

Dauphin Island Sea Lab



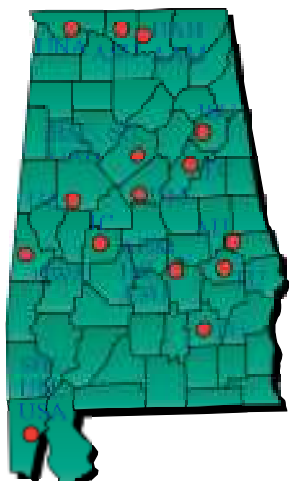
The State of Alabama's Marine Science Education and Research Institution

2011 Annual Report

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.....	6-10
• Administration	
• Business/Finance	
• Information Technology	
• Library	
• Public Relations	
• Facilities and Vessel Operations	
• Technical Support/Data Monitoring	
Discovery Hall Programs.....	11-14
• Academic Year Programs	
• Summer Camps and Classes	
• BayMobile and Other Outreach	
• Estuarium	
• Grant-Related Events and Other Activities	
The George F. Crozier Estuarium.....	15-16
University Programs.....	17-19
Mobile Bay National Estuary Program.....	20-23
• Program Implementation	
• Status and Trends	
• Mobile Bay Real-Time Monitoring	
• Ecosystem Restoration and Protection	
• Education, Outreach and Capacity Building	
Resident Research Faculty.....	24-25
Faculty Activity.....	26-40
• Book Chapters and Projects	
• Peer-Reviewed Publications	
• Technical Reports	
• Abstracts and Presentations	
• Miscellaneous Presentations	
• Workshops, Meetings Attended or Organized	
• Public Outreach and Other Service	
• Committee Service	
• Research Projects Abroad	
• Editorial Service	
Board of Directors/Executive Committee/ Program Committee.....	41-42
Federal Awards/Grants.....	43-47
Balance Sheet.....	48
DISL Educational Impact in Alabama, by County.....	49

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.

Dauphin Island Sea Lab
101 Bienville Boulevard
Dauphin Island, AL 36528
Ph: (251) 861-2141
Fax: (251) 861-4646
www.disl.org

For questions about this Annual Report, please e-mail Lisa Young, Public Relations Consultant, at lyoung@disl.org.



2011 Letter from the Executive Director

For more than 30 years, the Sea Lab was fortunate to operate under the steady influence of Dr. George Crozier. During those formative years, the understaffed lab survived despite minuscule state appropriations that often left it struggling just to survive. These were the days, when we were best characterized by pipes insulated with asbestos, Formica-covered chemistry benches, broken floor tiles and a rich diversity of wild mammals that made the labyrinth of cable channels once found in the underworld of the original Marine Science Hall their home. Staff and faculty alike, pitched in to teach in the classroom, serve lunches in the cafeteria and work on facilities repairs in the evenings. What held everyone together in those early days was a "dream-a-dream" that someday this nascent educational facility would become a leader in the field of marine education and research. As I think back on the stories I have been told about those days, and the many challenges our predecessors had to overcome, I think it is a miracle that they survived to build the laboratory we find ourselves working in today.

With time and a lot of hard work by the surviving staff and new faculty, our state appropriations began to grow, as did our reputation for excellence in research and education. The addition of faculty and, later, educators led to new research grants, facilities renovations and the growth of our academic programs. As success in these emerging endeavors grew, our revenue portfolio diversified, and the fluctuations in state appropriations became less damaging to our overall programmatic stability. Make no mistake about it, the \$1.5 million dollar reduction in our state appropriation the past few years has

diminished our ability to live up to our potential, but our success in acquiring extramural money has tempered this loss for the time being, and serves to illustrate just how far the lab has come and how well we are thought of today.

Amidst an atmosphere of difficult economic



Dr. John Valentine became Executive Director of the Dauphin Island Sea Lab on October 1, 2011.

times and belt-tightening battles in Montgomery and Washington, DC, I can assure you that we in administration are working hard during these challenging times to make sure our programs receive every consideration as budget priorities are developed - but nothing is guaranteed. It has not been lost on me during my visits to these two seats of government, the gratifying words of support expressed by our elected officials for the Sea Lab's mission, and their statements of appreciation about our accomplishments. All recognize the value science and education have for the citizens of our state and nation. They recognize the fact that the Gulf, despite its enormous contributions to the nation's economy, has not received the attention from federal agencies in Washington it

deserves. I am particularly proud of how hard our representatives in Washington have worked to pass the RESTORE Act. Should the Act pass in Washington, there is a very good chance the Sea Lab will be named the Center for Excellence for Alabama. Depending on the state's allocation from BP fines, this designation will represent a significant improvement in our financial position.

Since I have taken on the role of Executive Director in October 2011, I have been asked by staff and supporters alike what my plans are for the Sea Lab, so let me explain them briefly. I have two goals. It is my hope, that with continued growth in facilities and people, and with the integration of new approaches and technologies into our classrooms and laboratories, that we will become a beacon for the importance in education, science, and the application of science in coastal communities throughout the South. I also wish to promote the importance of the Gulf of Mexico both in Montgomery and Washington to anyone who will listen. I know that these will come across as simple, but I consider them to be key to our future. Already we are taking steps to achieve the first goal.

I believe that the diversification of our energy portfolio is of paramount national importance. If this diversification includes the development of sustainable sources of energy, those provided by nature, so much the better, and science will be the key to this success. Dr. Dindo's acquisition of a grant from the Department of Energy led to successful installation of solar panels on buildings along much of the southern portion of the campus. This is of significant importance to us as almost 10% of our state appropriation is spent on power. A new Sharks and Rays exhibit, which relies on geothermal energy to control water temperature, will soon be completed in the Estuarium. We are continuing to negotiate with Alabama Power for the installation of wind turbines on our campus. These will be wonderful opportunities for us to promote the application of science to our state. Dr. Heck has convinced the members of the Marine Environmental Sciences Program Committee to revise the summer curriculum which will bring more of the MESC-member institutions on to our campus.

This is not all that we are working on. Soon we will be soliciting bids for the development of a new website for the Sea Lab and campus-wide software that will allow us to be economically efficient as we continue to promote our mission. We are also close to completing our new facility searches bringing new ideas and skills to our campus. To improve the academic atmosphere of our facility, we will

continue to spruce up the campus with trees, bushes and benches wherever we can. We have every reason to believe that we will receive funding to add on to the Estuarium in the coming year. This addition will allow us to include traveling exhibits to our educational repertoire. I would also call your attention to the efforts of the Dauphin Island Sea Lab Foundation whose success in acquiring grants that contribute to the richness of the academic programs which build on our reputation for innovation in the classroom. When you add in the recognition received from the leadership shown by University Programs during the initial impact assessment phase of Deepwater Horizon Accident on Alabama's coastal resources, our work on habitat restoration and fisheries oceanography, meandering manatees and our growing educational programs, you have no choice but to conclude that our best years are not behind us! I would be remiss if I did not mention the fact that none of these successes would have been possible without the help of our excellent support staff.

I will close by saying that the administration cannot bring us into a new brighter future alone. When I was young I listened on my father's black and white television, to the inaugural address presented by the person I consider to be the best political leader of my lifetime. In this address, President Kennedy challenged the citizens of our nation to recognize that there was a greater good that we were all a part of, something that was bigger than the sum of our individual desires and wants. He called on us to proactively be a part of a greater nation, rather than limit our focus to ourselves. I find that recollection to be an appropriate metaphor for the moment we find ourselves in now. Just as our predecessors committed to the vision of a future greater Sea Lab, it is our time to take responsibility for the future growth of this remarkable institution. It is time for each of us to come together, to focus our efforts on a better Sea Lab, one that leads the way, not follows the path of others. I hope you will buy into this challenge as our success will be determined by your willingness to be a part of the Sea Lab's future.

I don't know about you, but I am excited to see what you make happen next!

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



Administration and Facilities

DISL is located on 36 acres on the eastern end of Dauphin Island, a barrier island approximately three miles from the mainland and 40 miles south of Mobile, Alabama. The Sea Lab spans the island and thus has direct access to the Gulf of Mexico, Mississippi Sound and Mobile Bay. A causeway and bridge connects the island to the mainland.

There are 50 buildings on campus, including eight instructional buildings; three dormitories; nine family-style houses; and two research buildings. The DISL also houses the Auburn Shellfish Laboratory, The Shelby Center, our newest research lab, has been recognized as a LEEDS Gold certified building, and is included in the Sea Lab's solar powered grid, making the Sea Lab the largest public producer of solar energy in the State of Alabama.



Solar panels, seen here on Horizon and Discovery Hall, have made the Sea Lab the largest public producer of solar power in the state of Alabama. Credit - John Dindo.

The DISL library is highly specialized in the marine sciences, particularly those areas relating to the ecology and geology of the Gulf Coast region. Its holdings include more than 7,400 bound volumes and approximately 500 periodical titles, with current subscriptions to many of those periodicals. The library also has numerous CD-ROM

databases, as well as access to a variety of on-line library catalogs.

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.

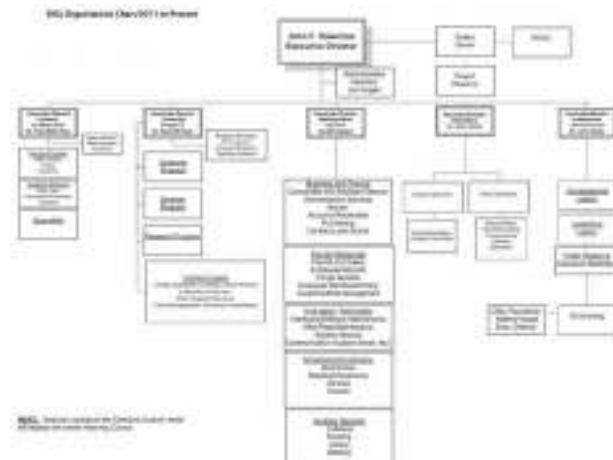
DISL maintains two large research vessels, including the 65-ft. R/V *A.E. Alabama Discovery* and the 40-ft. *E.O. Wilson*, in addition to a fleet of small boats and skiffs.

Administrative Personnel
Dr. George Crozier, Executive Director (retired Sept. 2011)

Dr. John Valentine, Executive Director (as of Oct. 2011 to present)
David England, Associate Director, Administrative Services
Dr. John Dindo, Associate Director, Operations and Institutional Advancement
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.

Business/Finance Personnel
David England - Associate Director, Administrative Services
Lynn Bryant - Payroll Processor
Christine Hilburn - Human Resources Generalist
Ashley Foster-Bursar/Purchasing Agent
Mary Darby-Accounts Payable



Denise Keaton-Scheduling Coordinator
Daphne Wood-Contracts and Grants Officer
Cindy Grimes-Receptionist
Dennis Patronas-Library/General Clerk

Alana Splawn
Sallie Jo Williams
Dennis Patronas

Auxiliaries
Auxiliaries of the DISL include the Cafeteria, Estuarium Gift Shop, Laundromat and vending machines.

Cafeteria Personnel
Classie Bentech-Manager
Faye Bentley
Judy Barber
Gayle Zirrott
Karen Saunders
Renee Cain

Information Technology
Information Technology (IT) instituted many cost saving projects in 2011. An onsite PBX system was installed in 2010 to help save roughly \$7200/year in phone costs by eliminating separate phone lines. Further enhancements were made to the system, such as expanding cordless phone coverage to more than 75% of the buildings on campus. This helps employees have access to their phones while away from their desk.

Estuarium Gift Shop Personnel
Jeana Layne-Manager
Amy Hannah
Janelle Roy
Janice Watanabe
Shea Childress Collier

IT also acquired and set up a Webex portal for the use of our staff and faculty. Webex allows DISL to host or attend a meeting via video teleconference from any computer with Internet access. This has also helped save traveling costs for many people that normally have to travel in order to meet with students or other colleagues.

Other noteworthy IT activities for 2011:

- Upgraded WiSe MSH to 1Gb LAN connection
- Set up Vimeo.com channel for sharing and viewing of HD quality videos
- Enacted network wide security enhancements
- Upgraded Internet connection to 50mb, with no cost increase to DISL
- Hosted and supported the National Benthic Ecology Meeting for over 600 participants
- Installed upgrades to all Horizon Hall and Galathea classrooms that included, new interactive projectors, presenter viewing monitors, podiums and WiFi for students.

Information Technology Personnel
 Melissa Mills - IT Manager
 Shane Johnson - Systems Administrator
 Sam Hardwick - PC / Network Support Specialist
 Lei Hu - Data Manager
 Rachel Nowlin - Data Specialist

Library
 The DISL Library is highly specialized in the marine sciences, particularly those areas relating to the ecology and geology of the Gulf Coast region. Its holdings include more than 7400 bound volumes and approximately 500 periodical titles, with current subscriptions to many of those periodicals. Online full text access to over 80 subscribed titles and hundreds of open access titles is available. Besides free Alabama Virtual Library, subscriptions to online databases Aquatic Sciences and Fisheries Abstracts, Oceanic Abstracts and Current Contents on Diskette continue to give students and faculty current bibliographic resources.

In 2011, several journals, including *Marine Biological Association of the U.K.* and *Fish Biology*, were donated to the Gulf Coast Research Laboratory in Mississippi to help stock their library, devastated by Hurricane Katrina.

Library Personnel
 Dennis Patronas - Librarian

Public Relations
 Public Relations was handled in the reporting year under the auspices of Institutional Advancement's Dr. John Dindo. Working with him were Lisa Young, Public Relations Consultant; Lori Angelo, Public Relations Liaison; and Robert Dixon, Estuarium Manager, who was responsible for Estuarium marketing.

2011 presented a range of scientific discoveries, educational programs and special events, proving once again that no year is a typical year. Of

note was the expansion of Dr. Ruth Carmichael's Manatee Sighting Network to include other marine mammals (i.e. dolphins); the 40th Annual Benthic Ecology Meeting, hosted by DISL scientists, that brought over 600 marine scientists to Mobile, AL; scientific findings on jellyfish populations (Dr. Rob Condon) and stingray consumption by Great Blue Herons (Dr. Marcus Drymon); and the DISL receiving the Clover Award from the US Green Building Council of Alabama for the Shelby Center's eco-friendly design and operations.

Special events included a highly successful Discovery Day; the WiSe Lecture series, featuring Dr. Ray Hilborn of the University of Washington; and the DISL Foundation's annual fundraiser, Cocktails with the Critters.

ExxonMobil continued to support a Public Relations Intern for the summer of 2011. Niki Marchand, a Public Relations major at the University of South Alabama, spent the summer covering the participants and programs of summer school, producing feature stories for internal and external publications. She did a great job, and we are grateful for ExxonMobil's continuing support of this hands-on, intensive fellowship.

Media outlets that featured the Sea Lab included national (MSNBC, CNN, *New York Times*), regional and local electronic and print press.

The Sea Lab produces a monthly electronic newsletter, the Sea Lab Skimmer. To subscribe, visit <http://skimmer.disl.org/skimmer/skimmerform.html>.

Public Relations Personnel
 Dr. John Dindo, Institutional Advancement
 Lisa Young, Public Relations Consultant
 Lori Angelo, Public Relations Liaison
 Robert Dixon, Estuarium Manager

Facilities and Vessel Operations
 Maintaining the vast Sea Lab campus, with its combination of new facilities and 60-year old structures, is often times accomplished by the sheer willpower, labor, and skill of the facilities and housekeeping crew. From building new countertops for a scientist's lab to installing a new long-line winch for the *RV Alabama*, the work is as varied and challenging as one might imagine.

One of the biggest projects of this reporting year's work was the installation of the solar panels and electrical wiring for the South Campus, specially Horizon Hall. Countless hours were also spent

on the Shelby Building's solar metering devices. The hard work and dedication of the facilities team helped the Sea Lab become the largest public solar generator in the State of Alabama, a recognition much appreciated by staff and supporters alike.

The Estuarium also saw its share of the crew's hard work with new kiosks in the building and along the Boardwalk.

New and current faculty were provided with new cabinets, lab tables, office furniture and much more, adding both cost savings and custom features for the scientists.

Existing buildings were given a facelift as well. The old maintenance shop was totally remodeled with new insulation, wiring, bathrooms, cabinets, and more; and the Challenger dorm's ancient showers were remodeled and retiled. The graduate student dorm, Albatross, received a new hot water holding tank and electrical sub-panel.

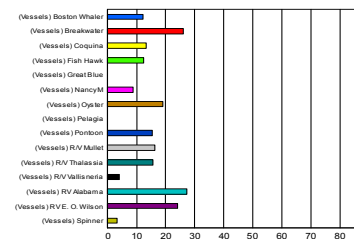
Security and safety were in mind when facilities put new lighting up along Shelby's east walkway, Estuarium boardwalk, and the boat dock.

All this and more was accomplished, on top of the hundreds of daily research and staff work requests that arose. We are grateful for their skill, hard work, and patience in dealing with the myriad of requests, all of which are tagged as "needs to be done as soon as possible!"

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

Facilities
 Tommie Blocker
 Wilfred Gazzier
 Ricky Gibbs
 Joey Johnson
 Tom Pritchett
 Jody Schultz

Housekeeping
 Tammy McClintock, Supervisor
 Shirley Emerson
 Cindy Johnson



Report Scope:	Utilization of Vessels	Resource Utilization Analysis	Utilization %
Range:	01/01/2011 - 12/31/2011		
Resource	Reservation Count	Hours Used	Available Hours
(Vessels) Boston Whaler	94	735.5	5,980
(Vessels) Breakwater	48	1,564.0	5,980
(Vessels) Coquina	70	793.5	5,980
(Vessels) Fish Hawk	78	748.3	5,980
(Vessels) Great Blue	0	0	5,980
(Vessels) Nancy M	47	525.3	5,980
(Vessels) Oyster	78	1,138.3	5,980
(Vessels) Pelagia	0	0	5,980
(Vessels) Porton	47	921.8	5,980
(Vessels) RV Mulet	85	978.0	5,980
(Vessels) RV Tullis Sta	100	931.3	5,980

Tammy Ladnier
 Sue Ramsey
 Dina Smith

Vessels operations
 Rodney Collier
 Tom Guoba
 John Hunt
 Willie Johnston
 Russell Wilson

Technical Support
 Technical Support encompasses four services in support of the faculty and students, including: diving operations; laboratory services; field support services; and data management.

The Laboratory and Field Support Services were particularly busy in 2011 with the continuing enhanced sampling of the FOCCAL transect in the wake of the BP Oil disaster, in addition to their regular duties. The Wet Lab and Mesocosm

facilities had 100% occupancy from early spring well into the late fall. Long-time field technician Yantzee Hintz went on active duty status with the National Guard and was deployed overseas. His duties were assumed by Brian Cabral, who came to DISL from an aquaculture farm on the Caribbean island of South Caicos.



Field technicians (l-r) Roxanne Robertson, Kyle Weis, and Al Gunter at the National Data Buoy Center in Stennis, MS. National Data Buoy Center staff behind buoy and on far right.

In January 2011, two members of Tech Support went down to Biscayne National Park to recover a 16' buoy and instruments that broke free from the FOCCAL site just after Hurricane Katrina. The buoy had wandered the Gulf for over a year before it grounded on one of the small islands within the park.

Technical Support also provided the proving ground for the "Inst. Liason" unit manufactured by Picarro for the determination of del 13C married to the Costech Elemental Analyzer. The samples analyzed resulted in the following publication and information on the Picarro page. The DISL has the serial number "001", meaning the first one built, and had the first laboratory application of that unit.

