

Dauphin Island Sea Lab

Letter from the Director

Analyzing the activities of a past year is always an interesting exercise, in recollection and interpretation! There were some remarkable achievements that do reflect the range of activities at the Dauphin Island Sea Lab. The newest of these is certainly the successful campaign by the Dauphin Island Sea Lab Foundation to meet the Kresge Endowment Challenge from the South Alabama Community Foundation. The premise of the Kresge Foundation Challenge Grants is that many institutions seldom have the *capacity* to pursue funding from the private sector in their community.

DISL had demonstrated some capacity to do this through the campaign to construct The Estuarium, but there had been a significant infusion of money from the State initially and we were not completely successful at the end, having to pursue a bond issue to finish the project. So we had a long way to go. But the Kresge Challenge catalyzed the formation of the DISL Foundation and the Board of Trustees, led by Chair Freda Roberts, did it! An endowment fund is extraordinarily difficult to fund because it is difficult to project a tangible product. The ultimate goal of \$1 million is still out there but the Foundation has made it through the early stages of development and will clearly become something that DISL will grow to value and appreciate even more.

The Laboratory also assumed another unfamiliar role by signing a contract with the Conoco Phillips Corporation to provide a complex set of biological and physical data to the proposed offshore Liquefied Natural Gas (LNG) terminal south of Dauphin Island. This was the first time that we had ever entered into a contractual agreement with the private sector and it was done with

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University Programs Marine Science Research and College and Graduate Education

University Programs (UP) oversees summer undergraduate and year-round graduate (M.S. and Ph.D.) education, as well as faculty research. Fourteen of the 22 member institutions sent students to the DISL for the 2004 Summer Program. UP delivered 703 undergraduate hours and 126 graduate hours during the summer and 476 graduate hours during the academic year. Dr. Tammy McGovern was appointed to the Coastal Marine Scholar post doctoral position and began in December 2004.

Seven M.S. students and one Ph.D. candidates who conducted their research on campus and were advised by Sea Lab faculty received their degrees from their home institution.



Dr. Ron Kiene (far right, standing) led a team of researchers from the Sea Lab down to Antarctica recently to study the atmospheric cycling of the sulfurous gas dimethylsulfide.

For the 6th year in a row, DISL also participated in NSF's Research Experience for Undergraduates, hosting seven students for twelve weeks of intensive study and fieldwork.

Sea Lab faculty continued to produce nationally renowned publications during the reporting year, totaling **30** refereed articles; **12** non-refereed publications; **48** scientific presentations; and **19** public presentations. UP research contributed \$1,517,950 to the Sea Lab's total extramural funding of \$2,944,935, which includes DISL research, public service, instruction, scholarships and equipment grants.



Dr. Just Cebrian (left) oversees a project on submerged aquatic vegetation (SAV) at Weeks Bay, AL.



(L-r) Dr. Crozier, artist Stig Marcussen, Honorary DISL Foundation Board Member Dr. E.O. Wilson, Dr. John Dindo. The DISL Foundation recently held a fundraiser called "Cocktails with the Critters" that featured Mr. Marcussen's artwork.

some trepidation, due in part to the controversial nature of the environmental impacts. DISL is committed to the highest ideals of scientific objectivity and peer scrutiny, so the understandable confidentiality agreement required by the company was a significant obstacle to overcome.

The remarkably interesting scientific opportunity for work on our nearshore shelf provided the impetus for the DISL team led by Dr. Monty Graham to reach a mutually acceptable agreement. ConocoPhillips was equally committed to having a defensible scientific endeavor developed by a credible institution. The contract was eventually finalized through good-faith agreement and we have embarked on one of the pioneer studies of the northern Gulf shelf. The data will be used by the federal regulatory agencies to manage the operation and impacts of the terminal, should the permit be granted.

Hurricane Ivan cannot go un-noted! Our familiarity with hurricane impact is rather great and I have to say that knowing what *could* have been here on our return, made what we found look awfully good! The Laboratory and Dauphin Island dodged a cannon ball, not a bullet! Life is good!

