

Alabama current connection

Dr. Toby Bolton Takes the Helm as Director of the MBNEP

BY TOM HERDER, MOBILE BAY
NATIONAL ESTUARY PROGRAM

The Mobile Bay National Estuary Program (MBNEP) is pleased to announce the appointment of Dr. Toby Bolton as its new Director. Dr. Bolton comes to Mobile from Adelaide, Australia, where he lectured in Marine Biology at Flinders University and managed the Lincoln Marine Science Centre. During his tenure there, in one of the largest fishing and aquaculture centers in the southern hemisphere, he gained considerable experience working with a diverse range of stakeholders, including conservation organizations, industry, and community groups.

Dr. Bolton's educational background includes a Bachelor of Applied Science Degree in Natural



Dr. Toby Bolton

Resource Management at the University of Adelaide, Australia, where he majored in Remote Sensing and Land Assessment and studied the economic and sociological aspects of natural resource management. His graduate and doctoral studies at Flinders University focused on the functional performance and evolution of larval forms of marine invertebrates. He further diversified his research interests

through post-doctoral appointments at the Dauphin Island Sea Lab, where his studies included the ecology of invasive species in marine environments.

"I am excited to be here and amazed at the diversity of efforts in which the NEP is involved. I look forward to seeing the Program rise to even greater heights," said Dr. Bolton.

Patti Powell Named New Director of State Lands Division

BY KENNY JOHNSON, ADCNR, STATE
LAND DIVISION

Patti Powell has been named as Director of the Alabama Department of Conservation and Natural Resources (ADCNR), State Lands Division. Ms. Powell will oversee Division activities relating to all state-owned lands, including oversight of the Alabama Coastal Area Program, the Weeks Bay National Estuarine Reserve, the Natural Heritage Section and the Forever Wild Land Acquisition Program. The State Lands Division manages undeveloped state-owned lands, most of which are held in trust for specific purposes.



Patti Powell

"We are very happy to have someone with Patti's background and experience as our new Lands Director," said Barnett Lawley, ADCNR Commissioner. "She has hit the road running, and everyone in our Department is very glad that we made this appointment."

Ms. Powell served as In-House Counsel and Vice President of Credit Quality for Guilford Capital Corporation in Montgomery from 2000 to 2006. Guilford was acquired by Column, a Credit Suisse Company, in 2006, where Ms. Powell served as Vice President – Legal, prior to joining ADCNR in late 2008. She replaces James H. Griggs, who retired in December 2008. *Continued on page 2*

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Coastal Corner

By AMY KING, ADCNR, STATE LANDS DIVISION, COASTAL SECTION

22nd Annual Alabama Coastal Cleanup

The 22nd Alabama Coastal Cleanup is scheduled **Saturday, September 19, 2009 from 8:00 a.m. until noon.** Your support and participation in the Alabama Coastal Cleanup provides a unique opportunity to be a part of the State's largest volunteer effort focused on the removal of marine debris from the waters edge. Marine debris, which is trash and litter discarded into the water, is not only an eyesore, but it poses a real threat to both marine wildlife and humans.

The Alabama Coastal Cleanup engages local citizens to remove trash and debris from the Gulf Coast beaches and waterways, to identify the sources of debris, and to change the behaviors that cause pollution. Since 1987, over **55,000** volunteers have collected **1,034,047** pounds of debris and litter from **3,315** miles the Alabama shoreline and waterways.

There are twenty cleanup zones across Mobile and Baldwin County. For more information about how to get involved with the 22nd Annual Alabama Coastal Cleanup, please call 251-621-1216 or visit www.AlabamaCoastalCleanup.com.

The Alabama Coastal Cleanup is sponsored by the Alabama Department of Conservation and Natural Resources State Lands - Coastal Section, Alabama People Against a Littered State, Baldwin County Commission, Bebo's, ExxonMobil, Honda Manufacturing of Alabama, Alabama Gulf Coast Convention and Visitors Bureau, Alabama Department of Transportation, ALFA, Baldwin EMC, Bay Title Insurance, The Original Oyster House, and Vulcan Materials.