<http://iopscience.iop.org/1748-9326/5/4/045301/fulltext/>
http://www.picarro.com/resources/literature_publications/oil_carbon_entered_the_coastal_planktonic_food_web_during_the_deep

Technical Support Personnel
 Laura Linn - Coordinator Technical Support Services, Analytical Technician

Brian Cabral - Wetlab/Field Technician
 Al Gunter - Field Technician
 Roxanne Robertson - Field Technician
 Kyle Weis - Field Technician

Data Monitoring

The Mobile Bay National Estuary Program Environmental Monitoring webpage (www.mymbilab.com) is a continuation of 25 years of meteorological observations at DISL. Various funding sources have provided more than \$1,200,000 since 2003 to add water quality monitoring to the original DISL site and establish stations on the northern edge and in the middle of the bay, completing a N-S transect across a large, ecologically important ecosystem and yielding information on the vertical

structure of the water column in the bay that has never before been available on an hourly time scale. A fourth station was added in 2010 in Bon Secour Bay and additional stations were added in Perdido Bay and Mississippi Sound in 2011 to create an E-W transect. The principal product is the real time output and display of data 2-3 times per hour at each of the stations. The website, which averaged 3,264 visits/month in 2011, may be visited at anytime by anyone to check on weather and water conditions in their area. The data are presented in a user-friendly fashion to the public through the webpage to increase public knowledge of the parameters used to measure water quality, and to increase the public's confidence in environmental knowledge. Professionals may also download data from the website in several formats for further analysis.

Data are also served to several entities in near real time for inclusion in national and regional webpages, including the National Data Buoy Center (http://www.ndbc.noaa.gov/maps/Alabama_inset.shtml), the Gulf of Mexico Coastal Ocean Observing System (<http://gcoos.rsmas.miami.edu/>) and the Integrated Ocean Observing System (http://www.ioopenoos.org/real_time_data/gos.html).

Data Monitoring Personnel
 Mike Dardeau, Marine Scientist
 Lei Hu, Data Manager
 Rachel Nowlin, Data Specialist (at reporting time)
 Roxanne Robertson, Field Technician
 Kyle Weis, Field Technician

Discovery Hall Programs

Dauphin Island Sea Lab's Discovery Hall Program Totals

Year	K-5	Middle School	High School	College	Teachers	Other	Total
1998	7,382	1,264	80	473	183	207	10,789
1999	7,796	743	378	173	354	618	11,371
2000	8,160	3,080	1,387	671	254	311	16,571
2001	7,128	1,784	1,171	794	138	578	13,692
2002	7,624	2,687	1,573	683	256	478	14,687
2003	5,981	1,783	1,171	632	713	736	10,894
2004	6,915	2,118	1,443	459	388	128	11,526
2005	6,313	1,879	1,178	647	369	284	10,510
2006	6,233	2,079	1,884	764	238	252	10,744
2007	6,312	2,893	1,393	878	271	369	12,697
2008	6,267	2,141	1,746	476	399	368	11,497
2009	6,138	1,695	2,409	488	171	371	11,676
2010	4,196	2,924	1,865	469	173	438	10,065
2011	4,669	3,841	2,319	738	138	360	10,466
2012	4,727	1,383	1,455	282	159	188	8,155
2013	3,897	1,191	1,597	338	161	98	7,171
2014	6,576	2,228	1,877	1,864	117	374	13,036
2015	3,884	1,444	1,399	817	89	111	6,724
2016	3,268	2,621	1,535	46	138	173	7,797
2017	3,324	2,025	1,333	78	495	169	11,634
2018	6,296	2,667	1,138	181	462	95	12,869
2019	3,133	1,071	1,673	127	74	97	11,371
Total	107,714	39,367	31,565	8,646	4,831	6,252	197,576

Discovery Hall Programs (DHP) is the Education and Outreach arm of the Dauphin Island Sea Lab. Chaired by Dr. Tina Miller-Way, DHP employs one half-time (Mendel Graeber) and seven full-time educators (Jenny Cook, Greg Graeber, JoAnn Moody, Carrie Riley, Stephanie Serra, Joan Turner, Hazel Wilson) as well as an administrative assistant (Sara Johnson). Most of the education staff hold advanced degrees in education (2) or marine science (2) or current teaching certification (4). In 2011, we were also fortunate enough to have 2 marriages and 2 babies born among our staff. With the overarching mission of experiential marine science education, DHP consist of several different types of activities.

Academic Year programs
 During the school year, DHP offers a variety of experiential environmental education classes to visiting school groups. We currently offer 10 different classes for K-12 students. In 2011, we added ROVing the Gulf, in which students learn about the technology that marine scientists use to explore and study marine environments, particularly the deep sea. The class culminates in students building and driving their own ROV in the Sea Lab's pool. All classes have been tied to the Alabama Course of Study Standards and specific Ocean Literacy Principles.

In 2011, 221 school groups visited the Sea Lab to take one or more of these classes. These groups



Marine educator Joan Turner, holding a fish, explains the contents of a trawl net catch to students aboard the R/V Alabama Discovery.

high school students came from 11 different states and 6 different counties in Alabama. Following a successful trial in 2010, we offered 2 sessions of our short overnight camp for 5th and 6th graders, Barrier Island Explorer. Both sessions filled to capacity enrolling a total of 30 students. We offered 3 sessions of Gulf Island Journey, our week-long camp for middle schoolers. All sessions filled serving 90 students from 12 different states and 12 different counties in Alabama. We also offered a number of day camps, including Oceans Alive, Treasure Hunters and Art-Sea Discovery, reaching 53, 37 and 21 young ocean enthusiasts, respectively.

represented a total of 8713 students. Ninety (3912 students) of these groups stayed overnight at the Sea Lab. Most of our visiting groups come from Alabama (190) and 74% are from public schools (163) though we also serve private schools, college students, home-school groups and Boy & Girl Scout groups. While at the Sea Lab, groups may elect to take one or more of our classes. In 2011, DHP educators taught 604 classes.

For the first time, DHP offered an environmental education camp for special needs students titled Sea Stars in 2011 with funding from the Gulf of Mexico Alliance. Over a long weekend in September, we hosted 15 special needs students and their parents/guardians. Participants visited salt marshes and barrier island beaches and took a boat trip to Mobile Bay where they collected fish, plankton and other living marine organisms. Evaluations indicated that each student experienced growth in some manner. Counselors and educators said it was an extremely rewarding experience and we anticipate offering this again in the future.

Summer Camps and Classes

Once school is out, DHP switches gear and offers fun and educational camps for all ages during the summer. We also offer one of the few residential programs in marine science for high school students nationwide. In 2011, our Marine Science Course for high school students filled to capacity and gave over 150 contact hours of directed marine science education to each of 30 high school students. These

Professional Development
Given the state of the economy and the pressures on K-12 teachers, we have devoted significant time and resources to providing inexpensive or free professional development to K-12 teachers and informal educators. In 2011, we offered 4 different multi-day workshops during the summer, The Delta; Reefs, Rhizomes and Restoration; Fins, Fishes and Fisheries; and Oceanographic Technology Tools in Education and Research (OTTER). These workshops were funded by grants from Mississippi-Alabama Sea Grant (MASGC), the Gulf of Mexico Alliance (GOMA) and the Northern Gulf Institute (NGI) and reached 76 teachers. These workshops consist of content delivery, relevant field activities and presentation and exploration of activities suitable for the classroom or laboratory. Additionally, DHP collaborated on 2 multi-day workshops (MSU, Teachers Exploring Coastal Hazards and Resilience, funded by NGI; From the Mountains to the Gulf, funded by Legacy) which reached 42 teachers. Lastly, DHP hosted 3 single day workshops for educators. These included NOAA's Office of Exploration workshops titled Learning Ocean Science through Ocean Exploration and Why do We Explore? which reached 55 teachers. In collaboration with 3 other Gulf states, DHP also implemented and hosted a single day workshop for educators on the Deepwater Horizon event (DWH), funded by NOAA's Office of Education. Using video conferencing technology, workshops were held at 3 locations across the state of Alabama (DISL and consortium member schools UVA, JSU) as well as 7 other locations throughout the Gulf. Four scientists spoke on several aspects of the DWH event;

combined enrollment was 171 teachers with 43 of those participants being from Alabama.

BayMobile and Other Outreach
The BayMobile is DHP's traveling marine science classroom. It is a truck equipped with recirculating aquaria for transport of live animals and with storage for preserved specimens and other teaching supplies. In 2011, the BayMobile visited 53 schools in the state of Alabama (primarily Title I schools) and reached approximately 13,500 K-12 students. Educators also took the BayMobile to more than 50 outreach events, including regional and national environmentally themed events such as Earth Day, Celebrate the Gulf, My Two Boots, Delta Woods and Waters, BirdFest, Kids Day in Bienville Square, Project WetKids, EnviroBowl, zoo days, fishing rodeos and boat shows. DHP educators also participated in many other outreach events including career days, library events, science fairs and AMSTI nights. Lastly, DHP took part in the Alabama Department of Education's distance learning event, ACCESS Week.

Estuarium
DHP works with the Estuarium manager and staff to present the latest in research and issues to the public. In 2011, The Estuarium had 69,550 visitors. Approximately 30% of these visitors are students. New exhibits in 2011 included the Ocean Today Kiosk, the Deepwater Horizon Event display, a Living Shorelines display with audio kiosk and a game

Which Niche is Which? for the younger visitors.

DHP educators offer a weekly series in the Estuarium, known as Boardwalk Talks on an almost weekly basis. These are intended to be informal conversations between Estuarium visitors and researchers at DISL or the surrounding area. In 2011, 36 Boardwalk Talks were offered on amazing variety of topics from oyster reef restoration to manatee tracking to climate change. More than 670 individuals attended these Boardwalk Talks.

Through the Estuarium, DHP also offers field trips for families known as Summer Excursions. In 2011, 69 individuals visited and learned about salt marshes or barrier island beaches and maritime forests through this program.

DHP educators continue to train docents for the Estuarium, offering training days, current events discussions, boat trips and also social events.

Grant-related events and other activities
During 2011, DHP continued work on several grants and was awarded additional grants in support of activities described above or in the following section.

Funds from the COSEE-CGOM NSF grant supported a forum on the Deepwater Horizon event for the public. Public meetings were held at 3 locations in the state, Birmingham Southern College, Auburn High School and DISL. Eighty-



Teachers help replant the shore during their summer workshop Reef, Rhizomes and Restoration.

participants heard from 4 scientists researching various aspects of the spill via web conferencing. A question and answer period followed. Attendees came from 19 different zip codes and included environmental consultants, engineers, librarians, camp counselors, K-12 teachers and aquaculturists, graduate students, K-12 students, retirees, individuals from several non-

professional environmental organizations, a commercial fisherman and a refinery technician.

Funds from the Northern Gulf Institute supported the development of approximately 20 fact sheets on research on the Deepwater Horizon event for teachers and members of the public.

The Gulf Alliance Partnership is an EPA funded program designed to provide multiple hands-on learning experiences for middle school students so that they move beyond the exploration stage and begin to develop inquiry skills. The partnership encompasses 10 locations in 4 states: in Alabama, DHP has been working with North Mobile County Middle School. In 2011, these 6th graders completed the 3rd of their 3 field experiences on watershed issues by traveling aboard DISL's research vessel, the AL Discovery, to sample the water quality and collect animals of Mobile Bay. They also began building a living shoreline, bagging more than 150 bags of oyster shell and deploying these bags just offshore Bayfront Park. This living shoreline will be completed in 2012. With the beginning of the new school year in August, we began the 2nd year of the project with a new cohort of 6th graders.

We continued work on a Climate Change Community Outreach Initiative (funded by NOAA) completing a survey designed to evaluate current knowledge and behaviors, developing an outreach exhibit on Climate Change and collaborating with the grant's partners to develop an online game for K-12 students (and the public) aimed at increasing awareness of climate change issues as well as soliciting individual behavioral changes that may help to ameliorate climate change.

In addition to these funded activities, DHP was fortunate enough to receive 2 donations through the Dauphin Island Sea Lab Foundation to support bus and tuition costs for Mobile County Public School System high school students to participate in the ROV class, ROVing the Gulf.

DHP also sent a delegation from Murphy High School in Mobile County to the Coastal Ecosystem Learning Center Student Summit on Climate Change in Washington DC. During the school year, students learned about climate change and conducted a service project that addressed climate change. The DISL supported team of 7 students and their teacher not only conducted several habitat restoration projects in the area, but also visited multiple elementary schools teaching about our local habitats and their value, particularly as they relate

to climate change. During the 4 days in Washington, DC, students met with Alabama's legislative representatives and congressional staff and many agency personnel and were treated to several events, including an evening in the Smithsonian Institution's Sant Ocean Hall hosted by Jean Michel Cousteau.

Lastly, DHP staff gave many presentations at professional meetings. These included the National Science Teachers Association national meeting (Joan Turner, March), National Science Teachers Association regional meeting (Joan Turner, November), Alabama Science Teachers Association meeting (Tina Miller-Way, Carrie Riley, October), National Marine Educators Association (Greg Graeber, July), Environmental Education Association of Alabama (Carrie Riley, April), Northern Gulf Institute annual meeting (Mendel Graeber, Tina Miller-Way, JoAnn Moody, May), Coastal Estuarine Research Federation biannual meeting (Tina Miller-Way, JoAnn Moody, November), Climate Change Community of Practice (Tina Miller-Way, June), BWET Regional meeting (Tina Miller-Way, April), and the Benthic Ecology meeting (JoAnn Moody, March).

DHP Personnel and Faculty
Dr. Tina Miller-Way, Ph.D. 1995 (Louisiana State University), Associate Director, Outreach and Education
Sara Johnson, Administrative Assistant

Faculty
Jenny Cook, M.S. 1991 (University of South Alabama)
Greg Graeber, M.E. 2008 (University of South Alabama)
Mendel Graeber/part-time, B.S. 2001 (University of Alabama)
JoAnn Moody, MAT/Biology 2005 (University of West Alabama)
Carrie Riley M.S. 2007 (College of Charleston)
Stephanie Serra, M.E. 2010 (University of South Alabama)
Joan Turner, B.A. 1999 (University of Alabama, Huntsville)
Hazel Wilson, B.S. 1981 (Memphis State University)



The George F. Crozier Estuarium
251.861.7500
Toll Free: 866.403.4409
www.sealabestuarium.org

The Estuarium at the Dauphin Island Sea Lab Visitor Totals

Year	Students	Adults	Seniors	Members/Passes	Employers/Groups	Total
1998	26,261	16,468	7,774	2,743		53,246
1999	34,557	18,642	10,427	2,669		66,295
2000	38,223	20,283	11,897	2,662		73,065
2001	36,713	21,705	13,133	3,718		75,269
2002	35,323	21,066	12,639	1,016		72,044
2003	38,622	23,589	12,475	1,318		75,994
2004	34,438	21,389	12,742	1,358		71,926
2005	36,501	13,098	6,732	2,533		58,864
2006	31,024	15,745	8,893	1,088		56,750
2007	34,152	19,689	10,564	1,228		65,633
2008	37,827	19,075	10,138	4,116		71,156
2009	37,581	18,677	10,212	2,788		71,258
2010	32,506	11,994	8,669	2,026		55,201
2011	37,904	18,756	10,799	2,064		69,523
Total	499,731	228,688	126,829	35,415		869,663

The Estuarium continues to be a much-visited local attraction, with an increase in visitation of 34 percent over the 2010 attendance. Recovering from the loss of attendance during and after the 2010 Mocondo Well Oil Spill, the Estuarium posted an attendance of 69,550 during the reporting year.

In 2011, the Estuarium also became part of the "Coastal Connection," a national scenic byway ranging from Grand Bay, across the Mobile Bay Ferry, through Orange Beach and onto Spanish Fort.

New exhibits included the Oceans Today Kiosk, part of a Coastal America initiative, and a display on the Deepwater Horizon Oil Spill. We also hosted the Mississippi River traveling exhibit "Rivers to the Sea."

The Estuarium also hosted celebrity chef Alton Brown in March 2011 for the "Eat in Good in Alabama" event sponsored by the West Bay and Gulf Coast Tourism Development Council. The event was designed to help South Mobile County and the

state of Alabama grow in sustainable tourism awareness.

Mr. Brown met with DISL scientists and supporters who discussed everything from fisheries to hurricanes with him.

Like all museums and aquariums around the nation, the Estuarium could not



Food Network celebrity chef Alton Brown with Aquarist Melissa Torres.



The Oceans Today Kiosk keeps visitors informed of the latest news and research in our seas. This interactive exhibit was sponsored by Coastal America.

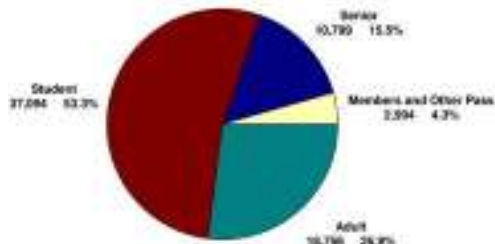
function at the level that it does today without the dedicated involvement of our docent volunteer force. Currently, we have over 55 docents who volunteer their time in the Estuarium or around the campus in other capacities helping to explain the Mobile Bay ecosystem to visitors to greening up our campus. Our stalwart crew of docents provided over 2,900 hours of service in 2011. There is no question that they are a tremendous resource for us.

If you admire our lushly landscaped butterfly gardens, please thank our volunteer gardeners: Stella Anderson; Kay Breitenfeld; Blanche Emerson; Anne Ferguson; Carol Goss; Rina Schuett; Carol Standish; Bonnie Staples and Pierce Staples.

If you are interested in volunteering at the Estuarium, please contact Ms. Jamelle Roy at jroy@disl.org.

Estuarium Personnel
 Robert Dixon, Estuarium Manager
 Brian Jones, Senior Aquarist
 Joe Ingraham, Aquarist
 Melissa Torres, Aquarist
 Denise Keaton, Estuarium Docent Coordinator (reporting period)
 Jamelle Roy, Estuarium Docent Coordinator (current)

Estuarium Visitor Breakdown for 2011



University Programs

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

In faculty news, Dr. John Valentine assumed the position of Executive Director in October 2011, and Dr. Ken Heck became Associate Director for University Programs.

Dr. William "Monty" Graham was named chairman of The University of Southern Mississippi Department of Marine Science in August 2011.

Seventeen (17) of the 22 member institutions sent students to the DISL for the 2011 Summer Program. UP delivered 977 undergraduate hours and 72 graduate hours during the summer and 545 graduate hours during the academic year for a total of 1594 hours (Figure 1).

Eighteen graduate students who conducted their research at the DISL received their degrees from their home institutions during the reporting period of October 1, 2010 to September 30, 2011 (Table 1).

Table 1. 2010-2011 Graduates:

Students Graduated
Ajemian, Matthew. Foraging ecology of large benthic mesopredators: effects of myliobatid rays on benthic communities. Ph.D. (USA)
Baggett, Lesley. The effects of nutrient enrichment on the stoichiometry, fitness, fecundity, and feeding preference of invertebrate grazers of seagrass (<i>Thalassia testudinum</i>) epiphytes in Florida Bay, Florida USA Ph.D. (USA)
Bianconi, Peter. Seasonal and Spatial Effects of Waste Water Effluent on Oyster Growth, Survival, and Sanitation in Mobile Bay, Alabama. M.S. (USA)
Drymon, Marcus. Distributions of Coastal Sharks within the Northern Gulf of Mexico: Consequences for Trophic Transfer and Foodweb Dynamics. Ph.D. (USA)
Fisher, Karen. Evaluating nursery habitat utilization by juvenile gray snapper (<i>Lutjanus griseus</i>) in the northern Gulf of Mexico, M.S. (USA)
Gericke, Rebecca. Effects of climate-driven range expansions of tropical snapper species (<i>Lutjanus</i> spp.) on the dominant native species (<i>pinfish</i> , <i>Lagodon rhomboides</i>). M.S. (USA)
Kenworthy, Matt. Effects of Temporal Variation in Predation Risk on Predator-Prey Interactions. M.S. (USA)
LeMoine, Nathan. Individual and community level responses of crustaceans and fish to restoration of marine biogenic habitat. M.S. (USA)
Martin, Charles. Impacts of Invasive Eurasian Milfoil and Nile Tilapia in Coastal Alabama. Ph.D. (USA)
Miller, Glenn. The influence of avian predators on nearshore communities in the northern Gulf of Mexico and Copper River Delta, Alaska: implications for habitat conservation. Ph.D. (USA)
Millet, Andrews. Zooplankton community structure in the northern Gulf of Mexico: implications for ecosystem management. M.S. (USA)
Myers, Joseph. Effects of species-specific grazing and nutrient addition on growth and production of the shoalgrass <i>Halodule wrightii</i> and its epiphyte. M.S. (USA)
Novoveska, Lucie. The influence of avian predators on nearshore communities in the northern Gulf of Mexico and Copper River Delta, Alaska: implications for habitat conservation. Ph.D. (USA)
Puntilla, Riika. Do piscivorous fish have cascading impacts on lower trophic levels in coral reef environment: comparisons of food web interactions in back reef and fore reef environments. M.S. (USA)
Shiple, Randi. Prey selectivity and Ichthyoplankton predation by scyphomedusae in the northern Gulf of Mexico. M.S. (USA)
Smith, Casey. The relationship between phytoplankton pigment concentrations and dmsp, dms, and dmsd in a diatom dominated bloom in the Ross Sea, Antarctica. M.S. (USA)
Stults, Debra. Paleoclimates from two Late Neogene Fossil Floras of Eastern North America, including Comparisons with the Marine Record. Ph.D. (USA)
Wells, Tami M. Natural disasters and long-term recovery: A baseline study of historical change and habitat structure of <i>Juncus roemerianus</i> marshes in Mississippi and Alabama. Ph.D. (USA).

