Coastal Landscapes Inspire Art/Art Inspires Coastal Awareness

"The aim of art is not to represent the outward appearance of things, but their inward significance." ---Aristotle---

Residents and visitors alike appreciate the beauty of Louisiana's coastal zone—the salt marshes, the barrier islands, the bayous and waterways, and the open vistas of the bays and Gulf of Mexico. Two exhibits this summer featured art inspired by Louisiana's coastal landscape. The first, Second Line, opened in New York featuring works by Southern artists including Houma native, Brooks Frederick, who spent several weeks this summer in LUMCON's observation tower painting a panorama of the landscape. His 'marsh-scape' was among the works featured in the Second Line show. In Lafayette at Gallery 912, Dennis Sipiorski and Karin Eberhardt exhibited in the Hell and High Water show during July and August. All of the art documented impressions of the fragile coastal habitats along Louisiana's barrier islands and wetlands.

When Frederick ascended the first of the seventy-plus steps leading to the observation tower, he did not realize that he would find a perfect view. "It has always been difficult to paint the landscape of South Louisiana," Frederick said, "but the LUMCON tower gives the perfect vantage point." After ten days and countless trips up and down the tower stairs, he emerged with a series of paintings, including a thirteen-foot panoramic view of the marsh and human habitats surrounding LUMCON (seen in the LUMCON News banner above). This and other works will be in his solo showing at Abercrombie Gallery at McNeese State University, Lake Charles, opening January 17, 2008 and running until February 14. Frederick also wants to exhibit in the Washington D.C. area, where he hopes to draw attention to the beauty of Louisiana wetlands and the importance of their preservation.

The Hell and High Water exhibit comprised the works of two artists acquainted with Louisiana's coastal landscape through LUMCON's Coastal Landscape Photography course. The paintings of Dennis Sipiorski, Chair of Southeastern Louisiana University's Department of Visual Arts and LUMCON Coastal Landscape Photography Instructor, are acrylics. Karin Eberhardt, a frequent student of the Coastal Landscape Photography class and a faculty member of Southeastern Louisiana University, specializes in collages of digitally-manipulated photography to remind the public of the multiple aspects of Louisiana's landscape. Hell and High Water was accompanied by historical maps of the barrier islands and other sensitive coastal areas that clearly showed the loss of habitat over recent decades.
Global Economy, Global Climate, Global Environment

If rapidly melting glaciers and polar ice caps do not convince you of global change, a trip to China after 20 years would be an eye opener. Dr. Boesch, LUMCON's first Executive Director, worked in China on the continental shelf off the Changjiang River (the Yangtze) in 1980, as scientific collaborations blossomed after "ping pong diplomacy." He and the other Westerners were an oddity on the streets of Shanghai and stared upon as something strange from another dimension. Few Chinese citizens spoke English, and they wore the mandatory Mao suit. Dr. Boesch encouraged my participation in a research program in 1986-1987 to the Bohai, the sea adjacent to the Huanghe (Yellow River). In 1986 the students were almost all wearing Mao suits or very conservative clothing. Upon our return in 1987, colorful shirts, flowered shirts, t-shirts, blue jeans, and heeled shoes were on deck! I was able to visit Shanghai, Beijing, Guilin and Guangzhou before China entered its period of openness, new economic growth and tourism.

Twenty years later I returned to Shanghai for a two-week period in September, to attend three scientific meetings combined with workshops. The post-colonial, post-Mao period Shanghai that I witnessed in 1986-1987 is now dwarfed by countless high rise skyscrapers, endless traffic, an endless urban landscape (eighth largest in the world with 14.5 million people) crowded with thousands of tourists. It is one of the world's largest ports and became the largest cargo carrier port in 2005. No wonder the landscape and intensity were different. The top of Shanghai's Jin Mao tower at 85 stories is mainland China's tallest skyscraper, ranking fifth in the world, and a great place for a view of the city (or a nightmare).

My scientific purpose was to attend a Joint Land-Ocean Interactions in the Coastal Zone (LOICZ) and the Integrated Marine Biogeochemistry and Ecosystem Research (IMBER) Open Science Meeting on Continental Margins at the East China Normal University campus. Both LOICZ and IMBER are part of the International Geosphere Biosphere Programme (IGBP). Jack Middelburg of The Netherlands and I co-organized and co-chaired the meeting of coastal-systems scientists representing twenty-two countries. Coastal ecosystems are experiencing global, regional, local and human pressures that interactively impact biogeochemical cycles, geomorphology, and marine food webs, having direct consequences for society. The ability to conduct relevant research on coupled natural and human systems on issues of global scale is challenging to say the least.

