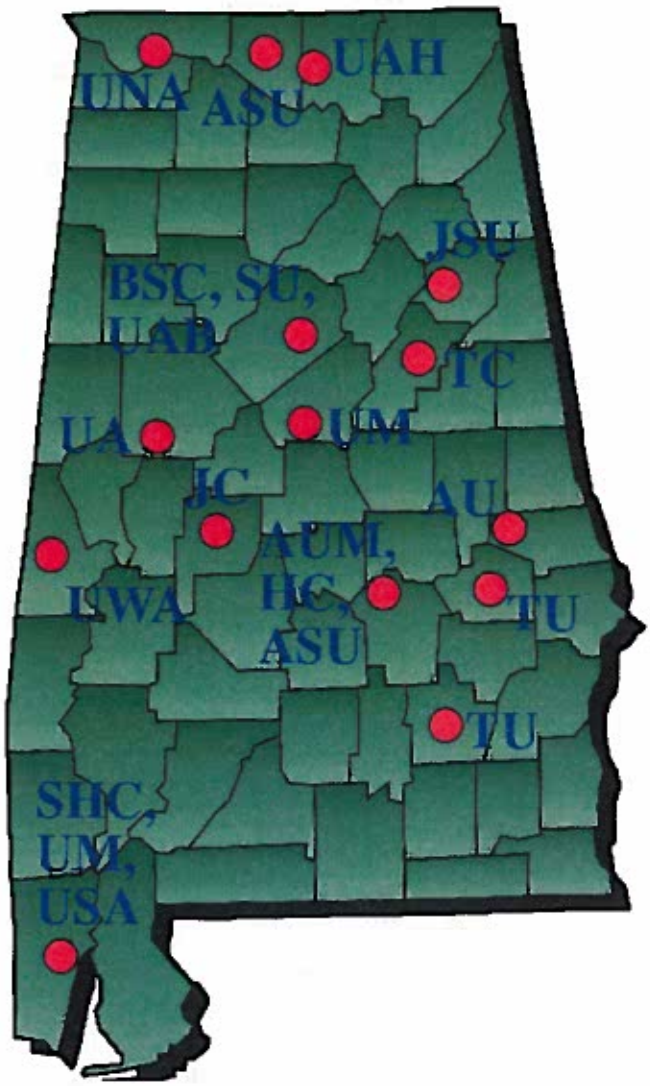
Dauphin Island Sea Lab

2007 Annual Report

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



- 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-one 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.

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

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

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Dauphin Island, AL 36528
Ph: (251) 861-2141
Fax: (251) 861-4646
www.disl.org

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

After 30 years as Executive Director and 39 years in coastal Alabama, Dr. George Crozier retired at the end of 2007. We are unable to confirm the provenance of most of the photos. Of those we can confirm: third row, l-r, Breaking ground on the new Richard C. Shelby Center for Ecosystem Based Fisheries Management, scheduled to open 2009) are (l-r) Ryan Welch, Senator Shelby's Office; NOAA Deputy Secretary Tim Keeney; Dr. George Crozier; NMFS Exec. Captain Tim Brown; NOAA Head of Research Dr. Rick Spinrad; photo on right, Town of Dauphin Island names street "Crozier Drive" in honor of his contributions.

Letter from the Executive Director

I was told by a higher authority (Public Relations Director Lisa Young) that the Director's letter for the 2007 Annual report could not simply be "I retired" no matter how it made sense to me. Then she listed some of the accomplishments that I could invoke to fill said white space – the ground breaking of the Richard Shelby Center for Ecosystem-Based Fisheries Management, the addition of Dr. Tina Miller-Way to the faculties of Discovery Hall and University Programs, Dr. Ruth Carmichael's public-friendly manatee sighting program, the maturation of the DISL Foundation with David Doubilet's fundraiser, and the Lab's inclusion in the Northern Gulf Institute to the tune of half a million dollars.

I still rather like the shorter version but it did occur to me that it provided me the opportunity to comment on and thank many (if not all) of the people who have been as much or more responsible than I for the survival and success of the Sea Lab. I have often reflected on the fact that the Laboratory absolutely dominated the personal and professional lives of many of us that have made an entire career of serving this institution in one way or another. Sometimes I thought about what might have happened to our staff (and me) if the Lab had never been established – interesting!

I grew up under the tutelage of May Tillman and George Oakes (a twice-retired Army motor pool mechanic and jack-o-all-trades) who facilitated the transition from Point aux Pins to Dauphin Island. May established the cafeteria's reputation for the best fed marine laboratory in the country (after she got through the early rice years) while George in project support taught the faculty and graduate students real humility. Tommy Walker and Fred Rees initiated the Discovery Hall Program and laid a foundation that was dramatically expanded by Johnny Booker and John Dindo. Fred went on to building an operations staff and worked hard to emulate George's approach to keeping the academics in line, and built a reputation that later led him to run the entire USA campus at Brookley.

Judy Stout came with May, George and me from the Point and promptly embarked on a second dissertation (having lost her first in the fire at PAP) which brought her to being the country's authority on *Juncus* marshes. Her forthright and hard-nosed approach to the academic demands of the new consortium were aided and abetted by Dr. Tom Hopkins, who had been my mentor in graduate school and biology chair at two different Florida institutions. Dr. Will Schroeder came from Texas A&M and brought an underwater science credibility as well as descriptive oceanography that played well at this stage of academic growth.

Everybody took a turn at doing the dishes in the early days- here, it's Dr. Judy Stout.

May's cafeteria became the training ground for so many who have come to serve the laboratory in a tradition that makes the institution truly unique. Rita George, Connie Mallon, Lynn Bryant and Georgia Mallon all began their careers behind the serving line of the cafeteria

and have reprised those roles many times over as necessity required even though they had become registrar, librarian, bursar, and business manger respectively. I think the success of the Laboratory through physical and financial difficulties can be directly attributed to their native intelligence, effort, and dedication to the Dauphin Island Sea Lab – they **willed** it through these trying times. Georgia has been the soul, conscience, financial planner, human

Darrell and Georgia Mallon in the early days. Both have served the Lab for many years.

resources, and chief administrator for many years at this point. Lisa Young is a relative "newbie" and didn't suffer the cafeteria or Hurricane Frederic "experience" (living with her husband DISL Marine Scientist Rich Aronson may reach those standards) but I count her as a fitting member of this remarkable clan of over-achieving women that have been the backbone (and brains) of the Lab's evolution!

However no one deserves more credit than Dr. John Dindo (unless it's his incredibly patient and tolerant wife) who completed his dissertation while building Discovery Hall into the nationally recognized program that it is today. For years he has been head lobbyist, chief building inspector, social director, energizer, vertebrate ecologist-ornithologist and the shoulder to cry on that every director needs. No one has ever had a better colleague or support.

I don't mean to offend many others that I may have omitted but I firmly believe that each and every one of these individuals, as well as the others to various degrees, deserves much of the credit that I have been given over the past several months. I will, however, take credit for identifying them, hiring them and managing to

Crozier (left) and Dindo making trouble and dinner in the kitchen.

A few more years, a little less hair, Crozier and Dindo at Dr. Crozier's retirement party in December 2007.

keep them long enough to let me depart with a sense of accomplishment that is rare – thank you all!

George F. Crozier, Ph.D.
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.

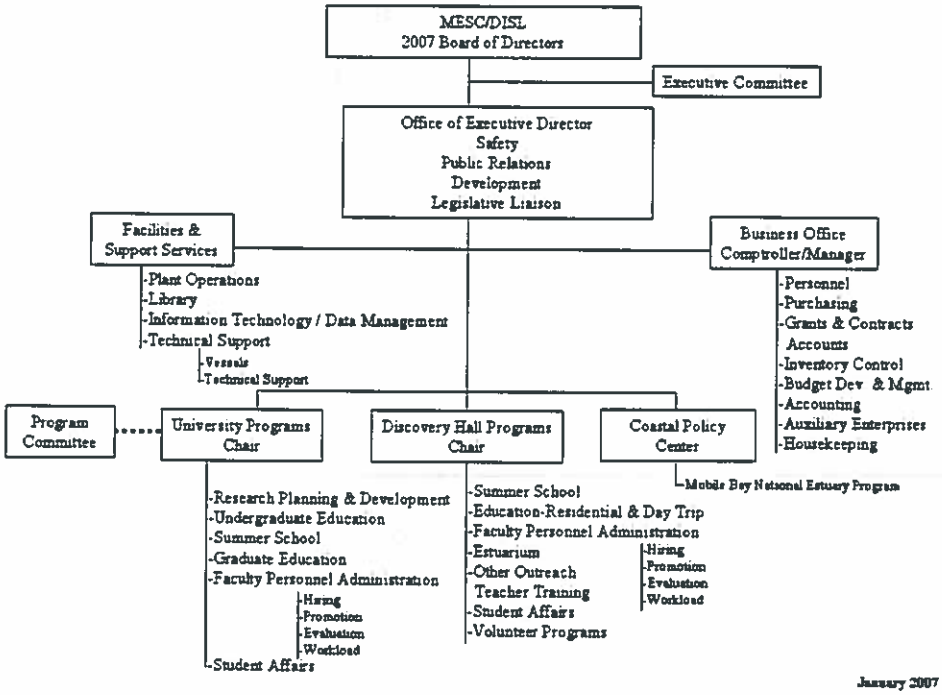
Aerial view of the Sea Lab campus - the Dauphin Island Bridge is in the background. Photo by J. Dindo.

Five buildings on the South Campus offer over 15,000 square feet of instructional space. Wiese Marine Science Hall on the North Campus houses a state of the art lecture hall, as well as the offices and laboratories of the research faculty and graduate students. The Sea Lab can accommodate 160 persons in residence. Two dormitories, a two-story efficiency apartment building with twelve-units, eight three-bedroom houses, and a cafeteria provide quarters and meals for visiting faculty and students.

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.

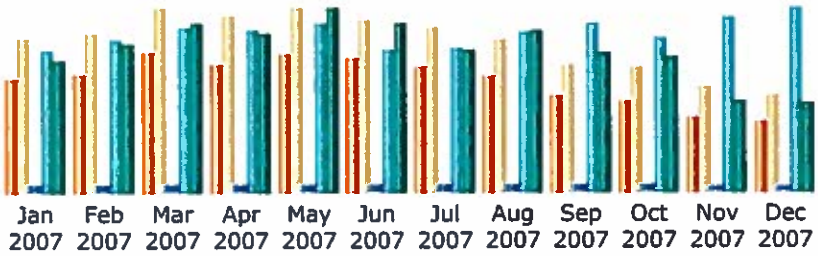
Wet Lab facilities house modular sea-water systems, kreisels, and other instruments for experimental work on living marine organisms. Research laboratories are equipped with state-of-the-art instrumentation for biogeochemical research. Field collection equipment for marine ecological and oceanographic research is available.

Table of Organization



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

Statistics for www.disl.org



Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jan 2007	5045	6897	11108	326804	1.79 GB
Feb 2007	5208	7106	12360	349491	2.01 GB
Mar 2007	6296	8362	13541	377548	2.31 GB
Apr 2007	5730	7955	13993	372549	2.17 GB
May 2007	6194	8355	13443	389281	2.54 GB
Jun 2007	5991	7739	12714	326469	2.30 GB
Jul 2007	5646	7352	12173	332306	1.93 GB
Aug 2007	5177	6840	11942	369474	2.21 GB
Sep 2007	4304	5734	9526	386597	1.90 GB
Oct 2007	4039	5638	9708	352616	1.84 GB
Nov 2007	3320	4717	8624	401183	1.23 GB
Dec 2007	3100	4351	7453	428398	1.21 GB
Total	60050	81046	136585	4412716	23.44 GB

Administrative Personnel
Dr. George F. Crozier - Executive Director
Dr. John J. Dindo - Chair, Discovery Hall Programs
Dr. Kenneth L. Heck - Chair, University Programs
Georgia Mallon - Business Manager
Aleada Nicholson - 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
Georgia Mallon - Comptroller/Business-Auxiliaries Manager
Lynn Bryant - Payroll
Mary Darby - Accounts Payable
David England - Bursar
Ashley Foster - Receptionist
Christine Hilburn - Purchasing/Human Resources
Sherry Horton - Contract & Grants Manager
Dennis Patronas - Clerical Assistant

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

Cafeteria Personnel
Classie Beritiech - Manager
Judy Barber
Renee Cain
Rose Cortichiato
Cindy Grimes
Randy Zirlott
Faye Bentley (Part-time)
Karen Saunders (Part-time)
Celenia Spettel (Part-time)

Estuarium Gift Shop Personnel
Jeana Layne - Manager
Daphne Wood - Manager/Buyer
Jamelle Ellington
Amy Hannah
Janice Pedrick (Part-time)

Household Maintenance Personnel
Tammy McClantoc - Supervisor
Shirley Emerson
Cindy Johnson
Holley Ladnier
Marty Newman
Sue Ramsey
Diane Summerlin

Information Technology

The Sea Lab's Information Technology Department provides user services and support for more than 120 users and 227 computers and servers, in both academic and administrative departments. In

2007, IT completed the move of the current server room to the second-floor space in the Administration Building. This move gained IT much needed office and computer space for the department. We also welcomed a new employee, Sam Hardwick, to the Information Technology staff.

Information Technology Personnel
Melissa Mills - Manger of Information Technologies
Shane Johnson - Systems Administrator
Sam Hardwick - PC / Network Specialist
Lei Hu - Data Manager

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.

Library Personnel
Connie Mallon - Librarian

Public Relations

Special events seemed to dominate the year for the Public Relations Department. In April, NOAA celebrated its 200th anniversary with a series of festivities around the country, choosing one geographical area a month. April was the Gulf Coast's turn, and the Sea Lab was privileged to host their commemoration in conjunction with Discovery Day. NOAA officials, including Deputy Secretary Tim Keeney, dedicated the new Richard C. Shelby Center for Ecosystem-Based Fisheries Management on that day. 2007's Discovery Day turned out to be one of the Sea Lab's most successful, with over 2,500 visitors.

Discovery Day is the only day of the year the research labs are open to the public. Dr. Frank Hernandez shows visitors research results on larval fish.

The PR Department also assisted the DISL Foundation's Cocktails with the Critters event, featuring National Geographic photographer David Doubilet.

