environmentally-friendly and aesthetically pleasing treatment of nutrient-



*Orange Beach Wetlands Restoration and Enhancement, Highway 161.*

impacted stormwater ultimately draining to Cotton Bayou. The project includes enhancement of existing 0.53 acres of wetlands, expansion/creation of 0.93 additional acres of wetlands, plantings with native, dramatically-flowering marsh vegetation, a constructed concrete weir designed to stabilize pool elevation, and installation of educational signage. The project was completed in May, 2014.

#### EDUCATION, OUTREACH, AND CAPACITY BUILDING

*Alabama Current Connection* is a joint semi-annual newsletter published by ADCNR, State Lands Division, Coastal Section and the MBNEP to highlight current projects, Management Conference activities and initiatives, and other issues of interest/concern to local residents. Two newsletters were



*Over 300 volunteers participated in the Take Pride in Toulminville Community Cleanup.*



*A Redfish Tale - Jimbo & Thibodaux.*

published for distribution as hard copies as well as in electronic (PDF) format.

*Clean Water Future Campaign-* Stormwater runoff, considered by the EPA to be the primary source of pollution to American waters, continues to challenge coastal Alabama communities where water bodies on the State 303(d) list are overwhelmingly impaired by pollutants it conveys. In the fall of 2013, the Coastal Alabama Stormwater Team (CAST) initiated by MBNEP, local communities, grassroots groups, the Clean Water Partnership, Weeks Bay NERR, Alabama Coastal Foundation, and Mobile Baykeeper, developed the campaign including development of an informative website ([www.cleanwaterfuture.com](http://www.cleanwaterfuture.com)), a membership program, and a branding logo. *Create a Clean Water Future* is a public service messaging and marketing campaign to help Alabamians learn more about stormwater runoff and its impacts; increase demand for stormwater management programs; and provide tools that empower Alabama residents to reduce polluted runoff in our waterways. Membership in *Create a Clean Water Future* provides municipalities, businesses, or other organizations with a unified mechanism for raising the issue of stormwater management throughout coastal Alabama.

*Take Pride in Toulminville-* On November 23, 2013, as part of the Three Mile Creek watershed planning initiative, the City of Mobile, the MBNEP, the Alabama State Port Authority and other partners hosted the *Take Pride in Toulminville* community cleanup, centered at the Lake Drive/Tricentennial Park. Over 300 volunteers, including City of Mobile's Mayor Stimpson, his Chief of Staff,

and other City elected and appointed officials participated in cleaning accumulated litter from the banks of Three Mile Creek and throughout the city streets of the Toulminville community. The effort provide a template for a flurry of other volunteer litter cleanup events designed to reduce stormwater-borne litter and to increase citizen awareness of the problem.

*Video Productions -* On the tail of successful educational video productions – *A Redfish Tale* and *Fish Slap* – MBNEP continued to use video productions to promote the wise stewardship of Alabama's estuarine waters. In 2014, MBNEP produced two well-received videos. *Understanding the MS4 Process* was created as a primer for elected officials and others to learn about Municipal Separate Storm Sewer System, or MS4 permit, requirements and responsibilities. *The Restoration of Joes Branch* documents the problem, the solution, the politics and the future of managing the D'Olive watershed.

*Community Solutions Fellow-* As part of a U. S. State Department *Community Solutions Program*, MBNEP hosted a Bangladeshi fellow, Civil Engineer Maharam Dakua for four months. As a CSP fellow, Maharam was charged with undertaking field and community outreach efforts to understand and prescribe solutions to problems related to stormwater management and flooding in a low-income, traditionally-underserved, largely-minority community in the Toulmins Spring Branch sub-watershed. His findings were well received at a community presentation at a Prichard City Council meeting. Concurrently, he participated in seven

intensive leadership training courses. As a final component of the Community Solutions Program, Maharam presented his Toulmins Spring project in a competition with the other fellows and tied for first prize- \$25,000 to apply the lessons learned in the US to his community back in Bangladesh.

*Alabama Water Watch-* Alabama Water Watch (AWW) is a citizen volunteer, water quality monitoring program covering all of the major river basins in Alabama. The MBNEP partnered with AWW to expand volunteer monitoring within Alabama's two coastal counties. During the past program year two coastal workshops were conducted and 37 volunteer water monitors were certified/recertified to collect and report water quality data to AWW.

*Coastal Alabama Clean Water Partnership-* As host to the Coastal Basin CWP Facilitator, MBNEP supports activities to reduce the amount of non-point source pollution entering our waterways. The CACWP is part of the Alabama Rain Barrel Project, conducting workshops for citizens to "make and take" a 55-gallon rain barrel. Included in the workshop is an educational session teaching citizens how to protect water quality and conserve water resources. During the past program year, four rain barrel workshops were held in Mobile and Baldwin counties and 50 rain barrels were constructed. Additionally, six rain barrels were donated to local community garden groups, and two barrels were donated to Craighead Elementary School.

**Mobile Bay National Estuary Program Personnel**

Roberta Swann, Director  
Amy Newbold, Deputy Director  
Tom Herder, Watershed Protection Coordinator  
Kelley Barfoot, Community Outreach Coordinator  
Tiffany England, Business & Grants Manager  
Rick Frederick, Business Resources Manager  
Linda Sierke, Project Manager (during 2014 reporting year)  
Christian Miller, Non-Point Source Pollution Specialist







## Resident Research Faculty

**Ruth Carmichael**, Ph.D. Senior Marine Scientist II, DISL and Assistant Professor of Marine Sciences, University of South Alabama. Employing natural abundance stable isotopes to understand biological and physiological responses to environmental perturbations, assessing nutritional importance of food sources, discerning physiological state of organisms, and determining time scales of ecosystem-level change.

**Just Cebrian**, Ph.D. Senior Marine Scientist III, DISL and Professor of Marine Sciences, University of South Alabama. Trophic interactions and carbon budgets in marine ecosystems, nature and controls of trophic routes of primary production in marine and terrestrial ecosystems.



Dr. Just Cebrian

**John Dindo**, Ph.D. Senior Marine Scientist III, DISL and Associate Director for Institutional Advancement. Marine vertebrate ecology; avian breeding biology; predator-prey relationships in avian and herpetological fauna, habitat assessments; and age, size class and recruitment rates of fish on hardbottoms.

**Kelly Dorgan**, Ph.D. – Senior Marine Scientist I, DISL and Assistant Professor of Marine Sciences, University of South Alabama. Benthic ecology; biomechanics of burrowing; biological-physical interactions; functional morphology and physiology of invertebrates.

**Marcus Drymon**, Ph.D. Research Senior Marine Scientist, DISL and Research Assistant Professor, University of South Alabama. Marine fisheries ecology, including assessments of species' life history, distributions and trophic ecology in coastal ecosystems.

**Brian Dzwonkowski**, Ph.D. Senior Marine Scientist I and Assistant Professor, University of South Alabama. Coastal circulation and across-shelf exchange processes; estuarine circulation and exchange processes; physical-biological coupling in the marine environment; and ocean observing systems.

**Kenneth L. Heck, Jr.**, Ph.D. Chair, University Programs, DISL and Professor of Marine Sciences, University of South Alabama. Ecological studies of interactions between seagrasses and associated macrofauna, especially shrimps, crabs, and fishes; Global assessment of seagrass nursery value, and experimental investigations of herbivory, nutrient enrichment and overfishing as they impact seagrass ecosystems.

**Ronald P. Kiene**, Ph.D. Senior Marine Scientist III, DISL and Professor of Marine Sciences, University of South Alabama. Biogeochemical cycling of organic matter in coastal and ocean systems with emphasis on compounds containing sulfur and nitrogen; cycling of climatically important trace gases in relation to phytoplankton and food web dynamics; and microbial ecology and biogeochemistry in sediments.

**Jeffrey W. Krause**, Ph.D. Senior Marine Scientist I, DISL and Assistant Professor, Department of Marine Sciences, University of South Alabama. Diatom ecology and physiology, cyanobacteria physiology, and coupling of the global Silicon, Carbon and Nitrogen cycles in coastal and open-ocean regions.

**Christine (Tina) Miller-Way**, Ph.D. Marine Scientist and Director, Discovery Hall, DISL. Science education - curriculum development, inquiry-based marine science; Research - functional ecology of marine benthos, benthic community structure, macrofaunal effects on benthic processes and coastal hypoxia.

**Behzad Mortazavi**, Ph.D. Senior Marine Scientist II, DISL and Assistant Professor and Director of the University of Alabama M.S. Degree Program in the Marine Sciences. Focus on the transfer and cycling of bioreactive material in terrestrial and marine ecosystems, with a particular emphasis on how naturally occurring perturbation and anthropogenic activities are impacting biogeochemical cycles.

**Alice C. Ortmann**, Ph.D. Senior Marine Scientist I, DISL and Assistant Professor of Marine Sciences, University of South Alabama. Diversity and ecological roles of marine microbes including Bacteria, Archaea and their viruses using both culture-based and molecular biology techniques.

**\*Kyeong Park**, Ph.D. Senior Marine Scientist II, DISL and Professor of Marine Sciences, University of South Alabama. Physical transport processes and their effects on water quality and living resources in tidal rivers, estuaries and coastal systems, using field data, theoretical analyses and numerical models. Specific topics include estuarine residual circulation, dispersion of pollutants, sediment transport, eutrophication, hypoxia/ anoxia, etc.

**Will Patterson**, Ph.D. Senior Marine Science I, DISL and Associate Professor, Department of Marine Sciences, University of South Alabama. Research areas include population dynamics, trophic dynamics, and population structure of marine fishes.

**Sean Powers**, Ph.D. Senior Marine Scientist III, DISL and Assistant Professor of Marine Sciences, University of South Alabama. Fisheries, experimental ecology, conservation and restoration of coastal shellfish and finfish populations.