Trash dumpster at Ono Island full of debris.



Volunteers from USA collecting trash and debris from Three Mile Creek.

Patti Powell Named New Director of State Lands Division *Continued from page 1*

"As a native Alabamian, I take a great sense of pride in our state, and look forward to helping promote the stewardship of Alabama's natural resources," said Ms. Powell. "I am also thankful for the unique opportunity to build upon Mr. Griggs' impeccable

reputation and dynamic leadership of the Division."

Before moving to Montgomery in 2000, Ms. Powell, a native of Hoover, AL, was a partner with Burr & Forman LLP, a law firm based in Birmingham that serves national and international clients. She is

a graduate of the University of Alabama's College of Communication and School of Law and is a member of the Alabama State Bar Association.

Estuary Reflections

DR. TOBY BOLTON, DIRECTOR, MOBILE BAY NATIONAL ESTUARY PROGRAM

How Close is Mobile Bay to A “Tipping Point?”

I finally arrived to take up the position as Director of the Mobile Bay National Estuary Program (MBNEP) in early April. My sincere thanks go to everyone for giving me such a warm welcome and so much support over the past month. I look forward to working with all of you.

For those of you that I have not yet met, my background is in marine ecology but my interests in environmental issues are broad. I have conducted research in the Gulf of Mexico and worked as a post-doctoral scientist at the Dauphin Island Sea Lab for five years. Prior to taking the position with the MBNEP, I was a lecturer at Flinders University in South Australia. Having grown up in Adelaide, South Australia, this was very familiar territory for me. A large part of my previous position involved managing the Lincoln Marine Science Centre (LMSC) in Port Lincoln, South Australia. This laboratory is located in the heart of the fishing and aquaculture industries, and much of the research that is conducted there is aimed at the development of aquaculture technologies and sustainable fisheries management. I currently have three PhD students that I am still supervising based at LMSC. Two of these wonderful students are coming to the end of their research and will be visiting Mobile later in the year. All of my students are working on aspects of the reproductive ecology of marine organisms. Lana Roediger is investigating how mothers allocate energy to offspring in environments that are highly variable. The primary model for her research is the world’s smallest sea star, *Parvulastra parvovipara*. Being a mere 5 mm in diameter and existing in only seven small rocky intertidal platforms on the remote west coast of South Australia, it’s a particularly odd animal. Erin Bubner is working towards closing the

life-cycle of southern bluefin tuna for aquaculture. Her work is being conducted in conjunction with an aquaculture company and is commercially sensitive — I could tell you more, but then I would have to kill you! Nadine Hackett is examining the reproductive ecology of the western king prawn but is currently on leave while she does some reproducing of her own!

Prior to accepting the position with the MBNEP, I thought long and hard about the major issues facing the region and what direction I would like to take the organization. Like many communities in low lying coastal areas, residents, businesses and industries along the Gulf Coast are vulnerable to storm events and rising sea levels. As we know, this fact was dramatically demonstrated by Hurricane Katrina. Based on a growing body of research evidence, the threat posed by storm events in this region is likely to increase over the next century due to rising sea levels and oceanic temperatures. The International Panel on Climate Change gave three projections for sea level rise in 2006 ranging from 15 cm to 90 cm over the next century (Church and White 2006, Bindoff et al., 2007). However, some more recent oceanographic modeling suggests that the upper boundaries of these projections may be conservative and that sea levels may rise by more than a meter over the next century (Grinsted et al. 2009). While some skepticism remains about the validity of these projections, the potential consequences of even moderate levels of sea level rise are too great to not factor into coastal planning processes.