The second meeting, also in Shanghai, was for the Scientific Committee on Ocean Research (ISCB) Working Group on Natural and Human-Induced Hypoxia and Consequences for Coastal Areas. The trend is evident for more and more areas of coastal water hypoxia caused by human activities on the landscape, particularly agriculture practices, urban wastewater, and fossil fuel burning. New records of hypoxic areas off the Asian continent are increasing. A third meeting was in Yantai, north of Shanghai, on the Shandong Peninsula near where our '986-'987 research cruises departed from Qingdao to the south and past South Korea and Yantai into the Bohai. I joined other international scientists in helping Chinese, Japanese, Korean and Taiwanese scientists celebrate the inauguration of an East Asian Node of LOICZ. The city is very modern and changing dramatically. I understand that Qingdao's transformation has been more dramatic with hill tops being leveled for housing developments, clear cutting of forests, and urban sprawl (does it sound similar to our hemisphere?).

An imprint of China with 1.3 billion people is visible as it strives to reach the same economic standards of more developed Sea. And, nutrient over-enrichment is leading to coastal water quality problems such as ever growing "Dead Zones" of oxygen-depleted water bodies and noxious harmful algal blooms (HABs). But, China is not alone. Very little sediment concentration is half its historic values, while water discharge remains basically steady over hundreds of years.

Shanghai's skyline displays towering architecture for the 1.3 billion Chinese people reaching to achieve economic standards of more developed countries.
EDUCATION: LEAD Campers Rise and Shine

This summer LUMCON hosted its Louisiana Estuarine Awareness and Discovery (LEAD) Camp from July 1 through July 7, 2007 at the DeFelice Marine Center in Cocodrie.

Summer LEAD Camp is offered to students that are entering grades 9 through 12. Students from nearby Montegut and Thibodaux, as well as from Metairie and Alexandria, enrolled and participated. LUMCON Marine Education Associate Jennifer "Murt" Conover who coordinated this year’s camp said, “The students selected every year set the tone for that year’s Camp. This year the tone was “let’s do it!” It didn’t matter what we did, these students were always ready for anything.”

Students explore the marsh during LEAD camp. Photo by Jennifer “Mutt” Conover.

Most students this age spend July 4, with family and sleeping in late, but for the students of LEAD Camp 2007 this was not the case. Conover said, “I set a tough schedule. I am very impressed but not at all surprised with what this group of students accomplished in just five working days.” LEAD Camp offers students early mornings and late evenings. This was often followed by another early morning.

Activities planned for each day are designed to further develop the student’s understanding of marine and coastal science. Conover said, “I understand that not every student that attends camp will become a marine scientist, but I hope that their experiences at LEAD Camp will give them the platform they need to becoming better leaders in whatever area they choose.”

The schedule of activities included several boat trips aboard LUMCON vessels that included a research cruise to Terrebonne Bay aboard the R/V Acadiana, a trip into the salt marsh aboard the R/V Dos Gris, and a trip to Last Island aboard the R/V Whiskey Pass. Mitch Samaha of the Louisiana Wildlife and Fisheries provided a cruise aboard their pontoon boat for LEAD Campers up the Houma Navigation Canal. LUMCON/LSU doctoral student, Julie Prerost gave a crash course in marine invertebrate classification, anatomy, and ecology, in a lecture and laboratory session.

This year’s project was to sample water from the bayou that flows in back of the Marine Center and record water quality data. Data collection started at noon on July 3 and ended at 11:00 am on July 4. They worked in teams that were scheduled for 6-hour shifts for 24 hours. Only four samples were not collected during the sampling period because of bad weather. The LUMCON Bayouside Classroom data collection method was used for this project.

Students presented their research in poster form to their families at LEAD Camp’s Saturday of Science family reception and luncheon. These posters are currently on display in the main lobby of the DeFelice Marine Center.

Conover said, “It was a great week with wonderful students. I am glad that I got to know each of them.” She was so pleased with the students, she invited them to join her in representing LUMCON at the BTNEP sponsored festival La Fete d’Ecologie, which was held in September. Conover said, “I really look forward to working with them again as their science education moves forward.”

LEAD campers, representing LUMCON at La Fete d’Ecologie, share what they learned. Photo by Jennifer “Murt” Conover.
Recalling her initial reaction to the tiny and remote town of Cocodrie where she would spend the next eight weeks, a Coastal Carolina University marine science junior from Buford, Georgia, Emily Speir said, "Where am I?"