**John F. Valentine**, Ph.D. Executive Director DISL and Professor of Marine Sciences, University of South Alabama. Current interests focus on the role of biotic processes in controlling the flow of energy among trophic levels in marine habitats, particularly herbivory on seagrasses. The application of conservation techniques for the protection of nearshore marine ecosystems. The use of marine protected areas to test the impacts of higher order consumers on the strength of trophic linkages between seagrass and coral reef habitat.



*Dr. Behzad Mortazavi is currently serving at the National Science Foundation (NSF) as a program director with the Ecosystem Science Cluster.*

#### **Post Doctoral Fellows**

Jennifer Hill

Justin Liefer \*

\*Indicates faculty/fellow no longer at DISL.



## Faculty Activity

### Faculty News and Awards

#### *Ron Kiene*

University of South Alabama National Alumni Association, 2014 Olivia Rambo McGlothren Outstanding Scholar Award. Dean's Lecture Award 2014, College of Arts and Sciences, University of South Alabama. For career excellence in scholarship. Lecture to be given October 23, 2014.

### Book Chapters and Projects

Powers, S. P. and K.E. Boyer, 2014. Marine Restoration Ecology, Ch. 22. In: M.D. Bertness, J.F. Bruno, B.R. Silliman and J.J. Stachowicz, Eds., Marine community ecology and conservation, Sinauer Associates, Sunderland, MA.

Valentine, J. F., K. L. Heck, Jr., M. R. Dardeau and H. Burch. 2013. Ecosystem-based management of Mobile Bay, Alabama. Pp.71-92, In: J.W. Day and A. Yanez-Arancibia (Eds.), Gulf of Mexico Origin, Waters, and Biota. Volume 4 - Ecosystem-Based Management. Texas A & M University Press, College Station, TX. 466 p.

### Peer Reviewed Publications

Ajemian, M. J. and S. P. Powers. 2014. Towed-float satellite telemetry tracks large-scale movement and habitat connectivity of myliobatid stingrays. *Environmental Biology of Fishes* 97: 1067-1081.

Amrani, A., W. Said-Ahmad, Y. Shaked and R. P. Kiene. 2013. Sulfur isotope homogeneity of oceanic DMSP and DMS. *Proceedings of the National Academy of Sciences, USA*, 110(46), 18413–18418. doi: 10.1073/pnas.1312956110

Bernard, R., B. Mortazavi, L. Wang, A. Ortmann, H. MacIntyre and B. Burnett. 2014. Spatial and temporal variability in benthic nitrogen fluxes in a eutrophic temperate coastal lagoon. *Marine Ecology Progress Series* 504:13-26.

Bernard, R. J., B. Mortazavi, L. Wang, A. C. Ortmann, H. MacIntyre and W. C. Burnett. 2014. Benthic nutrient fluxes and limited denitrification in a sub-tropical groundwater-influenced coastal lagoon. *Marine Ecology Progress Series* 504:13-26.

Bracken, M. E. S, H. Hillebrand, E. T. Borer, E. W. Seabloom, J. Cebrian, E. E. Cleland, J. J. Elser, D. S. Gruner, W. S. Harpole, J. T. Ngai and J. E. Smith. 2014. Signatures of nutrient limitation and co-limitation: responses of autotroph internal nutrient concentrations to nitrogen and phosphorus additions. *Oikos* DOI: 10.1371/0058376.

Cebrian, J., D. Corcoran and J. Lartigue. 2014. Eutrophication-driven shifts in primary producers in shallow coastal systems: implications for system functional change. *Estuaries and Coasts* 37 (Suppl. 1):S180-S197

Christiaen, B., A. McDonald, J. Cebrian and A. C. Ortmann. 2013. Response of the microbial community to environmental change during seagrass transplantation. *Aquatic Botany* 109:31-38.

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D'Ambra, I., R. H. Carmichael and W. M. Graham. 2014. Determination of  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$  and trophic fractionation in jellyfish: implications for food web ecology. *Mar. Biol.* 161:473-480.

Dahl, K. A. and W. F. Patterson III. 2014. Density and diet of rapidly expanding invasive lionfish populations in the northern Gulf of Mexico. *PLoS ONE* 9(8): e105852. doi: 10.1371/journal.pone.0105852

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H. B. Swan and B. D. Eyre. 2014. Dimethylsulphoxide (DMSO) in biological samples: a comparison of two methods based on  $\text{TiCl}_3$  or  $\text{NaBH}_4$  reduction. *Marine Chemistry* 164:9-1.

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- Wessel, C. and J. Cebrian. 2014. Assessing the abundance, distribution and toxicity of microplastics in nearshore areas of the Gulf of Mexico. Gulf Coast Graduate Student Symposium, February 21-23, Chauvin, LA (LUMCON).
- Wessel, C., A. McDonald, L. Yokel and J. Cebrian. 2014. Developing an evaluative tool for prioritizing removal or repurposing of derelict vessels to improve watershed habitats. Alabama Water Resources Conference, September 3-5, Orange Beach, AL.
- Wilson, B. J., B. Mortazavi and R. P. Kiene. 2014. Spatial and temporal variability in methane and carbon dioxide exchange at three coastal marshes along a salinity gradient in a northern Gulf of Mexico estuary. American Geophysical Union Meeting, San Francisco, CA, December.
- Wu, W., H. Huang, E. S. Darrow and R. H. Carmichael. 2014. LULC change in Grand Bay watersheds, landscape metrics, and links to water quality. NOAA NERRS National Science Collaborative Stakeholder Workshop, Grand Bay NERR, Moss Point, MS "Grand Bay: Planning the future with an eye on the past".
- Other Presentations*
- Cebrian, J. 2014. Can functional equivalency mitigate anthropogenic change in shallow coastal ecosystem services? Gulf Breeze EPA Laboratory, Gulf Breeze, FL, August.
- Dahl, K. A., W. F. Patterson III and J. H. Tarnecki. 2014. Invasive Pacific lionfish: ongoing research in the northern Gulf of Mexico. Institute for Marine Mammal Studies. 7 October, Ocean Springs, MS.
- Dorgan, K. M. 2013. Bigelow Laboratory for Ocean Sciences, East Boothbay, ME, October 3.
- Dorgan, K. M. 2014. Gulf Coast Research Laboratory, University of Southern Mississippi, February 13, Ocean Springs, MS.
- Dorgan, K. M. 2014. Whitney Lab, University of Florida, February 21, St. Augustine, FL.
- Dorgan, K. M. 2014. Environmental Protection Agency Gulf Ecology Division, March 19, Gulf Breeze, FL.
- Drymon, J. M. 2014. Applying ecology to the fisheries management of sharks in the Gulf of Mexico. Institute of Marine Mammal Studies Guest Lecture.
- Drymon, J. M. 2014. Stable isotope analysis as a tool in elasmobranch feeding studies. University of North Florida Shark Ecology Course Guest Lecture.
- Dzwonkowski, B. 2014. Transport and circulation in the coastal environment. Marine Sciences Program, Department of Earth and Environmental Science, Montclair State University, Montclair, NJ, Feb 4.
- Dzwonkowski, B. 2014. Temporal and spatial variability in Broad Sound, Casco Bay, ME. Marine Science Student Organization, University of Maine, Apr. 7.
- Dzwonkowski, B. 2014. Transport and circulation in the coastal environment. Marine Sciences Program, Department of Marine Science, University of Southern Mississippi, Stennis Space Center, MS, May 1.
- Dzwonkowski, B. 2014. Transport and circulation in the coastal environment. Department of Marine Sciences Program, University of South Alabama, Mobile, AL, May 19.
- Kiene, R. P. 2014. The smell of the sea: natural sulfur emissions with global impact. Source Evaluation Society (SES), Annual Conference, Grand Hotel, Point Clear, AL.
- Krause, J. W. 2014. Can Silicon structure coastal plankton food webs? Gulf Coast Research Laboratory, University of Southern Mississippi. 18 September.
- Krause, J. W. 2014. The biotic and abiotic controls on the Silicon cycle in the northern Gulf of Mexico. Department of Chemistry, University of South Alabama. 26 September.
- Mortazavi, B. 2014. Nitrogen Cycling at the Land Water Interface: Is Recovery In Highly Impacted Estuaries Possible? National Science Foundation, Division of Environmental Biology, Arlington, VA, March 10.
- Ortmann, A. 2013. The response of coastal microbes to oil and dispersant in experimental mesocosms. Sigma Xi, University of Alabama Birmingham, Birmingham, AL
- Park, K. 2013. Jubilee, a celebratory hypoxia-related event in Mobile Bay, Alabama. Chungnam National University, Department of Environmental Engineering, Daejeon, Korea, November 28.
- Park, K. 2014. Research, education and administration. Texas A&M University at Galveston, Department of Marine Sciences, Galveston, TX, April 2.
- Park, K. 2014. Water quality modeling in aquatic systems. Chungnam National University, Department of Environmental Engineering, Daejeon, Korea, May 23.
- Park, K. 2014. Physical-biogeochemical modeling for oceanic systems. Seoul National University, School of Earth and Environmental Sciences, Seoul, Korea, May 31.
- Park, K. 2014. Observational data, what can be done with them and what do they tell us: examples in coastal waters. Inha University, Department of Ocean Sciences, Incheon, Korea, June 12.
- Park, K. 2014. Water quality modeling in estuarine and coastal systems: concept and an example application. Hanyang University, Department of Civil and Environmental Engineering, Seoul, Korea, July 11.
- Patterson III, W.F. 2014. Population demographics and stock mixing in king mackerel, *Scomberomorus cavalla*. Universidad Autónoma de Campeche. 19 February, Campeche, Mexico.
- Patterson III, W. F. 2014. Acute and chronic effects of the Deepwater Horizon Oil Spill on northern Gulf of Mexico reef fish communities. Stratus, Inc. 4 April, Boulder, CO.
- Patterson III, W. F. 2014. Remotely operated vehicle marine research applications in the northern Gulf of Mexico. Deep-C GoMRI Student ROV Competition. 25 April, Dauphin Island, AL.
- Patterson III, W. F. 2014. Remotely operated vehicle marine research applications in the northern Gulf of Mexico. Deep-C GoMRI Consortium Teacher ROV Workshop. 14 June, Dauphin Island, AL.