The Sea Lab gained prominent national media coverage with Dr. Sean Power's *Science* paper on overfishing of sharks and its impact on the ecosystem; the *Washington Post,* the *New York Times*, and other prominent news outlets picked up this fascinating story. Dr. Monty Graham's research on invasive jellyfish received widespread national attention as well.

The Public Relations office assisted Dr. Ruth Carmichael in promoting Mobile Manatees, a manatee-sighting network that is the first of its kind in Alabama.

Public Relations Personnel
Lisa Young - Public Relations Director

Plant Operations

Creating new spaces and maintaining existing ones were on the forefront of Plant Ops' 2007 workload. In the Administration Building, the department revamped the second floor and built stairs for the IT Department's servers; Plant Ops also created the beautiful tables currently in the Library, as well as installing a new A/C system. On the South Campus, a new office was created in Endeavor for the Gulf of Mexico Alliance, and a new deck was installed on Albatross. Research faculty received new custom bookcases and lab tables. The Estuarium now includes a beautiful Schooling Room, courtesy of the J.L. Bedsole Foundation

Plant Ops Supervisor Troy McBride (left) and Chris Gilliam helped plant 1,000 slash pines to repopulate the Maritime Forest behind the South Campus after the salt spray from Hurricane Katrina destroyed the trees.

and the hard work of the Plant Ops crew. A fresh coat of paint spruced up many buildings on campus. This is just a small sampling of the extensive work performed by Plant Ops to improve and maintain the Sea Lab campus.

Plant Operations Personnel
Troy McBride - Supervisor
Tommie Blocker
Jim Daves
Karl Feemster
Ricky Gibbs
Chris Gilliam
Wilfred Gazzier
Joey Johnson
Kenneth O'Neal
Tom Pritchett

Technical Support and Vessels

Technical Support strives to provide faculty and students with information, technology, resources and services related to coastal research. Although technicians are subject to almost any conceivable demand, services can generally be grouped into one of four areas: field instrumentation, laboratory instrumentation, wet lab, and scientific diving. Three Motorboat Operators Certification Courses offered by Vessel Ops taught 13 students and staff the fundamentals of small boat operation. The increased number of users led to over 700 trips in 2007 by the combined fleet of 8 vessels.

For the first time, DISL/AAUS hosted a Divers Alert Network (DAN) summer intern, who produced an electronic newsletter for the American Academy of Underwater Sciences. Roxanne Roberson also participated in the professional development sessions with the REU's and in various sampling programs throughout the summer.

In addition to our own coastal observing system, tech support is helping TAMU-CC with installation and maintenance of NOAA's Physical Oceanographic Real-Time System (PORTS) in Mobile Bay.

Ryan Poythress was hired at the very end of the year, to temporarily replace Yantzee Hintz, who is again on active duty with the National Guard, this time in primary flight school at Ft. Rucker, AL.

Technical Support Personnel
Michael Dardeau - Technical Support Supervisor
Al Gunter - Field Technician
Ryan Poythress - Wet Lab Technician
Laura Linn - Analytical Technician
Kyle Weis - Field Technician

Vessel Operations Personnel
Tom Guoba - Vessel Ops Supervisor
Rodney Collier - Captain
Clark Lollar - Captain
Russell Wilson - Captain

2007 Vessel Days at Sea (including 1/2 day ops)

A. E. Verrill	120
E. O. Wilson	126
Small Boats	463

Marine Technicians Laura Linn (center, in orange shorts) and Al Gunter (right) demonstrated different types of instrumentation during Discovery Day 2007.

Discovery Hall Programs

Based on the principle that hands-on learning invigorates the desire for in-depth education and life-long interest, Discovery Hall Programs (DHP) offers a broad variety of intensive programs for K-12 students, teachers, and the general public.

Dauphin Island Sea Lab's Discovery Hall Program Totals

Year	K-5	Middle School	High School	College	Teachers	Other	Total
1990	7,382	1,364	905	473	185	397	10,706
1991	2,296	745	329	127	254	620	4,371
1992	6,103	2,005	1,187	671	254	351	10,571
1993	7,128	1,784	2,123	765	238	529	12,567
1994	7,634	2,083	1,533	603	356	478	12,687
1995	5,981	1,763	1,137	634	213	336	10,064
1996	6,915	2,318	1,411	456	300	126	11,526
1997	6,312	1,630	1,170	648	269	284	10,313
1998	6,233	2,079	1,484	364	230	352	10,742
1999	4,232	2,055	1,397	479	225	301	8,689
2000	6,567	2,141	1,746	476	199	368	11,497
2001	6,239	1,918	2,485	540	177	277	11,636
2002	4,196	2,924	1,865	460	175	430	10,050
2003	4,605	2,845	2,215	278	230	293	10,466
2004	4,737	1,385	1,435	262	150	188	8,157
2005	3,897	1,102	1,592	316	167	98	7,172
2006	6,576	2,326	2,877	566	117	374	12,836
2007	3,064	1,440	1,591	432	86	111	6,724
Total	**100,097**	**33,907**	**28,482**	**8,550**	**3,825**	**5,913**	**180,774**

The Discovery Hall Programs continues to be a leader in marine science education in the region and the nation. The Dauphin Island Sea Lab became a partner with NOAA's Northern Gulf Institute and the Discovery Hall Program has a lead role in science education for the institute. Dr. Tina Miller-Way, a former professor at the University of Mobile and past Sea Lab graduate student, was hired to help bridge the gap between scientists and teachers. She is working with DISL and NGI scientists to link on-going research with science curriculum and ocean literacy. Ms. Mendel Graeber has changed positions from a full-time marine educator to a part-time educator working in the Estuarium. Through funding from the Northern Gulf Institute, Ms. Graeber is able to interact with the students and other visitors. Her role, like Dr. Miller-Way's, is to highlight the scientific research being conducted by DISL and NGI scientists and how that research relates to the environment, global warming, the oceans and their lives.

Dr. Tina Miller-Way

Along with these changes DHP hired two new marine science educators. Ms. Carrie Dixon, received her Master's Degree in Marine Science from the College of Charleston, South Carolina and has been the lead educator for BayMobile. Through Ms. Dixon's efforts, the BayMobile program has reached over 5,000 students across the state of Alabama and this outreach is still expanding. ExxonMobil has helped to fund this program for many years and continues to be a partner in science education. The program is designed to bring coastal marine science to students in their classrooms across the state two weeks a month during the academic year. In addition, Ms. Stephanie Wright, a former Estuarium aquarist, has joined DHP's education staff. Ms. Wright and Mr. Graeber are both working on their Masters' degrees in science education through the University of South Alabama.

The Mississippi-Alabama Sea Grant Consortium (MASGC) has been a leader in funding science education for the past thirty years. Once again, in

Tia Dixon, Tuskegee University and a 2007 Shell Oil Intern, assists in an Ocean's Alive class.

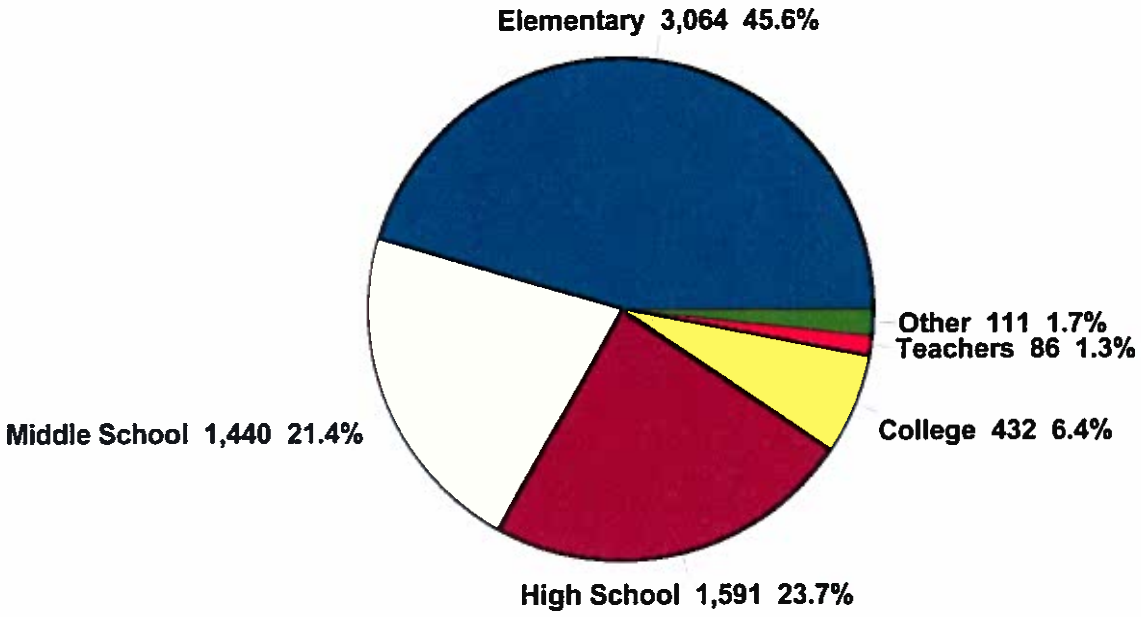
partnerhip with the Mobile County Environmental Studies Center and the J.L. Scott Marine Education and Aquarium, Sea Grant has helped fund a marine educator. Visiting students, educators, and the general public learn about Sea Grant-sponsored research, ocean literacy, and the link between watersheds and the coast.

ExxonMobil funds three summer internships for undergraduate students and Shell Oil supports two minority internships that work directly with the Discovery Hall Programs. These internships provide valuable assistance to the DISL during the busiest time frame, and the interns gain knowledge of the coast, science and education and hopefully will choose careers in science or education. Ms. Tia Dixon from Tuskeegee University and Mr. Marcus Sheppard from Jacksonville State College were our Shell Oil recipients in 2007.

DHP joins in partnership with the University of Florida, Louisana State University and the J.L. Scott Marine Education Program through the National Science Foundation grant Centers for Ocean Sciences Education Excellence. Teachers have the opportunity to work with research scientists in the field, laboratory and classroom and gain insight into the process of scientific investigations. Scientist and teachers have open exchanges in which teachers highlight the mandates of science education and how they can incorporate marine science research into existing curricula.

Discovery Hall Student Participation in 2007

Including Summer Programs and Teacher Workshops



Drs. John Dindo and Sharon Walker received a grant from the NOAA Office of Education that funds Ms. Lee Yokel, the Gulf of Mexico Alliance Education and Outreach coordinator. Ms Yokel is housed at the Dauphin Island Sea Lab and works with education partners from each of the Gulf Coast states on a program designed by the states through the Gulf of Mexico Governor's Action Plan.

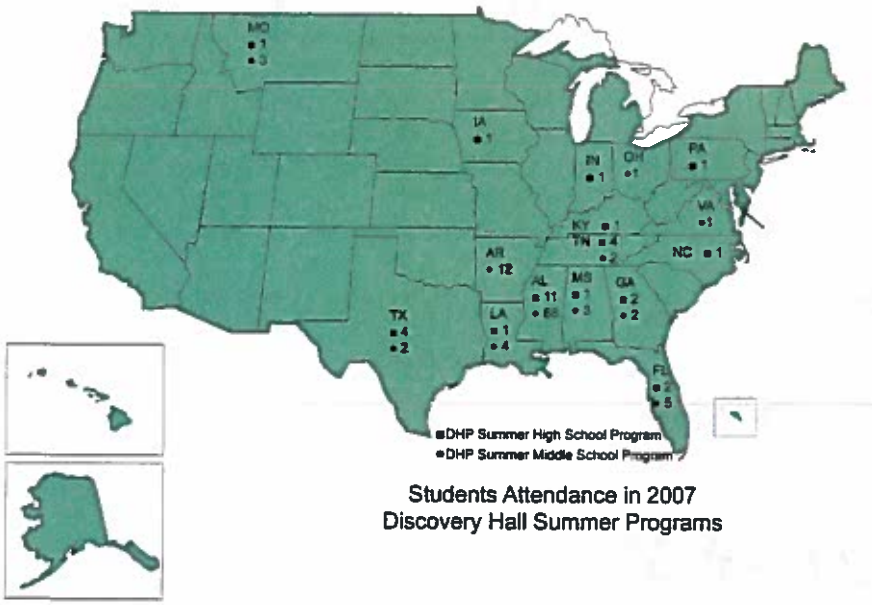
Inspecting the bounty of Mobile Bay, a group of teachers look forward to collecting specimens for their own classrooms.

Discovery Hall
Programs Personnel and Faculty

Dr. John J. Dindo, Ph.D. 1991 (University of Alabama at Birmingham) - Department Chair
Denise Keaton - Administrative Assistant
Pamela Pierce - Scheduler

Faculty

Jenny Cook, M.S. Marine Science, 1991 (University of South Alabama) - Marine Educator
Carrie Dixon, M.S., Environmental Studies (College of Charleston, SC) - Marine Educator
Greg Graeber, B.S. Science, 2000 (Auburn University) - Marine Educator
Mendel Graeber, B.S. Science, 2001 (University of Alabama) - Marine Educator
Joan Turner, B.S. Elementary Science Education, 1999 (University of Alabama, Huntsville) - Marine Educator
Hazel Wilson, B.S. Science Education, 1981 (Memphis State University) - Marine Educator
Stephanie Wright, B.S., Biology, 2004 (University of South Alabama) - Marine Educator



Students Attendance in 2007
Discovery Hall Summer Programs

The Estuarium

251.861.7500
Toll Free: 866.403.4409
www.sealabestuarium.org

The Estuarium once again is making strides in gaining visitors since the Hurricanes of 2004 and 2005. This year attendance again climbed 11,000 from 2006, with over 68,000 guests coming to our facility in 2007. New exhibits were on hand for the visitors to enjoy, including our Underwater Exploration Exhibit and Remote Operated Vehicle Kiosk. These newest exhibits were unveiled during Discovery Day in April 2007.

The Estuarium at the Dauphin Island Sea Lab Visitor Totals

Year	Students	Adults	Seniors	Members Passes	Total
				Employees, Comps	
1998	26,661	16,468	7,774	2,343	53,246
1999	34,557	18,842	10,427	2,455	66,281
2000	38,223	20,283	11,887	2,662	73,055
2001	36,213	21,305	12,112	2,718	72,348
2002	35,327	21,966	12,638	3,056	72,987
2003	38,622	23,200	12,435	3,218	77,475
2004	34,458	21,300	12,742	3,356	71,856
2005	26,501	13,050	6,728	2,533	48,812
2006	31,059	15,745	8,030	2,940	59,780
2007	34,152	18,689	10,586	3,220	68,654
Total	**335,773**	**190,848**	**105,359**	**28,501**	**664,494**

Renovations took place in our largest display, the Gulf of Mexico tank, as well as the Little Billy Goat Hole Room.