Sea levels have risen globally over the past 10,000 years as part of a natural warming climatic cycle (Bindoff et al., 2007). This sea level rise has had a major influence on the geomorphology of the Gulf Coast (Milliken et al., 2008). For example, what is now Mobile Bay was primarily bay head delta until approximately 8,000 years ago. At this point in time, a reduction in the amount of sediment being transported by rivers to the area, coupled with an increase in sea level, resulted in a sea water incursion that formed Mobile Bay (Milliken et al. 2008, Rodriguez et al., 2008). What is really striking about the formation of

Mobile Bay is that it occurred very rapidly, suggesting that while the geomorphology of the area is stable over millennial periods, it has “tipping points” that result in rapid reorganizations of the system. What concerns me greatly is that we do not

“...we do not understand what the consequences of modifications of the Mobile Bay – coupled with projected increase in sea level – may be for the region.”

understand what the consequences of modifications of the Mobile Bay watershed – coupled with projected increases in sea level – may be for the region. I view this as very serious issue facing Mobile Bay and the Gulf Mexico. We need to address these questions with urgency and gravity because the potential economic, social, and environmental consequences of not doing so are enormous. My aim over the next twelve months is to make progress towards understanding how changes in sediment transport and sea level may influence the geomorphology of the Bay and the risks associated with storm events.

(For complete citations, visit http://www.mobilebaynep.com/site/news_pubs/current_connection.htm.)

Indianapolis High School Students Spend Spring Break Restoring Wetlands at the Alabama State Port Authority Arlington Park Project

BY TOM HERDER, MOBILE BAY NATIONAL ESTUARY PROGRAM

Seventeen Lawrence Central High School students from Indianapolis spent part of their spring break working with local contractors to plant emergent grasses at the Arlington Park wetlands construction project of the Alabama State Port Authority (ASPA). The zoology and botany students in trip organizer and teacher Kathy Madren's Roots N Shoots Club, boarded a bus on Thursday, March 26 after school let out, traveled overnight to Mobile, and arrived at the Brookley shoreline early on Friday, March 27 to begin work. They worked under the direction of Paul Humbert of Southern Native Plants, Consultant J. J. McCool, and Mobile Bay National Estuary Program staff. Six adult chaperones worked with the students collecting over twenty

bags trash and debris from along the shoreline for disposal then planting cord grass (*Spartina patens*) along the fringe of the newly constructed marsh.

Ms. Madren said "Our club is all about trying to help our environment locally, nationally, and internationally. We stress service, and I challenge them to 'make a difference.' We want to see new things and learn about different ecosystems, but also to give back while we are there." The group stayed at the Dauphin Island Sea Lab and participated in Discovery Hall learning programs while enjoying early spring on the Gulf coast. They also "enjoyed" the violent storms that occurred early Saturday, March 28 before their Sunday, March 29 departure and return home.

The wetlands construction is part of the \$8.3 million ASPA Arlington Park project designed to mitigate the impacts of the

Choctaw Point Container terminal and increase public access to the western shore of Mobile Bay. Salt marshes are productive habitats that provide many valuable services to the coastal environment. Submerged portions of aquatic plants provide habitat for many invertebrates that in turn provide food for fish, shellfish, birds, and other wildlife species. Many recreationally and commercially important fishery species spend the early part of their lives in these marshes which offer protection from predators. When aquatic plants die back in the winter, their decomposition by bacteria and fungi provides food called "detritus" for many fish and aquatic invertebrates. Seeds from marsh plants are consumed by ducks and other birds.

Groups Work Toward Improving Land Conservation Efforts

BY MELISSA SCHNEIDER, MISSISSIPPI-ALABAMA SEA GRANT CONSORTIUM

Existing and potential land trust partners recently discussed the possibility of coordinating conservation efforts in coastal Alabama. They got together at a workshop that kicked off an initiative to identify gaps in conservation efforts and open discussion among groups.

A land trust is a nonprofit organization that can purchase, receive or manage land and easements for conservation.

The Mississippi-Alabama Sea Grant Consortium and Auburn University Marine Extension and Research Center hosted the workshop for land conservation stakeholders. The Mobile Bay National Estuary Program is funding the conservation initiative.