Powers, S. P. 2013. Policy challenges revealed by the assessment of ecological damage from the Deepwater Horizon Oil Spill in the Gulf of Mexico. Cambridge University, UK.

Workshops, Meetings Attended or Organized

*Ruth Carmichael*

Grand Bay: Planning the future with an eye on the past, NOAA NERRS National Science Collaborative Stakeholder Workshop hosted by DISL (PI Carmichael) and Grand Bay NERR, Moss Point, MS, 2014.

Gulf of Mexico Oil Spill and Ecosystem Science Meeting, Mobile, AL, 2014.

*Just Cebrian*

International Integration Workshop on Sea Level Rise, Merida, Yucatan, Oct 21-23, 2013. Gulf of Mexico Foundation/Gulf of Mexico Alliance/Gulf of Mexico Program Facilitator for Panels "Sea-Level Rise in the Gulf of Mexico: Observed and Potential Impacts on the Ecosystems

and Communities" and "Measurement and Mitigation of Sea-Level Rise's Long-Term Impacts on Wetland Equilibrium and Coastal Erosion" at the International Integration Workshop on Sea Level Rise, Merida, Yucatan, Oct 21-23, 2013. Gulf of Mexico Foundation/Gulf of Mexico Alliance/Gulf of Mexico Program

Presentation for partners (Volkert Inc., Alabama Department of Conservation and Natural Resources, Alabama Department of Marine Resources) of the Little Bay restoration project, November 2013. 5<sup>th</sup> Ecosystem Approach to Management (EAM) Workshop, Baton Rouge 15-17 April 2014

GRSMMP Subcommittee workshop (GOMA-HCRT Blueprint meeting), Pensacola, August 19-20, 2014 Presenter at the Carbon Market Credits and Conservation Benefits Workshop for landowners and managers, September 2014

Member of Program Committee for the professional meeting 2014 RAE (Science and Technology subcommittee) Member of Program Committee for the professional meeting 2014 Bays and Bayous (chair of the Habitat session)

*Kelly Dorgan*

2014 Gulf of Mexico Oil Spill and Ecosystem Science Conference, January 26-29, 2014, Mobile, AL.

SoftComp Topical Workshop: Fracture of Soft Materials: from soft solid to complex fluids, October 15-18, 2014, Palavas-les-Flots, France.

*Brian Dzwonkowski*

Panelist, Resiliency in Maine, Sea Grant Symposium, University of Maine, Apr 3, 2014.

*Ron Kiene*

6<sup>th</sup> International Symposium on DMSP and related Sulfur Compounds, Barcelona, May 26-30, 2014. Presented paper and was co-author on many others.



*Drs. Cebrian and Heck led a graduate student field class in Alicante, Spain. Left to right: Whitney Scheffel, Trey Spearman, Aaron Macy, Ken Heck, Tito Ferrero, Caitlin Wessel, Just Cebrian and Felio Lozano (middle)*

Discussion Session Leader, 6<sup>th</sup> International Symposium on DMSP and related Sulfur Compounds, Barcelona, Spain, May 26-30, 2014.

*Jeff Krause*

Ocean Sciences Meeting (AGU, ASLO, TOS). Honolulu, HI, February 2014. Southeastern Biogeochemical Symposium. Atlanta, GA, April 2014.

*Behzad Mortazavi*

Organizing Member of a session entitled: The Many Faces of the Marine N Cycle at the 2014 Ocean Sciences Meeting in Honolulu, HI, 2/23/2014 to 2/28/2014.

UA Spring 2014. E.O. Wilson Biodiversity Workshop Organizing Committee Member

*Will Patterson*

Data-Limited Methods Workshop, Gordon and Betty Moore Foundation and the Natural Resources Defense Council, Miami, FL, January 15-17, 2014 (invited)

Co-Chair for session Integrated Understanding of the Impacts of the DWH Oil Spill on Fisheries: Exposure Vectors, Biological-Physiological Effects and Abundance of Fisheries Populations. 2014

Gulf of Mexico Research Initiative Meeting. 26-29 January, 2014, Mobile, AL.

Vectors, Biological-Physiological Effects and Abundance of Fisheries Populations. 2014 Gulf of Mexico Research Initiative Meeting. 26-29 January, Mobile, Alabama.

*Sean Powers*

Panelist, Gulf of Mexico Spanish Mackerel Assessment Workshop, 2013.

Panelist, Gulf of Mexico Red Snapper Benchmark Assessment Workshop, 2012-2013.

Co-chair, Program Committee for 2014 Alabama-Mississippi Bays & Bayous Symposium

Public Outreach & Other Service

*Ruth Carmichael*

Mobile Propeller Club, Mobile, AL, Presentation - 'Shallow water phantoms: Understanding Alabama Manatees,' 2014.

Dog River Clearwater Revival, Mobile, AL, Presentation - 'Shallow water phantoms: Understanding Alabama Manatees,' 2014.

Alabama Master Naturalist: Coastal Program, Alabama Bays & Coastal Waters, Dauphin Island, AL, Presentation - 'Manatees and other marine mammals in Alabama coastal waters,' 2014.

Philanthropic Educational Organization International, Mobile, AL, Presentation - 'Dauphin Island Sea Lab & Manatee Research,' 2014.

Maintain DISL's Manatee Sighting Network Facebook page (1,668 fans from 5 states and 15 countries), 2014.

DISL Discovery Day, Dauphin Island, AL, Presentation, 2014.

MS Department of Marine Resources/ Grand Bay National Estuarine Research Reserve, Fall Science Seminar Oysters: Science on the Half Shell, Biloxi, MS 'Using oyster shells to trace historical nitrogen sources to Grand Bay, MS,' 2013.

Coastal and Estuarine Research Federation (CERF) Newsletter, Affiliate Society News for Gulf Estuarine Research Federation (three issues per year). Also, Maintain Gulf Estuarine Research Society Facebook page (118 fans from 4 Gulf of Mexico states and 2 countries), 2013.

Maintain Gulf Estuarine Research Society Facebook page (>165 fans from 12 states and 4 countries), 2011-2014.

*Just Cebrian*

Sponsored two visiting scientists: Stacey Trevathan-Tackett (University of Technology, Sydney, Australia) and Laurent Hutchinson (Texas A&M University), 2014.

DISL Discovery Day Presentation, 2014.

*Kelly Dorgan*

DISL Discovery Day Presentation, 2014.

*Marcus Drymon*

DISL Discovery Day, Presentation, 2014.

*Brian Dzwonkowski*

Judge for University of Maine Graduate Student Symposium (May 13-14, 2014).

Co-coordinator of the University of Maine, School of Marine Science Seminar Series, 2014.

Panelist, Resiliency in Maine, Sea Grant Symposium, University of Maine (Apr 3, 2014).

*Jeff Krause*

O William, Where art Thou? Mobile Genealogical Society. 8 March 2014. Diatoms and Nutrient Cycling. Discovery Hall High School Summer School, Dauphin Island Sea Lab. 9 July 2014.

Around the world with phytoplankton. Dauphin Island Sea Lab: Discovery Day. 12 April 2014.

Your diatomaceous name. Dauphin Island Sea Lab: Discovery Day. 12 April 2014.

Don't sink too fast – an activity on adaptation (lesson adapted from "Plankton Races", COSEE OCEAN, Dr. Bob Chen, bob.chen@umb.edu). Dauphin Island Sea Lab: Discovery Day. 12 April 2014.

Like to breathe? Thank phytoplankton! (adapted from "Breath Calculation" activity about phytoplankton, National Geographic Education activity). Dauphin Island Sea Lab: Discovery Day. 12 April 2014.

Dauphin Island Sea Lab: Alabama's marine science education and research laboratory. National Active and Retired Federal Employees Associations (NARFE) Chapter 318 Monthly Meeting. 13 March 2014.

*Behzad Mortazavi*

Participated in a 10 day field campaign in New Jersey working with colleagues at Rutgers. Made measurements of march methane efflux and determined the isotopic composition of the emitted methane.

*Alice Ortmann*

Identifying likely sources of fecal contamination of Little Lagoon, Alabama. Little Lagoon Preservation Society, Gulf Shores, AL

Continued to work with Kevin Dolbear and his classes at the Alabama School of the Math and Sciences. I hosted several sample collection and processing days at my lab, with many of my students participating.

Participated in Discovery Day at DISL from 2011 – 2014.

Animal Rescue Foundation – Volunteer, Grant Writer, Fostering, Fundraising

*Will Patterson*

Assistant Judge, Alabama Deep Sea Fishing Rodeo, Mobile Jaycees, 2012-2014

*Sean Powers*

Deep Sea Fishing Rodeo, Assistant Rodeo Judge, Mobile Jaycees

Nature Conservancy, Board Member, Global Oyster Task Force

Lionfish Regional Control Workshop

Offices, Boards, Panels, Consulting

*Ruth Carmichael*

Academic Editor, PLoS ONE (International), 2013-present.

Associate Editor, Estuarine Coastal and Shelf Science (International), 2013-present.

Review Editor, Aquatic Biology (International), 2012-present.

Editorial Board, Coastal and Estuarine Science News (CESN) (International), 2012-present.

President, Gulf Estuarine Research Society (GERS), Coastal and Estuarine Research Federation affiliate (Regional affiliate of national federation), 2011-2013.

Governing Board, Coastal and Estuarine Research Federation (International), 2011-2013.

International Relations Committee Scientific Advisory Committee, CERF Argentina 2012

Member, Science Advisory Committee, Mobile Bay National Estuary Program (Regional), 2010-present.