Table 2. 2011 Research Experience for Undergraduates - Participants and Projects

Chris Cacciapaglia (Florida Institute of Technology). Faculty Mentor - Dr. John Valentine. "Effects of predator identity, habitat structure, predator and habitat richness, and their interactions on prey mortality."

Melissa Collini (University of Texas at Dallas). Faculty Mentor - Dr. Ron Kiene. "Production of Alternative Dimethylsulfoxide Precursors in the Dinoflagellate *Lingulodinium polyedra*."

Jami Ivory (Humboldt State University). Faculty mentors - Dr. Monty Graham and Dr. Rob Condon. "Microbial metabolism of crude oil and dispersant using flow cytometry techniques."

Amanda Jones (Rutgers University). Faculty Mentor - Dr. Ruth Carmichael. "The contribution of oil-derived C and N to the diet of oysters due to the Deepwater Horizon oil spill."

Ian Kroll (Vassar College). Faculty Mentor - Dr. Sean Powers. "Predation threat and reef design mitigate mortality on oyster reefs."

Natasha Zarnstorff (Emporia State University). Faculty Mentor - Dr. Ken Heck. "Ecological effects of restoring seagrass in coastal Northern Gulf of Mexico waters."

Eight of these were Ph.D. graduates.

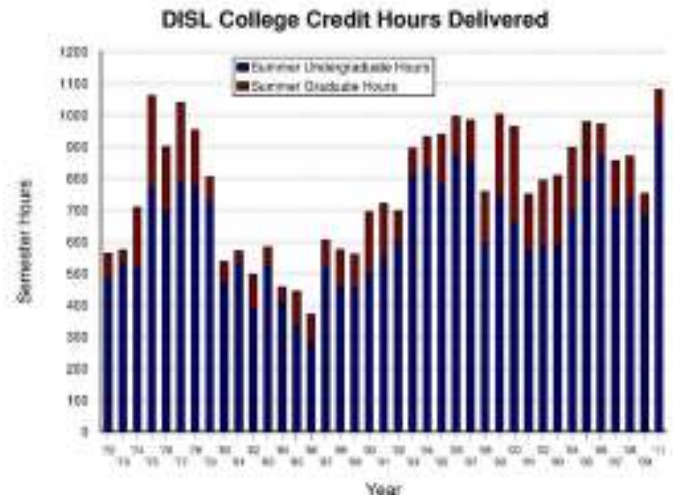
extramural funding through the University of Alabama and University of South Alabama.

Six NSF Research Experience for Undergraduates (REU) participants completed a 12-week program of workshops, lectures and research with faculty mentors in 2011 (Table 2).

During the reporting period, the faculty produced 47 refereed publications; 3 technical reports; 1 book chapter; 15 refereed publications in press; and 139 scientific presentations. A complete listing of research faculty activity can be found on pages 26-40.

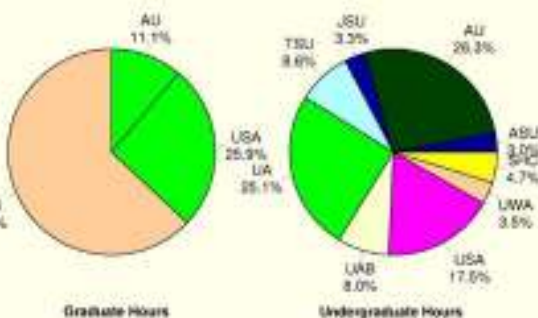
The UP Faculty contributed \$39,228,698 in extramural funding (inclusive of \$2,184,210.27 in BP Gulf Research Initiative expenditures)
 There was an additional \$1,264,585 in faculty

Figure 1



University Programs Personnel
 Dr. Kenneth L. Heck, Jr. - Associate Director, October 2011 to present
 Dr. John F. Valentine - Associate Director, January 2008 - September 2011
 Sally Brennan - University Programs Registrar
 Carolyn Wood - Administrative Assistant

Summer - 2011 Graduate and Undergraduate Credit Hour Breakdown by Institution





Mobile Bay National Estuary Program

Prepared by Roberta Arena Swann, Director, Mobile Bay National Estuary Program

PROGRAM IMPLEMENTATION

The Mobile Bay National Estuary Program (MBNEP) 2011 funding sources reflected its ability to collaborate with numerous partners. Fifteen grants from 12 different organizations were active during 2011 including two grants from the U.S. EPA Gulf of Mexico Alliance, two grants from Alabama Department of Conservation and Natural Resources, two grants from Alabama Department of Transportation, and two grants from U.S. Fish and Wildlife Service. Match funding for the MBNEP annual U.S. EPA award was received from the State of Alabama, the Alabama Department of Conservation and Natural Resources and several Mobile and Baldwin County municipalities, totaling \$215,946. Both the City of Fairhope and the City of Spanish Fort each contributed \$5,000 this year (after not contributing match dollars for several years) and the City of Daphne increased their contribution by \$5,000, to \$10,000. In total, the MBNEP managed over \$2,600,000 to conduct 42 projects affecting the water quality and living resources of Mobile Bay.



Mobile Bay National Estuary Program
4172 Commanders Drive
Mobile, AL 36615
(251) 431-6409
Fax: (251) 431-6450
www.mobilebaynep.com

STATUS AND TRENDS

Mobile Bay Sediment Budget
MBNEP JOINED FORCES with the U. S. Army Corps of Engineers to develop a Sediment Budget for Mobile Bay that will describe the various sediment inputs (sources) and outputs (sinks) for the entire Mobile Bay watershed. This budget will be used to predict morphological changes within over time and will be particularly useful in assessing any changes related to future habitat restoration projects. Such a tool will provide great value to regulatory and enforcement agencies to make decisions that affect policy development, project implementation, and management of habitats and living resources. Contractor: Dr. Mark Byrnes, Applied Coastal Research and Engineering, Inc.

MOBILE BAY REAL-TIME MONITORING

With continued funding (5th year) from the Gulf of Mexico Program in 2011, water monitoring sites at Meaher Park, Dauphin Island, Weeks Bay, and Mobile (Middle) Bay continue to provide real-time data that can be viewed at www.mymobilebay.com. That website also contains 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 particularly pertinent to shipping interests. Data is also available from Weeks Bay and Grand Bay through the NOAA National Weather Service Hydrometeorological Automated Data System. The My Mobile Bay website will ultimately be connected to a larger network of stations as part of the Gulf Coast Ocean Observing System with research

reports, maps, and other information available to the public. Contractor: Mike Dardeau, DISL

ECOSYSTEM RESTORATION AND PROTECTION

Joe's Branch

In the D'Olive watershed, Joe's Branch, a tributary parallel to Highway 31, is eroding at an accelerating rate due to increases in the volume and velocity of stormwater runoff. Identified as a high priority stabilization area in the D'Olive Creek, Tiawasee Creek and Joe's Branch Watershed Management Plan, MBNEP secured a \$645,600 grant from the Alabama Department of Environmental Management and a \$200,000 award from the Alabama Department of Transportation on behalf of its partners in Spanish Fort, Daphne, and Westminster Village. The goals of the project include removing this stream from the State's 303(d) list for impairment by siltation and demonstrating to public officials, engineers and other professionals how water quality protection through natural "green infrastructure" is a practical alternative to rock and armored bank retention systems.

The restoration will involve using a cutting-edge technology called Regenerative Step Pool Storm Conveyance. This methodology involves filling the gully to flush with a mixture of sand and sawdust and installing a series of rock step pools down the length of the impacted stream to slow velocity and promote infiltration of the runoff underlying the stream degradation. The project includes restoration of downstream wetlands impacted by sediments resulting from the upstream erosion. In addition, the Dauphin Island Sea Lab is donating in-kind services. Design and Engineering Services Contractor: Emery Baya, Thompson Engineering

Mon Louis Island

The western shore of Mobile Bay has suffered erosion and degradation of its shallow water and intertidal habitats that provide nursery grounds for fish and shellfish, benthic biodiversity, and primary production. This erosion stems not only from the effects of tropical weather events, but also from chronic impacts like prevailing winds and ship wakes. MBNEP and six contiguous property owners are undertaking this project to use "living shorelines" technology to demonstrate its benefits, including increases in acreage and ecosystem function of these near shore habitats for a greater community benefit.

MBNEP received funding from the Gulf of Mexico Foundation Community Restoration Partnership and the U. S. Fish and Wildlife Service Coastal Programs



This before and after photo to the right shows the erosion on a tributary of Joe's Branch. Ashley Campbell with the City of Daphne sits on a boulder that fell off the wall of the stream after a storm last summer. The second photo shows a completed step pool conveyance in Anne Arundel County, MD. The restoration of the tributary of Joe's Branch will resemble the Maryland project.

to undertake this project. The six property owners of parcels encompassing almost 700 feet of shoreline, have agreed to partner with the to demonstrate how such a project would be implemented on a multi-property scale and constructed under existing State and Federal regulations. The project is currently being designed by South Coast Engineers with input from the property owners.

Project goals are to create and enhance sub-tidal reef and intertidal marsh habitats. The objectives are to install 0.25 acres of reef structure to expand quality oyster settlement opportunities and to establish 0.45 acres of low energy inshore area to restore emergent marsh vegetation, while optimizing sandy areas along this stretch of shoreline. Another objective is to engage private property owners in designing and implementing this public shoreline restoration project as a demonstration of green technology as an alternative to shoreline armoring. Design and Engineering Services Contractor: Scott Douglass, Caren Dixon, South Coast Engineers

Prichard's Jackson Reading Park/Eight Mile Creek
With a Watershed Management Plan for the Eight Mile Creek (EMC) Watershed recently completed, MBNEP received a National Fish and Wildlife Foundation Five Star Grant to restore a first order tributary that borders Prichard's Jackson Reading Park in the Whistler Community. The creek conveys stormwater from a drainage area north of St. Stephens Road past the Park and downstream to Eight Mile Creek, which was listed on the State's 303(d) list for impairment by pathogens before development of a total maximum daily load (TMDL). Partners from Auburn University (Landscape Architecture Department and Alabama Cooperative Extension System (ACES)) are collaborating on developing an engineering plan for the stream restoration, scheduled for construction by the City of Prichard Public Works Department in early November, 2012. Partners also include the Coastal Alabama Clean Water Partnership and the Prichard Environmental Restoration Keepers, who will coordinate volunteer clean up and planting efforts. The restored stream will provide an educational venue to connect school-age stakeholders with environmental assets where they live. Design and Construction Management Services: Charlene LeBlue, Jessica Roberts Brown, Auburn University.

EDUCATION, OUTREACH AND CAPACITY BUILDING

A Red Fish Tale
"A Red Fish Tale," an educational video produced by MBNEP and directed by Hidden World Productions, was created as part of a grant from the Gulf of Mexico Program and was released in April, 2011. This film-short features a pair of animated red fish, Jimbo and Thibodeaux, who explain the concepts of nutrient over-enrichment, eutrophication, hypoxia, and anoxia along with storm water runoff and watershed dynamics to an elementary through middle school audience. The film premiered at the Crescent Theater in Mobile and is available via the MBNEP website. The cast was recruited from the Alabama School for Mathematics and Science student body and faculty. "A Red Fish Tale" will be distributed to area schools, libraries, and educational venues, available on the MBNEP website (www.mobilebaynep.com) and offered at interactive kiosks across the Gulf Coast. Movie Contractor: Lynn Rabren, Hidden World Productions. Kiosk Contractor: Hamline University



Clean Up the Bottom involved volunteers on water and on land.

Clean Up the Bottom

In an effort to engage the community and bring attention to the Three Mile Creek Watershed, MBNEP partnered with the City of Mobile, Keep Mobile Beautiful, the Mobile Housing Board, the Martin Luther King Redevelopment Corporation, and others to coordinate a neighborhood and waterway cleanup in "The Bottom." This historically African-American, traditionally-underserved community located along Martin Luther King Avenue near downtown Mobile has a rich heritage and is home to many area leaders and elected officials but suffers from ongoing problems with illegal disposal, trash and litter. The problems are intensified due to stormwater runoff which routinely carries discarded material into local tributaries to Three Mile Creek where it impairs rich wildlife and aquatic habitat and destroys aesthetics.

volunteers' kayaks and canoes. An eighteen-wheeled tractor trailer provided by Firestone/Bridgestone was filled with abandoned tires collected from along Conception Street Road. Local elected officials, Mobile Housing Board residents, community residents, and City and agency staffs all worked together to improve this area's condition and inspire pride in the Bottom community. The event was sponsored by BP, with support from Scotch Gulf Lumber, Coca Cola. This event was a signature event for raising awareness about the need to develop a comprehensive watershed management plan for the Three Mile Creek Watershed.

Mobile Bay National Estuary Program Personnel

Roberta Swann, Director
Tom Herder, Watershed Protection Coordinator
Katherine Eddy, Community Relations Coordinator
Brenda Lowther, Program Administrator
Christian Miller, Non Point Source Pollution Outreach

On October 21, 2011 almost 400 volunteers spent four hours on neighborhood streets and Three and One Mile Creeks to collect and dispose of litter, debris, and tires. Filled trash bags were collected by City public works staff from dead ends and intersections and Sheriff's Flotilla deputies from



Volunteers help Clean Up the Bottom in the shadow of the RSA Tower.



Resident Research Faculty

Ruth Carmichael, Ph.D. (Boston University, 2004). Senior Marine Scientist, 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 Cebrían, Ph.D. (Polytechnic University of Catalonia, Spain, 1996). Senior Marine Scientist, DISL and Associate 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. Ken Heck is Chief Marine Scientist at the DISL.

Rob Condon, Ph.D. (Virginia Institute of Marine Science, The College of William & Mary, 2008). Research Senior Marine Scientist, DISL and microbial ecologist interested in understanding the climatological, physical and biogeochemical processes controlling zooplankton and bacterial communities, the biological pump and carbon (C) cycling in estuarine, coastal and open-ocean systems.

John Dindo, Ph.D. (University of Alabama at Birmingham, 1991). Senior Marine Scientist, DISL and Associate Director for Institutional Advancement and Operations. 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.

Brian Dzwonkowski, Ph.D. (University of Delaware, 2009). Research Senior Marine Scientist, DISL. Understanding physical processes that influence three-dimensional transport in the coastal ocean as well as how this transport impacts marine ecosystems. Focused on improving the understanding of the low and its associated response to forcing functions at a range of temporal and spatial scales.

Monty Graham, Ph.D. (University of California, Santa Cruz, 1994). Senior Marine Scientist, DISL, and Associate Professor of Marine Sciences, USA. Physical and behavioral mechanisms that cause plankton to be distributed in patches; processes that influence the formation and fate of detrital particles known as "marine snow." (Reporting year; Dr. Graham is currently at the University of Southern Mississippi).

Kenneth L. Heck, Ph.D. (Florida State University, 1976). Chief Marine Scientist, DISL 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.



Dr. Frank Hernandez, fourth from bottom right, shows students an oarfish which was brought in by a local fisherman. This specimen was donated to the Natural History Museum at Louisiana State University for their fish collection.

Frank J. Hernandez, Ph.D. (Louisiana State University, 2001). Research Senior Marine Scientist, DISL and Research Assistant Professor, University of South Alabama. Ecology of marine organisms, primarily coastal and reef-associated fishes, particularly the early life history stages of fishes and the physical and environmental processes that affect dispersal, survival to settlement, habitat selection and the eventual recruitment to the adult population.

Ronald P. Kiene, Ph.D. (SUNY Stony Brook, 1986). Senior Marine Scientist, 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.

Christine (Tina) Miller-Way, Ph.D. (Louisiana State University, 1994). Marine Scientist and Associate Director, Discovery Hall, DISL. Science education - curriculum development, inquiry-based marine

science; Research - functionality of marine benthos, benthic community structure, macrofaunal effects on benthic processes and coastal hypoxia.

Behzad Mortazavi, Ph.D. (Florida State University, 1998). Senior Marine Scientist, 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 bioactive 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. (University of British Columbia, 2005). Senior Marine Scientist, 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. (College of William and Mary, 1993). Senior Marine Scientist, DISL and Associate 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.

Sean Powers, Ph.D. (Texas A&M University, 1997). Senior Marine Scientist, 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. (University of Alabama, 1989). 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.

Post-Doctoral Fellows

Leslie Baggett
Laure Carrasou
Brian Dzwonkowski
Marcus Drymon
Agota Horel
Glenn Miller
Bidyt Mohapatra
Ryan Moody



Faculty Activity

Book Chapters and Projects
Valentine, J.F., K.L. Heck, Jr., M.J. R. Dardeau and H. Burch. In press. Ecosystem-Based Management of Mobile Bay, Alabama. Pp.000-000. In: J.W. Day and A. Yanex-Arancibia (Eds.), Ecosystem-Based Management. Texas A&M Press.

Peer Reviewed Publications:
Ajemian, M. and S. P. Powers. In press. Habitat specialization in a marine copepod (*Rhinoceros bonasus*) of the northern Gulf of Mexico. *Environmental Biology of Fishes*.

Ajemian, M., J. D. Donlan, W. M. Graham and S. P. Powers. 2011. First Evidence of elasmobranch predation by a waterbird: Stingray Attack and Consumption by the Great Blue Heron (*Ardea herodias*). *Waterbirds*, 34(1):117-120.

Alberti, J., J. Cebrían, A. Mendez-Cassiriego, A. Canepuccia, M. Escapa and O. Iribarne. 2011. Effects of nutrient enrichment and crab herbivory on a SW Atlantic salt marsh productivity. *Journal of Experimental Biology and Ecology* 405:99-104.

Ant, N.A., J. Cebrían, K.L. Heck, Jr., C.M. Duarte, K. L. Sheehan, M-E.C. Miller and C. D. Foster. 2011. Decoupled effects (positive to negative) of nutrient enrichment on ecosystem services. *Ecological Applications* 21:999-1009.

Baggett, L.P., K.L. Heck, Jr., T.A. Polunich, A.R. Armbrige and J.W. Fourqurean. 2010. Nutrient enrichment, grazer identity and their effects on epiphytic algal assemblages: field experiments in subtropical turtlegrass (*Thalassia testudinum*) meadows. *Marine Ecology Progress Series* 406:33-45.

Biancani, P., J., R.H. Carmichael, J. H. Daskin, K. R. Calo, W. Burkhardt III. 2011. Seasonal and spatial effects of wastewater effluent on growth, survival and accumulation of microbial contaminants by oysters in Mobile Bay, Alabama. *Estuaries and Coasts*. Published online. June. Selected as CESN highlight article.