New technology made its bow with audio kiosks along the Living Marsh Boardwalk and in the Ladner Pavilion.

The J.L. Bedsole Foundation generously provided the funds for the Schooling Room, a sunny, indoor space attached to the Estuarium, overlooking Mobile Bay. With this much-needed private space, classes will now be able to assemble indoors, out of the elements, while receiving additional instruction before they enter the Estuarium. The Schooling Room is also available for rental for meetings and special events.

The J.L. Bedsole Foundation Schooling Room

There are currently 67 Docents who volunteer in the Estuarium, landscape our butterfly gardens, and perform outreach duties in the Mobile area. A new class in 2007 brought in 17 new faces who were paired with experienced docents, as well as receiving intensive training by our educators.

We'd like to extend special thanks to those docents who volunteer to work in the DHP administrative offices – Joe Horton, Lu Oswell, Mary Binion-Jones and Lynn Irving. We don't know what we'd do without those smiling faces and nimble fingers!

If you are interested in volunteering at the Estuarium, please contact Ms. Denise Keaton at dkeaton@disl.org.

Personnel:
Robert Dixon, Estuarium Manger
Brian Jones, Senior Aquarist
Lauren Adele Fowler, Aquarist
Joe Ingraham, Aquarist
Stephanie Wright, Aquarist (partial year; joined DHP Faculty)

University Programs

University Programs (UP) oversee summer undergraduate and year-round graduate (M.S. and Ph.D.) education, as well as faculty research. Thirteen of the 21 member institutions sent students to the DISL for the 2007 Summer Program. UP delivered 747 undergraduate hours and 148 graduate hours during the summer and 694 graduate hours during the academic year, for a total of 1589 hours (Figure 1, next page).

Twelve graduate students who conducted their research at the DISL received their degrees from their home institutions during the reporting period of October 1, 2006 to September 30, 2007 (Table 1).

For the 11th year in a row, DISL participated in NSF's Research Experience for Undergraduates Program, hosting seven exceptional students from around the country for twelve weeks of research and field experience (Table 2).

Summer - 2007 Total Credit Hour Breakdown by Institution

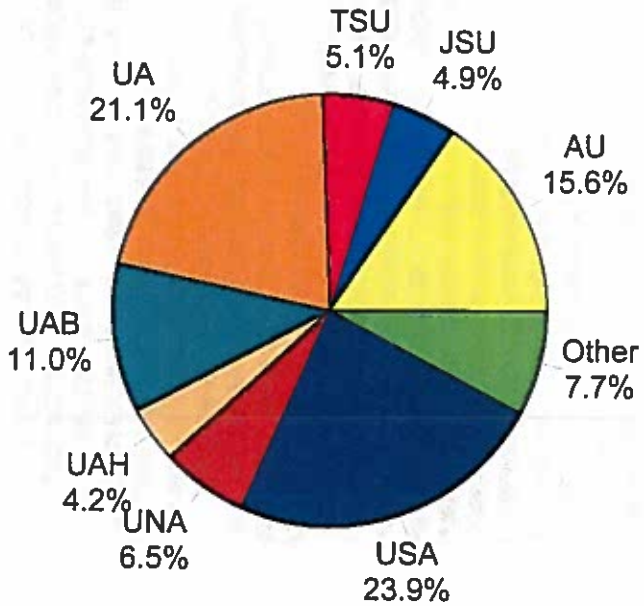


Table 1. '06-'07 Graduates

Andrea Anton, M.S., 2007 – Just Cebrian – The Effects of Eutrophication on the Ecological Services Provided by Seagrass Meadows
Nadia Bood, M.S., 2006 – Rich Aronson - Recovery and resilience of coral assemblages on managed and unmanaged reefs in Belize: a long-term study
Dale Booth, M.S., 2006 – Ken Heck - The impact of the eastern oyster (*Crassostrea virginica*) on growth and recruitment of the seagrass *Halodule wrightii*
Todd Clardy, M.S., 2006 – Sean Powers - Migratory group discrimination between eastern Gulf of Mexico and Atlantic king mackerel (*Scomberomorus cavalla*) using otolith shape analysis
Matthias A. Colomb, M.S., 2007 –Kyeong Park - Prediction of fecal coliform count in Mobile Bay, Alabama using a Bayesian model
Hayakubun Harada, Ph.D., 2006 – Ron Kiene - Physiological Roles of Dimethysulfoniopro- pionate (DMSP), DMSP Lyase, Dimethylsulfide (DMS) And Dimethylsulfoxide (DMSO) in Phytoplankton
Danny Husband, Ph.D., 2007 – Ron Kiene – The Role of DMSP in Oxidative Stress Protection in *Spartina alterniflora Loisel*
Matthew Johnson, Ph.D., 2006 – Ken Heck - The role of habitat fragmentation per se on the structure and function of seagrass ecosystems in the northern Gulf of Mexico
Thaddeus Murdoch, Ph.D., 2007 – Rich Aronson - A Functional Group Approach for Predicting the Composition of Hard Coral Assemblages in Florida and Bermuda
Deborah Schaefer, Ph.D., 2007 – John Valentine – Physiological Factors Affecting the Distribution of the Nonindigenous Seagrass *Zostera japonica* Along the Pacific Coast of North America
Carly Steeves, M.S., 2007 – Ken Heck - The Effects of Increased Habitat Structure on Predation Rates in Seagrass Beds
Jason Stutes, Ph.D., 2007 – Just Cebrian – Seagrass (*Halodule wrightii*) communities of the Northwest Gulf of Mexico: Differences in production dynamics and primary consumption across a gradient of human impact

Table 2. 2007 REU Presentations

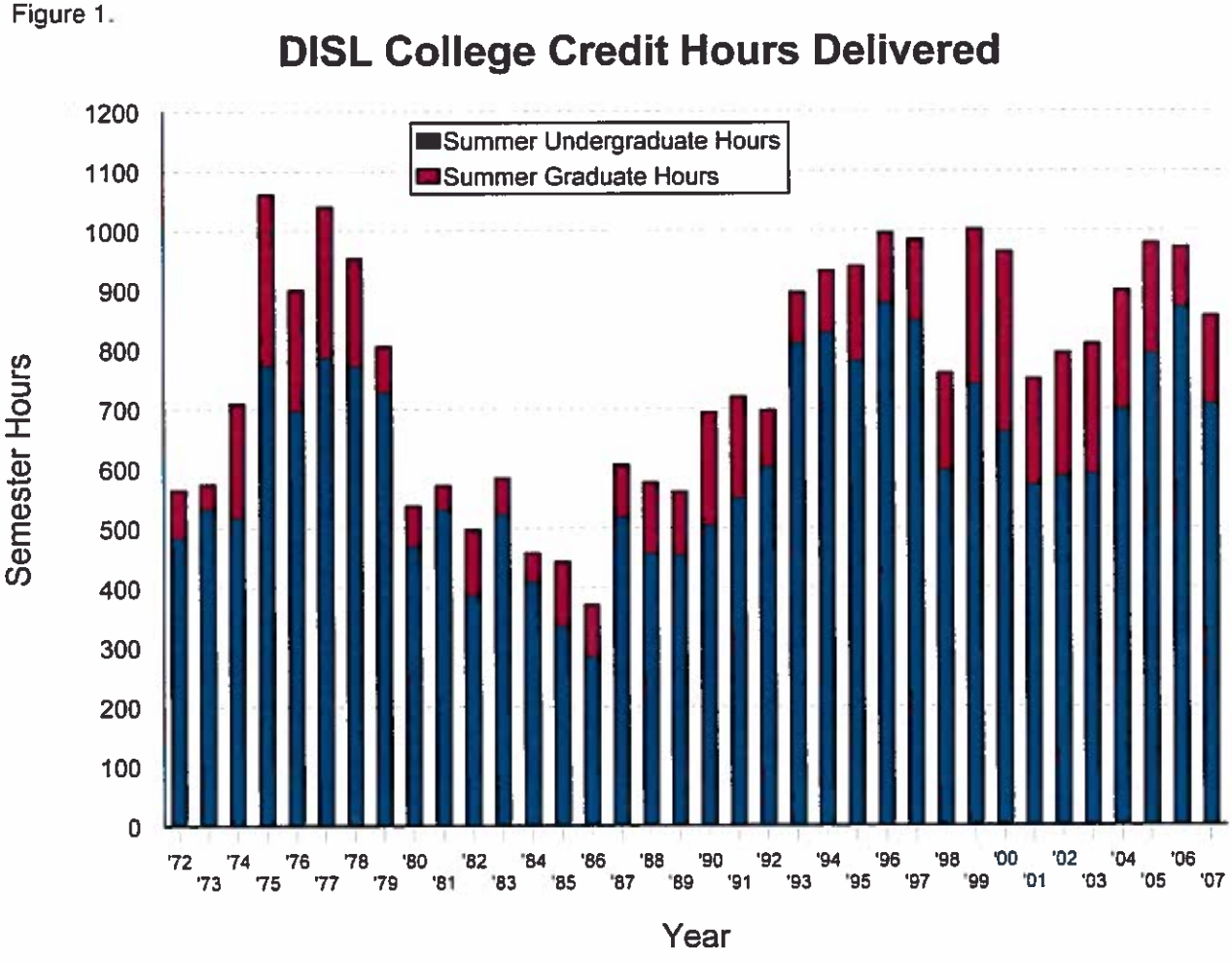
Renee Collini, University of Texas at Dallas, Mentor: Dr. Monty Graham. Assessing risk of predation on ichthyoplankton using an adaptive sampling approach.
Josh Daskin, Brandeis University, Mentor: Dr. Ruth Carmichael. Oysters as Sentinels of Wastewater Influence in Mobile Bay.
Lauren Grove, North Carolina State University, Mentor: Dr. Ken Heck. The effects of nutrient enrichment on abundance growth fecundity and C:N Ratios of Consumers in *Thalassia testudinum*.
Kirstin Hartzell, Baylor University, Mentor: Dr. Hugh MacIntyre. Water quality mapping in Little Lagoon, Alabama.
Jennifer Himmelstein, University of Maryland, College Park, Mentor: Dr. Just Cebrian. The influence of the trematode parasite *Microphallus turgidus* on the predator avoidance, predator choice and digestion of the common grass shrimp *Palaemonetes pugio*.
Jennifer Hobbs, State University of New York, Stonybrook, Mentor: Dr. Rich Aronson. The Future of Eastern Pacific Coral Reefs: The interplay between sea level rise and coral reef accretion rates.
Shanna Madsen, State University of New York, Stonybrook, Mentor: Dr. Sean Powers. Behaviorally mediated indirect interactions affect predation in a multiple prey assemblage.

The UP Faculty contributed $2,293,677 to the Sea Lab's total extramural funding of over $3.5 million. $615,062 was faculty extramural funding through the University of South Alabama. Research projects included oyster reef restoration; hydrological modification study; examining the effects of Hurricane Ivan, and many, many others. A complete listing of extramural grants can be found on pages 30-34.

During the reporting period of October 1, 2006 to September 30, 2007, the faculty produced 32 refereed publications; 9 other publications; 60 scientific abstracts and presentations; and 37 public and other presentations. These can be found on pages 22-27.

University Programs Personnel
Dr. Kenneth L. Heck - Department Chair
Sally Brennan - University Programs Registrar
Carolyn Wood - Administrative Assistant

Figure 1.



Coastal Policy Center
Mobile Bay National Estuary Program

Prepared by Mobile Bay National Estuary Program-
Captain David Yeager, Director

Management Conference

MBNEP's reorganization of the Management Conference consists of the following committees- Community Action Committee; Community Resources Committee; Government Networks Committee; Project Implementation Committee; Science Advisory Committee; Finance Committee; and Executive Committee. During 2007, the following activities took place:

The Community Action Committee- This group organized, identified volunteer water quality monitoring as their main focus, developed a grassroots organization based mini grant program, and conducted the first round of this peer reviewed funding program. The first projects to be undertaken in 2008 are: Little Lagoon Preservation Society- signage, educational speaker, lab equipment; Wolf Bay Watershed Watch- Automated Water Monitoring Instrument; Dog River Clear Water Revival- Dog River Park Restoration.

The Community Resources Committee- The CRC worked diligently to produce several outreach materials addressing the issue of Stormwater Runoff, including fact sheets, brochures, and a Power Point presentation. With these materials, MBNEP staff have given several presentations to community groups and grade and middle school classes.

The Government Networks Committee- One meeting was held to bring local government leaders together and introduce them to environmental issues impacting coastal Alabama. Another meeting of this group is in the planning stages.

The Project Implementation Committee- This group identified two focus areas for further study with the goal of achieving environmental results: Big Creek Lake watershed and Fish River Watershed. Both of these areas contain waterbodies that are currently on the State's 303(d) list of Impaired Waterbodies. In the coming year, this committee will undertake activities in the Fish River to identify sources of pathogens and to conduct a shoreline characterization.

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The Science Advisory Committee includes experts from the various scientific disciplines who provide insights and a sound basis to be used by the other committees in their decision making processes. In 2007, this committee developed a list of estuary indicator areas that are in the process of being used to generate a State of the Bay Report.

The Finance Committee has developed a community investment plan for soliciting the non-federal matching share that is required for the EPA grant received.

The Executive Committee, made up of representatives from each of the four main committees, an EPA Region IV representative, a representative from the Science Advisory

Committee, and a minimum of three at-large members, approved new by-laws for the management conference and drafted an executive order for governor execution establishing the new management conference.

Water Quality

Sub-Estuary Monitoring
MBNEP continues its commitment of support to monitoring activities throughout the estuary. Through a contract with the Alabama Department of Environmental Management (ADEM), water quality assessments of three sub-estuaries along the perimeter of Mobile Bay are being undertaken. ADEM monitored parameters including, but not limited to, in situ water chemistry, turbidity, ammonia, DRP (orthophosphates), chlorophyll a, and pathogens. In addition, sediment sampling was conducted for approximately 15 metals of concern, polyaromatic hydrocarbons, and pesticides. During the 2007 program the Bayou La Batre watershed was completed and the Dog River watershed was begun. This program will be complete by the end of 2008.