Advisor, Ecological Research Development Group, Lewes, DE (Regional), 2007-present.

#### *Just Cebrian*

Member of the Executive Committee and Subject Matter Expert (Perdido Coastal Lagoons) for the GOM Digital Atlas Development Team organized and coordinated by NCCDDC (NOAA). January 2011-present.

State of Alabama representative for the Gulf of Mexico Alliance Steering Committee on Habitat Conservation and Restoration. February 2011-present.

Member of the Science Advisory Committee for the Mobile Bay National Estuarine Program. April 2011-present.

Member of the Northern Gulf Institute Council of Fellows. September 2011-present.

Member of the NOAA Integrated Ecosystem Assessment-Ecosystem Services Working Group led by Chris Kelble. May 2012-present.

Advisory member of the NASA-funded project: "The Application of Remotely Sensed Data and Models to Benefit Conservation and Restoration along the Northern Gulf of Mexico Coast" led by Maurice Estes.

Member of the Alabama TNC Scientific Advisory Council for the development of restoration criteria in the 100:1000 Restoration Partnership.

Member of the Science Advisory Committee for the Mobile Bay National Estuarine Program. April 2011-present.

Member of the Northern Gulf Institute Council of Fellows. September 2011-present.

Member of the NOAA/Gulf of Mexico Sea Grant Hydrological Restoration Monitoring Panel for successful restoration

partnership in the Gulf of Mexico (two working groups: "SAV" and "Nekton") September 2011-present.

Elected Contributing Member of "Faculty of 1000", Marine and Freshwater Ecology Section, 2011-present.

Contributing Editor, Marine Ecology Progress Series, 2007-present.

Board Member, The Open Oceanography Journal, 2007-present.

Board Member, The Open Marine Biology Journal, 2007-present.

Associate Editor, Gulf and Caribbean Research (journal discontinued), 2010-2013.

Board Member, International Scholarly Research Network Ecology Journal, 2010-present.

Academic Editor, PLoS (Public Library of Science), 2011-present.

#### *Marcus Drymon*

Member of SEAMAP HMS Advisory panel, attended SEDAR 34 shark assessment.

#### *Ken Heck*

Editor, Gulf of Mexico Science Senior Sub-Editor, Marine Ecology Progress Series.

President, Coastal and Estuarine Research Federation (CERF), 2011-present.

Adjunct Professor, School of Plant Biology, University of Western Australia.

Adjunct Faculty, Department of Biological Sciences, University of Alabama.

Member, U.S. Environmental Protection Agency Science Advisory Board Nutrient Criteria Review Panel.

Member: Scientific Advisory Committee, Mobile Bay NEP.

Member of the Coral Reef Scientific and Statistical Committee, Gulf of Mexico Fisheries Management Council.

Chesapeake Bay SAV Restoration Review Panel for CB Scientific and Technical Advisory Committee, 2009-present.

Director, Shelby Center for Ecosystem Based Fisheries Management DISL Faculty Annual Review Committee (Chair).

Member of the Ecosystem Scientific and Statistical Committee, Gulf of Mexico Fisheries Management Council.

#### *Ron Kiene*

Provided consulting services to J.P. Courtney Law, regarding sulfur odor in Eight Mile Alabama (derived from t-butyl mercaptan spill/leak). Provided 2 days of legal deposition in said case. 2013.

Associate Editor, Marine Chemistry, January, 1996 - present.

Contributing Editor, Marine Ecology-Progress Series, January, 2008 - present.

Member, Advisory Board, Chemical Proficiency Testing - DMSP and DMS certified standard intercalibration. October 2011- present.

Member, Chemical Proficiency Testing - DMSP and DMS certified standard intercalibration. October 2011- present.

#### *Behzad Mortazavi*

Director MS program in Marine Sciences, University of Alabama.

UA representative on the Board on Oceans and Atmosphere at the Association of Public and Land Grant Universities, serve at the discretion of Provost Bonner at UA, July 2011-present.

#### *Alice Ortmann*

Member, American Society of Limnology and Oceanography.

Associate Member, American Society for Virology.

Member, American Society of Microbiology.

Member, International Society for Microbial Ecology.

#### *Will Patterson*

Chair, Standing Statistical and Scientific Committee of the Gulf of Mexico Fishery Management Council, 2013-present.

Member, Standing Statistical and Scientific Committee of the Gulf of Mexico Fishery Management Council, 2005-2013.

Co-chair, Program Committee for 2014 Alabama-Mississippi Bays & Bayous Symposium. Mobile, Alabama.

Co-Chair for session Integrated Understanding of the Impacts of the DWH Oil Spill on Fisheries: Exposure, 2014.

Southeast Data, Assessment, and Review (32 panelists including W.F. Patterson III). SEDAR 38, 2014 - Gulf of Mexico and South Atlantic King Mackerel Data Workshop Report. SEDAR, North Charleston, SC, USA. 250 pp.

Southeast Data, Assessment, and Review (6 panelists including W.F. Patterson III). SEDAR 32 South Atlantic, 2013 - Blueline Tilefish Review Workshop Report. SEDAR, North Charleston, SC, USA. 25 pp. 2013.

Southeast Data, Assessment, and Review (6 panelists including W.F. Patterson III). SEDAR 32A Gulf of Mexico - Menhaden Review Workshop Report. SEDAR, North Charleston, SC, USA. 19 pp. 2013.

Associate Editor, Gulf of Mexico Science, 2013-present

Editorial Board, Reviews in Fisheries Science and Aquaculture, 2012-present.

Appointed Member, Alabama Department of Conservation and Natural Resources Marine Resources Division State Record Fish Committee, 2012-present.

Consultant, Stratus Consulting, Boulder, Colorado. Tasks include review of sampling design, data analysis and interpretation, and report preparation for Natural Resources Damage Assessment of northern Gulf of Mexico mesophotic reefs following the Deepwater Horizon Oil Spill.

#### *Sean Powers*

Alabama Department of Conservation and Natural Resources Marine Resources Division State Record Fish Committee Natural Resource Damage Assessment—mesophotic reefs and reef fishes in the northern Gulf of Mexico.

Chair, Gulf of Mexico Fishery Management Council's Scientific and Statistical Committee, 2013-2014.

Member, Gulf of Mexico Fishery Management Council's Scientific and Statistical Committee, 2009-2013.

National Research Council (US). Member. Committee on U.S. Army Corps of Engineers Water Resources Science, Engineering, and Planning: Coastal Risk Reduction, 2013-2014.

Chair, Gulf States Fisheries Commission, Blue Crab Stock Assessment review, 2013.

Associate Editor, Gulf of Mexico Science, 2004-2013.

NOAA and U.S. Department of Justice, Damage Assessment and Restoration, via Industrial Economics. Fisheries and habitat damage assessments for the Deepwater Horizon Oil Spill, 2010-2014.

Chair, Gulf of Mexico Greater Amberjack Benchmark stock assessment review panel, 2014.

Chair, Gulf of Mexico Gag Grouper Benchmark stock assessment review panel, 2014.

Panelist, Gulf of Mexico Spanish Mackerel Assessment workshop, 2013.

Panelist, Gulf of Mexico Red Snapper Benchmark Assessment workshop, 2012-2013.

#### Committee Service

*Ruth Carmichael*  
Co-Chair, DISL Seminar Series, 2008-present.

Co-Chair, Wiese Distinguished Lecture Series, University of South Alabama, 2008-present.

Student Recruitment Committee, University of South Alabama, 2008-present.

*Just Cebrian*  
Co-Chair, DISL Seminar Committee, 2001-present.

Member DISL SMS Search Committee, 2006-present.

Chair, DISL SMS Search Committee, 2012-2013.

Member, DISL Promotion and Tenure Committee, 2006-present.

Member, USA Marine Sciences Promotion and Tenure Committee, 2006-present.

Co-Chair, USA Marine Sciences Wiese Distinguished Lecture Series, 2008-present.

Member of "Faculty of 1000", Marine and Freshwater Ecology Section, Elected Contributing, 2011-present.

Member of the NSF Ecosystem Panel, Fall 2013.

*Ken Heck*  
Chair, DISL Faculty Annual Review Committee.

USA Faculty Representative for DISL Grad Student Organization.

*Ron Kiene*  
DISL Promotion Review Committee.

DISL Fellowship Policies Committee (Chair) (inactive).

DISL FDA Fellowship Liason

USA Academic Standards Committee (inactive).

USA Policies and Procedures.

USA Curriculum Committee (Chair).

USA Graduate Coordinator.

USA Research Integrity Workshop coordinator.

USA Tenure and Promotion Committee USA Graduate Arts and Sciences.

Program Committee (GASP) Research Conduct and Ethics Committee (inactive).

USA Research Conduct and Ethics Committee.

#### *Jeff Krause*

Member, 2013-2015 DISL Fellowship Committee.

Member, 2013-2015 USA Fellowship Committee.

*Behzad Mortazavi*  
Member, Library Committee, UA  
Director, Marine Sciences MS Program, UA.

UA Microbiology Faculty Search Committee Fall 2013.

UA representative to the Board of Oceans and Atmospheres at the Association of Public and Land-Grant Universities.

#### *Alice Ortmann*

Arts and Sciences Support and Development Award Committee, 2013.

Graduate Student Curriculum Committee Policy and Procedures Committee USA Arts & Sciences Support and Development Award Committee, 2013.

USA Research Faculty Search Committee, 2013.

#### *Kyeong Park*

Chair, Policy and Procedures Committee, USA.

Member, Curriculum Committee, USA.

Member, Finance Committee, USA.