Fourteen individuals representing land trusts and organizations interested in land conservation attended the workshop at the Brookley Center. Tim Mulvaney of the Mississippi-Alabama Sea Grant Legal Program talked about the legalities of operating a land trust, and Mark Pentecost

of Alabama Land Trust and Judy Steckler of Land Trust for the Mississippi Coastal Plain gave overviews of the inner workings of a land trust. During a facilitated discussion, attendees explored partnership possibilities and committed to better coordinated conservation efforts in Mobile and Baldwin counties.

For more information about the conservation initiative, contact Jody Thompson at jody.thompson@auburn.edu or 251-438-5690.

Fishermen's Workshop Offers Gear and Loan Information

Mon Luis Island Waterfront Property Owners Meet with MBNEP and MASGC about Potential Shoreline Stabilization Effort

By TOM HERDER, MOBILE BAY NATIONAL ESTUARY PROGRAM

On Tuesday, April 7, at the St. Rose of Lima Catholic Church Parish Hall over 50 Mon Luis Island waterfront property owners attended a meeting to discuss a possible collaborative shoreline stabilization effort. Invitations were sent and the meeting was hosted by the Mobile Bay National Estuary Program (MBNEP) and the Mississippi Alabama Sea Grant Consortium (MASGC) to assess interest in a NOAA Community-based Restoration Partnership (CRP) Grant-funded "living shorelines" project. The island's Bay shoreline has been hammered by wave energy from recent storm events and routine boat traffic, forcing many property owners to annually devote money and efforts towards measures to protect property.

The property owners were brought together to offer perspectives about the present situation along the Bay's western shore, discuss current strategies used to stabilize and restore shorelines, and discuss the concept of a using living shorelines techniques as alternatives to shoreline armoring. Speakers included Dr. Chris Boyd of MASGC, who introduced living shorelines technology; Steven Scyphers, a graduate student of Drs. Sean Powers and Ken Heck of the Dauphin Island Sea Lab who introduced work being conducted near Point Aux Pines and Helen Wood Park; and Tom Herder, who showed some of the projects undertaken by Dr. Scott Douglass of the University of South Alabama. Property owner input gathered at the meeting is currently being considered by MBNEP staff members looking forward to the opportunity to work with residents to address shoreline erosion in a manner that enhances habitats and coastal living resources.



Mississippi-Alabama Sea Grant Fisheries Technologist Peter Nguyen displays a new type of netting that has helped some shrimpers save money on fuel.

By MELISSA SCHNEIDER, MISSISSIPPI-ALABAMA SEA GRANT CONSORTIUM

About 25 Vietnamese-American fishermen attended a financial and business workshop for shrimpers Feb. 5 in Biloxi at the Hope Community Center.

Mississippi-Alabama Sea Grant Fisheries Technologist Peter Nguyen told shrimpers about a new type of webbing, called Sapphire netting. Although this lighter, stronger material costs about twice as much as nylon, shrimpers who have used it have reported saving money on fuel. In the long run, the nets can pay for themselves and increase profit, he said.

Leo Esclamado of the National Alliance of Vietnamese American Service Agencies (NAVASA) told shrimpers there are funds available to help them outfit skimmer boats with equipment necessary to harvest oysters. While the idea is not new, oystering can become an additional revenue source for fishermen who have small boats, he said, and, there is a loan program that can help them get started.

Other NAVASA volunteers and representatives offered financial and business advice. They also gave information about the Access to Equity (A2E) program, which offers loans of \$1,000 to \$15,000, to refugees and low-income people who were devastated by Hurricanes Katrina and Rita. The loans can be used to help rebuild, start, or expand businesses. The program aims to make communities self-sufficient. One-on-one counseling, business plan development, and access to financing options are some of the services included in the loan program.

Consultant Andy Tran, a NAVASA volunteer, said he took the opportunity to remind fishermen to make time each month to keep up with their accounts and bills. Because they so often are working, they tend to forget to dedicate time to those activities, he said. Fishermen showed interest in the loan program, Nguyen said, and 12 applications were started after the meeting. The workshop was sponsored by NAVASA, Mississippi-Alabama Sea Grant, Boat People SOS and Hope Coordination Center.