Mobile Bay Real-Time Water Monitoring
During the year 2007, all sites, Meaher Park, Dauphin Island, and Mobile Bay, are now up and running and information generated can be viewed at www.mymobilebay.com. In the coming year, this website will be connected to a larger network of stations as part of the Gulf Coast Ocean Observing System. Information to be made available to the public will include research reports, maps, and other information.

Eight Mile Creek
The MBNEP working with Mobile Engineering LLC, aka Mobile Group, Inc. completed the Eight Mile Creek project. The report, Source Assessment Report for Eight Mile Creek Watershed, provides a detailed baseline of information on the sewer network for this community, as well as information on watershed boundaries, 3-D surface Hillshade, existing land use, soil series, hydrologic soils, and a comprehensive source assessment map.

Coastal Alabama Clean Water Partnership
MBNEP holds the contract with the Alabama Clean Water Partnership to host the Coastal Alabama chapter. During this past year, the facilitator presented one workshop to government officials, investigated opportunities for funding pathogen source identification at Juniper Creek, and began a project to develop an informational kit that would provide information on the economic benefits of conserving the natural landscape of a community. The target date for completion of this packet is summer, 2008.

Clean Marina Program
The Alabama- Mississippi Clean Marina Program was developed as a voluntary pprogram and implemented by the Mississippi Alabama Sea Grant Consortium and its partners (Alabama Department of Natural Conservation and Resources, State Lands Division, Coastal Section; Alabama Department of Environmental Management; Auburn University Marine Extension and Research Center; Mississippi Department of Marine Resources; Mississippi Department of Environmental Quality; and the Mobile Bay National Estuary Program) to promote environmentally responsible marina and boating practices. The program was initiated in Alabama in 2004 and two marinas completed the designation process at that time. In 2007 an effort was made to regenerate interest in the program. As of the end of 2007, the following marinas were visited and evaluated for their interest in pursuing this program: Zeke's Landing; Dog River Marina and Boatyard; Dauphin Island Marina; Gulf Shores Marina; Home Port Marina; Eastern Shore Marina and Boatyard; River Delta Marina; Bear Point Marina; Sportsman Marina; Orange Beach Marina; and San Roc Cay Marina. Results of this assessment included the designation of River Delta marina which will happen during the summer of 2008.

Living Resources

Oyster Gardening
During the 2007 Oyster Gardening season, 33 volunteers grew 63,352 oysters which were planted on Boykin and Shellbanks reefs in Mobile Bay. Specifically, Mobile County volunteers raised 21,658 oysters and Baldwin County raised 41,694.

Habitat Management

The Mississippi-Alabama Habitats Database
During the summer of 2005, MASCG and MBNEP worked with the DISL to develop an online habitat conservation, restoration, and enhancement database to track habitat conservation activities in the eleven coastal counties of Mississippi and Alabama. A mechanism was thereby established for tracking data such as 1) habitat projects planned, in progress, or completed along the northern Gulf of Mexico; 2) types of habitat conserved; 3) conservation techniques employed; 4) the variety of funding sources used; and 5) the locations of such projects. The database's development was funded by MASGC, and it resides on a Microsoft SQL server managed by the DISL at http://restoration.disl.org/database.

During 2007, MBNEP hired a contractor to "data mine" for this database. The result of their work is that there are now 75 different projects in the database representing over 92,596 acres of restoration and conservation activities.

Habitat Mapping

The U.S. Geological Survey's National Wetlands Research Center has collaborated with the Mobile Bay National Estuary Program through cooperative agreements for the past five years. These agreements have been for the National Wetlands Research Center to acquire aerial photography of Mobile County and to produce Digital Orthophoto Quarterquads of Mobile County, and Digital Quadranges for Baldwin County from aerial photography for use by the USGS, the State of Alabama, Mobile and Baldwin counties, and the National Estuary Program. The agreements have also included the mapping of wetlands and uplands of Mobile and Baldwin counties from the aerial photography acquired to add to the USGS Gulf of Mexico database, and the National Wetlands Inventory geodatabase. In 2007, the MBNEP and the National Wetlands Research Center continued the collaboration of all parties in the development of a series of products from the completed mapping, and the development of an accuracy assessment of the wetland and upland habitat mapping. This is the first year of a two year effort for the National Wetlands Research Center to produce a Status and Trends Report of the wetlands and uplands of the Mobile Bay Estuary.

Snowy plover chick. Photo by M. Zdravkovic.

Coastal Bird Assessment

In the spring and summer of 2007 MBNEP and ADCNR joined forces with the National Audubon Society through its Coastal Bird Conservation program to conduct the first comprehensive standardized survey of the Alabama coast (including islands) for breeding beach-nesting birds with the cooperation of state and federal agencies. The surveyed species included: Snowy Plovers; Wilson's Plovers; American Oystercatchers; Least Terns; Gull-billed Terns; Common Terns; and Black Skimmers. The CBCP surveyed all beach-nesting bird habitat or potential habitat on the Alabama coastline. The sites covered included: Bon Secour National Wildlife Refuge; Dauphin Island; West Dauphin Island; Isle Aux Herbs; Pelican Island; Cat Island; Gulf State Park; and Barton Island Peninsula. The total number of breeding birds located for each species are as follows: Snowy Plover-10 pairs; Wilson's Plover-13 pairs; American Oystercatcher-12 pairs; Least Tern-63 pairs; Gull-billed Tern-30 pairs; Common Tern-9 pairs; and Black Skimmer-56 pairs.

Little Dauphin Island Vegetation Restoration

Little Dauphin Island, part of the Bon Secour Wild Life Refuge System, is a fragile barrier feature along the rapidly developing Alabama Gulf Coast. It is host to a diverse assemblage of beach, coastal dunes and associated uplands, salt marsh, and wetlands at the mouth of Mobile Bay. These habitats support a variety of threatened and endangered species, including the piping plover, sea turtles, and more than 370 species of migratory birds.

During the latter part of 2007, MBNEP partnered with the Bon Secour Refuge to conduct a dune planting along the eastern end of the island to stabilize sand and promote increased shore accretion to support piping plover habitat. A few months later, 40 volunteers planted 325 native trees to restore migratory bird habitat. In addition to providing habitat, these trees will serve to stabilize this dynamic island landscape which protects the northern shore of Dauphin Island from the impact of storms and flooding.

Human Use Issues

D'Olive Creek

D'Olive and Tiawasee Creeks were studied during the summer of 2007 by GSA in partnership with ADCNR, State Lands Division, to assess the impacts of land-use change in this quickly developing area. This study determined sedimentation rates in streams that receive sediment from construction sites in this watershed. Sediment loads were determined by direct measurement of suspended

Planting on Little Dauphin Island.

and bed sediment for a range of discharge events from ten sampling stations. This data revealed more than two- to over 200-fold greater annual sediment loads in most of these streams when compared to estimated natural geologic erosion rates (without human impact or alteration). However, sediment loads in D'Olive and Tiawassee creek were similar to those of 25 other streams with anthropogenic erosional impacts throughout Alabama. Sediment loads estimated for five of the eight streams that drain into Lake Forest carry an estimated 1,977 tons of sediment annually which equates to 180 dump truckloads of dirt.

Regional Stormwater Management

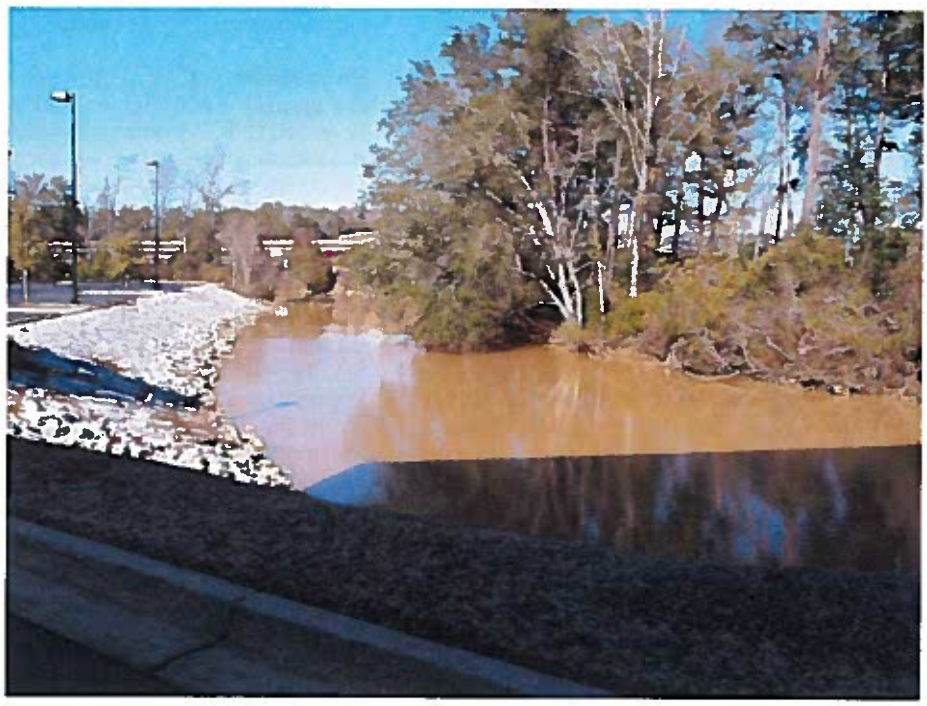
The Baldwin County Storm Water Working Group led by MBNEP, includes the Weeks Bay National Estuarine Research Reserve and the Alabama Coastal Foundation, and 12 of the 13 municipalities in Baldwin County as well as the county commission. To date, 12 of 13 incorporated municipalities in Baldwin County and the Baldwin County Commission have passed resolutions supporting creation of enabling legislation for a regional stormwater utility in Baldwin County. In 2007, the Baldwin County legislative delegation introduced House Bill 929 in the Alabama legislature which would allow Baldwin County to hold a local referendum to create a regional stormwater management authority.

Coastal Community Planning

During the 2007 period, MBNEP provided technical assistance and funding to the Town of Dauphin Island in partnership with MASGC and ADCNR to assist the Town with the creation of a Long term Strategic Plan to ensure the long-term community, economic and environmental sustainability of the island. The Town hired 5E's, a consultant firm based in Seattle, WA who completed a community driven process for addressing infrastructure; economic opportunities including tourism; housing needs/ opportunities; recreation, public access, and beach stabilization; environmental sustainability and smart growth land management and government financing and revenue streams. The Town is now in the preliminary stages of implementing components of this plan, including actions to address its working waterfront.

Outreach and Education

State of the Bay Report
In 2005, the Mobile Bay National Estuary Program initiated a process to identify a set of indicators that would provide the data necessary to assess the health of the Mobile Bay estuary. This program included surveying over 271 community members to assess the community's environmental concerns. The identified issues were translated into a series of focus questions that were used by over 70 scientists, environmental professionals, resource managers and citizens to determine what indicators, or sets of data, would provide the information needed to answer those questions. The final result of this process was a list of 51 such indicators.



D'Olive Creek

After much review, data investigation and discussion among the Science Advisory Committee, MBNEP engaged in the development of a report that would provide information on 14 indicators selected to provide insights into environmental changes that have occurred over the past five to ten years throughout our Mobile Bay estuary. Several of the original 51 are included as subcategories of the 14 used to describe the State of the Bay because data sets existed or collection is ongoing as part of an established monitoring program to support the trends describing human impacts, habitat changes, species richness, and water quality. The analysis of these indicators sheds light on how community growth has impacted coastal Alabama - how we have altered the coastal environment where we live, work and play. This document is currently in draft form and is being reviewed by several agencies, resource managers, and scientists. It will be released to the public during the summer of 2008.

Events
MBNEP facilitated, organized, and/or participated in a number of events during the 2007 period, including: Earth Day; Coastal Clean-up; Coastal Kids Quiz; Discovery Day; Coastal Alabama Birdfest; Derelict Crab Trap Recovery; The Dog River Paddle; Baldwin County Groundwater Festival; and the Environmental Studies Center Open House, among others. Attendance varied widely from 300 to nearly 5,000 participants.

Funding for the program

MBNEP currently has two EPA grants open for implementing CCMP activities. The first grant includes workplan activities for federal fiscal years 2004-2006. The second open grant covers years 2007-2009. During 2007, in addition to funding available of over $1.3 million, the MBNEP was included in the State Budget for an amount of $250,000 state dollars as a non-federal matching share to the program. In addition to these funds, MBNEP regularly receives funding from the following entities: Mobile County- $26,500; City of Mobile- $32,000; and Baldwin County- $17,000. Added to these funding sources, MBNEP has been very successful in raising local funding and applying for grants related to specific projects.

Mobile Bay National Estuary Program Personnel
Captain David W. Yeager - Director.
Roberta Swann - Deputy Director
Tom Herder - Science Communicator
Kara Lankford - Watershed Facilitator
Tiffany England - Business Manager

Resident Research Faculty

Richard B. Aronson, Ph.D. (Harvard University, 1985) Senior Marine Scientist, DISL and Professor of Marine Science, University of South Alabama. Ecology and paleoecology of disease outbreaks on coral reefs. Climate change and community paleoecology in Antarctica.

Just Cebrian, Ph.D. (Polytechnic University of Catalonia, Spain, 1996) Senior Marine Scientist, DISL and Assistant 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.

Ruth Carmichael, Ph.D. (Boston University, 2004) Senior Marine Scientist, DISL. Employing natural abundance stable isotopes to understand biological and physiological responses to environmental perturbations, assess nutritional importance of food sources, discern physiological state of organisms, and determine time scales of ecosystem-level change. **Hired in 2006, began in January, 2007.*

George F. Crozier, Ph.D. (Scripps Institute of Oceanography, 1966) Executive Director, DISL. Active on most of the state and regional technical planning groups and involved in translating basic research into the real world of coastal resource management.

Michael R. Dardeau, M.S. (University of South Alabama, 1982) Marine Scientist, DISL and Supervisor, Marine Technical Support & Operations. Coordinating marine operations including wet lab, dive locker, marine chemical and field instrumentation, and vessel operations. Research interests include coastal policy relating to living resources.

John J. Dindo, Ph.D. (University of Alabama at Birmingham, 1991). Senior Marine Scientist, DISL, and Chair, Discovery Hall Programs. Interests include 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.

Monty Graham, Ph.D. (University of California, Santa Cruz, 1994) Senior Marine Scientist, DISL, and Associate Professor of Marine Science, University of South Alabama. Physical and behavioral mechanisms that cause plankton to be distributed in patches. Also interested in processes that influence the formation and fate of detrital particles known as "marine snow."