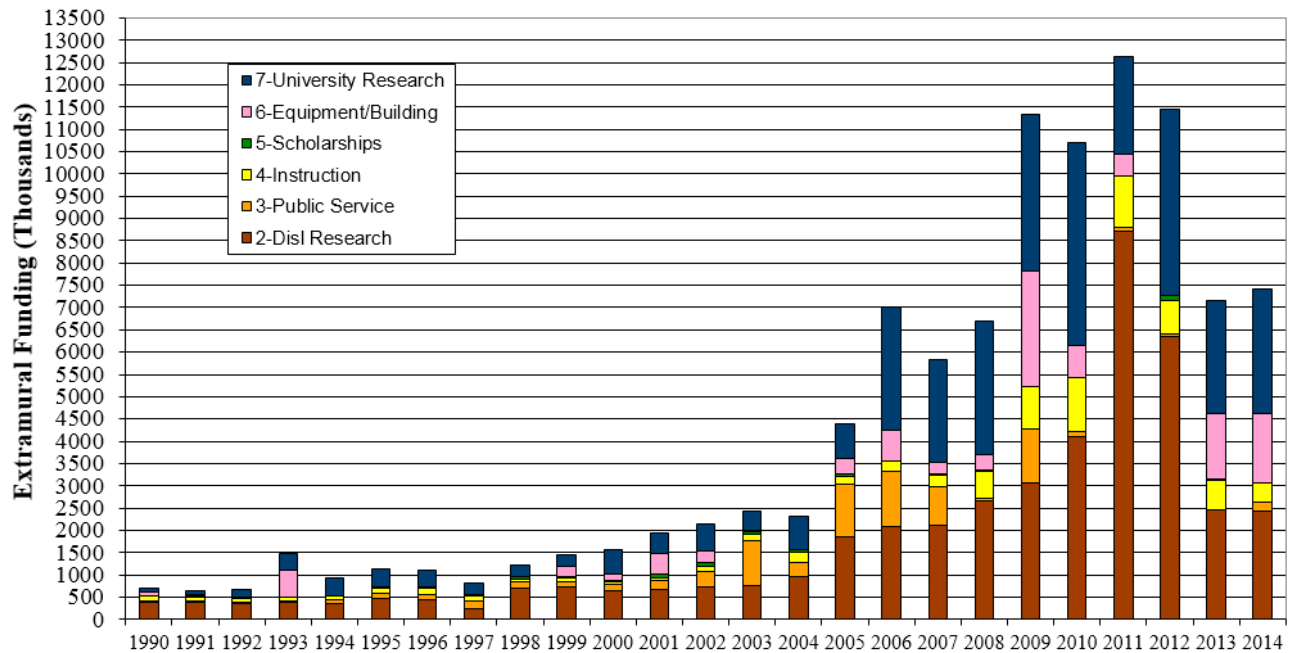
Chair, Tenure Review Committee for Dr. W. Patterson (2013-2014).

#### *Will Patterson*

Chair, DISL Data Management Committee, DISL.

Member, DISL Estuarium Committee.

# Extramural Funding



Chair, USA Marine Sciences Recruitment and Orientation Committee.

Member, USA Summer Professional Development Committee.

Chair, DISL LA-ICP-MS User's Committee.

Chair, USA Marine Sciences Recruitment and Orientation Committee.

Member, USA Marine Sciences Policies and Procedures Committee.

Member, USA Marine Sciences Curriculum Committee.

Member, USA Arts and Sciences Summer Professional Development Committee.

*Sean Powers*

Member, College of Arts & Sciences Awards Committee, USA, 2013-2014.

President's Policy Improvement Committee, 2014-present.

Grants in Force  
*Ruth Carmichael*

Determining sources, history and status of eutrophication at Naval Station Guantanamo Bay, Cuba, US Army Corps of Engineers (USACE), (PI Florida Atlantic University \$116,753; \$28,340 Carmichael portion of award), 2014

Support for the Alabama Marine Mammal Stranding Network, National Fish and Wildlife Foundation (NFWF), \$94,000, 2014, PI

Water quality in Bangs Lake: Effects of recurrent phosphate spills to a coastal estuary, MS Water Resources Research Institute (MWRRI), \$77,957 (K. Dillon PI; \$5,513 Carmichael Portion), 2014-2015

A circulation and transport model for fishery management in Mobile Bay and Eastern Mississippi Sound, Mississippi-Alabama Sea Grant Consortium, \$149,876, 02/01/14 – 01/31/15, Co-PI with K. Park.

Enhanced monitoring of Alabama's tagged manatees and comparison to the nGOM manatee opportunistic sighting database, ADCNR, \$42,429, 10/01/13 – 09/30/14, PI.

Acquisition of a Laser Ablation Inductively Coupled Plasma Mass Spectrometer to Support Marine Science Research and Education in the Northern Gulf of Mexico, NSF, \$314,725, 07/01/13-06/30/14, Co-PI with W. Patterson

Alabama Marine Mammal Stranding Network: A Strategy for strengthening and sustaining an efficient stranding response and research unit, Alabama EMA, \$1,262,355, 08/01/12 – 07/31/14, PI.

Support of NOAA's Marine Mammal Health and Stranding Response Program (MMSHRP) in the northern Gulf of Mexico through the NGI: Alabama Marine Mammal Stranding Response, NOAA/NGI, \$3,000 10/01/13, PI

A history of mercury impacts to Waquoit Bay clams, WHOI Sea Grant, \$14,600, 08/14 – 07/16, PI

*Just Cebrian*

Regional Living Shorelines Construction Technical Bulletins for Contractors, GOMA (HCRT), \$51,700, 01/14-01/16, Co-PI (with Carl Ferraro, Mike Shelton, Tom Herder and Bret Web)

Assessing the abundance, distribution and toxicity of microplastics in Mobile Bay, AL, USA Center for Resiliency, \$20,000, 04/14-12/15, PI (with co-PI David Battiste)

Occurrence and accumulation of marine debris on barrier islands in the Northern Gulf of Mexico, NOAA Marine Debris Program, \$44,108, 04/14-05/16, PI

Living Shoreline Restoration for Fowl River Private Owners, The Nature Conservancy, \$14,860 (\$9,200 supplement), 04/14-12/15, PI

Data Management in Support of NOAA's Integrated Ecosystem Assessment for the Gulf of Mexico: The Dauphin Island Sea Lab's Data Management Center, NOAA/NCDDC, \$85,094, 04/14-05/15, Co-PI (with Ken Heck)

Expanding the Integrated Ecosystem Assessment for Northern Gulf of Mexico Estuaries, The Northern Gulf Institute, \$100,000, 04/14-12/15, Co-PI (with Steve Ashby and Scott Milroy)

Reducing runoff pollution in coastal waters through marsh restoration: implementing

decision support tools for stakeholders, USFWS, \$19,550, 09/14-12/15, PI

Comprehensive Watershed Development Plan for Fowl River, NFWF-MBNEP, \$250,000, 08/14-12/15, Co-PI (with Lee Walters and Doug Robinson)

Monitoring in small embayments as early warning system for ecosystem change on larger spatial scales, NOAA/NCDDC, \$56,000, 11/13-10/14, PI

Ecosystem Services Provided by Gulf of Mexico Habitats: Tools, Valuation, and Application, National Sea Grant, \$843,306, 02/12-01/14, Co-PI (with D. Yoskowitz and C. Carollo)

Monitoring of Little Bay restored marsh, Alabama Department of Conservation and Natural Resources, \$18,000, 10/13-09/14, PI

Ecosystem services and restoration of Mobile Bay: an analysis of the environmental value regained with restoration of coastal habitats in Mobile Bay, Mobile Bay National Estuarine Program, \$40,000, 08/12-07/14, PI

Exploring the cost-effectiveness of restored marshes as filters of runoff pollution in a world of rising seas, NOAA/ Science Collaborative, \$371,099, 10/12-09/14, Co-PI (with J. Cherry and C. Tobias)

Evaluation of the Pelican Point Habitat Restoration Project, National Fish and Wildlife Foundation, \$87,654, 05/13-04/15, Co-PI (with K. Heck)

Addressing derelict vessels and habitat impairment in the Dog River Watershed, Mobile, Alabama, NOAA Marine Debris Program, \$201,729, 09/13-12/14, Co-PI (with J. Dindo and L. Yokel)

#### *Marcus Drymon*

Using acoustic and satellite telemetry to track movement of Alabama's state saltwater fish, Atlantic tarpon (*Megalops atlanticus*), Mississippi Alabama Sea Grant Consortium, \$19,112, 2014-2015, PI

Using sharks as a tool to evaluate ecosystem health in coastal Alabama, USA Center for Environmental Resiliency, \$9,000, 2014, PI

Expanding the shark and ray teaching collection at the Dauphin Island Sea Lab, USA Support and Development Fund, \$934, 2014, PI

Ecosystem based fisheries assessment of reef fishes in the northcentral Gulf of Mexico, Marine Fisheries Initiative

(MARFIN), \$322,979, 2013-2015, Co-PI (with S. Powers)

Assessing reef fish and shark populations in coastal Alabama via fishery-independent surveys, AL Department of Conservation and Natural Resources, Marine Resources Division, \$195,000, 2014, Co-PI (with S. Powers)

Genetic monitoring and stock structure of two large coastal sharks using high throughput next-generation sequencing, NOAA Cooperative Research Program (CRP), \$9,063 (MD portion), 2014, Collaborator

#### *Ken Heck*

Evaluation of the Pelican Point Habitat Restoration Project, National Fish & Wildlife Federation, \$46,414, 1/1/2013-6/30-2014, Co-PI (with J. Cebrian)

Submerged Aquatic Vegetation Restoration and conservation within Baldwin County, Alabama, CIAP, \$200,000, 06/01/2012-05/31/2014, PI

Acquisition of a Laser Ablation Inductively Coupled Plasma Mass Spectrometer to Support Marine Science Research and Education in the Northern Gulf of Mexico, National Science Foundation, Improvements in Facilities, Communications, and Equipment at Biological Field Stations and Marine Laboratories (FSML), \$314,725, 8/1/2013-7/31/2014, Co-PI with W. Patterson, R. Carmichael, J. Krause and S. Powers

Monitoring Seagrass Resources of the Gulf Islands National Seashore, National Park Service, \$54,986, 8/31/2011 – 12/31/2013, PI

Submerged Aquatic Vegetation Restoration and Conservation with Baldwin County, AL, CIAP, \$200,000, 6/1/2012 – 5/31/2014, PI

Acquisition of a Laser Ablation Inductively Coupled Plasma Mass Spectrometer to Support Marine Science Research and Education in the Northern Gulf of Mexico, National Science Foundation -

#### *Ron Kiene*

Collaborative Research: Resolving DMSP, DMS and DMSO dynamics in the Subarctic NE Pacific using stable and radioisotope tracers, National Science Foundation - Chemical Oceanography, \$473,048, January 1, 2015-December 31, 2017, PI

Wetland resiliency: watershed fate of mercaptan odorant after a spill event, Center for Environmental Resiliency, University of South Alabama, \$19,933, April 1, 2014-March 31, 2015, PI.

