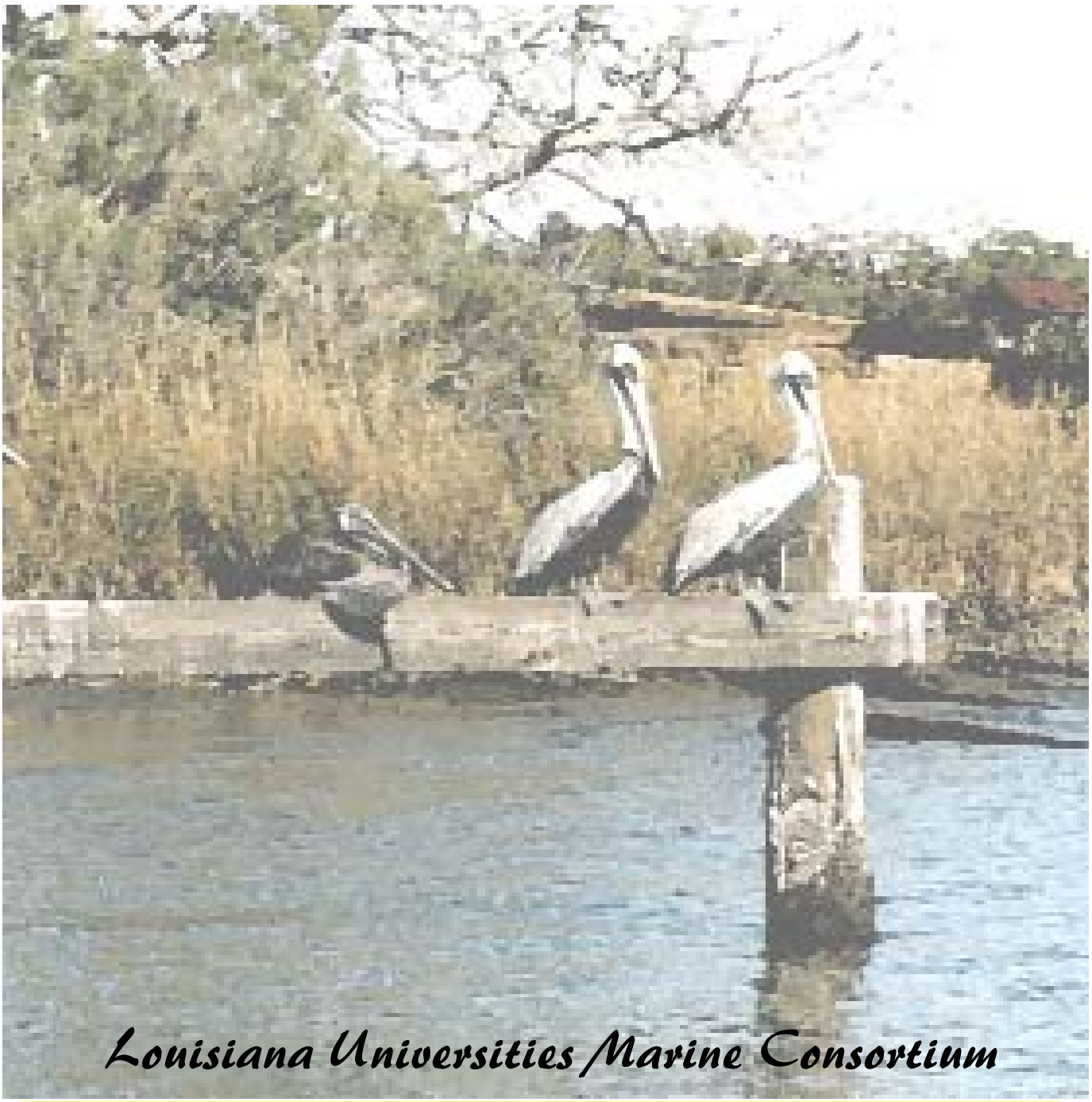

Louisiana Universities Marine Consortium

2006-2007 Annual Report

Our Mission

"To increase society's awareness of the environmental, economic and cultural value of Louisiana's coastal and marine environments by conducting research and education programs directly relevant to Louisiana's needs in marine science and coastal resources and serving as a facility for all Louisiana schools with interests in marine research and education."

Message from the Director

Two fiscal years at the helm. The first started with Hurricanes Katrina and Rita, their devastation and subsequent recovery. The second continued with hurricane recovery and a State of Louisiana budget left reeling from business and financial losses across the southern part of the state. Coastal natural resources, business and financial infrastructure, communities and individuals still bear the scars of these storms. Several of LUMCON's structural wounds still require mending. Recovery has been slow but is now showing visible improvements in the coastal zone and in the state's finances. And, the need for thoughtful, balanced and effective coastal restoration, flood control, and social support remains a foremost concern for Louisiana. LUMCON continues to focus its education and research programs on valuable coastal resources, dissemination of accumulated knowledge of coastal processes, and improved social literacy of the environmental, economic and cultural value of Louisiana's coastal and marine environments. The Woody J. DeFelice Marine Center in Cocodrie, the Fourchon field camp, the research vessels and boats, the laboratories and educational facilities, and the LUMCON staff remain critical components for reaching these goals.