Kenneth L. Heck, Ph.D. (Florida State University, 1976) Senior Marine Scientist, DISL, Professor of Marine Science, University of South Alabama, Chair of University Programs. Ecological studies of interactions between seagrasses and associated macrofauna, especially shrimps, crabs, and fishes. Current research includes a global assessment of seagrass nursery value, and experimental investigations of herbivory, nutrient enrichment and overfishing as they impact seagrass ecosystems.

Frank J. Hernandez, Ph.D. (Louisiana State University, 2001). Research Senior Marine Scientist I, DISL. Research interests focus on the 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 Science, 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. Microbial ecology and biogeochemistry in sediments.

Hugh MacIntyre, Ph.D. (University of Delaware, 1996) Senior Marine Scientist, DISL. Research interests include photosynthetic physiology and the dynamics of phytoplankton blooms (including harmful algal blooms) and in-water optical monitoring of water quality and productivity dynamics.

Kyeong Park, Ph.D. (College of William and Mary, 1993) Senior Marine Scientist, DISL and Associate Professor of Marine Science, 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 P. 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.

LaDon D. Swann, Ph.D. (Purdue University, 1999) Director, Mississippi-Alabama Sea Grant Consortium, Assistant Research Professor, Auburn University. Biological research focuses on marine aquaculture with an emphasis on oyster reproduction. Educational research interest focuses on distance education for adult learners.

John F. Valentine, Ph.D. (University of Alabama, 1989) Senior Marine Scientist, DISL and Associate Professor of Marine Science, University of South Alabama. The role of biotic processes in controlling the flow of energy in seagrass communities, conservation biology, and the potential for marine protected areas to restore food web function in seagrass-coral reef systems.

Faculty Activity

Peer Reviewed Publications

Aronson, R. B. 2007. Preface. Pp. vii-xiii, In: R. B. Aronson (Ed.), Geological approaches to coral reef ecology. Springer-Verlag, New York.

Aronson, R. B. and S. P. Ellner. 2007. Species turnover on coral reefs: a probabilistic approach. Pp. 61-84, In: R. B. Aronson (Ed.), Geological approaches to coral reef ecology. Springer-Verlag, New York.

Bowen, J., K. Kroeger, G. Tomasky, W. J. Pabich, , M. L. Cole, **R. H. Carmichael** and I. Valiela. 2007. A review of land-estuary coupling by groundwater discharge to New England estuaries: Mechanisms and effects. Applied Geochemistry 22:175-191.

Cebrian, J., C. D. Foster, R. Plutchak, K. Sheehan, A. Anton, M. Miller, K. Major and **K. Heck**. 2007. The impact of Hurricane Ivan on the primary productivity and metabolism of marsh tidal creeks. Aquatic Ecology 41:532-540

Coen, L. D., Mike, R. D. Brumbaugh, D. Bushek, R. Grizzle, M. W. Luckenbach, M. H. Posey, **S. P. Powers** and S. G. Tolley. 2007. AS WE SEE IT: Ecosystem services related to oyster restoration. Marine Ecology Progress Series 341:304-307.

Del Valle, D. A., D. J. Kieber and **R. P. Kiene**. 2007. Depth-dependent fate of biologically-consumed dimethylsulfide in the Sargasso Sea. Marine Chemistry 103:197-208. doi:10.1016/j.marchem.2006.07.005

Del Valle, D. A., D. J. Kieber, J. Bisgrove and **R. P. Kiene**. 2007. Light-stimulated production of dissolved DMSO by a particle-associated process in the Ross Sea, Antarctica. Limnology and Oceanography 52:2456-2466.

Fioravanti, G. and **J. F. Valentine**. 2007. Impacts of reef architecture and fishing on food webs in back reef environments of the upper Florida Keys national marine sanctuary. Florida Scientist 70:120-136

Heck, K. L., Jr. and R. J. Orth. 2006. Predation in seagrass meadows. Pp. 537-550, In: A.W.D. Larkum, R. J. Orth and C. Duarte (Eds.), Seagrasses: Biology, Ecology and their Conservation. Kluwer, Amsterdam.

Heck, K. L., Jr. and **J. F. Valentine**. 2007. The primacy of consumers in benthic ecosystems of the coastal zone. Estuaries and Coasts 30:371–381.

Howard E., J. R. Henriksen, A. Buchan, C. Reisch, H. Buergmann, R. Welsh, W. Ye, J. M. González, J, Remington, K. Mace, S. B. Joye, **R. P. Kiene**, W. B. Whitman and M. A. Moran. 2006. Identification of bacterial taxa limiting the flux of DMS from the ocean. Science 314:649-652.

Husband, J. D. and **R. P. Kiene**. 2007. Occurrence of dimethylsulfoxide in leaves, stems and roots of *Spartina alterniflora* (Loisel.). Wetlands 27:224-229.

Kiene, R. P., D. J. Kieber, D. Slezak, D. A. Toole, J. Bisgrove, J. Brinkley, A. Relinger. 2007. Distribution and cycling of dimethylsulfide, dimethylsulfoniopropionate, and dimethylsulfoxide during spring and early summer in the Southern Ocean south of New Zealand. Aquatic Sciences. DOI-10.1007/s00027-007-0892-3. Pp. 305-319.

Kline, T. C., C. A. Woody, M. A. Bishop, **S. P. Powers** and E. E. Knoudsen. 2007. Assessment of marine-derived nutrients in the Copper River Delta, Alaska using natural abundance of the stable isotopes of Nitrogen, Sulfur and Carbon. In: C. A. Woody (Ed.), Sockeye salmon ecology, evolution, and management. American Fisheries Society Symposium 54:103-115.

Merzouk, A., M. Levasseur, M. G. Scarratt, S. Michaud, R. B. Rivkin, M. S. Hale, **R. P. Kiene**, N. M. Price and W. K.W. Li. 2006. DMSP and DMS dynamics during a mesoscale iron fertilization experiment in the Northeast Pacific. Part II. Bacterial cycling. Deep-Sea Research (II) 53:2370-2383.

Moody, R. M. and **R. B. Aronson**. 2007. Trophic heterogeneity in salt marshes of the northern Gulf of Mexico. Marine Ecology Progress Series 331:49-65.

Myers, R. A., J. Buam, T. A. Sheperd, **S. P. Powers** and C. H. Peterson. 2007. Cascading effects of the loss of apex predatory sharks from the coastal ocean. Science 315:1846-1850.

Park, K., C.-K. Kim and W. W. Schroeder. 2007. Temporal variability in summertime bottom hypoxia in shallow areas of Mobile Bay, Alabama. Estuaries and Coasts 30(1):54-65.

Park, K., J. F. Valentine, S., K. R. Weis and **M. R. Dardeau**. 2007. Effects of Hurricane Ivan on Mobile Bay, Alabama. Journal of Coastal Research 23:1332-1336.

Park, K., J. F. Valentine, S. Sklenar, K. R. Weis and **M. R. Dardeau**. 2007. The effects of Hurricane Ivan in the inner part of Mobile Bay, Alabama. Journal of Coastal Research 23(5):1332-1336.

Popels, L. C., **H. L. MacIntyre**, M. Warner, Y. Zhang and D. A. Hutchins. 2007. Physiological responses during dark survival and recovery in *Aureococcus anophagefferens* (Pelagophyceae). Journal of Phycology 43:32-42

Powers, M. J., H. C. Summerson, C. H. Peterson and **S. P. Powers**. 2007. Macroalgal growth on bivalve aquaculture netting enhances nursery habitat for mobile invertebrates and juvenile fishes. Marine Ecology Progress Series 339:100-122.

Powers, S. P., M. A. Bishop, S. Moffit and G. H. Reeves. 2007. Variability in freshwater, estuarine and marine residence of sockeye salmon (*Oncorhynchus nerka*) within the Copper and Bering River Deltas, Alaska. In: C. A. Woody (Ed.), Sockeye salmon ecology, evolution, and management. American Fisheries Society Symposium 54:87-99.

Sievert, S. M., **R. P. Kiene** and H. N. Schulz-Vogt. 2007. The Sulfur Cycle. The Oceanography Society Journal 20:(2. A Sea of Microbes.):117-123.

Slezak, D., **R. P. Kiene**, D. J. Kieber, R. Simo and D. A. Toole 2007. Effects of solar radiation on the fate of dissolved DMSP and conversion to DMS in seawater. Aquatic Sciences: DOI-10.1007/s00027-007-0896-z. Pp. 377-393.

Stutes, J. P., **J. Cebrian**, A. L. Stutes, A. Hunter and A. A. Corcoran. 2007. System-integrated benthic metabolism across a gradient of human alteration and seagrass abundance in shallow coastal lagoons of the North Central Gulf of Mexico. Marine Ecology Progress Series 347:80-90.

Sunda, W. G., **R. P. Kiene**, R. Hardison, E. Bucciarelli and H. Harada. 2007. The effects of nitrogen limitation on cellular DMSP and DMS release in marine phytoplankton: climate feedback implications. Aquatic Sciences. DOI-10.1007/s00027-007-0887-0. Pp. 341-351.

Valentine, J. F., K. L. Heck, Jr., D. Blackmon, M. E. Goecker, J. Christian, R. M. Kroutil, K. D. Kirsch, B. J. Peterson, M. Beck and M. A. Vanderklift. 2007. Food web interactions along seagrass-coral reef boundaries: An experimental test of the impacts of piscivore reductions on cross-habitat energy exchange using the marine protected areas of the Florida Keys National Marine Sanctuary. Marine Ecology Progress Series 333:37–50.

Vanderklift, M. A., J. How, T. Wernberg, L. D. MacArthur, **K. L. Heck, Jr.** and **J. F. Valentine**. 2007. Proximity to reef influences the density of small predatory fishes while type of seagrass influences intensity of predation on crabs. Marine Ecology Progress Series 340:235–243.

Vila-Costa, M., R. Simó, H. Harada, J. M. Gasol, D. Slezak, **R. P. Kiene**. 2006. Dimethylsulfoniopropionate (DMSP) uptake by marine phytoplankton. Science 314:652-654.

Vila-Costa, M., D. A. del Valle, J. M. González, D. Slezak, **R. P. Kiene**, O. Sánchez and R. Simó. 2006. Phylogenetic identification and metabolism of marine DMS-consuming bacteria. Environmental Microbiology 8:2189-2200.

Other Publications

Book Projects

Aronson, R. B., Editor. 2007. Geological approaches to coral reef ecology. Springer-Verlag, New York.

Valentine, J. F. and J. Emmett Duffy. 2006. The Central Role of Grazing in Seagrass Ecology. Pp. 463-501, In: T. Larkum, R. Orth and C. Duarte (Eds.), Seagrass: Biology, Ecology and their Conservation. Springer.

Technical Reports/Popular Publications

Bishop, M. A., **S. P. Powers** and G. Reeves. 2007. Estuaries as essential fish habitat for Alaskan sockeye and coho salmon. Final report to the North Pacific Research Board. Anchorage, Alaska, 154 p.

Cebrian, J. 2007. Report on Ecosystem-based Management and Salt Marshes. Mississippi-Alabama Sea Grant Sea Briefs 7(1).

Graham, W. M., K. Bayha, S. Bosarge, **J. Dindo, K. Heck, F. Hernandez, K. Park** and **S. Powers**. 2007. Draft Final Report of Compass Port Baseline Marine Survey, Lease Block MO910. #2004-GPS-MSA-NC-0085, 120 pp.

Precht, W. F., **R. B. Aronson**, K. J. P. Deslarzes, M. L. Robbart, T. J. T. Murdoch, A. Gelber, D. J. Evans, B. Gearheart and B. Zimmer. 2006. Long-term monitoring at the East and West Flower Garden Banks National Marine Sanctuary, 2002-2003: Final Report. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, LA. OCS Study MMS 2006-035, 182 p.

Valentine, J. F. and S. Sklenar. 2005. Assessment of Sediment Contamination in the Lower Mobile-Tensaw Delta (Rangia Study). Final Report to the Mobile Bay National Estuary Program. 38 p.

Valentine, J. F., and S. Sklenar. 2006. Mobile – Tensaw Delta Hydrological Modifications Impact Study. A final report. Mobile Bay Keepers and Mobile Bay National Estuary Program. 176 p.

Valentine, J. F., K. D. Kirsch and D. C. Blackmon. 2006. An Analysis of the Long Term Fisheries Assessment and Monitoring Program Data Set Collected by the Marine Resources Division of the Alabama Department of Conservation and Natural Resources. Final Report to the Mobile Bay National Estuary Program. 17 p.

Scientific Abstracts and Presentations

Anton, A., **J. Cebrian** and C. D. Foster. The effect of eutrophication on the ecosystem services provided by mixed seagrass (*Halodule wrightii* and *Ruppia maritima*) meadows. 1st Alabama-Mississippi Bays and Bayous Symposium, Mobile (Alabama) November 27-29 2006.

Anton, A, **J. Cebrian**, K. Sheehan, M. Miller and C. Duarte. The impact of eutrophication on the nursery-role and ecological services provided by seagrass meadows. 36th Benthic Ecology Meeting. Atlanta. March 21-24 2007.

Aronson, R. B. 2006. Priorities for conservation and management of coral reefs. 3rd National Conference on Coastal and Estuarine Habitat Restoration, New Orleans.

Aronson, R. B. and I. G. Macintyre. 2007. Community dynamics in the central shelf lagoon of the Belizean barrier reef. P. 24, In: K. Rützler (Ed.), CCRE Reports 2006. National Museum of Natural History, Smithsonian Institution, Washington, DC.

Aronson, R. B. and W. F. Precht. 2006. Biotic homogenization of coral reefs. 2nd Annual Coral Reef Conservation and Management Conference, Taylor and Francis Informa Learning, Miami.

Aronson, R. B. and W. F. Precht. 2007. Global change, paleobiology, and conservation of coral reefs. Symposium on The Application of Historical and Fossil Records to Recovering Ecological Baselines, Ecological Society of America Annual Meeting, San Jose.

Aronson, R. B., W. F. Precht and I. G. Macintyre. 2006. Global change and biotic homogenization of coral reefs. Symposium on Applied Coral Reef Paleoecology, Geological Society of America Annual Meeting, Philadelphia.

Aronson, R. B., W. F. Precht and I. G. Macintyre. 2006. Global change and biotic homogenization of coral reefs. Geological Society of America Abstracts with Programs 38(7):535.