Dimensions: Collaborative Research: Bacterial taxa that control sulfur flux from the ocean to the atmosphere, National Science Foundation – Dimensions of Biodiversity, USA budget \$513,777, Total project budget \$1,977,972, January 1, 2014- December 31, 2018, Co-PI (with M. A. Moran, W. Whitman (UGA), C. Scholin, J. (MBARI).

Sulfur isotope ratio of dimethylsulfide, US-Israel Binational Science Foundation, Collaborative project with Dr. Alon Amrani, Hebrew University of Jerusalem, January 1, 2012 – December 31, 2013, \$75,000 to Amrani; Travel costs only for Kiene.

CIGUAHAB: Ciguatera Investigations in the Greater Caribbean Region: Ecophysiology, Population Connectivity, Forecasting, and Toxigenesis. Collaborative project with FDA, WHOI and several Universities, NOAA-EcoHAB, USA budget portion \$149,110 for research costs + \$19,857 for boat time; total \$168,967, September 1, 2011-August 31, 2016, Co-PI (M. Parsons, Lead PI)

Collaborative Research: Ecophysiology of DMSP and related compounds and their contribution to carbon and sulfur dynamics in *Phaeocystis antarctica*, National Science Foundation – Polar Programs-Antarctic Sciences Division, \$240,237, June 1, 2010-May 31, 2013. No Cost Extension through May 31, 2015, PI.

#### *Jeff Krause*

Acquisition of a Laser Ablation Inductively Coupled Plasma Mass Spectrometer to Support Marine Science Research and Education in the Northern Gulf of Mexico, National Science Foundation FSML, \$314,725, 12/14/2012, Co-PI (with W. Patterson, R. Carmichael, K. Heck and S. Powers)

Group-specific diatom silica production in a coastal upwelling system, National Science Foundation – Biological Oceanography, \$119,374, 4/1/2013, Sub-award granted (from PI Jeffrey W. Krause at UCSB), Co-PI with J. Valentine

Understanding the role of picocyanobacteria in the marine silicate cycle, National Science Foundation – Biological Oceanography, \$189,309, 4/9/2013 (movement of funded project from UCSB to DISL), Co-PI with M. Brzezinski

#### *Behzad Mortazavi*

Preliminary Proposal: Restoring the Edge: Degradation and potential for restoration of ecosystem services provided by nearshore marshes and oyster reefs, GOMRI, \$8,900,000 (\$1.09M Mortazavi

share), 2014, Co-PI (with Caffrey, J. B. Mortazavi, Conrwell, J., Ebble, J., Hollibaugh, T., King, G, Power, S., Rakonicki, J and Ringwood, A.)

Collaborative Research: Engineering salt marsh restoration to maximize denitrification - elevation and species interactions, NSF-CBET, \$300,000 (Mortazavi Share: \$182,000), Mortazavi (PI) at UA and A. Ortman (PI at USA), 2014-2017

Geo-ecological modeling to highlight nitrogen removal capabilities and inform riverine habitat restoration, UA Research Stimulation Grant, \$96,000, 07/01/2012 to 06/30/2015, J. Edmonds (PI), B. Mortazavi, L. Davis and S. Cohen.

Geo-Ecological modeling of riverine habitat occurrence and nutrient retention, UA and Center for Freshwater Studies, \$120,753, 6/13 to 5/15, Co-PI with Edmonds, Cohen and Davis (UA)

Effects of dissolved organic nitrogen enrichment from contaminated groundwater on nutrient availability and phytoplankton communities in a coastal Alabama lagoon, NSF Graduate Research Fellowship, \$126,000, 8/13 - 7/16, to support J. Anders

#### *Alice Ortman*

Predation by invasive lionfish and its effects on native reef fishes in the northern Gulf of Mexico, Mississippi Alabama Sea Grant Consortium, Development Proposal, \$15,288, 2014, Co-PI (Will Patterson, PI; Alison Robertson, co-PI)

REUSITE: Undergraduate research experiences in coastal and nearshore marine systems of the northeastern Gulf of Mexico, NSF Research Experience for Undergraduates, \$187,222, 2014, PI (Will Patterson, co-PI)

Isolation and characterization of marine hosts and their viruses by supporting an undergraduate intern, Gulf Coast ADVANCE Fellowship, 2014, \$3,000, PI

Collaborative Research: Engineering salt marsh restoration to maximize denitrification - elevation and species interactions, NSF CBET, \$117,827, 2014, PI (Behzad Mortazavi, collaborator)

#### *Kyeong Park*

Continued development of the Gulf of Mexico Coastal Ocean Observing System, Implementation of the U.S. Integrated Ocean Observing System (IOOS), NOAA National Ocean Service, \$366,823, 10/01/2011-09/30/2016 K. Park (PI at DISL) and B. Dzwonkowski, (Lead PI: A.E. Jochens at TAMU)

A circulation and transport model for fishery management in Mobile Bay and eastern Mississippi Sound, Mississippi-Alabama Sea Grant Consortium, \$149,876, 02/01/2014-01/31/2016, K. Park (PI) and R.H. Carmichael

#### *Will Patterson*

Efficacy of lionfish removal as a management strategy for Florida artificial reefs, Florida Fish and Wildlife Conservation Commission, \$84,478, 2014, Co-PI (with R. Snyder, PI).

Applying cutting edge laser ablation-inductively coupled plasma mass spectrometry to estimate population connectivity in coastal elasmobranchs, USA Resiliency Fund, \$14,400, 2014 PI.

Ecosystem-based fisheries management in the Gulf of Mexico reef fish complex, Lenfest Ocean Program, \$200,000, 2014-2015, Co-PI (with Q. Weniger, PI and L. Perruso and S. Gosnell).

Examining invasive lionfish diet and trophic position in the northern Gulf of Mexico via DNA barcoding of unidentifiable prey items, Mississippi-Alabama Sea Grant, \$10,000, 2014, PI (with A. Robertson and A. Ortman).

REU Site: Undergraduate research experiences in coastal and nearshore marine systems of the northeastern Gulf of Mexico, National Science Foundation Research Experience for Undergraduates, \$187,222, 2014-2015, Co-PI (with Alice Ortman, PI).

Center for Integrated Modeling and Analysis of the Gulf Ecosystem (C-IMAGE) Assessment of Escambia East Large Area Artificial Reef Site refugia reefs: Impacts of invasive lionfish, Florida Fish and Wildlife Conservation Commission, \$59,996, November 1, 2013 to October 31, 2014, Co-PI (with R. Snyder)

Modeling the impacts of gear regulations in the northern Gulf of Mexico recreational reef fish fishery, National Marine Fisheries Service and National Sea Grant, \$77,000, 2013-2014, PI, (graduate fellowship for Steven Garner).

Data management in support of NOAA's integrated ecosystem assessment for the Gulf of University Programs 2013-14 Faculty Activity Report Mexico through the NGI Ecosystem Data Assembly Center: DISL's Data Management Center, Northern Gulf Institute, \$68,622, 2013-2014, PI.

Acquisition of a laser ablation inductively coupled plasma mass spectrometer to support marine science research and education in the northern Gulf of Mexico,

National Science Foundation, \$314,725, 2013-2014, PI (with R. Carmichael, J. Krause, K. Heck and S. Powers, co-PIs).

Estimating potential nursery sources for south Atlantic red snapper populations using otolith chemistry, NOAA-NMFS Marine Fisheries Initiative, \$64,700, 2012-2014, Co-PI (with T. Kellison, PI and B. Barnett, Co-PI).

Distinguishing three cohorts of juvenile red snapper, *Lutjanus campechanus*, in the northern and southern Gulf of Mexico using otolith chemical signatures, NOAA-NMFS Marine Fisheries Initiative, \$75,800, 2012-2014, Co-PI (with B. Barnett, PI).

Examining hook selectivity in the northern Gulf of Mexico recreational reef fish fishery, NOAA Fisheries Cooperative Research Program, \$202,636, 2012-2014, PI, (with C. Porch, Co-PI).

Examining vertebrae elemental signatures as nursery-specific tags of blacktip shark in the Gulf of Mexico, NMFS-Highly Migratory Species, \$10,000, August 1, 2012 to July 31, 2014, Co-PI with J. Carlson

Center for Integrated Modeling and Analysis of the Gulf Ecosystem (C-IMAGE), Gulf of Mexico Research Initiative, \$11,000,000 (USA budget: \$471,966), January 1, 2012 to December 31, 2015, Co-PI with S. Murawski and 14 others

#### *Sean Powers*

Assessing the current status of red drum (*Sciaenops ocellatus*) in the northern Gulf of Mexico: a multistate cooperative effort, NMFS Saltonstall Kennedy Fisheries Program, \$399,500, 2014-2016, PI.