LUMCON has much to offer locally, nationally and globally for marine science and education. Researchers are addressing environmental issues of importance to Louisiana—hypoxia, harmful algal blooms, over-enrichment of nutrients, invasive species, coastal landscape processes, fisheries, offshore oil and gas platforms as refuges for coral communities, the biological and chemical components of the Mississippi River and many Louisiana estuaries. The LUMCON staff has been active and productive.

I proudly bring you some of our accomplishments for the 2006—2007 fiscal year.

Nancy Rabalais

Governance

Leadership of the LUMCON Executive Board was transferred from Dr. Ray Authement, of the University of Louisiana at Lafayette, to Dr. Stephen Hulbert, of Nicholls State University. Louisiana State University, under the leadership of Chancellor Sean O'Keefe, is also a governing university.

Research

- Collaborative work with David Senn, Mike Bank, Rebecca Lincoln and Jim Shine of the Harvard School of Public Health on mercury methylation and mercury accumulation in fishes and coastal fishers, along with Ed Chesney (fishes, fishers) and Nancy Rabalais (sediments) is coming to fruition. Surveys of mercury concentrations in the hair of coastal fishers (Lincoln, Senn, Chesney) showed a median concentration of 0.81 μg/g and a range of 0.1 - 10.7 μg/g. Forty percent of the participants in the survey had intake levels above the EPA reference dose for mercury intake of 1 μg/g. Published work (Bank et al. 2007) on the mercury accumulation by red snapper and gray snapper showed that mercury concentration was 23% higher in gray snapper compared to red. Stable nitrogen and carbon isotope studies showed that the gray snapper occupied a higher trophic position. This result demonstrates that even modest differences in trophic position and food habits in sympatric species can create relatively large differences in bioaccumulation and underscores the importance of characterizing trophic structure in marine methylated-mercury bioaccumulation studies. The Harvard/LUMCON research group also followed the consequences of Hurricanes Katrina and Rita on mercury methylation in Louisiana continental shelf sediments. [Support from NOAA's Human Health Initiative and the Center for Sponsored Coastal Ocean Research]

- The LUMCON phytoplankton group continues to document the phytoplankton communities and HAB (harmful algal bloom) species in the area of hypoxia ('Dead Zone') as well as the Barataria Bay estuary and contributes the information on HAB events for international compilation. In 2007, the group was contacted by outside researchers and agencies seeking information on possible bloom events, confirmation of taxonomic identifications, and in one instance for species abundance data to investigate causes of dolphin mortalities in Texas. The group is working closely with Dr. Sibel Bargu of Louisiana State University on the development of toxin identification and the occurrence of HAB toxins in offshore and inshore waters. High numbers of the potentially toxic diatom *Pseudo-nitzschia* spp. identified by Wendy Morrison in the spring were found by Dr. Bargu to contain high levels of the toxin domoic acid. Within the Barataria Bay estuary, the mycrocystin toxins of cyanobacteria, which can occur in explosive numbers, were detected in tissues of blue crabs collected from the upper basin. [Support from NOAA's Center for Sponsored Coastal Ocean Research, the Gulf of Mexico Program, and the Louisiana Board of Regents Education Support Fund]

- Wendy Morrison, research associate, continues progress in the documentation of the phytoplankton species likely to occur in Louisiana coastal waters. With the help of Brenda Leroux Babin, IT Manager, this compilation will become a searchable CD and web-based taxonomic guide with ancillary environmental information. [Support from the Gulf of Mexico Program]

- Once again, the area of oxygen depletion on the Louisiana/Texas shelf (known as hypoxia, or more commonly as the 'Dead Zone') was near its maximal size at 17,280 square kilometers (or 6,662 square miles), similar to the size of Connecticut and Rhode Island combined. The real-time monitoring of oxygen conditions offshore was expanded to a new station off Caminada Pass in 15 m of water. The effort joins the hypoxia research of Nancy Rabalais (LUMCON) and Greg Stone (LSU) in the WAVCIS/BIO2 efforts. http://www.gulfhypoxia.net [Support from NOAA's Center for Sponsored Coastal Ocean Research and the Gulf of Mexico Program]

- The hypoxia phenomenon in the Gulf of Mexico was scrutinized as part of a 5-year reassessment of the science and management progress towards reducing the size of the zone. The Environmental Protection Agency (EPA) Science Advisory Board convened a Hypoxia Assessment Panel (HAP) that spent more than a year reviewing the science completed since the initial Integrated Assessment (2000) and the Action Plan (2001). The HAP process was paralleled by the Mississippi River/Gulf of Mexico Nutrient Task Force in their development of a new Action Plan. The EPA HAP supported the existing science and called for strong controls on non-point source nitrogen and phosphorus inputs to the Mississippi River that targeted the highest sources. The draft Action Plan supported the 2001 ecological goal of a reduced size of hypoxia, but was weaker in its resolve.