Bayha, K. M. and **W. M. Graham**. 2007. Development of a Multiplex Taqman© PCR Assay for the Identification of Fish Eggs in the Northern Gulf of Mexico. 31st Annual Larval Fish Conference. St. John's, Newfoundland, July.

Bayha, K. M., T. Bolton and **W. M. Graham**. 2007. Phylogeography of an invasive jellyfish indicates multiple independent invasions and intense founder effects. Second International Conference on Jellyfish Blooms, Gold Coast, Australia, June.

Bayha, K.M., T. Bolton and **W.M. Graham**. 2007. Worldwide phylogeography of the invasive jellyfish *Phyllorhiza punctata*. Bays and Bayous Symposium, Mobile, AL, November.

Bayha, K. M., M. E. Miller and **W. M. Graham**. Development Of A Taqman® Real-Time PCR assay for the detection of benthic scyphozoan jellyfish polyps. American Society for Limnology and Oceanography, Winter Meeting, Santa Fe, NM (February 2007).

Bolt, C. R., R. M. Moody and **R. B. Aronson**. 2006. Measuring ecosystem development in restored salt marshes on the Gulf Coast. Alabama–Mississippi Bays and Bayous Symposium.

Bolt, C. R., R. M. Moody and **R. B. Aronson**. 2006. Tracking ecosystem development in restored salt marshes on the Gulf Coast. 3rd National Conference on Coastal and Estuarine Habitat Restoration.

Canion, A. K., **H. L. MacIntyre** and W. Smith. 2006. Hourly-to-Monthly Variability in Environmental Forcing Factors and the Response of Phytoplankton in Weeks Bay. Alabama Mississippi Bays and Bayous Symposium, Nov 27-29.

Cebrian, J. 2007. La necesidad de preservar zonas limitrofes de marisma para garantizar el desarrollo sostenible. Por Esto (Suplemento Unicornio) 855:6-7.

Cebrian, J., J. Shurin, B. Cardinale, M. Smith and E. Borer. 2007. Bottom-up control of herbivore-producer biomass ratios across ecosystems. ESA/SER Joint Meeting, San Jose (California), August 5-10 2007. (invited talk).

Cebrian, J., J. P. Stutes, A. L. Stutes, A. Hunter and A. A. Corcoran. System-integrated benthic metabolism across a gradient of human alteration and seagrass abundance in shallow coastal lagoons of the North Central Gulf of Mexico. 1st Alabama-Mississippi Bays and Bayous Symposium, Mobile (Alabama) November 27-29, 2006.

Chiaverano, L. M. and **W. M. Graham** 2007. Morphological plasticity in polyps of Aurelia sp in response to developmental temperature and food availability, and its subsequent effects on ephyrae: an experimental approach. Second International Conference on Jellyfish Blooms, Gold Coast, Australia, June.

Chiaverano, L. M. and **W. M. Graham**. Seasonal dynamics of parasitism and its effect on morphology and reproduction of the moon jellyfish *Aurelia* sp. from a marine lake in Croatia. American Society for Limnology and Oceanography, Winter Meeting, Santa Fe, NM (February 2007).

Colomb, M., **K. Park** and M. Misra. 2006. Bayesian formulation for predicting fecal coliform bacteria count in Mobile Bay. In: Abstracts for the 2006 Annual Meeting for AIChE (American Institute of Chemical Engineers), San Francisco Hilton, San Francisco, CA, Nov 12-17, 2006.

Colomb, M., **K. Park** and M. Misra. 2007. Sparse data problem: Intelligent use of Bayesian statistics for evaluating fecal coliform bacteria count. In: Abstracts for the Computational, Mathematical and Statistical Methods 2007, the 14th International Conference for the Forum for Interdisciplinary Mathematics, IIT-Madras, India, Jan 6-8, 2007.

D'Ambra, I. and **W. M. Graham**. 2007. Life cycle of a sea anemone parasite on *Aurelia* sp from Veliko Jezero (Mljet, Croatia). Second International Conference on Jellyfish Blooms, Gold Coast, Australia, June.

Deslarzes, K. J. P., W. F. Precht and **R. B. Aronson.** 2006. A coral reef before and after protection: a case study at the Flower Garden Banks, northwest Gulf of Mexico. 3rd National Conference on Coastal and Estuarine Habitat Restoration, New Orleans.

Geraldi, N., **S. P. Powers** and M. C. Benfield. 2007. Responses of fish and crabs to nearshore habitat degradation following Hurricane Katrina. Benthic Ecology Meeting, Georgia Tech University, March 22-25.

Goff, J., K. Sheehan, J. Stutes, D. Patterson, M. Miller, D. Foster and **J. Cebrian**. The impact of tropical storms on the primary productivity and metabolism of shallow coastal lagoons. 1st Alabama-Mississippi Bays and Bayous Symposium, Mobile (Alabama) November 27-29 2006.

Graham, W. M., J. H. Costello, S. P. Colin, A. Malej, D. Lucic, V. Onofri, and A. Benovic. 2007. Swimming with mesopelagics. American Society for Limnology and Oceanography, Winter Meeting, Santa Fe, NM, February.

Graham, W. M., J. E. Higgins III and **K. Park.** 2007. The role of water column structure on jellyfish aggregation and reproduction in shallow coastal waters. Second International Conference on Jellyfish Blooms, Gold Coast, Australia, June.

Heck, K. L. and **J. F. Valentine**. 2007. The primacy of consumers in benthic ecosystems of the coastal zone. Benthic Ecology Meetings, Georgia Tech.

Hernandez, F. J., Jr. and J.A. Hare. 2007. Development of ichthyoplankton vertical distribution models: testing for diel, ontogenetic and environmental effects. 31st Annual Larval Fish Conference. July, St. Johns, Newfoundland, Canada.

Holiday, D., G. Carter and **H. L. MacIntyre**. 2007. Harmful Algal Blooms in the Mississippi Sound and Mobile Bay: Using MODIS Aqua and In Situ Data For HABs in the Northern Gulf of Mexico. 32nd International Symposium on Remote Sensing of Environment, San José, Costa Rica, June 25-29.

Holiday, D., G. Carter, R.W. Gould, Jr. and **H. L. MacIntyre**. 2006. Harmful Algal Blooms in Mobile Bay and the Mississippi Sound: A One Year Comparison of Remote Sensing and In Situ Data. Alabama Mississippi Bays and Bayous Symposium, Nov 27-29.

Kenworthy, M., **S. P. Powers** and F. J. Fodrie. 2007. Multiple predator effects within oyster reefs: foraging behavior of oyster drills and stone crabs on a common resource. Benthic Ecology Meeting, Georgia Tech University, March 22-25.

Kim, C.-K., **K. Park, S. Powers**, K. M. Bayha and **W. M. Graham**. 2007. A model study of oyster larval transport in Mobile Bay and the adjacent eastern Mississippi Sound, AL. In: Abstracts for the Benthic Ecology Meeting 2007, Georgia Tech, Atlanta, GA, Mar 21-24, 2007, pp. 140.

Kim, C.-K., **K. Park, S. Powers**, J. Herrmann, K. M. Bayha and **W. M. Graham**. 2007. A model study of oyster larval transport in Mobile Bay and the adjacent eastern Mississippi Sound, AL. In: Abstracts for the 2007 Gulf of Mexico Graduate Student Symposium, USM Gulf Coast Research Lab, Ocean Springs, MS, Mar 2-4, 2007, pp. 5.

Liefer, J. D., **H. L. MacIntyre** and W. Smith. 2006. Nutrient Changes and Shifts in Microalgal Community Structure in Little Lagoon, AL. Alabama Mississippi Bays and Bayous Symposium, Nov 27-29.

MacIntyre, H. L., A. K. Canion, A. L. Stutes, W. Smith and C. Dorsey. 2006. Estimating Microalgal Abundance and Productivity in Estuarine Waters from 2-D Bio-Optical Mapping. Alabama Mississippi Bays and Bayous Symposium, Nov 27-29.

Martin, C. and **J. F. Valentine**. 2007. Effects of invasive Eurasian Milfoil (*Myriophyllum spicatum*) on trophic interactions and community structure of estuarine and freshwater fishes in the Mobile-Tensaw Delta. Benthic Ecology Meetings, Georgia Tech.

Miller, G. A., **S. P. Powers** and M. A. Bishop. 2007. Impacts of reduced predator diversity on intertidal infauna in the Copper River Delta, Alaska. Benthic Ecology Meeting, Georgia Tech University, March 22-25.

Miller, M.E.C. and **W.M. Graham**. 2007. The influence of ecological and physical factors on the settlement and viability of the moon jelly (Scyphozoa; *Aurelia* sp.) in the northern Gulf of Mexico. Second International Conference on Jellyfish Blooms, Gold Coast, Australia, June.

Moody, R. M., C. R. Bolt and **R. B. Aronson**. 2006. Development of trophic interactions in restored salt marshes. Alabama--Mississippi Bays and Bayous Symposium.

Moody, R. M., C. R. Bolt and **R. B. Aronson**. 2006. Measuring ecosystem development in restored salt marshes. 3rd National Conference on Coastal and Estuarine Habitat Restoration

Park, K., C.-K. Kim and W. W. Schroeder. 2006. Temporal variability in summertime bottom hypoxia in shallow areas of Mobile Bay, Alabama. In: Abstracts for the Alabama-Mississippi Bays & Bayous Symposium, Mobile Arthur R. Outlaw Convention Center, Mobile, AL, Nov 27-29, 2006, pp. 57.

Park, K., C.-K. Kim, H.-S. Jung and W. W. Schroeder. 2006. Modeling of physical transport in Mobile Bay, Alabama. In: Abstracts for the Alabama-Mississippi Bays & Bayous Symposium, Mobile Arthur R. Outlaw Convention Center, Mobile, AL, Nov 27-29, 2006, pp. 56.

Park, K., H. V. Wang, S.-C. Kim and J.-H. Oh. 2006. A model study of the Chesapeake Bay turbidity maximum. EOS Trans. AGU, 87(52), Fall Meet. Suppl., Abstract OS31A-1619.

Peterson, B J., **J. F. Valentine, K. L. Heck**. 2007. Dine out, dung in: habitat modification and facilitation of benthic plant communities by reef resident fish. Benthic Ecology Meetings, Georgia Tech.

Plutchak, R., C. D. Foster, A. Anton, K. Sheehan, J. Goff, **J. Cebrian** and K. Major. The effects of artificial oyster reefs on primary production and nutrient flow in shallow coastal creeks. 1st Alabama-Mississippi Bays and Bayous Symposium, Mobile (Alabama) November 27-29 2006.

Precht, W. F. and **R. B. Aronson**. 2006. Rapid range expansion of reef corals in response to climatic warming. Geological Society of America Abstracts with Programs 38(7):535.

Precht, W. F. and **R. B. Aronson**. 2006. Functional reef assessments and goal-setting and success-monitoring of reef restoration projects. 3rd National Conference on Coastal and Estuarine Habitat Restoration, New Orleans.

Precht, W. F. and **R. B. Aronson**. 2006. Rapid range expansion of reef corals in response to climatic warming. Symposium on Applied Coral Reef Paleoecology, Geological Society of America Annual Meeting, Philadelphia.

Rellinger, A. N., **R. P. Kiene**, D. Slezak, D. A. del Valle, H. Harada, J. Bisgrove, D. J. Kieber, J. Brinkley. Occurrence and physiological state of *Phaeocystis antarctica* in sub-euphotic waters of the Ross Sea, Antarctica. ASLO Meeting, Santa Fe, NM, February 2007.

Sheehan, K. L., J. O' Brien and **J. Cebrian**. Spatial and temporal abundance patterns of the common grass shrimp *Palaemonetes pugio*, and the trematode parasite, *Microphallus turgidus* in the north central Gulf of Mexico. 36th Benthic Ecology Meeting. Atlanta. March 21-24 2007.

Sheehan, K. L., J. O' Brien and **J. Cebrian**. Spatial and temporal abundance patterns of the common grass shrimp *Palaemonetes pugio*, and the trematode parasite, *Microphallus turgidus* in the north central Gulf of Mexico. 82nd annual meeting of the American Society of Parasitology, Merida (Mexico). June 21-25 2007.

Sheehan, K. L., **J. Cebrian** and J. O. Brien. 2006. Effects of nutrient-rich water on the parasitism of the common grass shrimp, *Palaeomonetes pugio* on Gaillard Island, AL. 1st Alabama-Mississippi Bays and Bayous Symposium, Mobile, Alabama. November 27-29.

Slezak, D. S., **R. P. Kiene**, D. J. Kieber, P. A. Matrai and A. Relinger. Evidence for mucous trapping of gaseous dimethylsulfide during blooms of colonial *Phaeocystis antarctica* in the RossSea. ASLO Meeting, Santa Fe, NM, February 2007.

Smith, W., C. Dorsey, D. Murray and **H. L. MacIntyre**. 2006. Harmful Bloom-Forming Microalgae in Alabama Waters. Alabama Mississippi Bays and Bayous Symposium, Nov 27-29.

Steele, L., **J. F. Valentine** and A. Boettcher. 2007. Impacts of grazing on the production of chemical deterrents - evidence for inducible defenses in seagrasses? Benthic Ecology Meetings, Georgia Tech.

Thorn, K., **K. Park**, N. D. Sylvester and M. Misra. 2006. Water height prediction in Mobile Bay using wavelet-based multi-scale model. In: Abstracts for the 2006 Annual Meeting for AIChE, San Francisco Hilton, San Francisco, CA, Nov 12-17, 2006.

Valentine, J. F. 2007. Hurricanes Ivan and Katrina Impacts on Environmental Assessments in the Lower Mobile-Tensaw Delta. Alabama Academy of Science, Tuskegee University.

Valentine, J. F. and **K. L. Heck**. 2007. Impacts of overfishing on trophic links between coral reefs and-seagrasses: an evaluation using "no-take" zones in the Florida Keys. Benthic Ecology Meetings, Georgia Tech.

Other Presentations

Aronson, R. B. 2007. Trophic dynamics of a created salt marsh. ADCNR Coastal Alabama Research Update, DISL.

Aronson, R. B. 2006. Millennial-Scale Dynamics of Coral Reefs. Brown University, Providence, RI.

Carmichael, R. 2007. First International Sclerochronology Conference.

Carmichael, R. 2007. International Symposium on Science and Conservation of Horseshoe crabs, NY.