Speir, along with Kimberly Domangue and Thomas Widgeon from Nicholls State University, were participants in LUMCON's summer internship program. Speir's and Widgeon's internships involved assisting with biological science research. Speir studied fish spawning and aquaculture under Dr. Ed Chesney, while Widgeon researched marine benthic microalgae under Dr. Nancy Rabalais and Ph.D. student, Melissa Baustian. Domangue, a Mass Communication major, worked under Brenda Leroux Babin in the Information and Technology Department manager developing a series of informational brochures. For Speir, life at LUMCON was a big adjustment. Speir said, "I'm from Atlanta, so there's a bit more to do there than here." However, Domangue and Widgeon, being Louisiana natives, knew what to expect when they arrived. Widgeon said, "I knew I was going to come out here and there would be a marsh, a couple of camps, and a research facility."

Soon after arriving, the interns hit the ground running with challenging projects. Speir studied fish larvae and their feeding habits, as well as studying the effects of LiquaLife™ as a supplement to a fish's daily diet. In the process of her research, Speir faced the task of measuring 400 microscopic LiquaLife™ particles to determine the properties of the liquid feed supplement. Widgeon monitored hypoxia in the Gulf of Mexico and investigated marine benthic microalgae and their relationships to sediment grain size. He was introduced to underwater salvage diving, i.e. lost gear. Widgeon said, "Diving was the most rewarding experience of my internship, because I was able to see firsthand the beauty of the oceans that we are trying to protect."

Kimberly Domangue worked on an altogether different project. She researched three local "critters" and put together a set of brochures featuring coastal wildlife. The brochures were dubbed the "Critter Corner." The name originated after a series of LUMCON News items that were written by Danielle Richardi. Domangue found herself reading and trying to understand science journals and articles. In order to be able to write the information needed, she had to understand it. Domangue said, "I've had very little training in science, so this was a very challenging experience."

However, all of the new experiences and the moments of fun countered the difficulties. Speir and Widgeon went on a 4 A.M. trip to Hammond to retrieve some pompano for Speir's experiment, only to discover that no fish were available until later that day. The three interns also experienced a scare on their field trip to the Aquarium of the Americas in New Orleans when they spotted two large waterspouts that had formed over nearby Lake Pontchartrain.

Near the end of their internships, the students reflected not only on all that they had learned, but also on their great experiences. Speir said, "Before I came to LUMCON, I was not sure what aspect of marine science I wanted to focus on, but after completing my research, I think that I would like to pursue fisheries science." Domangue added, "I learned more than I could have learned at school. I am proud of what I was able to accomplish this summer. And now, I know that I can succeed in unfamiliar situations."

Their educational experiences would not have been the same, they said, without the support and encouragement of the entire staff at LUMCON. Domangue said, "What will I miss the most? The people that I got to see and work with every day." Widgeon added, "What I'll miss the most are the people. The research facility is amazing, but it would not be the same without the people."
Workshops for a Sustainable Barataria-Terrebonne Estuary

Barataria-Terrebonne National Estuary Program (BTNEP) and the South Central Planning and Development Commission (SCPDC) hosted two workshops in August to promote sustainable development in the Barataria-Terrebonne Estuary. In the first, Mart Black from Planning Concepts and Strategies discussed tools that planners and local governments can use to implement comprehensive plans. Mike Hollier, Planning Manager for Lafayette Metropolitan, explained how Lafayette Parish is implementing Smart Code to anticipate and deal with problems inherent to Lafayette’s dramatic growth rate. Chris Piehler, Director of the Clean Waters Initiative of the Louisiana Department of Environmental Quality (LDEQ), rounded out the workshop by describing how they are using the Bayou Lafourche watershed as a model for cleaning up sewage pollution in the state. This workshop provided standard and non-standard tools for implementation of comprehensive plans.

The second workshop focused on Sustainable Economic Development through wise use of human resources. The wide array of skill sets in the petroleum industry could easily become a resource in other geographic regions, or their skills could be adapted to related industrial and environmental work, explained Jo-Anna Jones, a planner for SCPDC. St. James Parish President, Dale Hymel, shared the lesson his parish learned when attempting to establish a steel mill—act regionally rather than locally to effectively compete for large industries. Mike Ferdinand, CEO for Terrebonne Economic Development Authority, explained industrial clusters. He said, “We must honestly evaluate who we are, what we have, and what we can actually achieve as a region to develop clusters that will be successful.” Ancil Taylor of the Bean Companies presented a video on long-distance sediment slurry pipelines to create marshes. Andrew Barron of BTNEP identified this potential industrial cluster as a critical tool in coastal restoration and sustainable economic growth for South Louisiana.