- The Flower Garden Banks in the northern Gulf of Mexico are the Gulf's only true coral reefs. There are, however, about 3,600 oil/gas platforms in the northern Gulf of Mexico that provide hard substrates and facilitate the biogeographic spread of Caribbean reef animals. Paul Sammarco and colleagues recently completed studies of the distribution and abundance of hard corals on 13 platforms near the Flower Garden Banks and 35 other platforms off Corpus Christi, TX, Sabine Lake, TX, Terrebonne Bay, LA, and Mobile, AL. The three most abundant reef-building corals were *Madracis decactis*, *Diploria strigosa*, and *Montastraea cavernosa.* Most reef-building corals were found on platforms at the shelf edge off Sabine Lake and Terrebonne Bay, but they did occur on platforms off Corpus Christi and Mobile. Genetic analyses of a common reef-building coral, *Madracis decactis*, on either side of the Mississippi River delta indicated a high degree of isolation of populations and site fidelity, while the genetic composition of the non-reef building invasive coral, *Tubastraea coccinea*, indicated much less isolation. The Mississippi River and associated physical and hydrographic conditions appear to be effective biogeographic barriers to coral dispersal, even with the successful invasion of *Tubastraea* larvae. Corals that brood larvae, such as *M. decactis* and *T. coccinea,* and release them when they are fully developed are much more effective colonizers over the same geographic range than corals that broadcast egg and sperm for external fertilization. [Support from Minerals Management Service]

Research assistant, Carrie Semmler, assists Dr. Brian Roberts in preparing his new laboratory.

Left, Science team deploys an instrument package to study optics in the Gulf of Mexico. Right, Dr. Ed Chesney collects fish for his research.

- Nutrients from the Mississippi/Atchafalaya Rivers stimulate biological production in the 'classical' food web (nutrients to phytoplankton to multicellular zooplankton) in the northern Gulf of Mexico. Portions of this production, especially large phytoplankton and zooplankton fecal pellets, sink and decompose, consuming oxygen and contributing to the annual development of bottom water hypoxia. The 'microbial' food web (dissolved organic matter to bacteria to unicellular zooplankton) is also active but is generally not considered a significant contributor to sinking organic matter because it consists of small organisms and particles that do not sink. However, gelatinous zooplankton, such as appendicularians, directly consume particles as small as bacteria. They are abundant in coastal waters and produce copious amounts of fast sinking waste particles. Recent studies by Mike Dagg and collaborators show that appendicularian populations often provide more than 1 g m^{-2} d^{-1} of organic carbon to bottom water, thereby making a significant contribution to the establishment and maintenance of hypoxia during the periods they are present. For comparison, summertime phytoplankton production in Louisiana coastal waters is about 1 g C m^{-2} d^{-1}. Possible sources of dissolved organic matter for support of this 'microbial' food web include: excretion and leakage from the 'classical' food web, direct inputs from the Mississippi/Atchafalaya rivers, and washout from Louisiana's eroding coastal marshes. [Support from NOAA]
- LUMCON administers the NOAA CREST program (Coastal Restoration through Enhanced Science and Technology). The CREST program received no additional funding in the federal FY06 but was able to fund five grants for about $400,000 total in a continuation of its research program. CREST also provided $10,000 each to each of the member institutions to fund graduate and, in some cases, undergraduate students for projects specific to coastal restoration.
- John Conover, Librarian, along with software development by Brenda Leroux Babin, have been compiling, editing, and creating a database of citations related to oil spill dispersants with over 2000 citations ranging from the mid-1960s through 2008. [Support from Louisiana Oil Spill Research and Development Program]

Education

- World Water Monitoring Day at the Marine Center brought together Terrebonne Parish students, Taiwanese students, and educators.
- A dynamic week of teachers and researchers completed the LUMCON NSF-sponsored Center for Ocean Sciences Education Excellence program. (COSEE)
- The Southern Association of Marine Educators met at LUMCON's Woody J. DeFelice Marine Center.
- LUMCON courses and graduate education activities registered 75 individual students and approached 6,000 contact hours. The contact hours with K-12, teacher and public groups approached 30,000, and over 7,000 students participated in field trips. LUMCON hosted 450 public groups and interacted with 550 teachers.
- Two LUMCON/LSU graduate students, Melissa Baustian and Jennifer Lasseigne, teamed with two more LSU students and Dr. R. Eugene Turner for a study of historic wetland use and current reclamation in old Acadie in Nova Scotia. The study results formed the basis for a museum display that has been on tour across the state.
- Three other LUMCON graduate students continue in pursuit of degrees—Julie Prerost, LSU Department of Biological Sciences; Danielle Richardi, Nicholls State University, Marine and Environmental Biology; and Brenda Leroux Babin, LSU Department of Oceanography and Coastal Sciences
- LUMCON educators and researchers conducted 33 workshops and outreach activities.

Bottom left, Students row pirogues to location of field study and perform samplings. Bottom right, Dr. Earl Melancon of Nicholls State University instructs his class on the parts of an oyster.

Soldiers stationed at Fort Polk enjoyed a day aboard the *R/V Acadiana* before deployment to Iraq.

Forty-three students from nine universities enrolled in our 2007 summer courses—Coastal Landscape Photography, Introduction to Marine Zoology, Marine Invertebrate Ecology, Marine Fish Ecology and COSEE (teacher/researcher course).

LUMCON's education program continues to reach teachers, K-12 students, university students, and the public.