Reef fish research in the Alabama Artificial Reef Permit Zone. U.S. Fish and Wildlife, Sport Fish Restoration Fund via Alabama Department of Conservation and Natural Resources, Marine Resources Division, \$225,000, 2014-2015, S. P. Powers and R. Shipp, PIs.

SEAMAP: Alabama Reef fish surveys. NMFS via Alabama Marine Resources Division, \$579,200, 2014-2016, PI.

Intra- and inter estuary movement of tarpon and red drum in coastal Alabama. U.S. Fish and Wildlife, Sportsman Restoration Fund via Alabama Department of Conservation and Natural Resources, Marine Resources Division, \$37,000, 2014-2015.

Ecosystem-Based Fisheries Assessment of Reef Fishes in the Northcentral Gulf of Mexico. NMFS MARFIN, \$322,000, 2013-2015, S. Powers and J.M. Drymon, PIs.



Assessment of decapod crustaceans as sentinel estuarine species. Collaborative with UNO and USM, U.S. Dept. of Interior, Bureau of Ocean Energy Management, \$1,200,000 (\$399,300. U. South AL), 2012-2017, S. Powers, PI.

Dendritic Polymers as Biocompatible Dispersants for Oil Spill Mitigation. U.S. Environmental Protection Agency, \$500,000 (R204,000 U. South AL), 2012-2014, Co-PI (with D. Ladner, P. Ke1 [Clemson], S. Powers and A. Whelton [USA]).

Acquisition of a Laser Ablation Inductively Coupled Plasma Mass Spectrometer to Support Marine Science Research and Education in the Northern Gulf of Mexico, NSF FSML, \$300,000, 2013-2015, W. Patterson (PI), S. Powers, J. Krause, R. Carmichael and K. Heck, co-PIs.

Red Snapper and Greater Amberjack research in the Alabama Artificial Reef Permit Zone. U.S. Fish and Wildlife, Sportsman Restoration Fund via Alabama Department of Conservation and Natural Resources, Marine Resources Division, \$204,600, 2013-2014, (S. P. Powers and R. Shipp, PIs).

A Decision Support Toolkit for the Functional Design of Structures in Living Shorelines, MS/AL Sea Grant, \$130,000, 2012-2014, (B. Webb, S. Douglas and S. Powers, PIs).

Sustainable coastal pelagic fisheries. NOAA, \$750,000, 2010-2014, (S. P. Powers, J. Dindo and R.L. Shipp, PIs).

#### Research Projects Abroad

##### *Ken Heck*

Participated in field work in Finland as part of DISL Field Marine Science course taught at Åbo Akademi University, Husö Biological Station.

##### *Ron Kiene*

I completed work on a project funded by the US-Israel Binational Science Foundation (BSF) to work on stable isotope composition of DMS and DMS in the ocean. I am working with Dr. Alon Amrani from Hebrew University. Dr. Amrani obtained a young investigator award from BSF and his grant has travel funds from me to visit Israel which I did in late September 2013. We published our major findings in PNAS in October 2013. There is a good chance that this collaboration will result in future funding to USA/DISL.

##### *Jeff Krause*

Research Cruise (Oct 2013): Bermuda to Puerto Rico aboard R/V Atlantic Explorer (M.S. student and Lab technician)

#### Media

##### *Ruth Carmichael*

2013, America's Amazon documentary film [www.americasamazon.net](http://www.americasamazon.net) (Featuring research of PhD Candidate A. Aven)

##### *Just Cebrian*

GOMA Sea Level Rise workshop in Merida (Mexico); Description of the workshop; Online GOMA news, October 30<sup>th</sup> 2013

Ecosystem Approach to Management; Description of projects done in the Northern Gulf of Mexico; Momentum (a publication of the Mississippi State University Bagley College of Engineering) Fall 2013

DISL Internship by Spanish students Tito Ferrero and Candela Marco; Description of activities done during internship; Universidad de Alicante (Spain) online newsletter, January 2014

DISL Internship by Spanish students Tito Ferrero and Candela Marco; Description of activities done during internship; Informacion (Spanish newspaper) February 13, 2014

Exploring Cost-Effectiveness of Restored Marshes as Nutrient Filters in a World of Rising Seas; Marsh restoration/pollution filtration project in Weeks Bay (Alabama); Cross, L. M. 2014. Gulf Coast Community Handbook: Case studies from Gulf of Mexico communities for incorporating climate change resiliency into habitat planning and protection. Report to the US Environmental Protection Agency. Technical Report #01-14 of the Tampa Bay Estuary Program, St. Petersburg, Florida

Derelict Vessel Removal in Dog River (NOAA grant); Report on the removal activities and positive environmental impacts; Dauphin Island Sea Lab Skimmer March 2014

Marsh/Mangroves interactions under climate change; Field travel grant obtained by Aaron Macy (student at the Ecosystems Lab); Dauphin Island Sea Lab Skimmer March 2014

Living Shorelines; Project with the Southern Environmental Law Center; [www.dredgingtoday.com](http://www.dredgingtoday.com), April 4 2014

Derelict Vessel Removal in Dog River (NOAA grant); Report on the removal activities and positive environmental impacts; WPMI (local TV station in Mobile, Alabama), April 8 2014

Derelict Vessel Removal in Dog River (NOAA grant); Report on the removal

activities and positive environmental impacts; The Weather Channel online science news, April 17 2014

Derelict Vessel Removal in Dog River (NOAA grant); Report on the removal activities and positive environmental impacts; NOAA National Ocean Service weekly newsletter May 1<sup>st</sup> 2014

Shailesh Sharma (student at the Ecosystems Lab); Selection for Knauss Marine Policy Fellowship; MASGC Newsletter, Summer 2014

##### *Marcus Drymon*

"Researchers explain shark's behavior in Dauphin Island shark bite incident" *AL.com*. Sept 2014.

"Shark tagging off Dauphin Island's Coast" *WKRG News Channel Five*. June 2014.

"Bull Sharks Swarm Orange Beach" *WKRG News Channel Five*. June 2014.

"Six questions answered to help ease your fears" *AL.com*. June 2014.

"In Alabama's nearshore waters, a diver, a shark, and the one that got away" *AL.com*. January 2014

##### *Ron Kiene*

Articles about new Dimensions of Biodiversity project.

<http://www.nsf.gov/pubs/2014/nsf14057/nsf14057.pdf>

<http://www.rdmag.com/news/2014/02/scientists-study-how-marine-bacteria-release-cloud-making-compound>

<http://phys.org/news/2014-02-scientists-marine-bacteria-cloud-making-compound.html>

##### *Jeff Krause*

"Climbing the Family Tree: Genealogy journeys to be discussed at monthly meeting" *AL.com* and *Press-Register*. By Eugenia Parker, 3 March 2014. *Noted Dauphin Island Sea Lab and University of South Alabama*: "...Krause, a Seattle native, moved to the Mobile area in November 2012 to take a senior marine scientist position at the Dauphin Island Sea Lab. He has an assistant professor appointment at the University of South Alabama."

##### *Sean Powers*

Mobile Press Register Front Page, Starfish dead on beach: Causes. Interview April 2014.



- **Board of Directors**
- **Executive Committee**
- **Program Committee**

The Board of Directors is comprised of the Presidents of each of the 22 member institutions.

The Executive Committee has full power and authority in the interval between meetings of the Board of Directors to do all acts and perform all functions which the Board of Directors itself might do or perform, except that it shall have no power to amend the bylaws. Among its duties are to review and approve the annual budget; approve curricular options and other major policies and procedures; and facilitate and stimulate the development of education and research programs.

The Program Committee Members consists of one faculty member, appointed by the President, from each of the member institutions. These members serve as the primary liaison between the member institution and the Sea Lab, and are responsible for advising the Sea Lab's Executive Director in planning and implementing the education, research and service programs of the DISL.

The contact information listed is for the Program Committee Member.

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**Athens State University**

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**Auburn University at Montgomery**

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**Birmingham Southern College**

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**Huntingdon College**

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**\*\*Troy University**

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**\*\*University of Alabama at Huntsville**

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**University of Mobile**

President: Dr. Mark Foley  
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**University of Montevallo**

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**University of North Alabama**