Carmichael, R. 2007. Shellfish, Manatees and Microbes – What do they have in common? DISL Research Round-up.

Carmichael, R. 2007. Summer Seminar Series, DISL, AL

Carmichael, R. 2007. International Symposium on Science and Conservation of Horseshoe Crabs, NY.

Carmichael, R. 2007. AUB Landscape Architects Studio, DISL, AL

Carmichael, R. 2007. Green Eggs & Sand Curriculum Program for Teachers, Wellfleet, MA, Smyrna, DE, Skidaway Island, GA.

Cebrian, J. 2007. The effect of artificial oyster reefs on primary production and nutrient stocks in shallow coastal creeks. Presentation for the Alabama Department of Conservation and Natural Resources. January.

Cebrian, J. 2007. Oh, well - the Lure of Living by the Water...or Not! DISL Research Round-up, January.

Cebrian, J. 2007. Environmental Managers: Restoration of Salt Marsh Ecosystems: Grasses to Classes. NSF-COSEE, June.

Cebrian, J. 2007. (invited presenter). Managing Stormwater. Mississippi Coastal Plains Resource Conservation and Development Council, Mississippi Department of Environmental Quality, Mississippi Department of Marine Resources/ Grand Bay National Estuarine Research Reserve, and the Pascagoula River Audubon Center Presenter/ Moderator. Grand Bay NEER, September 25.

Graham, W. M. 2007. Mineral Management Service Information Transfer Meeting presentation on invasive jellyfish, New Orleans, LA, January.

Hartzell, K., E. A. Goldman and **H. L. MacIntyre**. 2007. GIS-based Analysis of Water Quality and Microalgal Abundance in Little Lagoon, AL. Little Lagoon Preservation Society quarterly meeting, July 17.

Hernandez, F. J., Jr. 2007. Why study baby fish? An overview of ichthyoplankton research. Daytona Beach Community College Science Department Seminar Series. 06 April.

Johnson, M.W. and **S. P. Powers**. 2007. Evaluating the potential impacts of red snapper on recruitment of vermillion snapper. Alabama Fisheries Association Meeting, Perdido, AL. Feb 20-22.

Kiene, R. P. 2007. DISL-Summer Colloquium, July.

Kiene, R. P. 2007. DISL- Research Round-up, February.

Kiene, R. P. 2007. Discovery Hall – MAST program –Teacher seminar, June.

Kiene, R. P. 2007. ASLO Meeting, Santa Fe, NM, February.

MacIntyre, H.L. 2007. Algal Blooms: Links to Human Activity. Center for Ocean Science Education Excellence (NSF-COSEE) Workshop, DISL, February 10.

MacIntyre, H. L. 2007. (Invited talk). Photosynthetic Regulation and Ek-independent Variability of Photosynthetic Response, Centre National de la Recherche Scientifique/Laboratoire de Oceanographie de Villefranche-sur-mer, France, June 5

MacIntyre, H. L., E. Lawrenz and T. L. Richardson. 2007. (Invited talk). Spectral Excitation Signatures as Indices of Taxonomic Structure in Microalgae, AquaFluo: Chlorophyll Fluorescence in Aquatic Sciences, Nove Hrady, Czech Republic, May 28 – June 1.

MacIntyre, H. L. 2007. (Invited talk). Research Update: Microalgal Populations in Little Lagoon and Adjacent Waters, Little Lagoon Preservation Society Quarterly Meeting, July 17.

MacIntyre, H. L. 2006. (Invited talk). Is Little Lagoon and Ecological Disaster in the Making? Little Lagoon Preservation Society quarterly meeting, Oct. 17.

MacIntyre, H. L. 2007. Spectral Signatures and Taxonomy. Aquafluo: Chlorophyll Fluorescence in Aquatic Sciences Symposium, Nove Hrady, Czech Republic, May 28 – June 1.

Park, K. 2006. Poster presentation, entitled "A model study of the Chesapeake Bay turbidity maximum. The 2006 AGU Fall Conference, Moscone Center West, San Francisco, CA. December 13.

Park, K. 2007. Water quality modeling in estuarine and coastal waters: Concept and an example application. Naval Research Laboratory, Stennis Space Center, MS. May 15.

Powers, S. P., M. A. Bishop and G. H. Reeves. 2007. Estimating estuarine residence time of sockeye and coho salmon in the Copper River estuary. Alaska Marine Sciences Symposium, Anchorage, Alaska. January 21-23.

Powers, S. P. and R. L. Shipp. 2006. Evaluating ecological and fisheries expectations in determining success of oyster reef restoration. Restore America's Estuaries, Annual Meeting, New Orleans, LA. December 11-13.

Powers, S. P., K. Gregalis, and **K. L. Heck**. 2006. Restoration of oyster reefs in coastal Alabama: assessing the relative importance of larval recruitment, environmental setting and predation in designing an effective restoration program. International Conference on Shellfish Restoration, Charleston, SC. Nov 14-17.

Powers, S. P. 2007. Cascading effects of the loss of predatory sharks from the coastal ocean. Bermuda Zoological Society, Bermuda.

Powers, S. P. 2007. Ecology you can eat. DISL Research Round Up.

Sheehan, K. **L.**, J. O'Brien and **J. Cebrian**. 2007. Spatial and temporal abundance patterns of the common grass shrimp *Palaemonetes pugio*, and the trematode parasite, *Microphallus turgidus* around the Mobile Bay, AL. Graduate Student Symposium, Ocean Springs, MS. March 2-4.

Valentine, J. F. 2007. Hurricanes Ivan and Katrina Impacts on Environmental Assessments in the Lower Mobile-Tensaw Delta. Alabama Academy of Science, Tuskegee University.

Valentine, J. F. 2007. Trophic exchanges among tropical marine habitats. Cape Eleuthera Institute.

Offices, Boards, and Panels

Rich Aronson
International Society for Reef Studies, President
Ecology and Ecological Monographs; member of Editorial Board
World Bank Working Group on Diseases of Coral Reef Organisms; member of advisory board
Journal of Experimental Marine Biology and Ecology; member of Editorial Advisory Board

Ruth Carmichael
Advisor, Ecological Research Development Group, Lewes, DE
Auburn University Landscape Architects Curriculum Advisory Committee

Just Cebrian
Marine Ecology Progress Series, Contributing Editor
The Open Oceanography Journal, Board Member 2007-present
Member of the Expert Panel for the evaluation of the Performance of the Gulf Breeze EPA laboratory (2007-present)
AGAUR (Catalan NSF) Proposal Evaluator 2005-present

Monty Graham
Editor, Gulf of Mexico Science (2006 – present)

Ken Heck
Contributing Editor Marine Ecology Progress Series

Frank Hernandez
33rd Annual U.S.-Poland Joint Studies Advisory Committee Meeting (Szczecin, Poland)

Ron Kiene
Marine Chemistry, Continuing appointment since January, 1996. - Continuing
Marine Ecology-Progress Series. Review Editor, Since January, 2007 - Continuing
Marine Ecology-Progress Series. Contributing Editor, Invitation Sep, 2007 (pending)
Applied and Environmental Microbiology, Jan. 1994-Dec. 2006.

Hugh MacIntyre
Editor, Aquatic Microbial Ecology
Scientific Advisory Member, Gulf of Mexico Coastal Ocean Observing System Task Team on Public Health.

Kyeong Park
Advisor, GeoSystem Research Co., Korea
Member, Advisory Committee, Korea Maritime Institute, Korea

Sean Powers
Associate Editor, Gulf of Mexico Science (2004 - present)
David and Lucille Packard Foundation, Marine Ecosystem-Based Management Tool Innovation Fund, Review Board Member.
NOAA Chesapeake Bay Oyster Research Program.
NSF LTER site review panel.

John Valentine
Member Mobile Bay NEP Executive Committee Board Member
Co-Chair Mobile Bay NEP Scientific Advisory Committee
National Science Foundation-Integrative Graduate Education and Research Traineeship Program (IGERT)
Marine Ecology Progress Series Review Editor, 2006-present

Meeting Sessions Organized and Chaired

Rich Aronson
Advisory Board for 2nd Annual Coral Reef Conservation and Management Conference, Miami, FL (2006); Conference hosted by Taylor and Francis Informa Learning, Westborough, MA.

Ruth Carmichael
Conference Workshops Chair. ERF 2007 Biennial Conference, Providence, RI.
Founding member, Steering Committee, and Chair. Special Session, Horseshoe crab culture and captive breeding. 2007 International Symposium on Science and Conservation of Horseshoe crabs, NY

Monty Graham
Chair, Ecology Session, Second International Conference on Jellyfish Blooms, Gold Coast, Australia (June 2007).

Hugh MacIntyre
Organized Water Quality session at Alabama & Mississippi Bays and Bayous Symposium, Mobile, AL, Nov. 27-29, 2006.
Organized and led workshop Multispectral Approaches in Fluorescence with Dr Tammi Richardson (University of South Carolina) at Aquafluo: Chlorophyll Fluorescence in Aquatic Sciences Symposium, Nove Hrady, Czech Republic, May 28 – June 1, 2007.

Other Service and Outreach
Rich Aronson
DISL Discovery Hall Programs tour of Marine Science Hall; prepared laboratory open-house for visit from DHP high school students. (June 2007)
DISL Summer School Colloquium; Climate Change and Marine Ecology in Antarctica.
DISL Discovery Day (April 2007); displays for public open house highlighting research programs on climate change and marsh restoration. (June 2007)
Discussion of Global Warming; Mobile Public Library; in conjunction with screening of An Inconvenient Truth (March 2007).
K–12 Presentation; "Penguins in Antarctica"; presentation for kindergarten students, St. Luke's Episcopal School, Mobile (November 2006).

Just Cebrian
NSF-COSEE, lecture and field activities on human eutrophication, (June 2007).
Volunteer in Spooktacular, a Halloween show for children, celebrated at DISL. I played "the beast". (October 2006).
Advise on seagrass fauna identification to Mr. Arthur Hosey Jr. for efforts to preserve valuable habitat in Perdido Key (Florida). November 2006.
Presentation for high school students at Bayside Academy (title: Becoming a scientist: the value of hard-work and dedication.) as part of Professional Orientation Day. March 2007.
Presentation for pre-Kindergarten students at Bayside Academy:" Marine animals of Mobile Bay: let's take a plunge!" April 2007.
Volunteer in Spooktacular; set up of global climate change demos. October 2007.

Monty Graham
Invited Opponent for dissertation of Aino Hosia, University of Bergen, Norway (May 2007)
NMFS/DISL Cooperative Institute Science Steering Committee (produced short steering document). 2006.
ADCNR-Sponsored Fisheries Oceanography in Coastal Alabama (FOCAL) Program Coordinator. 2006.
Participated in Molecular Ecology Course (DISL, K. Bayha, Instructor). 2006.
NOAA/NMFS SEAMAP Zooplankton Working Group Meeting, Ocean Springs, MS (December 2006)

Frank Hernandez
Career Day, St. Ignatius Catholic School, Mobile Alabama (2007)
Career Day, Discovery Hall Program, Dauphin Island Sea Lab (2007)

Ron Kiene
Antarctic web log – Palmer Station. http://biogeochemistrylab.disl.org/artic/artic.htm (5277 unique visitors in 2007, through Sep, 2007. Site is still receiving ~450-600 visitors per month in through Sep 07.
External Examiner, Honors Thesis, Darin Fortescue, Southern Cross University, Australia, March, 2007, 2006.
External Examiner, Ph.D. Thesis, Tess Vance, Southern Cross University, Australia, June, 2007.

Hugh MacIntytre
Contributing partner in NOAA's Center for Coastal Monitoring and Assessment (CCMA)'s
National Estuarine Eutrophication Assessment Update Report:
Academic representative to NOAA National Policy and Evaluation Division's review of the Weeks Bay National Estuarine Research Reserve, March 21. Final Evaluation issued July 17.
Phytoplankton Monitoring Network. Organized a group of volunteers to monitor microalgal populations in Alabama waters in expansion of NOAA's Phytoplankton Monitoring Network (National Ocean Service/National Center for Coastal Ocean Science Program:http://www.chbr.noaa.gov/pmn/index.htm)
Weeks Bay Foundation. Contributed to article "Fish Kill and Harmful Algal Blooms" on toxic Karlodinium veneficum bloom in Weeks Bay NERR for the Fall, 2007, Pelican Post newsletter (http://www.weeksbay.org/WBR-Fall2007-FinalWeb2.pdf).

Sean Powers
Expanding Your Horizon's conference, a workshop to promote science to female high school students. University of South Alabama, October 2006.
2006, 2007 Mobile Jaycee's, Alabama Deep Sea Rodeo, Assistant Rodeo Judge
2006, 2007 Mobile Jaycee's Roy Martin Young Angler Tournament, Assistant Judge
DISL 2006 Presenter - Summer teacher workshops
NSF-COSEE Program, DISL Summer 2007

Highlights/Awards
Ruth Carmichael
Fox News, CBS News affiliate, Mobile, AL; "Mobile Manatees, Battleship" 2007.
Fox News, NBC News affiliate, Mobile, AL; "Mobile Manatees" 2007.

Just Cebrian
Citation as one of the 100 most productive scientists in Marine Sciences in Spain during the period 1994-2004 ("Las Ciencias y Tecnologias Marinas en Espanya" CSIC) (I left Spain in 1996, so I believe this quote is meaningful) 2007:
Activity/Paper: Marsh restoration project in Weeks Bay NERRS funded by MASGC, Press report, Baldwin Register (March 27 2007)
Activity/Paper: Seagrass restoration project in Little Lagoon funded by MBNEP/ADCNR, Report on the activities carried out with this project, CNN-money (PR Newswire, September 20 2007)

Monty Graham
Interviewed by BBC Radio in April 2007 and a variety of newspapers and other broadcast media regarding jellyfish blooms (2007)

Ron Kiene
Interview, for TV story on Global Climate Change, by Allan Seals, WKRG, June, 2007.

Sean Powers
Fox 10 news, Invasive species – "Flying Carp" interview, June 2007.
WPMI TV interview on the decline of sharks and implications for Alabama fisheries, May 2007.
Fox 10 News Interview, Oyster Reef Restoration, April 2007
Mobile Press Register Story by Ben Raines, "No sharks, no oysters?" March 29, 2007
Associated Press Story "Consequences of overharvesting of sharks", reported by several news papers including NY Times and Washington Post.
Alabama Public TV Interview, Decline of the Great Sharks. March 2007
Fox 10 News Interview, Decline of the Great Sharks. March 2007

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.