Facilities

- The post-Katrina roof of the Marine Center is officially finished, but work remains on the dormitories, the downstairs lobby, and the Fourchon field camp bulkhead and dock. Architectural drawings for a renovated (flood friendly) downstairs lobby were completed by the University of Louisiana at Lafayette, School of Architecture and Design. LUMCON eagerly awaits the resolution of the lobby design with the Office of Facility and Planning Control and FEMA and continues to push for the completion of the dormitories and the Fourchon field camp.
- Following damage from the 2005 hurricanes, five environmental monitoring stations were all back on line and progress was made toward replacing the Terrebonne Bay station. The Terrebonne Bay structure was once again run over by a barge and rebuilt with the help of Hilcorp Energy Company. Work is underway to replace the instrument packages. LUMCON renewed its cooperation with the Audubon Nature Institute for the station at Audubon Zoo on the Mississippi River. Southeastern Louisiana University continues to provide assistance in accessing the southwestern Lake Pontchartrain station.
- LUMCON continues the operation of a lower atmosphere Doppler profiler and radio acoustic sounding system to collect meteorological data. [Support from Minerals Management Service.]
- A HiSeasNet communication system was installed on the *R/V Pelican* for connection to the Internet while at sea, allowing for access to weather forecasting networks, remote sensing imagery, and communications with onshore research teams.

Top left, *R/V Acadiana* docking after a cruise in area waters. Bottom left, Doppler system located in LUMCON's backyard. Bottom right, Kai Fiand calibrates backyard equipment.

Vessels

- The *R/V Pelican* successfully completed its NSF ship inspection.
- The *R/V Acadiana*, besides the many educational field trips, served as a research platform for archeological surveys, benthic and fisheries studies, and hypoxia research.
- Tulane University's *R/V Eugenie* sailed away from the Marine Center for the last time, ending its bare boat charter agreement with LUMCON.
- The *R/V Pelican* spent 242 days at sea, the *R/V Acadiana* spent 147 more, and our small boat fleet accumulated 214 days 'at sea.'
- The *R/V Pelican* spent 2½ months with researchers studying Caribbean mesoscale eddy currents (University of Puerto Rico), North American-Caribbean tectonic plate boundaries (U.S. Navy and University of North Carolina), and acoustic sub-seafloor mapping for earthquake and tsunami hazards (NOAA and USGS).
- The *R/V Pelican* remains a research platform for numerous mooring operations such as, state-of-the-art technical instrumentation testing, and multiple research programs on Gulf of Mexico hypoxia ('Dead Zone'), offshore benthic and fisheries resources, paleoclimate, and ocean color remote sensing imagery. The *R/V Pelican* also participated in marine archeology with soundings for the *SS Virginia* sunk in World War II by a German U-507; the *SS Virginia* was transported 600 m to the southeast during Hurricane Katrina.

Top left, *R/V Pelican* and crew heading for LUMCON's marina. Bottom right, DNR and many agencies use landing at LUMCON.

Barataria-Terrebonne National Estuary Program

- LUMCON administers the Barataria-Terrebonne National Estuary Program (BTNEP), which is funded by the U.S. Environmental Protection Agency and other sources and is directed by Kerry St. Pé.
- BTNEP led several highly successful activities that centered on bird populations: the second annual Eagle Expo in Morgan City, the 10th annual Grand Isle Migratory Bird Celebration that focuses on the importance of maritime forest (cheniers) for neo-tropical migrant birds, a continued study of Wilson's plover community distribution and ecology on a ridge restoration area, and the distribution of numerous products that link Louisiana's birds with critical coastal landscapes.
- BTNEP continues to work with the Louisiana Department of Natural Resources on the coastal restoration project, The Mississippi River Water Reintroduction into Bayou Lafourche, particularly in aspects of public outreach to inform legislative delegates, citizens and multiple stakeholder groups.
- BTNEP completed the series of activities called "From H-2-O – A Water Quality Workshop for Teachers, in which teachers and students collect and post water quality data on the LUMCON Bayouside Classroom web site (http://www.lumcon.edu/education/StudentDatabase/). Additional workshops were held for K-4, middle school and high school teachers. (http://educators/btnep.org/default.asp?id=68)
- The BTNEP Volunteer Program organized and hosted several vegetation plantings in support of habitat restoration. For example:

  * Pinecrest Middle School students (Monroe, LA), partners and sponsors planted 5,000 wetland plants along the shoreline of east Lake Boudreaux.
  * Students from Riverside-Brookfield High School (Illinois) and foreign exchange students from Nicholls State University (Japan) planted 4,000 plugs of smooth cord grass in wetlands of Plaquemines Parish.
  * Volunteers planted 20,000 marsh grass plants on newly constructed wetland terraces in a deteriorating marsh. The project was co-sponsored with Ducks Unlimited in Lafitte, LA.
  * Volunteers from Dickenson College (Pennsylvania) participated in a community-based habitat restoration project near Chauvin to help restore natural habitat areas damaged by on-going coastal land loss.