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# Federal Awards/Grants

Federal Grantor/ Pass-Through Grantor/ Program Title	Assistance Period	Budget		Revenue Recognized	Expenditures
		Total	Federal Share		
<b><u>Research and Development Cluster</u></b>					
<b><u>U.S. Department of Commerce</u></b>					
<b><u>Direct Programs</u></b>					
<b><u>Passed Through University of Southern Mississippi</u></b>					
Sea Grant Support Oceanic and Atmospheric Projects	2/1/2010-1/31/2014	190,274.00	159,738.00	22,790.53	22,790.53
Sea Grant Support Oceanic and Atmospheric Projects	02/1/2014-01/31/2016	83,734.00	52,027.00	-	-
Sea Grant Support Oceanic and Atmospheric Projects	2/1/2012-1/31/2015	64,690.00	31,240.00	10,413.00	10,413.00
Sea Grant Support Oceanic and Atmospheric Projects	03/01/2014-02/28/2015	8,010.00	3,996.00	2,395.38	2,395.38
Sea Grant Support Oceanic and Atmospheric Projects	02/01/2014-01/31/2016	107,676.00	71,361.00	47,210.13	47,210.13
Environmental Protection Agency/GOMA	10/1/2013-06/30/2015	56,000.00	56,000.00	16,266.98	16,266.98
<b><u>Passed Through University of South Alabama</u></b>					
Sea Grant Support Oceanic and Atmospheric Projects	02/01/2014-01/31/2016	36,560.00	36,560.00	22,985.35	22,985.35
National Oceanic and Atmospheric Administration	09/1/2014-8/31/2015	209,250.00	209,250.00	81,300.75	81,300.75
National Science Foundation	01/01/2014-12/31/2018	110,826.00	110,826.00	6,863.56	6,863.56
National Science Foundation	09/2014/08/31/2017	74,711.00	74,711.00	-	-
<b><u>Passed through Alabama of Conservation and Natural Resources</u></b>					
Coastal Zone Management Administration Awards	4/1/2013 - 3/31/2014	22,000.00	15,400.00	7,702.31	7,702.31
Coastal Zone Management Administration Awards	10/1/2013-9/30/2014	30,000.00	15,000.00	15,000.00	15,000.00
Coastal Impact Assistance Program	7/10/2013-9/30/2015	395,000.00	395,000.00	65,448.47	65,448.47
Coastal Zone Management Administration Awards	10/1/2012-3/31/2014	88,000.00	88,000.00	32,365.34	32,365.34
Coastal Zone Management Administration Awards	10/1/2013-12/31/2014	21,160.00	21,160.00	15,953.43	15,953.43
Coastal Zone Management Administration Awards	10/1/2012-09/30/2014	52,500.00	52,500.00	3,855.00	3,855.00
<b><u>Passed Through Mississippi State University</u></b>					
National Oceanic and Atmospheric Administration (NOAA) Cooperative Institute	4/1/2012 - 9/30/2016	187,510.00	187,510.00	73,348.84	73,348.84
National Oceanic and Atmospheric Administration (NOAA) National Coastal Data Development Center	06/01/2013-05/31/2014	68,623.00	68,623.00	45,325.30	45,325.30
National Oceanic and Atmospheric Administration	07/01/2012-5/31/2015	17,097.00	17,097.00	9,160.98	9,160.98
National Oceanic and Atmospheric Administration	6/1/2014-5/31/2015	83,425.00	83,425.00	21,821.89	21,821.89
National Oceanic and Atmospheric Administration	7/1/2013-6/30/2014	2,940.00	2,940.00	2,940.00	2,940.00
National Oceanic and Atmospheric Administration	8/1/2014-7/31/2016	44,082.00	44,082.00	1,873.00	1,873.00
<b><u>Passed Through University of New Hampshire</u></b>					
Coastal Zone Management Administration Awards	9/15/2010-9/14/2013	354,750.00	354,750.00	48,396.28	48,396.28
<b><u>U. S. Department of Health and Human Services</u></b>					
<b><u>Direct Program</u></b>					
Food and Drug Administration-Research	9/21/2011-8/31/2015	665,000.00	665,000.00	106,029.36	106,029.36
<b><u>National Science Foundation</u></b>					
<b><u>Direct Programs</u></b>					
National Science Foundation	2/15/2013-12/31/2015	189,309.00	189,309.00	50,257.42	50,257.42
National Science Foundation	8/1/2013-7/31/2014	314,725.00	241,725.00	312,703.80	312,703.80
National Science Foundation	9/15/2013-8/31/2016	44,652.00	44,652.00	1,658.56	1,658.56
National Science Foundation	9/1/2014-8/31/2016	187,220.00	187,220.00	-	-
<b><u>Passed Through Bermuda Institute of Ocean Sciences</u></b>					
Bermuda Institute of Ocean Sciences (BIOS)	10/01/2010-9/30/2013	151,708.00	151,708.00	13,605.00	13,605.00

Federal Grantor/ Pass-Through Grantor/ Program Title	Assistance Period	Budget		Revenue Recognized	Expenditures
		Total	Federal Share		
<b><u>Passed Through the Regents of the University of California-Santa Barbara</u></b>					
National Science Foundation	4/1/2013-3/31/2015	119,374.00	119,374.00	45,088.93	45,088.93
<b><u>Passed Through The University of Alabama In Huntsville</u></b>					
Exp. Program to Stimulate Competitive Research	10/01/2010-08/31/2013	239,283.00	239,283.00	8,244.90	8,244.90
<b><u>Other Federal Awards</u></b>					
<b><u>US Department of Commerce</u></b>					
<b><u>Direct Programs</u></b>					
Congrssonally Identified Awards and Projects	10/01/2009-09/30/2015	377,264.00	295,247.00	82,134.05	82,134.05
Congrssonally Identified Awards and Projects	8/1/2013-12/31/2014	201,729.00	99,766.00	65,922.66	65,922.66
National Fish and Wildlife Foundation	1/1/2014-12/31/2014	94,400.00	94,400.00	67,219.68	67,219.68
<b><u>Passed Through Gulf of Mexico Alliance (GOMA)</u></b>					
Unallied Management Projects (M)	1/6/2012 - 12/31/2013	79,745.00	79,745.00	55,957.96	55,957.96
Unallied Management Projects (M)	1/1/2013-12/31/2013	36,000.00	36,000.00	5,083.97	5,083.97
Unallied Management Projects (M)	01/1/2014-9/30/2015	31,970.00	31,970.00	6,366.39	6,366.39
<b><u>Passed Through The Florida Aquarium</u></b>					
Congrssonally Identified Awards and Projects	7/20/2010-8/20/2011	122,580.00	76,407.00	915.17	915.17
<b><u>Passed Through Texas A &amp; M research Foundation</u></b>					
	06/01/2011-05/31/2016	107,519.00	107,519.00	15,325.38	15,325.38
<b><u>U. S. Department of the Interior</u></b>					
<b><u>Direct Program</u></b>					
Fish and Wildlife Service	9/1/2011 - 12/31/2015	97,067.00	97,067.00	33,481.63	33,481.63
Fish and Wildlife Service	08/01/2012-09/30/2016	39,550.00	39,550.00	13,873.31	13,873.31
<b><u>Passed Through Weeks Bay Foundation</u></b>					
Fish and Wildlife Service	9/1/2012-2/28/2015	105,884.00	105,884.00	23,710.61	23,710.61
<b><u>Passed Through Baldwin County Commission</u></b>					
Bureau of Ocean Energy Management					
Coastal Impact Assisstance Program	10/01/2010-12/31/2013	250,000.00	250,000.00	14,188.69	14,188.69
Coastal Impact Assisstance Program					
Shoreline/Habitat Restoration	04/20/2011-02/28/2013	200,000.00	200,000.00	35,272.43	35,272.43
Coastal Impact Assisstance Program	6/1/2012-11/30/2015	200,000.00	200,000.00	62,382.01	62,382.01
<b><u>Passed Through Florida Atlantic University</u></b>					
U.S. Army Corp of Engineers	8/15/2014-01/31/2016	28,340.00	28,340.00	2,182.20	2,182.20
<b><u>Passed Through Texas A &amp; M University</u></b>					
<b><u>Gulf Coast Cooperative Studies Unit</u></b>					
<b><u>National Parks Service</u></b>					
Gulf Coast Inventory and Monitoring Network	08/31/2011-12/31/2015	110,917.60	110,917.60	6,241.79	6,241.79
Gulf Coast Cooperative Studies Unit	08/16/2013-2/01/2014	12,517.00	12,517.00	12,139.84	12,139.84
<b><u>Passed Through Alabama Department of Conservation and Natural Resources</u></b>					
ADCNR-Wildlife and Freshwater Fisheries	10/1/2013-09/30/2014	42,429.00	42,429.00	42,429.00	42,429.00
ADCNR- Coastal Zone Management Administration	10/1/2013-9/30/2014	6,300.00	3,150.00	3,150.00	3,150.00
ADCNR - Coastal Zone Management Administration Awards	10/1/2013-3/31/2015	82,000.00	82,000.00	7,588.38	7,588.38
<b><u>Environmental Protection Agency</u></b>					
<b><u>Direct Programs</u></b>					
National Estuary Program	10/01/2010-9/30/2013	2,068,467.00	2,068,467.00	276,447.89	276,447.89
National Estuary Program	2/14/2012-9/30/2015	1,156,121.00	710,563.00	16,616.00	16,616.00
Gulf of Mexico Program	05/01/2010-04/30/2013	319,797.00	239,925.00	61,526.94	61,526.94
National Estuary Program	10/1/2013-09/30/2016	1,024,000.00	512,000.00	344,464.21	344,464.21
<b>TOTAL:</b>		<b>\$11,014,685.60</b>	<b>\$9,513,330.60</b>	<b>\$2,345,624.68</b>	<b>\$2,345,624.68</b>



# Balance Sheet

Marine Environmental Sciences Consortium  
Dauphin Island Sea Lab  
Statement of Net Assets  
For the Year Ended September 30, 2014

## ASSETS

### Current Assets

Cash	2,073,037
Accounts Receivable	1,435,271
Inventories	119,145
Total Current Assets	<u>3,627,453</u>

### Noncurrent Assets

Endowment Investments	780,405
Capital Assets:	
Land	658,757
Buildings	13,618,495
Improvements Other Than Buildings	391,481
Equipment	2,724,645
Vessels	1,075,392
Library Holdings	842,322
Construction in Progress	306,921
Less: Accumulated Depreciation	<u>(7,502,517)</u>
Total Capital Assets, net of Depreciation	<u>12,895,902</u>
Total Noncurrent Assets	<u>12,895,902</u>
Total Assets	<u>16,523,355</u>

## LIABILITIES

### Current Liabilities

Accounts Payable	51,150
Lease Obligations	10,672
Compensated Absences	29,148
Unearned Revenue	1,217,773
Deposits Held for Others	150,874
Total Current Liabilities	<u>1,459,616</u>

### Noncurrent Liabilities

Compensated Absences	<u>456,649</u>
Total Noncurrent Liabilities	<u>456,649</u>
Total Liabilities	<u>1,916,265</u>

## NET ASSETS

Invested in Capital Assets, net of related debt	12,104,825
Restricted for	
Nonexpendable	780,405
Expendable	
Capital Projects	28,334
Research & Scholarships	140,499
Instruction	18,312
Public Outreach	290,172
Unrestricted	1,244,542
Total Net Assets	<u>14,607,090</u>

## Dauphin Island Sea Lab Participation Totals, and Graduate and Undergraduate Credit Hours Earned