Spanish Fort High School Students Design Cups for Deep Sea Experiment and Raise Funds for the Mobile Bay NEP

By TOM HERDER, MOBILE BAY NATIONAL ESTUARY PROGRAM

The winner of a contest held among Spanish Fort High School (SFHS) Advanced Marine Biology students was a styrofoam cup decorated by junior Jessica Coccaro. What does “it” win? For being the best decorated, it will be released by the Research Submersible *Jason II* almost three miles down in the Lau Back-arc Basin in the deep Pacific near Fiji. When it is returned to Spanish Fort High and its designer, Jessica, the daughter of Mr. and Mrs. David Caccaro of Spanish Fort, it will be approximately the size a large thimble, due to the great pressure at those depths.

The contest was organized by Ms. Jane Nall, a biologist and teacher at Spanish Fort High, in conjunction with a Penn State

University outreach/education program. Students from her classes designed and decorated the white coffee cups in “thirds” – one third of the cup was devoted to the dive, one third to Spanish Fort High School, and the remaining third to the beneficiary of the project, the Mobile Bay National Estuary Program (MBNEP). SFHS students voted for their favorites by dropping money into their favorite cup, and Jessica’s cup garnered the most money. All proceeds from the contest were donated to the MBNEP.

Ms. Nall presented a check for \$100 to the MBNEP on Wednesday, March 4. The donation will be directed towards promoting wise stewardship of the water quality and living resources of Alabama’s coastal waters, which is the mission of MBNEP and the goal of the Marine Biology students at Spanish Fort High.



Jessica Coccaro holds the contest winning cup.

Grass Roots Organizations Receive YSI Instrument Training from Manufacturer

By TOM HERDER, MOBILE BAY NATIONAL ESTUARY PROGRAM

On Wednesday, March 11, YSI, Inc. representatives trained four local grassroots organization members and partners on the use of their new YSI 556 Multiparameter Water Monitoring Instruments. Matt Longfield and Kyle Waits, both from the Baton Rouge office of YSI, provided the training at the Arthur C. Tonsmeire, III Resource Building Multi-Purpose Center at the Weeks Bay Reserve. The Dog River Clearwater Revival, Little Lagoon Preservation Society, Weeks Bay Foundation, and Wolf Bay Watershed Watch, each place-based member organizations of the

Mobile Bay National Estuary Program’s (MBNEP’s) Community Action Committee, received the water monitoring devices through MBNEP Mini-Grants Program. Each organization has been involved in monitoring local water quality, either with Alabama Water Watch (AWW) manual test kits or YSI electronic devices. Each applied for funds to purchase the devices, but the MBNEP purchased discounted units from YSI which they provided the organizations through Memoranda of Agreement.

The four organizations agreed to certain provisions to get the monitors. They will provide the MBNEP with specific monitoring plans for their waters and make their data available electronically to the public, and

members using the YSI meters must be certified AWW water quality monitors.

The YSI 556 is capable of measuring temperature, pH, salinity, and dissolved oxygen through the range of different salinities found in their estuarine waters. Training focused on calibration of the devices, with field testing in Weeks Bay waters to test calibration and proficiency. Organization members and Riviera Utilities staff, also on hand for the training, were positive about the session. Experienced water quality monitor Homer Singleton of Alabama’s Outstanding Water Wolf Bay said, “The maintenance tips were invaluable. I don’t know that I would have gotten that without the session.”

Miller to Work with Communities on Water Quality Issues

BY MELISSA SCHNEIDER,
MISSISSIPPI-ALABAMA SEA
GRANT CONSORTIUM

Christian Miller has joined the Mississippi-Alabama Sea Grant Consortium (MASGC) as an extension specialist focusing on nonpoint pollution issues. He works out of the Auburn University Marine Extension and Research Center (AUMERC) in Mobile and serves as the Alabama-Mississippi Clean Marina Program coordinator and the Coastal Alabama Clean Water Partnership facilitator. His newly created position is funded through the Alabama Clean Water Partnership, AUMERC, MASGC and the Mobile Bay National Estuary Program, which are involved in various water-quality programs.