BTNEP
BARATARIA-TERREBONNE NATIONAL ESTUARY PROGRAM

BTNEP Personnel

Kerry St. Pé, *Program Director*
Andrew Barron, *Water Quality Coordinator*
Dean Blanchard, *Habitat Enhancement Coordinator*
Richard DeMay, *Senior Scientist*
Sandra Helmuth, *Office Manager*
Mel Landry, *Public Involvement Coordinator*
Michael Massimi, *Invasive Species Coordinator*
Shelly Sparks, *Media Relations Coordinator*
Susan Testroet-Bergeron, *Education Coordinator*

Publications

Dagg, M. J., H. Liu, and A. C. Thomas. 2006. Effects of mesoscale phytoplankton variability on the copepods *Neocalanus flemingeri* and *N. plumchrus* in the coastal Gulf of Alaska. *Deep-Sea Research* I 53:321-332.

Fleury, B. G., J. C. Coll, and **P. W. Sammarco**. 2006. Complementary (secondary) metabolites in a soft coral: Preliminary data on sex-specific variability, inter-clonal variability, and competition. *Marine Ecology* 303:115-131.

Green, R. E., T. S. Bianchi, **M. J. Dagg**, N. D. Walker, and G. A. Breed. 2006. An organic carbon budget for the Mississippi River turbidity plume, and plume contributions to air-sea CO_2 fluxes and bottom-water hypoxia. *Estuaries* 29:579-597.

Maida, M., **P. W. Sammarco,** and J. C. Coll. 2006. A diffusion chamber for assessing efficacy of marine antifouling agents. *Journal of Experimental Marine Biology and Ecology* 337:59-64.

Mason, R. P., J. M. Benoit, and **R. T. Powell**. 2006. 8th International Estuarine Biogeochemistry Symposium: Introduction. *Marine Chemistry* 102:1.

Rabalais, N. N., R. E. Turner, B. K. Sen Gupta, E. Platon, and M. L. Parsons. 2007. Sediments tell the history of eutrophication and hypoxia in the northern Gulf of Mexico. *Ecological Applications,* 17(5) Supplement:S129-S143. [Special Issue, Nutrient Enrichment of Estuarine and Coastal Marine Environments]

Rinker, K. R. and **R. T. Powell**. 2006. Seasonal and spatial distribution of dissolved organic phosphorus in the Mississippi River plume. *Marine Chemistry* 102:170-179.

Sammarco, P. W., P. Hallock, J. C. Lang, and R. S. LeGore. 2007. Environmental bio-indicators in coral reef ecosystems: The need to align research, monitoring, and environmental regulation. *Environmental Bioindicators* 2:35-46.

Sammarco, P. W., A. Winter, and C. Stewart. 2006. Coefficient of variation (CV) of sea surface temperature (SST) as an indicator of bleaching in Caribbean corals. *Marine Biology* 149:1337-1344.

Sammarco, P. W. and J. Wheaton. 2006. Coral reefs as indicators of long-term ecosystem change at the regional and global scales. *Environmental Bioindicators* 1:12-14.

Turner, R. E., **N. N. Rabalais**, D. Scavia, and G. F. McIsaac. 2007. Corn Belt landscapes and hypoxia of the Gulf of Mexico. In J. I. Nassauer, M. V. Santelmann and D. Scavia (eds.) *From the Corn Belt to the Gulf. Ecological and Societal Implications of Alternative Agricultural Futures*, Resources for the Future Press, Baltimore, Maryland.

Walker, N. D. and **N. N. Rabalais**. 2006. Relationships among satellite chlorophyll *a*, river inputs and hypoxia on the Louisiana continental shelf, Gulf of Mexico. *Estuaries and Coasts* 29(6B):1081-1093.

Weirich, C. R., D. R. Groat, R. C. Reigh, **E. J. Chesney**, and R. F. Malone. 2006. Effect of feeding strategies on production characteristics and body composition of Florida pompano *Trachinotus carolinus* reared in closed marine recirculating systems. *North American Journal of Aquaculture* 68:330–338.

Wysocki, L., T. Bianchi, **R. T. Powell** and N. Reuss. 2006. Spatial variability in the coupling of organic carbon, nutrients and phytoplankton pigments in surface waters and sediments of the Mississippi River plume. *Estuarine, Coastal and Shelf Science* 69:47-63.

Yuan, J., L. Hayden, and **M. Dagg**. 2007. Temporal variation of remotely sensed sea surface chlorophyll *a* and the effect of the Sanxia Dam on the East China Sea, a comment on Gwo-Ching Gong et al. *Geophysical Research Letters* 34:L14609, doi:10.1029/2006GL029036.

Reports, Articles

Switzer, T. S., E. J. Chesney and D. M. Baltz. 2006. Exploring temporal and spatial variability in nekton community structure in the northern Gulf of Mexico: Unraveling the potential influence of hypoxia. Proceedings of the Gulf and Caribbean Fisheries Institute 57:699-716

Atchison, A. D., P. W. Sammarco, and D. A. Brazeau. 2006. Genetic affinities of coral populations between the Flower Garden Banks and oil and gas platforms in the northern Gulf of Mexico: Preliminary data. Proceedings 10th International Coral Reef Symposium, Okinawa, Japan, 2004.

Sammarco, P. W., **A. D. Atchison**, and G.S. Boland. 2006. Geographic expansion and limits of corals in the NW Gulf of Mexico: Colonization of offshore oil and gas platforms. Proceedings 10th International Coral Reef Symposium, Okinawa, Japan, 2004.