Bishop, M.A., B.F. Reynolds and S. P. Powers. 2010. An in situ, individual based approach to quantify connectivity of marine fish: Ontogenetic movements and residency of lingcod. *PLOS ONE* 5(12):e14267.

Brotz, L., M. Lebrato, K.L. Robinson, M. Sexton, A.K. Sweetman, K. Pitt and R.H. Condon. 2011. Implications of increased carbon supply for the global expansion of jellyfish blooms. *Limnology & Oceanography* Bulletin 20:38-39.

Canepuccia, A., D., J. Alberti, J. Pascual, G. Alvarez, J. Cebrían and O. O. Iribarne. 2010. ENSO episodes modify plant-terrestrial herbivore interactions in a Southwestern Atlantic salt marsh. *Journal of Experimental Marine Biology and Ecology* 396:42-47.

Carrasou, L., B. Dzwonkowski, F.J. Hernandez, S. P. Powers, K. Park and W. M. Graham. In press. Climatic and environmental controls of fish recruitment in the northern Gulf of Mexico: Dominance of riverine inputs. *Marine and Coastal Fisheries: Dynamics, Management and Ecosystem Science*.

Carrasou, L., B. Dzwonkowski, F. Hernandez, S. Powers, K. Park, W. M. Graham and J. Maresca. In press. Environmental influences on juvenile fish abundances in a river-dominated coastal system. *Marine and Coastal Fisheries*.

Carmichael, R. H. and C. Kovacs. 2010. Comment on Watanabe et al. 2009. *Marine Pollution Bulletin* 60:314-315.

Condon, R.H., D.K. Steinberg, P.A. Del Giorgio, T.C. Bouvier, D.A. Bronk, W.M. Graham and H.W. Ducklow. 2011. Jellyfish blooms result in a major microbial respiratory sink of carbon in marine systems. *Proceedings of the National Academy of Sciences*, 108 (25), 10225-10230. doi:10.1073/pnas.1015782108.

del Giorgio, P.A., R.H. Condon, T. Bouvier, K. Longnecker, C. Bouvier, E.B. Sherr and J.M. Gasol. 2011. Coherent patterns in

bacterial growth, growth efficiency and luciferase respiration and incorporation along a North Pacific inshore-offshore transect. *Limnology and Oceanography* 56:1-16.

Del Valle, D., A. D. Slezacek, C.M. Smith, A.N. Relling, D.J. Kieber and R.P. Kiene. 2011. Effect of acidification on preservation of DMSP in seawater and phytoplankton cultures: evidence for rapid loss and cleavage of DMSP in samples containing *Phaeocystis* sp. *Marine Chemistry*, 124:57-67. doi:10.1016/j.marchem.2010.12.002.

Drymon, J.M., S. P. Powers, J. Dindo and T. Herwood. 2010. Distribution of sharks across a continental shelf of the northern Gulf of Mexico. *Marine and Coastal Fisheries: Dynamics, Management and Ecosystem Science* 2:440-450.

Drymon, J.M., S. P. Powers, R.H. Carmichael. 2011. Trophic plasticity in the Atlantic sharpnose shark (*Rhizoprionodon terraenovae*) from the north central Gulf of Mexico. *Environ. Biol. Fish.* Published online, September.

Dzwonkowski, B., K. Park, H.K. Ha, W.M. Graham, F.J. Hernandez and S.P. Powers. 2011. Hydrographic variability on a coastal shelf directly influenced by estuarine outflow. *Continental Shelf Research*, 31(9):939-950. doi:10.1016/j.csr.2011.03.001.

Dzwonkowski, B., K. Park and L. Jiang. In press. Subtidal across-shelf velocity structure and surface transport effectiveness on the Alabama shelf of the northeastern Gulf of Mexico. *Journal of Geophysical Research*, doi:10.1029/2011JC007188.

Dzwonkowski, B., K. Park, H.K. Ha, W.M. Graham, F.J. Hernandez and S.P. Powers. 2011. Hydrographic variability on a coastal shelf directly influenced by estuarine outflow. *Continental Shelf Research*, 31(9):939-950.

Ferrero-Vicente, L. M., E. Martinez-Garcia, J. Cebrían, K. L. Heck, B. Christensen and J. L. Sanchez-Lizaso. 2011. Comparison of macrobenthic assemblages in shallow coastal lagoons (NW Florida) with different level of anthropogenic impact. *Gulf of Mexico Science* 29(1):68-73.

Fodrie, F.J. and K.L. Heck, Jr. 2011. Response of Coastal Fishes to the Gulf of Mexico Oil Disaster. *PLoS ONE* 6(7):e21609. doi:10.1371/journal.pone.0021609.

Gacia, E., N. Marba, J. Cebrían, R. Vaquer-Sunyer, N. Garcias-Bonet and C. M. Duarte. In press. Thresholds of irradiance for seagrass (*Posidonia oceanica*) meadow metabolism: an experimental approach. *Marine Ecology Progress Series*.

Gerardi, N. R. and S. P. Powers. 2011. Subtle changes in prey foraging behavior have cascading effects in a shallow estuary. *Marine Ecology Progress Series*, 427:51-58.

Graham, W.M., R.H. Condon, R.H. Carmichael, I. D'Ambr, H.K. Patterson, L.J. Linn and F.J. Hernandez. 2010. Oil carbon entered the coastal planktonic food web during the Deepwater Horizon oil spill. *Environmental Research Letters* 5:045301. doi:10.1088/1748-9326/5/4/045301. Selected as '2010 Highlight' article.

Ha, H.K., J.P.-Y. Maa, K. Park and Y.H. Kim. 2011. Estimation of high-resolution sediment concentration profiles in bottom boundary layer using pulse-coherent acoustic Doppler current profilers. *Marine Geology*, 278, 199-209. doi:10.1016/j.margeo.2010.11.002.

Hayworth, J.S., T.P. Clement and J.F. Valentine. 2011. Deepwater Horizon oil spill impacts on Alabama beaches. *Hydrological Syst. Sci. Discuss.* 8:6721-3741.

Heck, K.L., Jr., J. Cebrían, S. P. Powers, N. G. Gerardi, R. Plutchak, D. Byron and K. Major. In press. Ecosystem Services Provided by Oyster Reefs: An Experimental Assessment. *Marine Ecology Progress Series*.

Hernandez, F.J., J., L. Carrasou, S.P. Muffelmaier, S.P. Powers and W.M. Graham. 2011. Comparison of two plankton net mesh sizes for ichthyoplankton collection in the northern Gulf of Mexico. *Fisheries Research* 108:327-335.

Herrera-Silveira, J.A., J. Cebrían, J.J. Hauxwell, J. Ramirez and R. Ralph. 2010. Evidence of negative impacts of ecological tourism on turtlegrass (*Thalassia testudinum*) beds in a marine protected area of the Mexican Caribbean. *Aquatic Ecology* 44:23-31.

Herrmann, M., R.G. Najjar, A.R. Neeley, M. Vila-Costa, J.W. Dacey, G.R. DiTullio, D.J. Kieber, R.P. Kiene, P.A. Matrai, R.J. Simó and M. Vermet. In press. Diagnostic modeling of dimethylsulfide production in Antarctic Peninsula coastal waters. *Continental Shelf Research*.

Howard, E., S. Sun, C.R. Reisch, D.A. Del Valle, R.P. Kiene and M.A. Moran. 2011. Changes in DMSP methylase gene assemblages in response to an induced phytoplankton bloom. *Applications in Environmental Microbiology* 77:524-531. doi:10.1128/AEM.01457-10.

Ilkikhyan, I.N., R.M.L. McKay, O.A. Kutovaya, R.H. Condon et al. G.S. Bulerjishi. 2010. Seasonal expression of the pycocyanobacterial phosphonate transporter gene *phnD* in the Sargasso Sea. *Frontiers in Microbiology*, Dec 2010, 1: Article 135.

Inskip, W.P., D. B. Rusch, Z.J. Jay, M.J. Herrgard, M.A. Kozubal, T. H. Richardson, R.E. Maour, M. Hamamura, R. deM. Jennings, B. Fouke, A. Reysenbach, F. Roberto, M. Young, A. Schwartz, E. S. Boyd, J.H. Badger, E.J. Mathur, A.C. Ortmann, M. Bateson, G. Geesey and M. Frazier. 2010. Melanogones from high-temperature chemotrophic systems reveal geochemical controls on microbial community structure and function. *PLoS ONE* 5:e9773.

Khayal, R., C. Fu, A. C. Ortmann, M. J. Young and J. E. Johnson. 2010. The architecture and chemical stability of the archaeal Sulfolobus turreted icosahedral virus. *Journal of Virology* 84:9575-9583.

Kim, C.-K., K. Park, S.P. Powers, W.M. Graham and K.M. Bayha. 2010. Oyster larval transport in coastal Alabama: dominance of physical transport over biological behavior in a shallow estuary. *Journal of Geophysical Research*, 115, C10019, doi:10.1029/2010JC006115.

Kovacs, C., J. Daskin, W. Burkhardt and R. H. Carmichael. 2010. Cross-treaty virginalis shells record local variation in wastewater inputs to a coastal estuary. *Aquatic Biol.* 9:77-84.

Labfabe, C., K. Major, C. S. Major and J. Cebrían. 2011. Arsenic and mercury bioaccumulation in the aquatic plant *Valisneria spiralis*. *Chemosphere* 82:1393-1400.

Labfabe, C., K. Major, C. S. Major, M. Miller and J. Cebrían. 2011. Comparison of morphology and photo-physiology with metal-metalloid contamination in *Valisneria spiralis*. *Journal of Hazardous Materials* 191:356-365.

Lebrato, M., M. Pahlow, A. Oschlies, K.A. Pitt, D.O. B. Jones, J.C. Molinero and R.H. Condon. 2011. Depth attenuation of organic matter export associated with jelly falls. *Limnology & Oceanography*, 56:1971-1928.

Lehrter, J. C. and J. Cebrían. 2010. Uncertainty propagation in an ecosystem

nutrient budget. *Ecological Applications* 20:508-524.

Lucas, C.H., K.A. Pitt, J.E. Purcell, M. Lebrato and R.H. Condon. In press. What's in a jelly? Proximate and elemental composition and biometric relationships for use in biogeochemical studies. *Ecology*.

Magalhães, C., R.P. Kiene, A. Buchan, A. Machado, C. Teixeira, J.W. Wiebe, et al. 2010. A novel inhibitory interaction between dimethylsulfoniopropionate (DMSP) and the dentrii carbon pathway. *Biogeochemistry*, 10, 1007/10553-010-9560-0.

Magalhães, C., R.P. Kiene, A. Buchan, A. Machado, J.J. Wiebe and A.A. Bordalo. 2011. Methanethiol accumulation exacerbates release of N2O during denitrification in estuarine sediments and bacterial cultures. *Environmental Microbiology Reports*, 10.1111/j.1758-2229.2010.00226.x.

Marco-Mendez, C., P. Prado, K. Heck, J. Cebrían and J.L. Sanchez-Lizaso. In press. Epiphytes mediate the trophic role of sea urchins in *Thalassia testudinum* seagrass beds. *Marine Ecology Progress Series*.

Martin, C.M. and J.F. Valentine. 2011. Impacts of a habitat-forming exotic species on estuarine structure and function: an experimental assessment of Eurasian mussels. *Estuaries and Coasts*, 34: 364-372.

Martin, C.M., M. Valentine and J.F. Valentine. 2010. Competitive Interactions between Invasive Nile Tilapia and Native Fish: The Potential for Altered Trophic Flow. *Science and Policy Implications of *Rutilus rutilus** to olfactory and visual cues from multiple predators. *Oecologia* 163:893-902.

Moran, M. A., C. R. Reisch, R. P. Kiene and W. B. Whitman. 2011. Genomic insights into bacterial DMSP transformations. *Annual Reviews of Marine Sciences*, Published Online, Sep 9, 2011.

Peterson, C. H., S. S. Anderson, G. N. Cherr, F. R. Ambrose, S. Angberg, S. Bay, M. Blum, R. Condon, T. A. Dean, M. Graham, M. Guzy, S. Hampton, S. Joyce, J. Labrinbos, B. Mate, D. Meffer, S. B. Powers, P. Somasundaran, R. B. Spies, C. M. Taylor, R. Tjeerdema, E. E. Adams. In press. *Form: A Tale of Two Spills*. Governance and Policy Implications of an Emerging New Oil Spill Paradigm. *Biogeochemistry*.

Plutach, R. R., K. Major, J. Cebrían, C. D. Foster, M. E. Miller, A. Anton, K. L. Sheehan, K. L. Heck and S. P. Powers. 2010. Impacts of Oyster Reef Restoration on Primary Productivity and Nutrient Dynamics in Tidal Creeks of the North Central Gulf of Mexico. *Estuaries and Coasts* 33:1355-1364.

Prado, P. and K.L. Heck, Jr. 2011. Seagrass selection by omnivorous and herbivorous consumers: determining factors. *MEPS* 429:45-55.

Rinta-Kanto, J. M., H. Burgmann, S.M., Gifford, S. Sun, S. Sharma, D.A. Del Valle, et al. 2010. Analysis of Sulfur-Related Transcription by Roseabacter Communities Using a Taxon-Specific Functional Gene Microarray. *Environ Microbiol*, 10.1111/1462-2920.2010.02350.x.

Rinta-Kanto, J. M., Sun, S., Sharma, S., Kiene, R. P., & Moran, M. A. In press. Bacterial Community Transcription Patterns During a Marine Phytoplankton Bloom. *Environmental Microbiology*.

Scheinin, M. S.B. Scyphers, L. Kauppi, K.L. Heck, Jr. and J. Mattila. 2011. The relationship between vegetation density and its protective value depends on the densities of prey and predators. *Oikos* doi:10.1111/j.1600-0706.2011.19941.x.

Sophers, S. B., S. P. Powers, K. L. Heck, Jr. and D. Byron. 2011. Oyster reefs as natural breakwaters mitigate shoreline loss and facilitate fisheries. *PLoS ONE* 6(8):e22396. doi:10.1371/journal.pone.0022396.

Sheehan, K. L., J. O'Brien, K. Lafferty and J. Cebrían. 2011. Parasite Distribution, Prevalence and Assemblages of the Grass Shrimp, *Palaeomonetes pugio*, in Southwestern Alabama, U.S.A. *Comparative Parasitology* 78(2):245-256.

Wirh, J. F., J. C. Snyder, R.A. Hochstein, A. C. Ortmann, D. A. Willis, T. Douglas and M. J. Young. 2011. Development of a genetic system for the archaeal virus Sulfolobus turreted icosahedral virus (STIV). *Virology* 415:6-11.

Technical Reports
 Cebrían, J. 2011. Perdido Coastal Lagoons. In: NOAA/NCDC Digital Atlas of the Gulf of Mexico (Russ Beard and Thomas Pardo, Eds.)

Powers, S.P., M. Johnson, C. Hightower. 2010. Age distribution and abundance estimates of adult red drum (*Sciaenops ocellatus*) in offshore waters of the north central Gulf of Mexico. *NMFS, Marine Fisheries Initiative*, Award number - NA08NM4330405.

Powers, S.P. and K. Burns. 2010. Summary Report of the Red Drum Special Working Group for the Gulf of Mexico Fishery Management Council: Recommendations for allowable biological catch (ABC). Gulf of Mexico Fishery Management Council, Tampa, Florida 12 pp.

Abstracts & Presentations
 Ajemian, M.J. and S.P. Powers. 2010. Impacts of cownose rays (*Rhinoptera bonasus*) to the north-central Gulf of Mexico in a decoupled approach. Bays and Bayous Symposium, MS-AL Sea Grant, Mobile, AL, December 1-2. [Poster].

Ajemian, M. and S. P. Powers. 2011. Impacts of Cownose Rays (*Rhinoptera bonasus*) to northern Gulf of Mexico Shellfish Resources: An Integrated Approach. American Fisheries Society, Annual Meeting, Seattle, WA, September 5-10.

Anton, A., J. Cebrían, K. L. Heck, C. M., Duarte, K. L. Sheehan, M. C. Miller and C. D. Foster. 2010. Decoupled effects (positive to negative) of nutrient enrichment on seagrass ecosystem services. The 2010 Bays and Bayous Symposium, Mobile, Alabama, December 1-2, 2010.

Bawden, N.E. and S.P. Powers. 2010. Seasonal Times Series of Oyster Spat Settlement: Comparison of 2006-2007 Data with Historical Data from 1967. Bays and Bayous Symposium, MS-AL Sea Grant, Mobile, AL, December 1-2. [Poster].

Bayha, K.M., F.J. Hernandez, Jr., W.M., Graham and R. Colini. 2011. Spatial distribution of red snapper (*Lutjanus campechanus*), vermilion snapper (*Rhombopilus auroreus*) and red drum (*Sciaenops ocellatus*) eggs across the northern Gulf of Mexico based on historic SEAMAP plankton samples. 35th Annual Larval Fish Conference. 22-26 May 2011. Wilmington, NC. [Poster].

Bernard, R. and B. Mortazavi. 2011. Benthic Nutrient Fluxes in Little Lagoon, AL. The Benthic Ecology 40th Annual Meeting, Mobile, AL, March 2011.

Carassou, L., B. Dzwonkowski, F.J. Hernandez, K. Park, S.P. Powers and W.M. Graham. 2010. Climatic and environmental Controls of fish recruitment in coastal waters dominated by riverine processes. In: Abstracts of the 2010 Bays and Bayous Symposium - Science, Industry, Community: Building Bridges to Coastal Health, Arthur R. Outlaw Convention Center, Mobile, AL, Dec 1-2, 2010.

Carmichael, R. H. 2011. Marine mammals in the northern Gulf of Mexico: Promoting science & closing a data gap. Gulf Coast Student Chapter, The Society for Marine Mammalogy, Hattiesburg, MS, Keynote address [Oral, invited].

Carmichael, R. 2011. International Workshop on Science and Conservation of Asian Horseshoe Crabs, Hong Kong "Molts reveal life-history patterns of American horseshoe crab populations in fringe habitats" [Oral].

Carmichael, R., A. Aven. 2010. "Seasonal changes in water temperature affect West Indian manatees (*Trichechus manatus*) movements in Alabama coastal waters" Gulf Estuarine Research Society (GERS) Biennial Meeting, Port Aransas, TX [Oral].

Carmichael, R., A. Aven. 2011. "Detection of belted manatees using passive acoustic monitors" [Poster].

Carmichael, R., A. Aven. 2010. "Seasonal changes in water temperature affect manatee movements in Alabama waters". Bays and Bayous Symposium, MS-AL Sea Grant, Mobile, AL, December 1-2. [Oral].

Carmichael, R., E. Brush. 2011. International Workshop on Science and Conservation of Asian Horseshoe Crabs, Hong Kong "Three decades of horseshoe crab rearing: A review of conditions for captive growth & survival." [Poster].

Carmichael, R., M. Dailey. 2011. SETAC Gulf Oil Spill Focused Topic Meeting, Pensacola Beach, FL "Assessment of water and sediment for PAH concentrations and embryo toxicity following the Deepwater Horizon oil spill." [Poster].

Carmichael, R., J. Hansen. 2011. AAPG Student Expo, Tuscaloosa, AL "Pretreatment methods for stable isotope analysis in mollusk shells." [Poster].

Carmichael, R., D. Ingram. 2011. AFA 27th Annual Meeting, Mobile, AL "Manatees in Alabama." [Oral].

Carmichael, R., A. Jones. 2011. DISL Summer Student Symposium, Dauphin Island, AL. "The contribution of oil-derived C and N to the diet of oysters due to the Deepwater Horizon oil spill." [Oral].

Carmichael, R., H. Patterson. 2010. "Measuring dissolved oxygen stress in the Eastern oyster, *Crassostrea virginica*" Gulf Estuarine Research Society (GERS) Biennial Meeting, Port Aransas, TX. [Oral].