Bayou Lafourche Project Design

Bayou Lafourche is scheduled to return as a major coastal restoration project. The Louisiana Department of Natural Resources (LDNR) will lead the “Mississippi River Reintroduction into Bayou Lafourche” project. The work involves surveying, cross sections, soil sampling and aerial photography as input to the final design.

Robert Routon, DNR Project Manager said, “This project is coastal restoration and conservation at its best.” The project will bring an additional 1,000 cubic feet of water per second down the bayou to maintain water levels, reduce saltwater intrusion and provide desperately needed fresh water to sustain the coastal marshes. It will also stabilize the freshwater supply for over 300,000 residents, businesses and industries such as the petroleum transport center at Port Fourchon.

For additional information contact BTNEP at 985-447-0868 or susan@btnep.org.
Dr. Nancy Rabalais. LUMCON’s Executive Director, was elected as a Council Member of UNOLS, the University-National Oceanographic Laboratory System, in October. This organization oversees and schedules oceanographic research vessels, including the R/V Pelican, in collaboration with the National Science Foundation.

Dr. Rabalais attended the October 9 meeting of the Fleet Improvement Committee and the open Council Meeting on October 12-13. Being on the UNOLS Council will provide a much closer link to decisions concerning overall ship operations, insight into future plans and a point of view from a coastal research institution. LUMCON is one of 19 operator institutions among the 60 member institutions.

Dr. Nancy Rabalais, LUMCON’s Executive Director, was appointed to the National Science Foundation Advisory Committee to the Environmental Research and Education (ERE) Directorate, and attended her first meeting in October.

The ERE directorate is the only one of NSF’s directorates to be permanently established across directorates with dedicated funds from Biological Science, Geosciences, and Human and Social Dynamics. ERE directs programs in Energy and Climate Change Technology, Nanotechnology, Environmental Research, Dynamics of Coupled Natural and Human Systems, investment in Environmental Observatory Networks, and was the initiator and architect for NSF’s Biocomplexity in the Environment Priority Area.

As part of this panel for the next three years, Dr. Rabalais hopes to be a positive influence on NSF’s Environment and Education portfolio.

Dr. Paul Sammarco was elected Executive Director-Elect of the Association of the Marine Laboratories of the Caribbean in June 2007. He will serve 2 years as Elect until 2009; then, he will be Executive Director for a 4-year term until 2013.

The Association is comprised of 30 marine labs and research institutions across the U.S., Caribbean, Central and South America. LUMCON is a member. Dr. Sammarco’s position will help steer the association, determine and implement policy, and serve as liaison for AMLC and various federal and international government agencies. Find out more at http://www.amlc-carib.org.

On October 25, Senator Reggie Dupre and Representative Damon Baldone hosted a Joint Legislative Committee on Coastal Restoration and Flood Control at LUMCON. Scott Angelle, Secretary of the Department of Natural Resources, presented to Tony Alford, President of the Terrebonne Levee & Conservation District, a check for $40 million to begin construction on the Houma Navigation Canal Lock Complex Project. Members of the public were present to give their views on coastal restoration projects.

LUMCON hosted the Breaux Act Project Dedication Ceremony on October 26. Federal, state and local government officials gathered as the sun rose. Dr. Nancy Rabalais welcomed guests reminding them that just a few days ago, water was flooding the area where they were now sitting. LUMCON’s landscape was the departure point as guests and officials left for excursions to the six dedicated projects. Tours reached the restoration projects by boats, seaplanes, and helicopters, to the delight of officials, visitors and LUMCON employees.

Welcome aboard Dr. Brian Roberts, LUMCON’s newest faculty member. Roberts earned his B.S. in 1995 at the College of William and Mary in Williamsburg, VA; his M.A. in 1996 at Boston University Marine Program, Marine Biological Laboratory in Woods Hole, MA; and his Ph.D. in 2004 at Cornell University in Ithaca, NY. Roberts says he sees LUMCON as a good fit and opportunity for him.

Photo Contest on “Boats of Louisiana” deadline is January 31, 2008.
Help LUMCON save our natural resources! If you have access to email, we encourage you to sign up at lumconnews@lumcon.edu to receive LUMCON News online, rather than through the mail.

October 26, 2007 students walk on the New Cut Dune & Marsh Restoration Project that connects East and Trinity Islands of the Isle Derniere chain. Photo by Trudy V. Hebert