Community Contributions

Brenda Leroux Babin

- Member, Data Mgmt and Communication Committee, Gulf Coast Ocean Observing System Regional Assn
- Member, Advisory Committee, Nicholls State University, Computer Science and Computer Information Systems Curriculum

Ed Chesney

- Member, CALFED Science Advisory Panel to consider the emergency use of water for fisheries management
- Member, Louisiana Sea Grant Academic Advisory Panel

John Conover

- Chair, LALINC Grant Committee (Louisiana Academic Library Information Network Consortium)
- LUMCON alternate representative, BTNEP Mgmt Conf.
- Member, Action Plan Team for Protection of Habitat for Migratory and Resident Birds, BTNEP

Murt Conover

- Member, La Fete d' Ecologie Planning Committee, BTNEP
- Member, Children's Museum Exhibit Task Force, Coastal Wetlands Planning Protection Restoration Act/BTNEP
- Alt. Representative, Executive Board, South Louisiana Children's Discovery Ctr (Wild in the Wetlands Planning Group)
- Judge, Terrebonne Parish Science Fair

Nicole Cotton

- Judge, Terrebonne Parish Science Fair

Mike Dagg

- Chair, Biological Oceanography Committee of PICES, the North Pacific Marine Science Organization
- Member, Science Advisory Board, North Pacific Research Board Member, science sub-panel on development of Integrated Research Ecosystem Plan for the Bering Sea
- Member, Editorial Advisory Board, *Continental Shelf Research*
- Organizer, Symposium on Coastal Ecosystem Responses to Changing Nutrient Inputs from Large Temperate and Sub-Tropical Rivers, and Co-Editor, special volume of *Continental Shelf Research*
- Co-editor, with Roger Harris (Great Britain), Luis Valdéz (Spain) and Shin-ichi Uye (Japan), special volume of *ICES Journal of Marine Science*

Jessica Kastler

- LUMCON alternate representative, BTNEP Management Conference
- Chair-elect, Education and Outreach Committee, Gulf Coast Ocean Observation System
- Member, Outreach Committee, Nat'l Marine Educators Assn
- Region 3 director, Louisiana Assn of Science Leaders
- Member, Education Action Plan Team, Education Committee, Citizens Monitoring Advisory Committee, and Water Quality Action Plan Team, BTNEP
- Member, Executive Board, South Louisiana Children's Discovery Center (Wild in the Wetlands Planning Group)

Rodney Powell

- Panel, NOAA CICEET Proposal Review
- Workshop, Alliance for Coastal Technologies Nutrient Sensors

Nancy Rabalais

- Member, National Research Council Committee on the Mississippi River and the Clean Water Act
- Vice chair and member, Scientific Steering Committee, Land Ocean Interactions in the Coastal Zone
- Member, SCOR (Scientific Committee on Ocean Research) Working Group 128 on Natural and Human-Induced Hypoxia and Consequences for Coastal Areas
- Member, National Research Council, Committee on the Review of Water and Environmental Systems (WATERS) Network
- Member, Advisory Committee, NSF Environmental Research and Education Directorate
- LUMCON representative, BTNEP Mgmt Conference
- Member, Advisory Committee, Nicholls State University, Masters Program in Marine and Environmental Biology
- Chair and Member, Executive Board, NOAA CREST, Coastal Restoration and Enhancement through Science and Technology
- Member, Louisiana Hypoxia Working Group
- Member, Board of Directors, GCOOS, Gulf of Mexico Coastal Observing System Regional Assn
- Co-Chair, with Jack Middelburg, Continental Margins Task Team, LOICZ and IMBER Continental Margins Open Science Mtg, Shanghai, September 17-22, 2007
- Science Advisor, Björn Carlson Fdn for the Baltic Sea

Paul Sammarco

- Regional Editor, *Marine Biology*
- Chair and Organizer, Environmental Bio-Indicators - Coral Reef Roundtable, 14th Int'l Conference on Environmental Bioindicators
- Member, Organizing Committee, 2nd Annual Conference, Int'l Society of Environmental Bioindicators, Hong Kong.

Wayne Simoneaux

- Design Advisor, South Louisiana Children's Discovery Center (Wild in the Wetlands Planning Group).

Grants

Chesney, E. J.

- Captive spawning of marine fishes as a stimulus to research and industry development, LA Sea Grant, $104,322, 2004-2007.
- Intensive propagation of marine finfish in recirculating systems: Improving survival and growout efficiency during the larval stage, LA Sea Grant, $109,548, 2006-2008.
- Development of formulated diets for pompano, Part II: Replacement of fishmeal with plant proteins, LA Sea Grant, $26,320, 2006-2008.

Chesney, E. J. and N. N. Rabalais

- Coastal eutrophication and hypoxia: implications for mercury methylation, mercury biomagnification, and human health, NOAA Human Health Initiative, with D. Senn, Harvard School of Public Health, $82,000 to LUMCON, 2004-2007.

Conover, J.

- Louisiana Oil Spill Research and Development Program (OSRADP), Dispersants: an electronic bibliography on effectiveness, technological advances and toxicological effects, $72,622, 2006-2008.

Dagg, M. J.