Carmichael, R., H. Patterson. 2010. "Measuring dissolved oxygen stress in the Eastern oyster, *Crassostrea virginica*" Bays & Bayous Symposium, Mobile, AL. [Poster].

Carmichael, R., H. Patterson. 2011. "Can we use stable isotopes to measure sublethal stress in the eastern oyster, *Crassostrea virginica*?" [Oral].

Carmichael R., H. Patterson. 2011. NGI Annual Conference, Mobile, AL "Can we use stable isotopes to measure sublethal stress in the eastern oyster, *Crassostrea virginica*?" [Oral].

Carmichael, R. H., P. Biancanti, J. Dasikin, K. Calo, W. Burkhardt, III. 2010. Seasonal and Spatial Effects of Wastewater on Oysters in Mobile Bay, AL. Bays & Bayous Symposium, Mobile, AL. [Oral].

Carmichael, R. H., M. Estes and A. Brady. 2011. Molts reveal life-history patterns of American horseshoe crab populations in fringe habitats. International Workshop on Science and Conservation of Asian Horseshoe Crabs, Hong Kong [Oral, invited].

Cebrían, J., B. Christiaan, J. C. Lehrter, J. P. Stutes and A. Anton. Disparate impacts of eutrophication in shallow coastal systems of the Northern Gulf of Mexico. The 40th Annual Marine Benthic Ecology Meeting, Mobile, Alabama, March 16-20, 2011.

Cebrían, J., K. Heck, S. Powers, D. Byron, J. Goff, C. Hightower, R. Moody, S. Sharma and C. Ferraro. The ADCNR-Dauphin Island Sea Lab EDRP Research and Monitoring Partnership: Point-Aux-Pines Project Concept and Construction, Restore America's Estuaries, The 5th National Conference on Coastal and Estuarine Habitat Restoration, Galveston, Texas, November 13-17, 2010.

Chen, Y., J. Cebrían, B. Christiaan and J. P. Stutes. Impacts of watershed development and climate events on ecosystem health in lagoons in the north central Gulf of Mexico. Joint Meeting of the Arkansas Chapters of the American Fisheries Society and the Wildlife Society, Little Rock, Arkansas, February 24, 2011.

Christiaan, B., A. Ortmann, A. McDonald and J. Cebrían. Do microbe-mediated processes in the success of seagrass restoration? 2011 University of South Alabama Student Research Forum, Mobile, Alabama, March 28-31, 2011.

Christiaan, B., J. Goff, J. Stutes and J. Cebrían. Living on the edge: ecosystem metabolism in shallow lagoons in the NW Gulf of Mexico. The 2010 Bays and Bayous Symposium, Mobile, Alabama, December 1-2, 2010.

Christiaan, B., J. Stutes, J. Lehrter and J. Cebrían. Tidal exchange of organic matter in shallow lagoons in the NW Gulf of Mexico. The 40th Annual Marine Benthic Ecology Meeting, Mobile, Alabama, March 16-20, 2011.

Cieba, D. J., C.E. Spiese, R.P. Kiene and C. Liu. 2010. "Direct dimethylsulfoxide and dimethylsulfoniopropionate production from diatoms with reactive oxygen species." American Society of Limnology and Oceanography (ALSO), Puerto Rico, February.

Kiene, R.P., C. Li, G.P. Yang and D.J. Cieba. 2010. Will the real dissolved dimethylsulfoniopropionate (DMSIP) concentration please stand up? 5th International Symposium on Biological and Environmental Chemistry of DMS(P), October 19-21, Goa India.

Kiene, R.P., C. Li, G.P. Yang, D.J. Cieba, J. Kiehn and L. Oswald. 2011. Bio-availability and turnover of dissolved dimethylsulfoniopropionate (DMSIP) in coastal waters of the Gulf of Mexico. American Society of Limnology and Oceanography (ALSO), Puerto Rico, February.

Kroetz, A. and S. P. Powers. 2011. Ecology of Bonnethead Sharks (*Sphyrna tiburo*) in the Northern Gulf of Mexico. 40th Annual Benthic Ecology Meeting, Mobile, AL, March 16-20.

Johnson, M.B., F.J. Hernandez, Jr. and S. Muffelman. 2011. Early life history dynamics of forage fishes in the northern Gulf of Mexico. Alabama Fisheries Association Annual Meeting, 2-4 February, Mobile, AL. [Poster].

Kenworthy, M. and S. P. Powers. 2010. Understanding the effects of temporal variations of production from prey behavior: A test of the Risk Allocation Hypothesis. Bays and Bayous Symposium, MS-AL Sea Grant, Mobile, AL, December 1-2.

Kenworthy, M. and S. P. Powers. 2011. Uncertainty Enhances Cascading Effects of Top Predators: A Test of the Risk Allocation Hypothesis. 40th Annual Benthic Ecology Meeting, Mobile, AL, March 16-20.

Kerner, S. R., Moody, L. Biermann, J. Cebrían, K. Heck and S. Powers. 2010. Temporal dynamics of salt-marsh and seagrass utilization of commercial shellfish species in the northern Gulf of Mexico: Impact of the oil spill? The 2011 Northern Gulf of Mexico Annual Conference, Mobile, Alabama, May 17-19.

Kieber, D.J., C. E. Spiese, R. P. Kiene and C. Liu. 2010. "Direct dimethylsulfoxide and dimethylsulfoniopropionate production from H2O2 and NO3- photolysis." American Chemical Society Pacific Meeting, Honolulu, Hawaii, December.

Magalhães, C. M., R.P. Kiene, A. Buchan, A. Machado, C. Teixeira, W. Webe and A.A. Bordoalo. 2010. A novel inhibitory interaction between dimethylsulfoniopropionate (DMSIP) and the denitrification pathway. 5th International Symposium on Biological and Environmental Chemistry of DMS(P), October 19-21, Goa India.

Marshall, A. and K. Heck. 2011. Benthic Ecology Meeting, Mobile, AL, March.

McDonald, A., P. Prado, J. Cebrían and K. Heck. 2010. How does our seagrass "measure up"? A large scale comparison of morphological, growth and flowering of the seagrass *Thalassia testudinum* in the Gulf of Mexico. Bays and Bayous Symposium, Mobile, Alabama, December 1-2.

McDonald, A., P. Prado, K. Heck, J. Cebrían, J. Fourcure and K. Dunton. 2011. A large-scale comparison of morphological, growth and flowering attributes of the seagrass *Thalassia testudinum* from three environmentally distinct lagoons in the Gulf of Mexico. 40th Annual Marine Benthic Ecology Meeting, Mobile, Alabama, March 16-20.

Miller, G.A. and S.P. Powers. 2010. Ecology of barrier island salt ponds in the northern Gulf of Mexico: fish and avian communities. Bays and Bayous Symposium, MS-AL Sea Grant, Mobile, AL, December 1-2.

Mitchell, R.J., B. Mortazavi, J.J. O'Brien, K. McCee, J.D. Hendricks, K.A. Kuehn, R.O. Teskey and D.P. Aubrey. 2011. Stored carbohydrates decouple current photosynthesis from soil CO2 flux in frequently disturbed ecosystems. The Ecological Society of America 96th Annual Meeting, Austin, TX, August.

Moody, R.M., S. M. Kerner, J. Cebrían, K. L. Heck, Jr. and S. P. Powers. 2010. Alteration of Salt-Marsh Floral Communities Induced by Shoreline Erosion. Bays and Bayous Symposium, MS-AL Sea Grant, Mobile, AL, December 1-2.

Moody, R., S. Kerner, L. Biermann, J. Cebrían and K. Heck. 2010. The nursery role of fringing salt marshes and submerged aquatic vegetation in coastal Alabama. LA Board of Regents: Collaborative Science Research Opportunity Relative to the Gulf Oil Spill, New Orleans, Louisiana, November 1-2.

Moody, R., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers. 2011. Temporal dynamics of nekton abundance in a coastal fringing marsh: Impact of the oil? The 27th Alabama Fisheries Association Meeting, Mobile, Alabama, February 2-4.

Moody, R. M., S. Kerner, L. Biermann, J. Cebrían, K. Heck and S. P. Powers.

coastal microbial community response to oil and dispersant exposure. 97th Annual Southeastern Branch ASM Conference, Gainesville, FL. [Poster]

Ottmann, A. C., R. C. Metzger, R. Condon and S. M. Ni Chadhain. 2011. Investigating patterns of growth, grazing and viral lysis of the phytoplankton along a salinity gradient in, lenced by oil from the Deepwater Horizon spill. Northern Gulf Institute Annual Conference, Mobile, AL.

Powers, S. P. 2010. Planary Talk: Coastal ecosystem resilience and resistance in relation to the Deepwater Horizon Oil Spill. National of ce of Science Joint Subcommittee on Ocean Science and Technology (USOST). Deepwater Horizon Oil Spill Principal Investigator Conference.

Powers, S. P. 2011. Establishing a sheries independent sampling program to support ecosystem based sheries management in the northern Gulf of Mexico. Gulf of Mexico Fishery Management Council April meeting, Orange Beach, FL.

Powers, S.P. and T. M. Soniat. 2011. Bad Years(s): Recent and continued decline in the northern Gulf of Mexico. National Shell sh Association Annual Meeting, Baltimore, MD March 27-31.

Rajan, S., R. J. Martinze, M. J., Beazley, Y. Picono, G. L. Andersen, T. C. Hazen, P.A. Sobczyk and B. Mortazavi. 2011. Coastal Alabama microbial responses to the Deepwater Horizon oil spill. American Society for Microbiology, New Orleans, LA, May.

Reilinger, A. E., McPartand, D. J., Kieber and R. P. Kiene. 2010. Effects of hydrogen peroxide on oxidative stress and DMS production in *Phaeocystis* globosa. 5th International Symposium on Biological and Environmental Chemistry of DMS(7). October, 19-21, Goa India. Abstract submitted, but presentation cancelled because of visa issues.

Reilinger, A. E., McPartand, D. J., Kieber and R. P. Kiene. 2011. Effects of hydrogen peroxide on oxidative stress and DMS production in *Phaeocystis* globosa. American Society of Limnology and Oceanography (ALSO), Puerto Rico, February.

Riggs, A. and B. Mortazavi. 2010. Benthic nitrogen cycling in Weeks Bay, Alabama. AL MS Sea Grant Bays and Bayou Meeting, Mobile, AL, December.

Riggs, A. and B. Mortazavi. 2011. Benthic nitrogen cycling in Weeks Bay,

Alabama. The Benthic Ecology 40th Annual Meeting, Mobile, AL, March.

Schlenker, L., K. Gregalis, J. M. Drzymo and S. P. Powers. 2011. Multiple Gear Fisheries Independent Assessment of the Red Snapper Population in Alabama's Reef Permit Zone. 40th Annual Benthic Ecology Meeting, Mobile, AL, March 16-20.

Sophers, S. B., S. P. Powers, K. L. Heck and D. Byron. 2010. Oyster Reefs as Natural Breakwaters Mitigate Shoreline Loss and Facilitate Fisheries. Bays and Bayous Symposium, MS-AL Sea Grant, Mobile, AL, December 1-2.

Sophers, S., S. P. Powers, K. Heck and D. Byron. 2011. Oyster Reefs as Natural Breakwaters Mitigate Shoreline Loss and Facilitate Fisheries. 40th Annual Benthic Ecology Meeting, Mobile, AL, March 16-20.

Sophers, S.B., F. J. Fodrie, S. P. Powers, G.W. Stunz, F. J. Hernandez and R. L. Shipp. 2010. Are there 'big ones' left in the Gulf of Mexico: evidence from shery-dependent catch data and intergenerational perceptions among anglers. Bays and Bayous Symposium, MS-AL Sea Grant, Mobile, AL, December 1-2. [Poster]

Sharma, S., J. Goff, D. Byron, J. Cebrian, C. Heick and S. Powers. 2010. Potential Impacts of Restored Oyster Reefs on Water Quality and Submerged Aquatic Vegetation. Bays and Bayous Symposium, MS-AL Sea Grant, Mobile, AL, December 1-2.

Sharma, S., J. Goff, D. Byron, J. Cebrian, K. Heck and S. Powers. 2011. Potential impacts of restored oyster reefs on water quality and submerged aquatic vegetation. The 40th Annual Marine Benthic Ecology Meeting, Mobile, Alabama, March 16-20.

Shelton, N.L., R.H. Condon, W.M. Graham and L.J. Linn. 2011. Source-sink dynamics of oil-derived chromophoric dissolved organic matter in coastal Gulf of Mexico waters. ASLO Ocean Sciences Meeting, San Juan, PR, February. [Poster]

Shoemaker, L. B. Mortazavi, D. Evans and J. Dindo. 2010. Stable isotope and mercury analysis in the Mobile Bay, AL food web. AL MS Sea Grant Bays and Bayou Meeting, Mobile, AL, December.

Shoemaker, L. B. Mortazavi, D. Evans and J. Dindo. 2010. Stable isotope and Mercury Analysis in Mobile Bay, Alabama. The Ecological Society of America 95th Annual Meeting, Pittsburg, PA, August.

Sobczyk, P., M. Beazley, R. Martinze, S. Rajan, J. Powell, Y. Picono, L. Tom, G. Anderson, T. Hazen, J. Van Nostrand, J.

Zhou and B. Mortazavi. 2011. Coastal Alabama bacterial community responses to the Deepwater Horizon oil spill. Industrial Microbiology and Biotechnology Annual Meeting, New Orleans, LA, July, 2011.

Sparks, E., J. Cebrian and K. Sheehan. 2011. *Junco* zoemeiranius morphology and colonization in two marsh restoration designs. Bays and Bayous Symposium, Mobile, AL, December 1-2.

Sparks, E. and J. Cebrian. 2011. Grazing responses to fertilization and effects on black neederush (*Junco zoemeiranius*). The 40th Annual Marine Benthic Ecology Meeting, Mobile, Alabama, March 16-20.

Sparks, E., A. Langston, K. Phillips, R. Moody, J. Cebrian and M. Woodrey. 2010. Tidalushing through ISIS Oil Exclusion Cylinders. LA Board of Regents: Collaborative Scientists Research Opportunities Relative to the Gulf Oil Spill, New Orleans, Louisiana, November 1-2.

Steele, L. J. F. Valentine and B. Mortazavi. 2011. Seasonally varying habitat linkages in a northern Gulf of Mexico estuary. Northern Gulf of Mexico Institute Annual Meeting, Mobile, AL, May.

Tor-Brown, S., M. Roser, M. Gay, R. Moody and J. Cebrian. 2011. Saltmarsh remediation of hydrocarbon surface contamination utilizing in-situ isolation systems (ISIS). National Council for Science and the Environment, 11th National Conference "Our Changing Oceans," Washington DC, January 19-21.

Valentine, M.M., S. P. Powers, M. Ajeamian and M. Drzymo. 2010. Coastal Alabama Acoustic Monitoring Program (CAAMP): Tracking Elasmobranch Fauna in Mobile Bay and Bayous Symposium, MS-AL Sea Grant, Mobile, AL, December 1-2.

Valentine, M., S. P. Powers, M. Ajeamian and J. M. Drzymo. 2011. Coastal Alabama Acoustic Monitoring Program (CAAMP): Tracking Elasmobranch Fauna in Mobile Bay. 40th Annual Benthic Ecology Meeting, Mobile, AL, March 16-20.

Vedral, A., B. Mortazavi, J. Valentine and L. Steele. 2011. Using stable isotopes to investigate a cross-habitat linkage presented by the post-mating migration of female blue crabs in Mobile Bay, Alabama. Northern Gulf of Mexico Institute Annual Meeting, Mobile, Alabama, May.

Wang, L. and A. C. Ottmann. 2011. Detection of indirect nitrogen removal by oysters. 97th Annual Southeastern Branch ASM Conference, Gainesville, FL, USA.

Miscellaneous Presentations
Ruth Carmichael
2011, Mississippi Museum of Natural Science, Jackson, MS, "Horseshoe crabs: Social and ecological relevance, fringe lifestyles, and the BP oil spill"
2011, Rotary Club of Mobile, Mobile, AL, "Alabama manatees: Shallow water phantoms"
2011, Alabama Coastal Fisherman's Association, Mobile, AL, "Alabama manatees: Shallow water phantoms"
2011, Coastal Nature Gulf Program, Sea Sand and Stars, Orange Beach, AL "Alabama manatees: Shallow water phantoms"
2011, Carmichael, R., A. Aven. 2011. Pelican's Nest Science Lab, Fairhope, AL "Manatees" [Oral]

JustCebrian
Colonization and functionality of two black neederush (*J. zoemeiranius*) marsh restoration designs, Grand Bay National Estuarine Research Reserve, 1st Research Symposium, October 2011
Presentation to of cers from the Alabama Department of Conservation and Natural Resources (ADCNR) for an update and discussion on results to date from the ADCNR-funded "Alabama EDRP Fin: sh Restoration and Shell sh Nursery Habitat Restoration Program", October 2010
Brie ng for State of Alabama Commissioner Guy Gunter about restoration projects in Coastal Alabama during his visit to DISL, February 2011
Presentation to of cers from EPA and environmental managers in coastal Mississippi for an update and discussion of the EPA-funded project "Development of a Decision-Support Tool to Assess the Risk of Habitat Degradation Following Watershed Land Use Changes", August 2011

Ken Heck
Evaluation of the Effectiveness of SAV Restoration designs, Grand Bay National Estuarine Research Reserve, 1st Research Symposium, October 2010
Bay A program review conducted at the request of the Chesapeake Bay Scientific and Technical Advisory Committee (STAC) October 7, 2011.
NGI Annual Conference, Oral presentation, Mobile, May 2010.

Frank Hernandez
2010 - Guest Lecturer, Quantitative Methods in Fisheries and Ecology, Dauphin Island Sea Lab
2010 - Guest Lecturer, Biological and Physical Interactions, Dauphin Island Sea Lab

Ron Kiene
Invited Presentations - University of Alabama Birmingham, April 2011; University of Southern Mississippi, Stennis Space Center - November 2010.

Animal Rescue Foundation - Volunteer, Foster Parent

Of ces, Boards, Panels, Consulting
Ruth Carmichael
2010-present, Science Advisory Committee, Mobile Bay National Estuary Program, Member.
2009-present, Gulf Estuarine Research Society (GERS), President Elect.
2007-present, DISL Data Management Advisory Committee, Chair.
2007-present, Ecological Research Development Group, Lewes, DE, Scientist Advisor.
2006-present, ERF/CERF Biennial Conference, Workshops Chair.