Christian Miller

Miller received a bachelor's degree in biology from Jacksonville State University and a master's degree in fisheries science and applied aquacultures from Auburn University.

Prior to joining MASGC, Miller served as an extension agent at the Miami-Dade County Extension Service in Florida from 2004 to 2008,

primarily organizing informal outreach and education programs in the areas of aquaculture and water science. He also enjoyed organizing annual youth sport fishing programs for the local 4-H youth development program.

"I'm excited to have the opportunity to come back home to Alabama and work on water quality issues that are important to protecting the natural resources of the Gulf coastal communities," he said.

Alabama current connection

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Editor:

Tom Herder, *Mobile Bay NEP*

Alabama Current Connection welcomes comments and suggestions from its readers. If you have recommendations for future articles or would like to subscribe, please contact:

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The editorial staff reserves the right to edit submissions for content and grammar.

Current events

May

Saturday, May 16, 8:30 a.m. - 2 p.m.

What: Dog River Clearwater Revival 7th Annual Dog Paddle (half and one mile canoe and kayak races and a seven mile downriver race to Dog River Bridge)

Where: Dog River (formerly Luscher/Navco) Park

Contact: Ann Gathings at 454-2322 or Claire Wilson at 479-5599

June

Saturday, June 6, 6:00 p.m.

What: Dog River Clearwater Revival Dog River Run (Two mile run ending at the access road along Airport Blvd. near Wings Restaurant. Also a 400 meter children's Doggie Dash.

Food and refreshments will follow the race with an after-race party at Wings.

Where: Matthew's Park off of Michael Blvd.

Contact: Ann Gathings at 454-2322 or Claire Wilson at 479-5599

September

Saturday, September 19, 8:00 a.m.

What: 22nd Annual Coastal Cleanup

Where: Various locations around Mobile Bay and coastal Alabama
<http://www.alabamacoastalcleanup.com/cleanup-zones/>

Contact: Amy King at the Alabama Department of Conservation and Natural Resources, State Lands Division at 251-621-1216 or amy.king@dnr.alabama.gov

Alabama current connection

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Marine Environmental Science Consortium
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Little Bay Restoration Project Gets Underway

*DR. CARL FERRARO, NATURAL
RESOURCE PLANNER, ADCNR, STATE
LANDS DIVISION, COASTAL SECTION*

On April 10, 2009, J & W Marine Construction of Bayou la Batre, placed 80 wave attenuation devices (WADS) to the west of the mouth of the bayou, initiating construction of the Alabama Department of Conservation and Natural Resources' Little Bay Restoration Project.

This project, located along the shores of the Forever Wild tract just west of Bayou la Batre, will eventually restore approximately 32 acres of salt marsh through the placement of a 5,200' segmented permeable breakwater, the placement of dredged sediments, and the planting of marsh vegetation. The project will restore the shoreline to a pre-1950 alignment, rebuilding marsh and repairing the breach in the peninsula which historically enclosed Little Bay.

The WADS are a small part of the project intended to test the suitability of the use of WADS for constructing the segmented permeable breakwater.



Under the watchful eye of ADCNR and Volkert & Associates, Inc. staff, J&W Marine Construction places the first set of experimental WADS at the Little Bay Restoration site.

If over the next month or so the WADS achieve the level of wave attenuation desired and do not appear to settle into the bottom sediment at an unacceptable rate, WADS may be chosen as the preferred alternative for construction of the remainder of the breakwater.

The public notice period for the U.S. Army Corps of Engineers permit for the project closed on April 23, 2009.

The issuance of a request for bids for construction of the project should be issued in mid-May, 2009, with a hope of initiating construction by mid-July, 2009.

For more information about the project, please contact Carl Ferraro at the ADCRN-State Lands Division-Coastal Section.