- Responses of *Neocalanus* spp. – microplankton community to physical forcing in the coastal Gulf of Alaska, NSF – Biological Oceanography, $590,460, 2001-2007.
- U.S. GLOBEC: NEP Phase IIIb-CGOA: Links between climate and planktonic food web dynamics. NSF – Biological Oceanography ($116,194, Dagg component), 2006-2009.

Dagg, M. J. and R. T. Powell

- Long-term estuary assessment group (LEAG): River and estuarine contributions to coastal hypoxia in the northern Gulf of Mexico, NOAA (through Tulane University), 2006-2008.

Finelli, C.

- Supplement to career development plan: Interdisciplinary research and education in marine habitats, NSF, $20,948, 2007.
- Expanding and enhancing the Bayouside Classroom science & stewardship program, Entergy, $22,257, 2006-2007.

Kastler, J.

- Regional Center for Ocean Science Education Excellence (COSEE)-Central Gulf of Mexico, $38,264, 2006-2007.

Rabalais, N. N.

- Together with Sibel Bargu, LSU, Distribution and potential toxicity of the diatom *Pseudo-nitzschia* spp. in Mississippi River influenced Louisiana coastal waters, Louisiana Board of Regents Quality Support Fund, 2007-2009.
- Toxin detection in potentially harmful algae and their consumers in the Barataria Bay system: Implications for humans, EPA, Gulf of Mexico Program, $193,063, 2006-2008.
- NGOMEX06, Integrated observational studies of hypoxia in the northern Gulf of Mexico, NOAA, Center for Sponsored Coastal Ocean Research, $2,260,022, subcontract of $906,320 to R.E. Turner et al., LSU, 2006-2009.
- Refining knowledge of hypoxia dynamics: The interaction of physics and biology, EPA Gulf of Mexico Program, $300,000, subcontract of $56,376 to LSU, 2005-2008.
- Guide to phytoplankton (including harmful algae) from Louisiana estuarine and coastal waters, EPA Gulf of Mexico Program, $101,000, 2005-2008.
- MULTISTRESS: Cumulative coastal stressors: northern Gulf of Mexico. NOAA Coastal Ocean Program, Nancy Rabalais, $1,123,711, collaborative award to lead LSU, R. E. Turner et al., $4,990,832, 2002-2008.
- NOAA Coastal Restoration and Enhancement through Science and Technology (CREST), $909,686 through 2007, 2006-2012.

Rabalais, N. N., J. Malbrough

- Oceanographic Instrumentation, NSF, $96,400, 2006-2008.
- Oceanographic Technical Services, NSF, *R/V Pelican*, $44,395, 2006–2007.
- Ship Operations, NSF, $144,210, days on the *R/V Pelican*.
- Office of Naval Research, $619,288, *R/V Pelican*.
- NSF, Oceanographic Instrumentation, $31,612, 2007-2008.

Sammarco, P. W.

- Deep-water coral distribution and abundance on active offshore oil and gas platforms and decommissioned 'Rigs-to-Reefs' platforms, Minerals Management Service, LSU-Coastal Marine Institute, $351,723, 2006-2008.
- Determining the geographical extent, maximum depth, and genetic affinities of corals on offshore oil and gas platforms, northern Gulf of Mexico, Minerals Management Service, LSU-Coastal Marine Institute, $369,104, 2004-2007.

Finances

LUMCON FY 2006-2007 BUDGET

EXPENDITURES	BUDGET	ACTUAL EXPENDITURES	BUDGET BALANCE
STATE FUNDS			
Salaries and Wages	1,657,068	1,657,068	0
Student Wages	15,000	15,000	0
Fringe Benefits	430,855	430,855	0
Travel	14,050	14,050	0
Operating Services	323,110	323,110	0
Supplies	114,513	114,513	0
Professional Services	0	0	0
Acquisitions: Library	117,414	117,414	0
Other Acquisitions	13,687	13,687	0
IAT TRANSFERS, OTM Charges	404,457	404,457	0
STATE FUNDS EXPENDITURES*	3,090,154	3,090,154	0
*With Statutory Dedication Funds			
LIBRARY ACQUISITIONS WILL BE SUPPLANTED WITH OTHER FUNDS			
OTHER FUNDS			
Barataria-Terrebonne National Estuary	1,030,134	594,212	435,922
Restricted Fund (Research, IDC, FEMA)	2,827,003	2,365,624	461,379
Vessel Operations	2,000,000	2,007,803	-7,803
Cafeteria/Dormitory	130,000	121,771	8,229
TOTAL EXPENDITURES	$9,074,821	$8,179,564	$897,727

SOURCE OF REVENUE:	FY07 BUDGET	FUNDS DRAWN	BUDGET BAL
State General Fund	3,037,933	3,037,933	0
Restricted Fund: (Research, IDC, FEMA)			
Federal Funds	2,934,667	2,586,419	348,248
Self Generated Fees	70,000	70,000	0
Interagency Transfers	850,000	303,418	546,582
Ancillary Funds:		0	
Vessel Operations	2,000,000	2,007,803	-7,803
Cafeteria/Dormitory	130,000	121,770	8,230
Statutory Dedications: Faculty Pay	41,509	41,509	0
Statutory Dedications: Library	10,712	10,712	0
TOTAL REVENUE	$9,074,821	$8,179,564	$895,257
Prior Year-End Fund Balances:			
Restricted Fund: (Research)			
Federal/Self-Gen. Fees, IAT, IDC Funds		501,135	
Ancillary Funds:			
Vessel Operations w/IDC		671,014	
Cafeteria / Dormitory		150,449	
Act 971 Carryover (Prev. Maint.)		0	
		1,322,598	