Just Cebrian
Aquatic Botany, Staff Referee, 2004-present.
AGAUR (Catalan NSF), Proposal Evaluator, 2003-present.
FBBVA (Spanish Foundation), Proposal Evaluator, 2006-present.
Marine Ecology Progress Series, Contributing Editor, 2007-present.
The Open Oceanography, Board Member, 2007-present.
The Open Marine Biology Journal, Board Editor, 2010-present.
The International Scholarly Research Network Ecology Journal, Board Member, 2010-present.
Public Library of Science, PLoS ONE, Academic Editor, 2011-present.
Member of the Expert Panel for the periodical evaluation of the performance of the Gulf Breeze EPA laboratory (2007-present).
Member of evaluation committee for Alabama (Dr. Jim Hagy from the EPA); Gulf Breeze Laboratory (Florida) 2008.
External Reviewer of tenure/promotion package for Dr. Patrick Biber, Gulf Coast Research Laboratory.
Induction as a Member of the International Ecology Institute (<http://www.int-res.com/ecology-institute/staff/>)

Ken Heck
President Elect, Coastal and Estuarine Research Federation (CERF).
Review of EPA's draft approaches for deriving numeric nutrient criteria for Florida's Estuaries, Coastal Waters and southern inland; owing waters for USEPA. July 19, 2011.
U.S. Environmental Protection Agency Science Advisory Board Nutrient Criteria Review Panel.
President, Coastal and Estuarine Research Federation (CERF) (2011-).
Member: Scientific Advisory Committee, Mobile Bay NEP.
Member of the Coral Reef Scientific and Statistical Committee, Gulf of Mexico

Kyeong Park
Invited seminar, entitled "Environmental engineering for coastal zone," Ulsan National Institute of Science and Technology, School of Urban and Environmental Engineering, Ulsan, Korea, October 21, 2010
Invited seminar, "A modeling study of transport and retention of oyster larvae in Alabama coastal water," University of Alabama, Department of Biological Sciences, Tuscaloosa, AL, October 28, 2010
Presentation, entitled "Across-shelf surface transport and velocity structure on a coastal shelf directly in: lenced by estuarine out: w," The 16th Paci c-Asian Marginal Seas, GIS NTU Convention Center, Taipei, Taiwan, April 21-23, 2011
Invited seminar, entitled "Temporal variability in summertime bottom hypoxia in a shallow, strat: ed, micro-tidal estuary," Chungnam National University, Department of Oceanography, Taejeon, Korea, April 26, 2010
Invited lecture (14-hr over 2 days), entitled "Water quality modeling in coastal and estuarine eaters," 2011 GGSC Intensive Course on Estuarine Dynamics, Gyeonggi-Go Sea Grant Program, Inha University, Incheon, Korea, July 27-28, 2011
Invited seminar, entitled "Temporal variability in summertime bottom hypoxia in a shallow, strat: ed, micro-tidal estuary," Korea Maritime Institute, Seoul, Korea, August 5, 2011

Workshops, Meetings Attended or Organized
Ruth Carmichael
2010
October - Coastal & CERF Biennial Conference Planning Meeting, Daytona, FL; Estuarine Research Federation Biennial Conference Planning Meeting
November - Gulf-Gulfuarine Research Society Meeting, Fort Aransas, TX
December - Bays & Bayous Symposium, Mobile, AL
2011
March - Benthic Ecology Meeting, Mobile, AL
April - FWC Marine Mammal Stranding Workshop & Necropsy training, Pensacola Beach, FL; Prescott Cetacean Stranding Workshop, Prescott, AZ
June - International Workshop on Science and Conservation of Asian Horseshoe crabs, Hong Kong
August - Gulf Coast Student Chapter of the Society for Marine Mammalogy, Hattiesburg, MS

Just Cebrian
Co-organizer of the Dedicated Session: "Restoration Practices in Coastal Alabama," 2010 Restore America's Estuaries, Galveston Island Convention Center, Galveston Island, TX, November 13-17, 2010.
Chair of the "Habitat Management" Session of the 2010 Bays and Bayous Symposium
Member of the Program Committee of the XL Benthic Ecology Meeting, Mobile, AL, March 16-20, 2011
Chair of the Session "Ecosystem Function" of the XL Benthic Ecology Meeting, Mobile, AL, March 16-20, 2011
Panelist and presenter in the session "Coastal Systems" in the JOSOST Deepwater Horizon Oil Spill Principal Investigator (PI) Conference, St. Petersburg, FL, October 5-8, 2010
Presenter in the Technical Session on Modeling Approaches and Data Needs with Focus on Ecological and Physical Process organized by the COM Digital Atlas Development Team and Restoration Team, Sea Level Rise subteam, in Saint Petersburg, Florida, November 3-4, 2010
Participant in workshop: "Development of COM Digital Atlas" organized by NCCDC (NOAA), Grand Bay NERR, January 18-21, 2011
Member of the Executive Committee and Subject Matter Expert (Periodic Coastal Lagoons) for the COM Digital Atlas Development Team organized and coordinated by NCCDC (NOAA), January 2011-present.
Participant in an implementation workshop for the NASA funded project: "The Application of Remotely Sensed Data and Models to Bene Conservation and Restoration along the Northern Gulf of Mexico Coast" (PI: Maury Estes), Five Rivers Center, Spanish Fort, AL, January 21, 2011
Organizer of workshop: "Earth System Modeling for Integrated Assessment of Ecosystems" Gulf Coast Research Laboratory, Biloxi, Mississippi, January 26-27, 2011.
Presenter at the workshop: "Earth System Modeling for Integrated Assessment of Ecosystems" Gulf Coast Research Laboratory, Biloxi, Mississippi, January 26-27, 2011.
State of Alabama representative for the Gulf of Mexico Alliance Steering Committee on Habitat Conservation and Restoration, February 2011-present.
Member of the Alabama TNC Society Advisory Council for the development of restoration criteria in the 100:1000 Restoration Partnership.
Presenter at the workshop "Submerged Aquatic Vegetation and Seagrass of Louisiana, Mississippi, and Alabama Coasts," Grand Bay NERR, May 24, 2011.
Member of the Science Advisory Committee for the Mobile Bay National Estuarine Program, April 2011-present.
Member of the Northern Gulf Institute

2008-present, Member, Advisory Board, Chemical Pro: cency Testing - DMSF and DMS: certi ed standard intercalibration, October 2011 - present.
Behzad Mortazavi
UR 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 since July 2011.
Alice Ottmann
American Society of Limnology and Oceanography, Member.
American Society for Virology, Associate Member.
American Society of Microbiology, Member.
International Society for Microbial Ecology, Member.
Kyeong Park
Advisor, GeoSystem Research Co., Kyeong Park, Seoul, Korea.
Member, Advisory Committee, Korea Maritime Institute, Korea.
Sean Powers
2011-2012, Chair, Gulf of Mexico Fishery Management Council's Standing Scientific and Statistical Committee.
2010-2011, Vice-Chair, Gulf of Mexico Fishery Management Council's Standing Scientific and Statistical Committee.
2010, Chair, Red drum special working group for Gulf of Mexico, Gulf of Mexico Fishery Management Council.
2010-2011, Science Advisory Team, The National Conservation's Oyster Reef restoration Program.
2010-2011, Chair, SEDAR Gulf of Mexico, Greater Amberjack stock assessment.
2010-2011, Committee Member, Gulf of Mexico Goliath Group Stock Assessment.
2011, Integrating socioeconomic and ecosystem principles in current shery management, National Fishery Council SSC, 4th annual meeting, Williamsburg, VA.
2011, 40th Annual Benthic Ecology Meeting, Mobile, Alabama, Co-host with Dr. John Valentine.
2010-2011, NOAA Damage Assessment and Restoration, via Industrial Economics, Fisheries and habitat damage assessments for the Deepwater Horizon Oil Spill.
Associate Director, Alabama Oyster Reef Restoration Program, 2003-present.
Associate Editor, Gulf of Mexico Science, 2004 - present.
Chair, SEDAR Red Snapper stock assessment update workshop, 2009-2010.
Advisor, Hudson River Foundation, Oyster Reef Restoration Initiative, 2009-2010.
Member, Gulf of Mexico Fishery Management Council's Scientific and

Council of Officers, September 2011, pre-cited in the Coastal Hazards Collaboratory - 2011 Annual Meeting, Renaissance Mobile Riverview Plaza Hotel, Mobile, AL, May 18-19, 2011, organized by NG-CHC.

Participated in the Workshop on Water Quality Modeling in Coastal and Estuarine Waters, Inha University, Incheon, Korea, July 27-28, 2011, organized by Gyeong-Gi Sea Grant Program, Inha University and Ministry of Land, Transport and Maritime Affairs, Korea.

Participated in the Florida Department of Environmental Protection's DO Peer Review Committee Meeting, DEP NE District Of ce Conference Room, Jacksonville, FL, August 11, 2011, organized by FL DEP.

Public Outreach & Other Service
Ruth Carmichael
Coastal Nature Guide Program - Oral presentation: Alabama manatees: Shallow water phantoms.
Rotary Club of Mobile - Oral presentation: Alabama manatees: Shallow water phantoms.
Alabama Coastal Fisherman's Association - Oral presentation (co-author): Manatees in Alabama (D. Ingrid, USFWS).
Alabama Deep Sea Fishing Rhode - Information Booth: Mobile Manatees Sighting Network.
DISL Discovery Day - Interactive oral presentation: Mobile Manatees Sighting Network.
Dog Paddle, Dog River Clearwater Revival - Information Booth: Mobile Manatees Sighting Network.
Cocktails with Critics - Information Booth: Mobile Manatees Sighting Network.

Just Cebrian
October 2010, Speaker at luncheon with the U. South Alabama Foundation.
December 2010, Reader for the Christmas tale: "The Polar Express" for Kindergarten students at Bayside Academy.
January 2011, Scientific advice to journalists: Katie Farnell on the ecology of seagrass beds and salt marshes for an article for "Birders World Magazine."
January 2011, Group Leader for oyster restoration project at Helen Wood Park (Mobile, Alabama) organized by TNC.
May 2011, Presentation for Kindergarten students at Bayside Academy (title: "Marine habitats in the Gulf of Mexico: a trip underwater").
May 2011, Presentation for 3rd grade students at Bayside Academy (title: "The Macondo Oil Spill: impacts on Gulf of Mexico marine ecosystems: activity developed in collaboration with Joan Turner and JoAnn Mitchell from Discovery Hall Programs).
Regular meetings with residents around our study sites in Perdido Bay (Big Lagoon State Park, Kee's Bayou and Gongora Drive) for environmental education and

Stewardship (from 2000 to present).
Special Course: Centro de Investigaciones Marinas (Universidad de Alicante, Spain), September 2011, two weeks, Graduate Course: "Anthropogenic Impacts on Coastal Ecosystems".
Rob Condon
Discovery Day, DISL, 2011 - Hosted children's jelly sh art display.
Ken Heck
Special Course: Centro de Investigaciones Marinas (Universidad de Alicante, Spain), September 2011, two weeks, Graduate Course: "Anthropogenic Impacts on Coastal Ecosystems".
Odum Lifetime Award Selection Committee Member (CERF).
Frank Hernandez
Presentation for "Fin, Fish and Fisheries" Teacher Education Workshop, Discovery Hall Program, DISL.
Presentation for NOAA Oil Spill Professional Development Workshop, Discovery Hall Program, DISL.
Open laboratory with exhibits during Discovery Day, DISL.
2011, Presentation for public at Dauphin Island Sea Lab's Estuarine "Boardwalk Talk" series.
2007-date, High School Career Day, Discovery Hall Program, DISL.
2010-date, Discovery Day Laboratory Open House, DISL.
Ron Kiene
Chief Scientist, RV Pelican, Gulf of Mexico, Sea Oct-23, 13 sea days.
USA-Press Conference Panel for anniversary of Deepwater Horizon blowout. Battle House Hotel, Mobile.
Professional Development Project guidance for Pranaya Chikuri, Davidson High School. Effects of different dispersants on oil dissolution/suspension, January 2011.
Research Integrity Workshop Coordinator (annual, half day workshop for graduate students and faculty).
Behzad Mortazavi
Seminars Hosted - October, 2010. LSU Park University South Alabama, Park presented "A Modeling Study of Transport and Retention of Oyster Larvae in Alabama Coastal Water" at Biological Sciences, UA, Tuscaloosa, AL.
Alice Ottmann
Little Lagoon Preservation Society - Presentation of research results at the quarterly meeting April 19, 2011.
NGI Annual Conference, Gainesville, FL, October 5-8, 2011. Topic: "Aquatic Sciences Meeting February 2011."

Animal Rescue Foundation - Volunteer, Foster Parent

Of ces, Boards, Panels, Consulting
Ruth Carmichael
2010-present, Science Advisory Committee, Mobile Bay National Estuary Program, Member.
2009-present, Gulf Estuarine Research Society (GERS), President Elect.
2007-present, DISL Data Management Advisory Committee, Chair.
2007-present, Ecological Research Development Group, Lewes, DE, Scientist Advisor.
2006-present, ERF/CERF Biennial Conference, Workshops Chair.

Just Cebrian
Aquatic Botany, Staff Referee, 2004-present.
AGAUR (Catalan NSF), Proposal Evaluator, 2003-present.
FBBVA (Spanish Foundation), Proposal Evaluator, 2006-present.
Marine Ecology Progress Series, Contributing Editor, 2007-present.
The Open Oceanography, Board Member, 2007-present.
The Open Marine Biology Journal, Board Editor, 2010-present.
The International Scholarly Research Network Ecology Journal, Board Member, 2010-present.
Public Library of Science, PLoS ONE, Academic Editor, 2011-present.
Member of the Expert Panel for the periodical evaluation of the performance of the Gulf Breeze EPA laboratory (2007-present).
Member of evaluation committee for Alabama (Dr. Jim Hagy from the EPA); Gulf Breeze Laboratory (Florida) 2008.
External Reviewer of tenure/promotion package for Dr. Patrick Biber, Gulf Coast Research Laboratory.
Induction as a Member of the International Ecology Institute (<http://www.int-res.com/ecology-institute/staff/>)

Ken Heck
President Elect, Coastal and Estuarine Research Federation (CERF).
Review of EPA's draft approaches for deriving numeric nutrient criteria for Florida's Estuaries, Coastal Waters and southern inland; owing waters for USEPA. July 19, 2011.
U.S. Environmental Protection Agency Science Advisory Board Nutrient Criteria Review Panel.
President, Coastal and Estuarine Research Federation (CERF) (2011-).
Member: Scientific Advisory Committee, Mobile Bay NEP.
Member of the Coral Reef Scientific and Statistical Committee, Gulf of Mexico

Fisheries Management Council
Ad Hoc Nutrient Panel of the EPA Science Advisory Board
Chesapeake Bay SAV Restoration Review Panel for CB: Scientific and Technical Advisory Committee, 2009-present.
JOSOST Deep Water Workshop Thematic Chair (declined).
Senior Sub-Editor, Marine Ecology Progress Series.
Editor, Gulf of Mexico Science.
Director, Alabama Center for Estuarine Studies.
Director, Shelby Center for Ecosystem based Fisheries Management.
Gulf of Mexico Fishery Management Council National Advisory Panel.
Mobile Bay National Estuary Program: Scientific Advisory Panel.
PhD Examiner for Flinders University (Australia), Murdoch University (Australia), University of Melbourne.
DISL Faculty Annual Review Committee (Chair).
Member of the Ecosystem Scientific and Statistical Committee, Gulf of Mexico.
Fisheries Management Council.
External Promotion Reviewer: Dr. Sally Hacker, candidate for promotion to Professor at Oregon State University.
Frank Hernandez
2011, Research contributor, NOAA Gulf of Mexico Data Atlas.
2011-date, Secretary-Elect, Early Life History Section, American Fisheries Society.
2010-date, Gadsden State Community College Aquaculture Program Advisory Committee.
2010, The NOAA SEFSC/SEAMAP Deepwater Horizon Fishery Resource Workshop, Invited.
LNG-BMP Advisory Panel, 2008-present.
Fisheries Oceanography of Coastal Alabama (Florida) Supervise ichthyoplankton laboratory and field: s: vank ops: coordinate sample processing with NMF's and Plankton Sorting and Identification Expert Panel for the periodical evaluation of the performance of the Gulf Breeze EPA laboratory (2007-present).
Member of the International Ecology Institute (<http://www.int-res.com/ecology-institute/staff/>)

Ken Heck
President Elect, Coastal and Estuarine Research Federation (CERF).
Review of EPA's draft approaches for deriving numeric nutrient criteria for Florida's Estuaries, Coastal Waters and southern inland; owing waters for USEPA. July 19, 2011.
U.S. Environmental Protection Agency Science Advisory Board Nutrient Criteria Review Panel.
President, Coastal and Estuarine Research Federation (CERF) (2011-).
Member: Scientific Advisory Committee, Mobile Bay NEP.
Member of the Coral Reef Scientific and Statistical Committee, Gulf of Mexico

Committee Service
Ruth Carmichael
2007-2011, DISL Data Management
Advisory Committee, Member/Chair,
2008-2011, DISL Seminar Series, Co-
Chair
2008-2011, Recruitment, Student Stipend
Review, Member.
2008-2011, Wiese Distinguished Lecture
Series, Co-Organizer.

Just Cebrían
DISL Seminar Committee Chair 2010-
2011.
DISL Faculty SMS I Search Committee
Chair 2008, 2011.
DISL Promotion and Tenure Committee
Member 2006-2011.
USA Marine Sciences Promotion and
Tenure Committee Member 2006-2011
USA Marine Sciences Adjunct Committee
Chair 2007-2011.
USA Marine Sciences Wiese Committee
Co-Chair 2008-2011.

Ken Heck
DISL Faculty Annual Review Committee
(Chair).
USA Faculty Representative for DISL
Grad Student Organization.

Ron Kiene
DISL-FDA Fellowship Program Liaison.
DISL Faculty Review Committee.
DISL Ad Hoc Committee Chair for
Fellowship Policies and Procedures (April
2010-present).
USA Department of Marine Sciences,
Graduate Coordinator since 2000.
Curriculum Committee Chair, Marine
Sciences, since 1995.
Research Integrity Workshop Coordinator
(annual, half day workshop for graduate
students and faculty).
USA Faculty Search Committee
for Fisheries Scientist, Chair Fall
2010-February 2011.

USA Department of Marine Sciences New
Student Orientation Committee.
USA Graduate Arts and Sciences
Program Committee (GASP), since
1995.
USA Graduate Curriculum Committee,
2009-2011.
USA Research Conduct and Ethics
Committee (minor activity).
USA Graduate Coordinator, Department
of Marine Sciences, 2000-present.
USA Research Conduct and Ethics
Committee, 1995-present.
USA Graduate Arts and Sciences
Program Committee (GASP).
1995-present.
DISL Faculty Review Committee,
2006-present.
USA Dean of Arts & Sciences Search
Committee, September 2009 - present.
USA Research Conduct and Ethics

Committee (minor activity).
DISL-MESC-BP Research Initiative – Co-
Chair of Theme #4 – Degradation and fate
of oil and gas from Deepwater Horizon
spill.
USA Department of Marine Sciences
Promotion and Tenure Review Committee
Chairman, 2001, 2005, 2006, 2007, 2010,
2011.

Behzad Mortazavi
DISL Ad Hoc Fellowship Committee,
Member.
Ad Hoc Committee Member, Initiative
for GTAs at DISL, 2008-present.
DISL Faculty Search Committee Member,
2008-present.
UA Biological Sciences, Library
Committee Member, 2008-present.
UA China Initiative.

Alice Ortmann
USA Department of Marine Sciences
Search Committee Member.
USA Curriculum Committee Member.
USA Policy and Procedures Committee
Member.
USA Fisheries Faculty Search Committee,
2010.

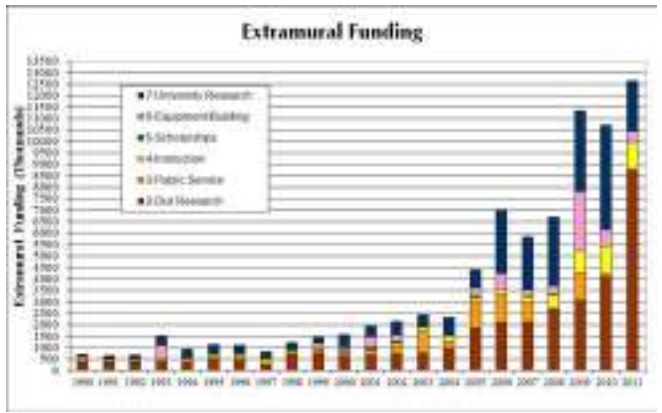
Kyeong Park
USA Department of Marine Sciences
Policy and Procedures Committee, Chair.
USA Department of Marine Sciences
Graduate Academic Standards
Committee, Member.
USA Department of Marine Sciences
Member, Finance Committee, Member.
USA Department of Marine Sciences Ad-
hoc Core Course Committee, Member.
USA Department of Marine Sciences
Curriculum Committee, Member.