Dr. George F. Crozier
Executive Director
Dauphin Island Sea Lab

Discovery Hall Programs

K-12 and Teacher Education; Public Outreach

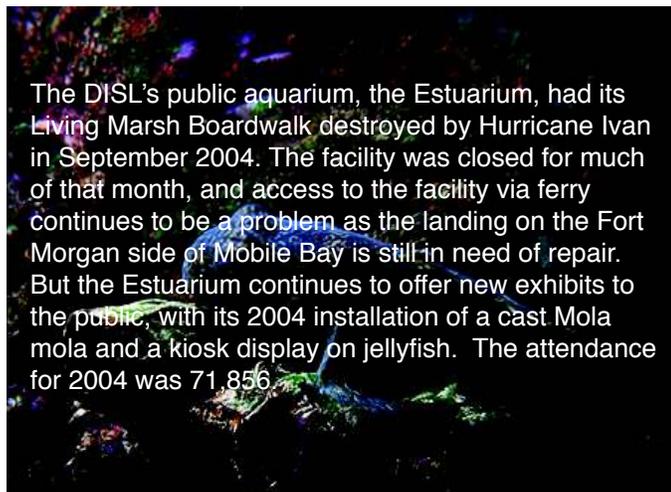
Discovery Hall Programs continues to be a leader in K-12 marine science education in the nation. Currently the department has two Mississippi-Alabama Sea Grant proposals funded, one in marine biotechnology, another in advanced marine education programs. National Sea Grant has funded the third year of Aquatic Invasive Species. Through this effort, the latest issue of CURRENT- the National Marine Educators Association's journal will feature invasive species. The second round of proposals for the National Science Foundation's Center for Ocean Science Education Excellence has been submitted as a joint project with Mississippi's J.L. Scott Marine Education Center. Dr. Powers, Shipp and Heck's Oyster Grant includes funding for Discovery Hall to adapt oyster research for K-12 curriculum infusion and public awareness through the Estuarium.

The Estuarium will soon feature an ROV(remote operated vessel) in which the general public and students will learn how scientists study the deep sea. The ROV will be capable of being operated by the students and the public from a separate kiosk adjacent to the Gulf of Mexico exhibit. This project was funded by Mississippi-Alabama Sea Grant Consortium.

The Dauphin Island Sea Lab is designated as a federal Coastal Ecosystem Learning Center. In 2004, as a partner in this program, the Discovery Hall Program was one of ten programs around the nation to take five students and two teachers to Washington D.C. to present to the Ocean Commission. The students concerns for the ocean were recorded in the Federal Register and made part of the report to the President of the United States.

In 2004, DHP conducted field and coursework for:

Elementary School:	4.737
Middle School:	1.385
High School:	1.435
College:	262
Teachers:	150
Other:	188
Total:	10,466 individuals



The DISL's public aquarium, the Estuarium, had its Living Marsh Boardwalk destroyed by Hurricane Ivan in September 2004. The facility was closed for much of that month, and access to the facility via ferry continues to be a problem as the landing on the Fort Morgan side of Mobile Bay is still in need of repair. But the Estuarium continues to offer new exhibits to the public, with its 2004 installation of a cast Mola mola and a kiosk display on jellyfish. The attendance for 2004 was 71,856.

Coastal Policy Center/Mobile Bay National Estuary Program

The Coastal Policy Center (CPC) has continued to participate in the region's Smart Growth movement. The conclusions of the Pew and U.S Ocean Commissions both indicted urban sprawl and poor land use practices in general as primary causes in the decline of the coastal ocean. The principles of modern urbanism are entirely consistent with the concepts of watershed management and the CPC has been a major player in two regional conferences held which dealt with these issues.

Dr. Crozier continues to work directly with the real estate and development community through grassroots, inc., a not-for-profit educational group which includes real estate professionals, landscape architects, and civil engineers. Presentations have been made throughout the bay area and as far away as Montgomery.

CPC continues to facilitate the two working information exchange groups of the ADCNR Coastal Program, the Planners Roundtable and the Waterways/Marina Task Force. Waterways experts from Florida were brought in during the year to assist in the complex issue of marina planning. Some of these issues may benefit from the appointment of Dr. Crozier to the Environmental Advisory Board of the U.S. Army Corps of Engineers.

The Mobile Bay National Estuary Program (MBNEP)

directly obtained and brought in almost \$1.3 million dollars in federal grant funds and local contributions targeted towards the study and solution of the environmental and natural resource challenges facing coastal Alabama and to implement a Comprehensive Conservation and Management Plan (CCMP) for Mobile Bay and the Delta.

Highlights include:

- Water and sediment monitoring in three sub-estuaries around Mobile Bay.
- A study that will help locate sources of bacterial contamination in 8-Mile Creek and Gum Tree Branch in the City of Prichard.
- The Alabama-Mississippi Rapid Assessment Team worked the coast of Mississippi to identify non-native aquatic species.
- Oyster Gardening Program completed a fourth year with a record 62 volunteers. Despite the damages caused by Hurricane Ivan, approximately 25,000 oysters were placed on Denton Reef.
- Go to www.mobilebaynep.com and click on Environmental Monitoring. Here you will find the real-time continuous meteorological and water quality information at three sites in Mobile Bay.
- Partnering with the Weeks Bay National Estuarine Research Reserve, the MBNEP was an integral part of a live online program, "Estuary Live!" Targeted toward K-12 students, this program was one of seven live sites around the country.
- Working as one of the lead participants, the Mobile Bay NEP was part of the first Coastal Alabama Birdfest. This event was a success despite local storm damage; raising over \$43,000 for purchase of habitat and is planned again for October 2005.