- LUMCON researchers, educators, and vessel operations carried a total of 46 grants and increased grant expenditures to $4.3 million, which is 46% over the previous fiscal year.
- The proceeds from the sale of three donated SES (Surface Effect Ships) LaCrosse ships have been cleared by the Internal Revenue Service, after many years, so that funds of approximately $400,000 (less legal fees) can now be expended through the LUMCON Foundation Account.
- LUMCON started the next fiscal year (’08) in better than usual shape when the Louisiana Board of Regents worked to bring the non-formula institutions under their funding increase umbrella (LUMCON and the LSU Pennington Biomedical Research Center) and more in line with the formula funded universities that were raised as appropriate to reach the southern standard.

2006-07 Employees

Atilla, Nazan, *Senior Research Associate*
Authement, Michael, *Security Guard*
Babin, Brenda Leroux, *I&T Manager*
Boudreaux, Heidi, *Finance Manager*
Boudreaux, Ivy, *Facility Technician*
Bourge, Beth, *Purchasing/Accounts Payable*
Burnett, Gary, *Part-time Captain*
Chauvin, Christian, *Instrument Technician*
Chesney, Ed, *Associate Professor*
Conover, John, *Librarian*
Conover, Murt, *Marine Education Associate*
Cotten, Nicole, *Marine Education Associate*
Crochet, Beau, *Information Technology Specialist*
Dagg, Mike, *Professor*
Delatte, Michael, *Marine Technician*
Delaune, Wilton, *Facility Technician, Fourchon*
DeLuca, Nina, *Senior Research Associate*
Dietlein, Mary Beth, *Public Information Specialist*
Dortch, Quay, *Adjunct Professor*
Duhon, Shanna, *Assistant Librarian*
Duplantis, Gwen, *Cafeteria/Dormitories*
Endsley, Reid, *Facility Technician*
Faulkner, Louis, *Captain & 2nd Captain*
Feigler, Bruce, *Security Guard*
Finelli, Chris, *Associate Professor*
Foret, Poule, *Cafeteria/Dormitories*
Guidry, Chuck, *Administrative Assistant*
Hebert, Jaimee, *Personnel/Payroll Officer*
Hebert, Holly, *Database Specialist*
Hebert, Bill, *Finance Operations Manager*
Johnson, Carolyn, *Cafeteria/Dormitories*
Kastler, Jessica, *Marine Education Instructor*
LeBoeuf, Craig, *Captain R/V Pelican*
LeBouef, Sam, *Vessel Technician*
LeCompte, Kenneth, *Security Guard*
Lirette, Angela, *Research Technician*
Luke, Charo, *Grants/Contracts Officer*
Malbrough, Joseph, *Marine Superintendent*
Martin, Russell, *Facility Technician*
Mendenhall, Warren, *Research Technician*
Morrison, Wendy, *Research Associate*
Pennington, Jack, *Chief Engineer*
Pontiff, Gene, *Security Guard*
Powell, Rodney, *Associate Professor*
Pride, Lora, *Research Associate*
Rabalais, Nancy, *Executive Director & Professor*
Reed, Denise, *Adjunct Professor*
Ren, Ling, *Postdoctoral Research Associate*
Richardi, Danielle, *Research Assistant*
Roberts, Brian, *Assistant Professor*
Robichaux, Richard, *Facility Technician*
Rodriguez, Stephen, *Captain R/V Eugenie*
Sammarco, Paul, *Professor*
Sapp, Adam, *Research Associate*
Semmler, Carrie, *Research Assistant*
Sevin, Carl, *Vessel Technician*
Sevin, Cindy, *Receptionist*
Simoneaux, Wayne, *Marine Center Superintendent*
Thomas, Joseph, *First Mate R/V Pelican*
Walker, Jerry, *Facility Technician*
Westmoreland, Jordan, *Marine Technician*
Whatley, Tanya, *Cafeteria/Dormitories*
Wicher, Lillie, *Administrative Assistant*
Wilson-Finelli, Amy, *Research Associate*

- LUMCON hired a new faculty member, Dr. Brian Roberts, *Assistant Professor.*
- A search continues for two *Assistant Professor* positions in Plankton Ecology (Phytoplankton or Microbial) and Wetland Science (Ecology, Processes or Restoration).
- Wayne Simoneaux took full responsibility as the *Marine Center Superintendent*.
- Joe Malbrough was promoted to *Marine Superintendent.*
- Heidi V. Boudreaux was promoted to *Finance Manager.*
- Lora Pride was appointed *Dive Safety Officer*.

Environmental, Economic, and Social Livelihood

Understanding and Conserving Marine Life

Pelicans Hanging Out original photograph by Thomas Fett -2006 LUMCON Photography Contest 3rd Place Winner, Teen Wildlife -Digitally enhanced. Cover cropped and waterpaint filter applied using a mirror image.

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