Sean Powers
2011-present, Member, Senior Marine
Scientist I Search Committee.
2011-present, College of Arts and
Sciences Search Committee Evaluation
Committee.
2011-present, College of Arts and
Sciences Tenure Evaluation Committee.
2009-present, University of South
Alabama Faculty Senate.
2003-present, Associate Director,
Alabama Oyster Reef Restoration
Program.
2005-2011, University of South Alabama
Institutional Human Care and Use
Committee (IACUC).
2006-present, Member, Scientific Advisory
Committee for the proposed NMFSP/DISL
Shelby Center, From NOAA to NRCOM.
2003-present, Chair, Department of
Marine Sciences Graduate Recruitment
Committee.
2003-present, Member, Graduate
Academic Standards Committee.
2003-present, Member, Departmental
Curriculum Committee.

Grants in Force
Ruth Carmichael
Prescott Fund, Fisheries Protected
Resources Program, Establishing a
regionally cooperative dolphin stranding
network for Alabama (PI) (\$74,388) NOAA
Award Number NA11NMF4390080, 2011-
2012.
National Fish and Wildlife Foundation, A
cooperative marine mammal stranding
network for Alabama (PI) (\$175,837)
#2011-0108-000, 2011-2012.
Alabama Division of Wildlife and
Freshwater Fisheries, Monitoring manatee
habitat and movement patterns in
Alabama waters (PI) (\$43,182), 2011-
2012.
MESC BP-GRI, Gulf of Mexico Ecosystem
Recovery: Sentinel macrofauna
(\$243,000, \$45,000 Carmichael portion of
award), 2011-2012.
NOAA/NERR National Science

Collaborative, Legacy effects of land-use
change and nitrogen source shifts on a
benchmark system: Building capacity for
collaborative research leadership at the
Grand Bay Reserve (PI) (\$354,750),
2010-2013.
Alabama Division of Wildlife and
Freshwater Fisheries, Use of tagging and
necropsy data to de-nude movements and
diet of Alabama manatees (PI) (\$35,794),
2010-2013.
NGI BP-GRI, Effects of oil contaminants
on sentinel benthic and pelagic species in
Mobile Bay (PI) (\$69,355), Phase II (PI)
(\$45,000), 2010-2011.
NOAA/NMFS, Proposed data collection plan
to assess injury to West Indian
manatees from the Deepwater Horizon Oil
Spill outside of Florida (Co-PI) (\$20,761
Carmichael portion of award), 2010-2011.
Alabama Oyster Reef Restoration
Program, University of South Alabama,
Quantification of direct and indirect:
nitrogen removal by oysters (*Crassostrea
virginica*) (Co-PI) (\$35870), 2009-2011.
Shelby Center, From NOAA to NRCOM
sheries: The trophic importance of land-
derived organic matter (PI) (\$96,205),
2009-2011.

Alabama Division of Conservation and
Natural Resources, Linking nutrient
source to harmful algal blooms in Little
Lagoon, AL (Co-PI) (\$13,000 Carmichael
portion of award), 2009-2010.
Alabama Division of Wildlife and
Freshwater Fisheries, Population Ecology
of West Indian manatees in Alabama
waters (PI) (\$39,307), 2009-2010.
NOAA/NCDC, Data Management in
Support of NOAA's Integrated Data System
Assessment for the Gulf of Mexico
through the NGI Ecosystem Data
Assembly Center (PI) (\$81,302), 2009-
2010.
MS-AL Sea Grant Consortium, Use of
stable isotope ratios to link wastewater
sources to effects on shellfish and
human health: Determining relevant and
effective spatial and temporal scales for
management (PI) (\$99,995), 2008-2010.



Just Cebrían
National Coastal Data Development
Center: Long-term ecological studies in
coastal lagoons of Perdido Bay \$50,000
01/11-12/11 (single PI)
The Alabama Department of Conservation
and Natural Resources: "Analysis of
Historical Submerged Vegetation"
\$10,000 10/10-12/10 (PI with Ken Heck
and John Valentine).
NSF Rapid Program: "Evaluating the
performance of the ISIS-Cylinder
as a bioremediation method for oil
contamination in marshes" \$23,375 9/10-
9/11 (Co-PI with Mark Roses from ISIS;
money received as a subcontract from
ISIS).
Northern Gulf Institute: "Impacts of the
Deep Horizon Oil Spill on Ecosystem
Structure and Function in Alabama's
Marine Waters." \$60,000 6/10-12/10 (Co-
PI with Ken Heck).
NOAA-The Shelby Center "Impact of SAV
loss on the diversity and production of
prey for coastal sheries" \$74,000 01/10-
04/11 (PI with Ken Heck).
The Alabama Department of Conservation
and Natural Resources: "Fish and
Shellfish Nursery Habitat Restoration"
Project" \$1,500,000 07/08-06/11 (PI with
K. Heck, S. Powers and R. Aronson as
co-PI).
EPA-GOMA "Development of a Decision-
Support Tool to Assess the Risk of Habitat
Degradation Following Watershed Land
Use Changes" \$350,000 01/09-12/10 (PI
with David Ruppel and Mark Woodruff as
co-PIs).

NOAA-The Economic Recovery and
Ecological Restoration Program "Coastal
Alabama Economic Recovery and
Ecological Restoration: Creating jobs
to protect shorelines, restore oyster
reefs and enhance sheries production"
\$646,275 08/09-06/11 (Co-PI with Ken
Heck and Sean Powers).
The Northern Gulf Institute: "Ecosystem
Approach to Management for the Northern
Gulf" \$75,000 01/11-12/12 (co-PI with
William MacIntyre and Richard Fullford).
The Alabama Department of Conservation
and Natural Resources -Coastal Zone
Management Program: "Effective
restoration of salt marshes for reduction
of coastal nutrient pollution" \$30,000
10/10-3/12 (single PI).
The Alabama Marine Environmental
Science Consortium BP program "Impacts
of the Deepwater Horizon oil releases on
the functional integrity of salt marshes
and seagrass meadows and associated
fauna" \$66,148 1/11-12/11 (Co-PI with
Ken Heck).
The Northern Gulf Institute "Potential
Impacts of the Deepwater Horizon shery
resources: will there be reduced
recruitment of economically important
shrimp, crabs, and fish in seagrass and
marsh nursery habitats of the north
central Gulf of Mexico?" \$91,253 1/11-
12/11 (Co-PI with Ken Heck).
NOAA/NCDC "Monitoring in small
ecosystems as early warning system
for ecosystem change on larger spatial

scales" \$56,000 11/11-10/12 (single PI).
The Northern Gulf Institute "Extend Suis
Toolkit" \$172,592 01/11-12/11 (co-PI with
Philip Auburn and Bill McAnally).
The Northern Gulf Institute "An ecosystem
modeling framework to examine
ecological impacts of the Deepwater
Horizon Oil Spill." \$208,387 01/11-12/11
(co-PI with Richard Fullford and Scott
Milroy).
The National Sea Grant "Ecosystem
Assessment and Enhancement: Alabama
Habitats: Tools, Valuation, and
Application." \$843,306 02/12-01/14
(Co-PI with David Yoskowitz and Cristina
Carollo).
Rob Condon
NGI, Phase II Funding, Condon, R.H. &
W.M. Graham. Does the "primer effect"
caused by the DWH oil spill result in
increased microbial and zooplankton
consumption of labile and refractory
DOC? \$104,000.
MESC-BP GRI Funding, Condon, R.H.
Theme 3: Recovery, Tank 3, Plankton
Community Composition and
Trophic Interactions as Modifiers of
Carbon Export in the Sargasso Sea. 3-yr
program beginning Oct 2010, \$301,339.
NSF RAPID, Graham, W.M. & Condon,
R.H. Understanding ecosystem change

with the plankton communities of the
northern Gulf of Mexico as a consequence
of the Deepwater Horizon oil spill: Is there
a shift in the classical planktonic food web
due to increased microbial activity on the
shelf? Shery program, begun June 2010. \$200,000.
National Center for Ecological Analysis
and Synthesis (NCEAS), Condon, R.H.,
Graham, W.M. & Duarte, C.M. Global
seagrass survey, \$18,9K, 2010-2011.
causes and consequences, 2-year
program, begun Jan 2010, \$155,700.

Ken Heck
Heck, J.R., Kenneth L., S.P. Powers and J.
F. J. Fodrie, NOAA (MARFIN), Nursery
origins of adult gulf snapper, gray snapper,
and lane snapper from the northern Gulf
of Mexico, onshore-offshore connectivity
of reef sheries and contribution of seagrass
meadows to shery production, \$188K,
2007-2009, w/ 1 year extension.
Cebrían, J., K.L. Heck, J.R. S.P. Powers,
Powers, Department of Conservation and
Natural Resources, DISL, FIN 811.
Shellfish nursery habitat restoration
project, \$15.5 M, 2008-2011.
Heck, J.R., Kenneth L., and J. Cebrían,
National Park Service, GUIS Oil Spill
Seagrass Survey, \$18.9K, 2010-2011.
J. Cebrían and K.L. Heck, Jr., Shelby
Center (NOAA), The impact of seagrass
loss on the potential yield of coastal
sheries in the Northern Gulf of Mexico, \$74.7K, 2010 - 2011.
Heck, J.R., Kenneth L. and A. Marshak,
Shelby Center (NOAA), Incidence
of trophically associated snappers
and groupers within offshore shery
assemblages of the northern Gulf of
Mexico, and measurement of their
ecological interactions with early adult
red snapper (*Lutjanus campechanus*)
and experimental mesocosms, \$69K,
2010-2011.
Heck, J.R., Kenneth L., Baldwin County,
Pre-Spill Coastal Sampling, \$39.9K, 2010-2011.

Heck, J.R., Kenneth L., and D.A. Byron,
USFWS, Black mangrove expansion into
the GUIS, 46.6K, 2010-2011.
Heck, J.R., Kenneth L., and D.A. Byron,
The Nature Conservancy, Restoring
turtgrass meadows and their propagator
damage using bird roosts, \$44.5K, 2010-
2011.
Heck, J.R., Kenneth L., and D.A. Byron,
ADONR, State Lands Division, Restoring
SAV in coastal Alabama, \$50K, 2010-
2011.

Frank Hernandez
Lead Investigator, "Floating Sargassum
communities: potential consequences of a
continued assessment of associated
faunal assemblages, trophic interactions
and habitat function in the wake of the
Deepwater Horizon oil spill" (with S.
Powers and M. Drymon), 2011, Gulf
Research Initiative, \$203,776 no.
Lead Investigator, "An examination of
pre- and post-spill ichthyoplankton
assemblage dynamics" (with K. Bayha),
2011, Gulf Research Initiative Alabama
Rapid Response Grant, \$11,490/1 yr.
Co-Investigator, "Trophic interactions in
oiling Sargassum communities of the
Caribbean Sea: potential consequences
of habitat degradation related to the
Deepwater Horizon oil spill" (with S.
Powers and M. Drymon), 2010, NSF
RAPID, \$150,056/1 yr.

Frank Hernandez
Lead Investigator, "Floating Sargassum
communities: potential consequences of a
continued assessment of associated
faunal assemblages, trophic interactions
and habitat function in the wake of the
Deepwater Horizon oil spill" (with S.
Powers and M. Drymon), 2011, Gulf
Research Initiative, \$203,776 no.
Lead Investigator, "An examination of
pre- and post-spill ichthyoplankton
assemblage dynamics" (with K. Bayha),
2011, Gulf Research Initiative Alabama
Rapid Response Grant, \$11,490/1 yr.
Co-Investigator, "Trophic interactions in
oiling Sargassum communities of the
Caribbean Sea: potential consequences
of habitat degradation related to the
Deepwater Horizon oil spill" (with S.
Powers and M. Drymon), 2010, NSF
RAPID, \$150,056/1 yr.

Ron Kiene
US-ISIBrainal Science Foundation,
Sulfur isotope ratio of dimethylsulfoxide
Collaborative project with Dr. Alan Amrani,
Hebrew University of Jerusalem, de-
January 1, 2012 - December 31, 2013, \$75,000 to
Amrani, Travel costs only for Kiene,
NOAA-EcoHAB, CIGUAHAB: Ciguatera
Investigations in the Greater Caribbean
Region: Ecosystems, Population
Connectivity, Forecasting, and
Toxicogenics. Collaborative project with
FDA, WHOI and several Universities.
Michael Parsons, Lead PI, USA budget
portion \$149,110 for research costs
\$19,857 for boat time. September 1,
2011-August 31, 2016.
MESC-BP-GRI Research Initiative,
Carbon and oxygen dynamics on the
Alabama shelf in relation to potential
inputs of hydrocarbons from the BP-
Macondo spill, \$370,000, January 1, 2011 -
December 31, 2011, Co-PI under John
Valentine, University of South Alabama,
Northern Gulf Institute, BP, DISL Oil Spill
response initiative, \$69,355, August 1,
2010 - June 30, 2010, Co-PI under
John Valentine (Funds run through DISL).
National Science Foundation - Polar
Programs-Antarctic Sciences Division,
Collaborative Research: Ecophysiology of
DMSP and related compounds and their
contribution to carbon and sulfur dynamics
in Phaeocystis Antarctica, \$240,257, 3
years, June 1, 2010-May 31, 2013.
National Science Foundation Chemical

Oceanography, Reassessment of
dissolved DMSP concentrations and
turnover:lux in the ocean, \$412,866, 3,
2012.
National Science Foundation -
Environmental Genomics, A functional
genomics approach to organic sulfur
cycling in the ocean, \$356,427, sub-
contract from Univ. Georgia, under grant
from NSF, \$1,000,000, 08/01/11 to 08/30/13.
2008- December 31, 2010, (No-Coast
Extension through September 2012).
Behzad Mortazavi
Mortazavi, B. Benthic nitrogen cycling and
the fate of nitrate in Weeks Bay, Alabama.
To support Rebecca Bernhard Ph.D.
student, DOC-NOAA National Estuarine
Research Reserve Graduate Fellowship,
\$ 20,000, 06/01/11 to 05/30/13.
Mortazavi, B. Determining the
Degradation Rate Constants of the
Hydrocarbons From the Macondo Well
Mortazavi, B. \$74,750, 1/1/11 to 12/31/11.
Cheri J. and Behzad Mortazavi, \$1,000,
Impacts of the Deepwater Horizon Oil/
Dispersant Pollution on Ecosystem
Functioning: Assessing C and N
Dynamics of a Benthic Invertebrate
Exposure Gradient, MESC/BP, \$ 92,577,
1/1/11 to 12/31/11.
Mortazavi, B., Impact of Deepwater
Horizon Oil Spill on the Nitrogen Cycle in
Alabama Marsh Ecosystems, NGI/DISL
BP, \$ 11,238, 6/1/10 to 12/21/10.
Mortazavi, B., Isotope analyzer for
real-time measurements in the field.
DOE-SBIR subcontract to UA Mortazavi
from Los Gatos Inc., \$ 50,000, 03/01/11-
03/01/12.
Mortazavi, B. (PI) and Patricia Sobczyk,
Rapid: Accelerating biodegradation
of hydrocarbons from the Deepwater
Horizon Oil Spill in the Gulf of Mexico
by Naturally Occurring Marine Substrates,
NSF-CBET, \$ 124,999, 05/25/10 to
04/24/2011, with the no cost extension.
Mortazavi, B., Coupling of Aboveground
and Belowground Carbon in a Longleaf
Pine Plantation in Georgia, Joseph W.
Jones Ecological Research Center, \$10,347.
Mortazavi, B. Nitrogen Removal
via Denitrification in Weeks Bay, AL, \$1
Mississippi Alabama Sea Grant, \$9,964.
Mortazavi, B., R. Sponser and J.W. Jones,
Edmonds: Understanding the Role of
Denitrification as a Mechanism for
Nitrogen (N) Removal Along a River
Continuum in Central Alabama, Alabama
Water Resources Research Institute,
\$25,000.
National Science Foundation - Polar
Programs-Antarctic Sciences Division,
Collaborative Research: Ecophysiology of
DMSP and related compounds and their
contribution to carbon and sulfur dynamics
in Phaeocystis Antarctica, \$240,257, 3
years, June 1, 2010-May 31, 2013.
National Science Foundation Chemical

Mortazavi, B. Los Gatos: Isotope
Analyzer for Real-Time Measurements
in the Field. DOE SBIR. \$50,555.
Alice Ortmann
Northern Gulf Institute/BP Phase II,
Dauphin Island Sea Lab, PI, \$63,143.
(S. Ni Chadhan, co-PI), Quantifying the
effects of oil on carbon cycling and
diversity of the pelagic microbial
community of coastal Alabama, 2011.
AL Rapid Response Program, BP Gulf
Research Initiative, University of South
Alabama, Theme 3: Environmental
effects of the oil-dispersant system on the
sea urchin, water column, coastal waters,
shallow water habitats, wetlands, and
beach sediments, and the science of
ecosystem recovery, Plankton \$86,250
and Benthic Meiobenthos \$40,250, 2010.
Northern Gulf Institute/BP Rapid
Response Funding, Dauphin Island Sea
Lab, Co-PI, \$69,355 (direct costs) (John
Valentine, PI), Impacts of the Deep
Horizon Oil Spill on ecosystem structure
and function in Alabama's marine waters,
2010.
Arts & Sciences Support and
Development Award, University of
South Alabama, PI, \$1,384, Exploring
marine microbial communities through
ingprinting, 2010.
University of South Alabama Faculty
Development Award, PI, \$4,180.
Exploring the living microbial communities
in northern Gulf of Mexico "dead zones",
2010-2011.
Alabama Oyster Reef & Fisheries Habitat
Enhancement Program, PI, \$150,000.
(Ruth Carmichael and Behzad Mortazavi,
co-PI), Quantification of direct and indirect:
nitrogen removal by oysters (*Crassostrea
virginica*, 2010-2012).
Arts & Sciences Support and
Development Award, University of
South Alabama, PI, \$1,384, Exploring
marine microbial communities through
ingprinting, 2010.
Mississippi-Alabama Sea Grant
Consortium, PI, \$1,384, Exploring
marine microbial communities through
ingprinting, 2010.
Mississippi-Alabama Sea Grant
Consortium, Co-PI, \$28,255, (Hugh
MacIntyre, PI and Kyeong Park, co-PI),
Residence time as a factor controlling
HABs and fecal coliform bacteria in Little
Lagoon, AL, 2010-2012.
Shelby Center for Ecosystem-based
Fisheries Management, PI, \$113,565.
Coupling the microbial loop to sheries:
Assessing impacts on available food
resources, 2009-2011.
Ortmann, A. Coupling the Microbial
Loop to Fisheries: Assessing Impacts
on Available Food Resources, Shelby
Center for Ecosystem-based Fisheries
Management, PI, \$113,565.
Ortmann, A. Incorporating Microbial
Processes into Coastal Lagoon
Ecosystems and Seagrass Restoration,
Arts and Sciences Summer Professional
Development Award, University of South
Alabama, \$5,000.
Ortmann, A., H. MacIntyre and K.