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Extramural Funding

DAUPHIN ISLAND SEA LAB
CONTRACTS/GRANTS
FY 2006/2007

AGENCY	P.I.'s	TITLE	BEGIN DATE	END DATE	AMOUNT FUNDED	INCOME FY 2006/2007
EPA	DY	Mobile Bay National Estuary Program	Mar-02	Jun-07	$1,337,664.00	$16,292.00
City of Mobile/ Mobile County/ Various Donations	DY	Mobile Bay National Estuary Program	Mar-05	Sep-06	$556,778.49	$84,631.00
ADCNR	DY	ADCNR MOA	Oct-04	Sep-07	$180,000.00	$7,905.00
USF&W	DY	Pinto Pass Eco System Restoration and Wildlife Observation Site	Sep-02	Dec-07	$5,000.00	$2,454.00
EPA	DY	Mobile Bay National Estuary Program	Oct-03	Mar-08	$1,525,635.00	$79,639.06
MASGC	DY	A Rapid Assessment Survey of Non-Aquatic Species in Alabama and Mississippi	May-04	Dec-06	$20,000.00	$84.00
EPA	DY	AL Phase 1 Monitoring Eight Mile Creek FY2004	Jun-04	Dec-07	$63,250.00	$47,635.00
EPA	DY	Al Phase 3 Remediation Eight Mile Creek FY2004	Jun-04	Dec-07	$99,475.00	$34,816.00
USF&W	DY	Emergent March Creation and Native Plantings	Jul-05	Jul-10	$50,000.00	$6,517.00
ADCNR	DY	Wetlands Status and Trends Report and Alabama Current Connection	Oct-05	Jan-08	$31,000.00	$25,510.00
Mobile County Baldwin County	DY	Mobile/Escatawpa/Perdido Watershed(s) Facilitator	Jan-06	Dec-08	$55,361.00	$12,664.00
EPA	DY	National Estuary Program Grants-Mobile Bay	Oct-06	Jul-08	$492,600.00	$430,732.00
EPA	DY	National Estuary Program Grants-Mobile Bay	Oct-06	Jul-08	$43,665.00	$43,665.00
City of Mobile/ Mobile County/ Various Donations	DY	Stormwater Working Group/ Feasibility Study	Oct-06	Sep-07	$41,650.00	$41,650.00
EPA	DY	Gulf of Mexico Program Grant	May-06	Mar-08	$68,041.00	$20,795.00
ADCNR	DY	Alabama Coastal Connection Newsletter, Bird Survey, and SAV Study	Oct-06	Dec-08	$110,000.00	$5,999.00
EXXON MOBIL	JD	BayMobile			$120,000.00	$5,761.00
SHELL	JD	Shell Oil Special Fund			$75,000.00	$12,802.00
EXXON MOBIL	GC	Exxon Mobil	Sep-02	Sep-07	$50,000.00	$120.00
USA	KH JV	Predicting Seagrass Survival in Nutrient Enriched Waters: Toward a New View of an Existing Program	Jan-03	Dec-06	$139,926.00	$1,684.00

USA	KH	ACES Administration 2004	Jan-04	Oct-06	$142,586.00	$625.00
NEP	JD	Coastal Bird Nesting Survey	May-04	May-06	$28,960.00	$33.00
USA	KH JC SP	Ecosystem Services Provided by Oyster Reefs: An Experimental Assessment	Jul-03	Jun-07	$117,700.00	$1,039.00
USA	JV	Educational Outreach Component	Oct-04	Aug-07	$71,635.00	$21,581.00
NSF	JC	SGER: Examining the Effects of Hurricane Ivan in Coastal Alabama and Northwestern Florida: A Positive Impact on Shallow Coastal Lagoons?	Feb-05	Jan-07	$40,249.00	$775.00
MASGC	JC	Examining the Effects of Hurricane Ivan in Coastal Alabama and Northwestern Florida: A Positive Impact on Shallow Coastal Lagoons?	May-05	Apr-06	$20,000.00	$5,871.00
MASGC	JD	The Use of Remote Sensing and Molecular Detection to Predict the Risk of Infection by *Vibrio Parahaemolyticus*	Sep-04	Aug-08	$28,000.00	$18,165.00
NOAA	GC	Variability in Phytoplankton Productivity on Hourly to Monthly Time Scales and Its Coupling with Nitrogen Inputs to Weeks Bay, Alabama	Jun-05	May-07	$40,000.00	$15,137.00
NSF	KH	REU Site: Undergraduate Research Experiences in Coastal and Nearshore Marine Systems of the Northeastern Gulf of Mexico	Apr-05	Mar-08	$157,797.00	$58,905.00
USA	MG	Development of a Molecular Genetic Method to Quantify *Crassostrea Virginica Veliger*	Sep-05	Aug-08	$112,297.00	$13,116.00
National Geographic	RA	Land Use and Reef Development in Central America			$21,000.00	$1,972.00
USA	KH	ACES Administration 2005	Jan-05	Oct-07	$149,383.00	$4,554.00
ADCNR	HM	Little Lagoon as an Incubator Site for the Harmful Bloom-Forming Diatom, *Pseudo-nitzschia* sp.	Oct-05	Sep-08	$25,000.00	$17,154.00
ADCNR	JD	Post Hurricane Katrina Monitoring of Colonial Nesting Birds in Coastal Alabama	Oct-05	Sep-08	$26,650.00	$17,574.00
ADCNR	KH	Post Hurricane Katrina Damage Assessment of Seagrass Resources of Coastal Alabama	Oct-05	Sep-08	$5,000.00	$201.00
ADCNR	MD	Alabama Coastal Observing System	Oct-05	Sep-08	$25,000.00	$11,182.00
USA	HM	Harmful Algal Blooms and Oyster Restoration in Mobile Bay	Nov-05	Apr-07	$38,776.00	$3,602.00
Gulf of Mexico Foundation	KH	Robinson Island Restoration Project	Jan-06	Dec-07	$56,641.00	$30,786.00

MASGC	HM	Remote Sensing of Harmful Algal Blooms in the Northern Gulf of Mexico	Apr-05	Dec-07	$7,500.00	$4,406.00
USA	KH	Restoring Estuarine Landscapes in Alabama Coastal Waters Through Creation of Oyster Reefs	Sep-05	Aug-07	$165,108.00	$96,836.00
USA	JV	Understanding Human Modifications of Coastal Water	Nov-05	Mar-07	$24,476.00	$9,127.00
USA	HM	ACES/Dr Jim Chen	Nov-05	Oct-07	$25,004.00	$19,241.00
MASGC	JC	Evaluating the Role of Restored Black Needlerush Marsh as a Buffer of Anthropogenic Eutrophication of Coastal Systems Systems: An Isotope Enrichment Approach	Feb-06	Aug-08	$196,961.00	$58,655.00
USA	JV	Invasion Ecology: Effects of Habitat Alteration on the Survival of an Exotic Species	Nov-05	Oct-08	$87,383.00	$48,284.00
NOAA	KH	Evaluating Species Interactions in Reef Fish Communities: The potential Impact of Red Snapper on Recruitment of Vermillion Smapper	Apr-06	Apr-09	$192,338.00	$122,636.00
MASGC	JD	Regional Center for Ocean Education Excellence (COSEE)	Sep-05	Aug-08	$100,685.00	$44,706.00
USA	RA	Impacts of Salt Marsh Restoration on Ecosystem Function and Export to Estuarine Environments	Nov-05	Oct-08	$152,019.00	$135,929.00
National Marine Sanctuary Foundation	JD	Learning Ocean Science through Ocean Exploration	Jul-06	May-08	$29,000.00	$6,855.00
MASGC	JD	Educational Efforts at the Scott Aquarium, the Dauphin Island Sea Lab, and the Environmental Studies Center	Feb-06	Jul-08	$59,136.00	$9,034.00
USA	KH	ACES Administration 2006	Nov-06	Oct-08	$155,337.00	$135,981.00
MASGC	JD	Facilitating the GOMA Environmental Education Priorities Through the Employment of an Educator and Outreach Coordinator	Jun-06	May-08	$199,962.00	$87,991.00
ADCNR	RA	Salt Marsh	Oct-06	Mar-08	$25,000.00	$12,652.00
NOAA	GC	Construction of the Center for Ecosystem-Based Fisheries Management, Construction of the Mesocosm Facility, and the Completion of Wiese Marine Science Hall	Jul-06	Jun-09	$4,411,204.00	$130,732.00
NEP	MD	Real Time Monitoring	Oct-05	Mar-08	$84,166.00	$34,764.00

USA	JV	The Effects of Nutrient Enrichment on the Stoichiometry, Fitness, Fecundity and Feeding Preference of Epiphyte Grazers Associated with the Seagrass *Thalassia testudinum*	Nov-05	Feb-08	$21,528.00	$11,901.00
ADCNR	HM	Purchase and Testing of an Autolab Underway Nutrient Analyzer for Real-time Mapping during Harmful Algal Blooms	Jun-06	Aug-07	$28,360.00	$28,360.00
USA	HM	Impact of Human Activity on Microalgal Populations in Mobile Bay: Insights from Recent Palaeosediments	Nov-05	Oct-06	$83,926.00	$36,994.00
USA	KH	Estimating the Relative Importance of Northern Gulf Nursery Habitats to Adult Fish Populations: Studies of Gray Snapper (*Lutjanus griseus*) and Gag Grouper (*Mycteroperca microlepis*)	Sep-06	Mar-09	$117,060.00	$113,549.00
USA	JD	Outreach and Education	Oct-06	Sep-08	$49,420.00	$13,902.00
UNH	HM	Improved Characterization of Microalgal Abundance and Taxonomic Status through Laser-Induced Flourescence	Sep-06	Aug-08	$270,274.00	$115,887.00
MASGC	JD	Marine Exhibit			$5,000.00	$1,300.00
AL DEPT OF EDUCATION	JD	MAST	Nov-06	Sep-07	$64,186.00	$48,957.00
MSU	JD	Education, Outreach and Habitat Restoration Research at the Dauphin Island Sea Lab	Feb-07	Jul-08	$365,745.00	$33,334.00
ADCNR	MG	Fisheries Oceanography of Coastal Alabama-Zooplankton	Oct-06	Sep-09	$742,062.00	$232,360.00
ADCNR	SP	Fisheries Oceanography of Coastal Alabama-Ichthyoplankton	Oct-06	Sep-09	$607,938.00	$194,624.00
ADCNR	KH	Fisheries Oceanography of Coastal Alabama-Benthic	Oct-06	Sep-09	$105,000.00	$816.00
ADCNR	KP	Fisheries Oceanography of Coastal Alabama-Physical Oceanography	Oct-06	Sep-09	$285,000.00	$31,925.00
ADCNR	HM	Fisheries Oceanography of Coastal Alabama-Productivity Studies	Oct-06	Sep-09	$161,000.00	$57,727.00
ADCNR	SP	Fisheries Oceanography of Coastal Alabama-Productivity Studies	Oct-06	Sep-09	$450,000.00	$75,000.00
ADCNR	MG	Fisheries Oceanography of Coastal Alabama-Sea Operations	Oct-06	Sep-09	$225,000.00	$60,879.00
ADCNR	GC	Fisheries Oceanography of Coastal Alabama	Oct-06	Sep-09	$450,000.00	$141,082.00
USA	SP	Monitroing Success of Oyster Reefs in Mobile Bay	Oct-06	Sep-08	$53,385.00	$53,385.00
FIO	RA	Coral Reef Benthic Community Repsonse to Management in Fully Protected Marine Zones of the Florida Keys	Jun-07	Sep-08	$35,300.00	$15,683.74

ADCNR	JV	Hurricane Impacts on the Mobile Bay Causeway-An Environmental Assessment	Apr-07	Mar-08	$150,000.00	$56,284.00
ADCNR	GC	Landscape & Facility Master Plan Weeks Bay NERR	May-07	Aug-07	$4,000.00	$3,885.00
ADCNR	GC	City of Chickasaw Public Access Planning & Design, Wm. Brooks Park	Oct-06	Sep-07	$4,000.00	$4,000.00
EXXON MOBIL	RD	Summer Internship 2007			$2,000.00	$2,000.00
EXXON MOBIL	LY	Summer Internship 2007			$2,000.00	$2,000.00
EXXON MOBIL	JC	Summer Internship 2007			$2,000.00	$2,000.00
NOAA	HM	Benthic-pelagic Coupling: Microalgal Transfer of Mercury from Contaminated Sediments	Jun-07	May-09	$20,000.00	$830.00
USA	RC	The Effects of Nutrient Enrichment on Oyster Ecology in Mobile Bay	Aug-07	Mar-09	$143,152.00	$395.00
ADCNR	MD	Monitoring of Selected Hydrographic Parameters in Mississippi Sound	Jun-07	May-09	$91,302.00	$49,029.00
USA	JV	Invasion Ecology: Effects of Habitat Alteration on the Survival of an Exotic Species	Jan-07	Oct-08	$97,938.00	$46,585.00
J. L. BEDSOLE FOUNDATION	JD	Schooling Room			$10,000.00	$10,000.00
USA	SP	Addressing Challenges to Oyster Reef Restoration in Mobile Bay	Jun-07	Mar-09	$163,368.00	$10,994.00
TEXAS A&M	MD	Mobile Physical Oceanographic Real Time System (PORTS) Installation and Routine Monthly Maintenance	Jul-07	Aug-08	$50,000.00	$2,640.00
MSU	HM	A Volunteer Phytoplankton Monitoring Network NOAA Ecosystem Data Assembly Center	Jul-07	Jun-08	$14,000.00	$1,024.00
NOAA	MG SP	Sources and Fate of Snapper (*Lutjanidae*) Early Life Stages in Alabama Shelf Waters: Temporal and Spatial Occurrence of Red Snapper (*Lutjanus campechanus*) and Vermilion Snapper (*Rhomboplites aurorubens*)	Aug-07	Jul-09	$100,000.00	$4,992.00
Con/Phil	MG KH KP SP MD	Assessment of Red Drum Spawning and Icthyoplankton Abundance in Alabama Coastal Waters	Jun-04	Aug-07	$1,667,972.00	$42,308.00
Con/Phil	MG SP	Assessment of Red Drum Spawning	Aug-05	Aug-07	$241,388.00	$19,628.00
						$3,587,715.80

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