Park, Residence Time as a Factor
Controlling the Effects of HABs and Fecal
Contamination on Ecosystem Health in
Little Lagoon, Alabama, Alabama
Mississippi Sea Grant, \$467,347.
Kyeong Park
Marine Resources Division, Alabama
Department of Conservation and
Natural Resources, "FOCAL (Fisheries
Oceanography in Coastal Alabama -
Physical)", K. Park (PI), \$341,430,
10/01/2006-06/30/2012.
NSF Division of Ocean Science,
"Collaborative research: Tracer
distributions, chemical fluxes, and
distributary comparisons in the mixing
zone of the Mississippi River (NSF
OCE-0728778)", A. M. Shiller (Lead PI at
USI), J. M. West (PI at USF), and K. Park
(PI at USA), \$86,893 (budget at USA)
08/01/2007-01/31/2012.
Mississippi-Alabama Sea Grant
Consortium, "Residence time as a factor
controlling HABs and fecal coliform
bacteria in Little Lagoon, AL", K. Park
(PI), A. C. Ortmann, and H.L. MacIntyre,
\$295,159 (plus \$149,863 matching)
02/01/2010-01/31/2012.
NSF-EPSRC/RRI Track-2 Program,
"Research and education cyber
infrastructure investments to develop
the coastal hazards collaboratory in the
northern Gulf coast (EPS-1010607) (Lead
PI: R.R. Twilley at ULL)", K. Park (PI at
USA) and S.K. Kimball, \$232,573 (budget
at USA, 10/01/2010-09/30/2013).
Gulf of Mexico Research Initiative Rapid
Response, "Modeling of circulation and
physical forcing for the Alabama coastal
waters to assess transport and distribution
of oil-derived substances" (K. Park (PI),
B. Dzwonkowski, B.M. Webb, and J.M.
Chen, \$129,246, 12/31/2010-12/31/2011).
Gulf of Mexico Research Initiative Rapid
Response, "Investigation of the three
dimensional Eulerian low-field and
resulting Lagrangian transport pathways
on the Alabama shelf", B. Dzwonkowski
(PI), K. Park, B.M. Webb, and A. Valle-
Levinson, \$177,975, 12/31/2010-
12/31/2011.
Gulf of Mexico Research Initiative
Rapid Response, "Identifying transport
pathways and quantifying exchange in
Alabama's coastal waters: from the shelf
to the Delta", B.M. Webb (PI), K. Park,
B. Dzwonkowski, and A. Valle-Levinson,
\$199,223, 12/31/2010-12/31/2011.
FY 2011 Implementation of the U.S.
Integrated Ocean Observing System
(IOOS), NOAA National Ocean Service,
"Continued development of the Gulf of
Mexico Coastal Ocean Observing System"
(Lead PI: A.E. Jochens at TAMU)", K.
Park (PI at DISL) and B. Dzwonkowski,
\$96,823 (budget at DISL, 10/01/2011-
09/30/2012).
Northern Gulf Institute (BGI) BP Gulf
Research Initiative (GRI), "Impacts
of the Deepwater Horizon oil spill on

ecosystem structure and function in
Alabama's marine waters - Task 7
Along-estuary transport of oil-derived
substances in surface and subsurface
waters of the ship channel of the Mobile
Bay Estuary", K. Park (PI), B.M. Webb,
and B. Dzwonkowski, \$79,758, 7/15/2010-
12/31/2010.
Alabama Oyster Reef Restoration
Program, National Marine Fisheries
Service, NOAA, "Impacts of Katrina-
made new pass having Dauphin Island
on oyster larval transport and mortality
in Cedar Point Reef of Mobile Bay,
Alabama", K. Park (PI) and S.P. Powers,
\$44,095, 05/01/2010-09/30/2011.

Sean Powers
Establishing an ecosystem-based
sheries-independent survey of reef shery
in the northcentral Gulf of Mexico: Critical
data for the next and future red snapper
stock assessment. (S. Powers and J.M.
Drymon), \$320,000 NMFSP-CR (DISL),
2012-2014.
Benthic Polymers as Biocompatible
Dispersants for Oil Spill Mitigation. EPA:
Environmental Impact and Mitigation of
Oil Spills. (D. Ladner, P. Ke (Clemson), S.
Powers, NOAA, "Impacts of Katrina-
made new pass having Dauphin Island
(120,000 U.S. South AL.) AWARD-Pending,
2012-2014.
Decision Support Toolkit for the
Functional Design of Structures in Living
Shoresides. (B. Webb, S. Powers, and S.
Powers, PI's), M/SAL SEA 2012-2014,
\$130,000. (U. South AL.) 2012-2014.
Floating Sargassum communities of the
Gulf of Mexico: data collection for the
continued assessment of associated
faunal assemblages, trophic interactions
and habitat function in the wake of the
Deepwater Horizon Oil Spill (F.
Hernandez, S. Powers and J.M. Drymon),
2003,000, 2011-2012.
Scientific support for oyster damage
assessment associated with the
Deepwater Horizon Incident. NOAA,
Natural Resource Damage Assessment,
via Industrial Economics Inc. \$352,000,
2010-2012.
Red Snapper and Amberjack Fisheries
Assessment and Enhancement: Alabama
Sportsman Restoration Fund, Department
of Conservation and Natural Resources,
(R. Shipp and S. P. Powers, PI),
\$250,000, U. South Alabama, (Year 1 of
2), 2011-2012.
Impacts of the Deepwater Horizon
Accident on food web structure in the
north-central Gulf of Mexico. (J. Valentine,
S. Powers, M. Drymon and C. Martin),
\$165,000, Northern Gulf Institute, DISL,
2011-2012.
Investigating the sheries impacts of the
deep water Horizon disaster through
socioeconomic surveys. Alabama Marine
Ecosystem Sciences Consortium
Deepwater Horizon Initiative, (Sean
Powers and Steven Scyphers, PIs)

\$14,375. U. South AL. 2010-2011. Improving Deepwater Horizon risk assessment for large pelagic rays: Global-scale position via satellite telemetry. Alabama Marine Environmental Sciences Consortium: Deepwater Horizon Initiative, (Sean Powers and Matt Ajemian, PI's) \$14,375. DISL. 2010-2011. Sustainable coastal pelagic fisheries. NOAA (S. P. Powers, J. Dindo and R.L. Shipp), \$750,000. DISL. 2010-2014. Assessing fisheries resources in response to the Deep Water Horizon Oil Spill, Northern Gulf Institute (S. P. Powers, PI), \$88,000. DISL. 2010-2011. Ecological and fisheries implications of red snapper (*Lutjanus campechanus*) and gag (*Micropterus microlepis*) interactions. NOAA MARFIN (S. Powers, PI), 303,188 U. South AL. 2010-2012. Trophic interactions in Sargassum communities of the Gulf of Mexico: potential consequences of habitat degradation. NSF Biological Oceanography (S. Powers and F. Hernandez, PI's), 155,000 U. South AL. 2010-2011. Prince William Sound Herring Survey: Top-down regulation by predatory fish on juvenile herring. NOAA Exxon Valdez Oil Spill Trustee Council (M. Bishop and S. Powers, PI's), \$678,900 (\$210,000 U. South AL.). 2009-2013. Coastal Alabama economic recovery and ecological restoration project: creating jobs to protect shorelines, oyster reefs and enhance fisheries production. (S. Powers, K. Heck and J. Cebrían with the Nature Conservancy) NOAA Habitat Of. ce. \$3,200,000. (\$265,000 U. South AL component), 2009-2011. Alabama oyster reef and fisheries habitat enhancement program (R. Shipp and S.P. Powers). National Marine Fisheries Service, \$ 798,000. (USA). 2009-2012. Dauphin Island Sea Lab: in. sh. and shellfish nursery habitat restoration and monitoring project. (J. Cebrían, R. Aronson, K. Heck and S. Powers, PI's). Alabama Department of Conservation and Natural Resources, \$1,500,000. DISL. 2008-2001. Nursery origins of adult gag grouper, gray snapper, and lane snapper from the northern Gulf of Mexico: onshore-offshore connectivity of reef fishes and contribution of seagrass meadows to shery production. NOAA/NMFS Marine Fisheries Initiative (MARFIN), (K. Heck, S.P. Powers and F. J. Fodrie, PI's), \$180,000. DISL. 2008-2010. Fisheries Oceanography of Coastal Alabama-FOCAL (M. Graham, S. Powers, F. Hernandez, K. Heck and K. Park, PI's). Alabama Department of Conservation and Natural Resources, \$5,000,000. (\$2,100,000:sh component, DISL). 2006-2012. Tracking Movements of Lingcod *Ophiodon elongatus* in Prince William Sound Using Acoustic Tags and Arrays: Expanding

PWSSC Partnerships, Infrastructure and Capacity. (M. A. Bishop and S.P. Powers, PI's). Prince William Sound Oil Spill Recovery Institute and the Paci. c Ocean Shelf Tracking Network (POST). \$155,000 (\$40,000 U. South AL. component). 2008-2010. Apex Predator Dynamics. (S. P. Powers, PI), NMFS Shelby Center for Ecosystem Fisheries Management, \$355,000. DISL. 2009-2011. Setting up CAAMP (Coastal Alabama Acoustic Monitoring Program) (S. P. Powers, M. Ajemian, M. Dymon, PI's). NMFS Shelby Center for Ecosystem Fisheries Management, \$89,000. DISL. 2009-2011.

Research Projects Abroad
Just Cebrían
CONACYT (i.e. Mexican NSF)
"Evaluación ambiental del sistema lagunar Ocafen-Progresso, Yucatán" 08/09-07/11 (Gilberto Jeronimo and Xavier Chiappa as PI's, Unidad de Química-Sisal, Facultad de Química, UNAM, Mexico).
CONACYT (i.e. Mexican NSF)
"Variancias espacio-temporales de la comunidad de peces de la Boca de la Carbonera en la costa norte de Yucatán" 08/09-07/11 (Gilberto Jeronimo and Xavier Chiappa as PI's, Unidad de Química-Sisal, Facultad de Química, UNAM, Mexico).

Editorial Service
Ruth Carmichael
Journals
Marine Biology (1), Estuarine Coastal and Shelf Science (2), Aquatic Botany (1), Journal of the Marine Biological Association (1), Marine Ecology Progress Series (3), FEMSEC-Microbiology Ecology (1)
Proposals
NSF (2), WHOI Sea Grant (1), Maine Sea Grant (1)

Rob Condon
Journals
Marine Ecology Progress Series, FEMS Microbiological Ecology, Journal of Plankton Research, and Hydrobiologia
Ken Heck
Journals
Limnology and Oceanography, Ecological Applications, Proceedings of the Royal Society (B) Quarterly Review of Biology (biological), Biological Conservation, Canadian Journal of Fisheries and Aquatic Sciences
Proposals
Declined multiple requests from NSF, several Sea Grant programs

Frank Hernandez
Journals
Limnology and Oceanography - 1

Bulletin of Marine Science - 1
Proposals
NOAA Fisheries and the Environment (FATE) - 6
Texas Sea Grant College Program - 1
Program Reviews
Juvenile Menhaden Sampling Protocol (at the request of ADCNR)
SEAMAP Shrimp Ground: sh Survey Design Revisions (at the request of ADCNR)
Reports:
Summary of DISL-ADCNR larval/sh thermal tolerance experiments (for ADCNR)
Fisheries Oceanography of Coastal Alabama (FOCAL) status report (for ADCNR)

Ron Kiene
Journals
17 manuscripts for L&O, Nature, PNAS, Marine Chemistry, MEPS among others.
Proposals
NSF (2), NOW Netherlands (1)

Behzad Mortazavi
Journals
Global Change Biology (2), Journal of Geophysical Research - Biogeosciences (1), Limnology and Oceanography (1), Tree Physiology (2),
Proposals
National Science Foundation (1)

Alice Ortmann
Journals
Deep-Sea Research, FEMS Microbiology Letter, Microbial Ecology, Aquatic Microbial Ecology, Aquatic Botany
Proposals
NSF

Kyeong Park
Journals
Estuaries and Coasts (1); BP Gulf Research Initiative, Competition 2, Of. ce of Research and Economic Development, LSU (1), Journal of Asian Earth Sciences (1), Journal of Marine Systems (1),
Estuarine, Coastal and Shelf Science (1), Continental Shelf Research (1)

Sean Powers
Journals
Ecology (1), Estuaries (1), Gulf of Mexico Science (3), Journal of Shellfish Research (2), Restoration Ecology (1), Fishery Bulletin (2)
Proposals
National Science Foundation: Division of International Programs Division of Ocean Sciences (2), North Paci. c Research Board (2), Texas SeaGrant (2)

University of Mobile
President: Dr. Gilbert L. Rochon
(Dr. Charlotte Morris - interim president during reporting period)
Program Committee: Dr. Douglas Hileman
hilemand@tuskegee.edu
Tuskegee University
Department of Biology
Tuskegee, AL 36088
Ph: (334) 727-8828
Fax: (334) 724-3919

University of Alabama
President: Dr. Judy Bonner
(Dr. Robert Witt - president during reporting period)
Executive Committee Member
Program Committee: Dr. Julie Olson
jolson@bama.ua.edu
Department of Biological Science
Box 870344
Tuscaloosa, AL 35487-0344
Ph: (205) 348-2633
Fax: (205) 348-1786

University of Alabama at Birmingham
President: Dr. Carol Z. Garrison
Program Committee: Dr. Ken Marion
kmarion@uab.edu
Department of Biology
University Station
Birmingham, AL 35294
Ph: (205) 934-4290/934-8308
Fax: (205) 975-6097

University of Alabama at Huntsville
President: Dr. Robert Altonkirch
(Dr. Malcolm Portera and Dr. David B. Williams - interim president and president during reporting period, respectively)
Program Committee: Dr. Bruce Stalls
stallsb@email.uah.edu
Department of Biological Sciences
Huntsville, AL 35899
Ph: (256) 824-6992
Fax: (256) 824-6305

University of West Alabama
President: Dr. Richard Holland
Program Committee: Dr. John McCall
jmccall@uwa.edu
University of West Alabama
Department of Biological & Environmental Sciences
Livingston, AL 35470
Ph: (205) 652-3724

University of North Alabama
President: Dr. William G. Cale, Jr.
Executive Committee Member
Program Committee: Dr. Terry Richardson
tdrichardson@una.edu
Department of Biology
Florence, AL 35632
Ph: (256) 765-4429
Fax: (256) 765-4430

University of South Alabama
President: Mr. Gordon V. Moulton
Executive Committee Chair
Program Committee: Dr. Jack O'Brien
jobjrien@jaguar1.usouthal.edu
Department of Biological Sciences
Mobile, AL 36688
Ph: (251) 460-7525
Fax: (251) 414-8220

University of Southern Mississippi
President: Dr. Andrew Hugine, Jr.
Program Committee: Dr. Malinda Westbrook
Alabama A & M University
Department of Natural and Physical Science
4900 Meridian Street, P.O. Box 422
Normal, AL 35762
Ph: (256) 372-4803
Fax: (256) 372-8288

Alabama State University
President: Dr. William H. Harris
Program Committee: Dr. B.K. Robertson
brobertson@asunet.alasu.edu
Department of Biological Sciences
915 S. Jackson Street
Montgomery, AL 36104
Ph: (334) 229-4423
Fax: (334) 229-1007

Athens State University
President: Dr. Robert Glenn
Program Committee: Dr. Christopher J. Otto
ottojc@athens.edu
300 N. Beaty Street
Department of Biology
Athens, AL 35611
Ph: (256) 233-8255
Fax: (256) 233-8164

Auburn University
President: Dr. Jay Gogue
Executive Committee Member
Program Committee: Dr. Anthony G. Moss
tony@auburn.edu
Dept. of Biological Sciences
331 Funchess Hall
Auburn, AL 36849
Ph: (334) 844-9257
Fax: (334) 844-9234



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

The Board of Directors is comprised of the Presidents of each of the 21 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 Program Committee Members listed here are for the time at print; those who served at the reporting time of 2007 are so noted.

**Schools with Graduate Programs

Auburn University at Montgomery
Chancellor: Dr. John G. Veres
Program Committee: Dr. John Aho
jahoj@mail.aum.edu
Department of Biology
Montgomery, AL 36124
Ph: (334) 244-3787
Fax: (334) 244-3826

Birmingham Southern College
President: Gen. Charles C. Kruk
(Dr. Mark Chantz - interim president during reporting period)
Program Committee: Dr. Andrew Gannon
agannon@bsc.edu
Department of Biology
Box 549022
Birmingham, AL 35254
Ph: (205) 226-4899
Fax: (205) 226-3078

Huntingdon College
President: Dr. J. Cameron West
Program Committee: Dr. Paul Gier
pgier@huntingdon.edu
Department of Biology
1500 East Fairview Ave.
Montgomery, AL 36106
Ph: (334) 833-4510
Fax: (334) 833-4486

Jacksonville State University
President: Dr. William A. Meehan
Program Committee: Dr. George Cline
gcline@su.edu
Department of Biology
700 Pelham Road North
Jacksonville, AL 36265-1602
Ph: (256) 782-5798
Fax: (256) 782-5587

Federal Awards/Grants



Pass-Through Grantor/Program Title	Assistance Period	Total	Federal Share	Revenue Recognized	Expenditures
Marine Fisheries Initiative	08/01/2009-07/31/2012	211,258.00	211,258.00	40,736.14	40,736.14
Marine Fisheries Initiative	07/01/2008 - 06/30/2012	221,230.00	221,230.00	181,484.95	181,484.95
Marine Fisheries Initiative	07/01/2006 - 01/31/2011	2,129,368.00	488,362.03	488,362.03	488,362.03
Marine Fisheries Initiative	09/01/2009-08/31/2011	899,100.00	899,100.00	730,552.07	730,552.07
Marine Fisheries Initiative	09/01/2010-08/31/2013	749,250.00	749,250.00	237,022.74	237,022.74
Passed Through University of Southern Mississippi					
Sea Grant Support Oceanic and Atmospheric Projects	02/01/2010-01/31/2012	126,934.00	79,265.00	52,704.40	52,704.40
Sea Grant Support Oceanic and Atmospheric Projects	02/01/2010-01/31/2012	441,549.00	289,254.00	116,785.90	116,785.90
Institute for Marine Mammal Studies	04/04/2011-08/31/2012	28,100.00	28,100.00	6,594.19	6,594.19
Passed through Alabama of Conservation and Natural Resources Coastal Zone Management (CZM)					
Unaffiliated Management Projects	10/01/2009-02/15/2011	50,000.00	25,000.00	6,202.66	6,202.66
CZM Administration Awards	10/01/2006 - 06/30/2012	5,000,000.00	5,000,000.00	1,034,431.09	1,034,431.09
CZM Administration Awards	10/01/2010-3/25/2012	70,000.00	35,000.00	29,583.00	29,583.00
CZM Administration Awards	10/01/2010-3/25/2012	20,000.00	50,000.00	242.22	242.22
CZM Administration Awards	10/01/2010-3/25/2012	20,000.00	10,000.00	280.80	280.80
CZM Administration Awards	10/01/2010-2/29/2012	11,000.00	30,000.00	11,454.83	11,454.83
CZM Administration Awards	10/01/2008-03/25/2012	11,000.00	5,000.00	2,100.37	2,100.37
CZM Administration Awards	03/01/2010-02/28/2011	15,000.00	7,500.00	7,500.00	7,500.00
CZM Administration Awards	03/01/2010-09/30/2011	15,000.00	7,500.00	7,500.00	7,500.00



Balance Sheet

Marine Environmental Science Consortium Dauphin Island Sea Lab Statement of Net Assets For the Year Ended September 30, 2011

ASSETS	
Current Assets	
Cash	2,980,088
Accounts Receivable	2,804,038
Receivables	125,793
Total Current Assets	5,909,919
Noncurrent Assets	
Capital Assets	
Land	456,331
Buildings	18,972,246
Improvements Other Than Buildings	952,419
Equipment	2,275,628
Vehicles	1,075,942
Library Buildings	382,527
Less: Accumulated Depreciation	(13,890,525)
Total Capital Assets, net of Depreciation	11,440,128
Total Noncurrent Assets	11,440,128
Total Assets	17,350,047
LIABILITIES	
Current Liabilities	
Accounts Payable	961,160
Liabilities Payable	15,804
Compensated Absence	22,407
Deferred Revenues	6,000,219
Payables Due to Other	111,420
Total Current Liabilities	7,110,990
Noncurrent Liabilities	
Compensated Absence	312,800
Other Long-term Liabilities	45,307
Total Noncurrent Liabilities	358,107
Total Liabilities	7,469,097
NET ASSETS	
Invested in Capital Assets, net of Related Debt	11,780,000
Restricted for:	
Endowments	
Scholarships & Fellowships	
Instruction, Research & Public Outreach	211,390
Capital Projects	1,358,600
Unrestricted	1,568,900
Total Net Assets	17,350,047

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

