The Tidal Flat

Fall Edition 2008

NCNERR Completes Site Profile

by John Fear, Reseach Coordinator

The North Carolina National Estuarine Research Reserve (NCNERR) has worked extremely hard over the past three years to complete its Site Profile. The Site Profile is a NOAA required document that compiles all known information regarding the National Reserve properties (Currituck Banks, Rachel Carson, Masonboro Island, and Zeke's Island) including their climate, geology, biology, and environmental stressors. The document also identifies areas where current information is lacking, providing direction for future research and education activities. This is a substantial accomplishment for NCNERR and represents the combined effort of all NCNERR staff members.

The NOAA approved 165-page Site Profile plus appendices are viewable and downloadable from the Reserve's new website at **www.nccoastalreserve.net**. A small number of hard cover editions of the Site Profile will be printed.

State Preserves Additional Land on Masonboro Island

by Michele Walker, DCM Public Information Officer

The Division of Coastal Management has completed an $89,150 deal to purchase the largest of 13 remaining privately owned parcels on Masonboro Island in New Hanover County. Acquisition of this tract will add 23.3 acres to the Masonboro Island component of the North Carolina National Estuarine Research Reserve.

"The preservation of these additional acres is an important part of achieving the goals of the N.C. NERR program," said Jim Gregson, director of the N.C. Division of Coastal Management. "Our Reserve program is dedicated to preserving coastal natural areas for education, research and compatible recreation," Gregson said. "It has long been a goal of DCM to add the privately owned parcels on Masonboro Island to our Reserve system as we are able to do so."

Funding for the preservation effort came from the National Oceanic and Atmospheric Administration's National Estuarine Research Reserve System.

The 5,000-acre Masonboro Island component of the North Carolina National Estuarine Research Reserve has been protected and managed by DCM since its designation as a reserve in 1991. It is the largest undisturbed barrier island along the southern coast of North Carolina and is also part of the N.C. Coastal Reserve, created by the General Assembly in 1989.

New Office Space for Wilmington Staff

by Byron Toothman, Research Associate

The Masonboro Island, Zeke's Island, Bald Head Island, and Bird Island components of the Reserve are located in New Hanover and Brunswick Counties in close proximity to UNCW's Center for Marine Science at Myrtle Grove (CMS). The University and the Reserve have developed a partnership in mutual pursuit of their goals with respect to research, partnership building, and community outreach. The N.C. Department of Environment and Natural Resources contributed in an excess of $225,000 toward the design and development fees for the expansion of the CMS facility. In exchange, the University has provided approximately 1,450 sq. ft. of new lab and office space for the Reserve at the Center's Myrtle Grove campus. In addition to the new facilities, the Reserve enjoys full access to the University's support services and staff.

Septic System DVD For Realtors

by Lori Davis, Education Specialist

The Coastal Training Program (CTP), with the help of N.C. State Cooperative Extension and the Carteret County Health Department,have completed a septic system DVD for realtors. This project helps build on the already very successful septic system workshops for realtors that the Reserve has been conducting since 2002. The DVD highlights different system types that are found in coastal North Carolina and demonstrates a system pump-out. Downloadables are available for more information at the end of the DVD. If you are interested in a copy of the DVD contact Whitney Jenkins, CTP Coordinator, at 252-838-0882 or whitney.jenkins@ncmail.net.

Announcing New Reserve Websites And Logo

by Whitney Jenkins, Coastal Training Program Coordinator

The Reserve is proud to announce the launch of two new Web sites! The main site, **www.nccoastalreserve.net**, includes basic information about the Reserve, has links to Research, Education and Stewardship activities, and includes a calendar of upcoming events, maps of each site and a photo gallery. The Coastal Training Program's Web site, **www.nccoastaltraining.net**, has online workshop registration and the ability to post upcoming events of partner agencies.

In addition to our new websites, we have a new, updated logo. Look for our new logo on updated letterhead, signs and other promotional items.

NC COASTAL RESERVE & NATIONAL ESTUARINE RESEARCH RESERVE

Rachel Carson Reserve Honors Volunteers

by Michele Walker, DCM Public Information Officer

Volunteers with the Rachel Carson component of the North Carolina Coastal Reserve and National Estuarine Research Reserve were honored for their service with an appreciation lunch on Thursday, April 24. The volunteers bring a wide variety of skills to the Reserve, including leading public field trips, assisting with clean-ups, bird identification consulting and boat assistance.

"We really depend on our volunteers to help educate and inform visitors to the Reserve, especially during the busy summer months," said Coastal Reserve Manager Rebecca Ellin. "Their support is invaluable."

Those honored in April were Pat and Bob Rapaport, Bruce McCutcheon, Mike Bertino, Ann Goellner, John Fussell, John Davis, Meg Luther, Ron McComas, Paul Dunn, Sharon Owens and Paige Clark with the Outer Banks Chapter of the Mother/ Daughter Charity League. The Carolina Estuarine Reserve Foundation, a nonprofit organization dedicated to supporting the reserve, provided lunch for the event.

From left, Paige Clark, Pat Rapaport, Bob Rapaport, Meg Luther and Ann Goellner

Rachel Carson Reserve Big Sweep

by Paula Gillikin, Rachel Carson Site Manager

Fourty-four volunteers helped to collect data and remove debris from the Rachel Carson Reserve over the course of two days in early October as part of North Carolina's annual Big Sweep. Those that volunteered included reserve staff, Division of Coastal Management staff, 4-H groups, and Rachel Carson Reserve volunteers. Nearly 1.5 miles of shoreline were covered and 1,400 pounds of debris removed – most of the weight being attributed to construction and dock debris. Two of our most interesting finds were a television and a dolphin plaque.

N.C. Big Sweep, founded in 1987 as Beach Sweep, is the nation's first statewide waterway cleanup. The purpose is to rid our watersheds of litter by promoting environmental education and an annual statewide cleanup. Since its inception more than 230,000 volunteers have participated in the event and collected over eight million pounds of trash from North Carolina watersheds.

Big Sweep in Carteret County is sponsored and orgainized by N.C. State's Cooperative Extension Service.

Thanks to all of the volunteers for helping to make the Rachel Carson Reserve Big Sweep a success!

Mo Will, Sharon Owens, Kelly Price and Paula Gillikin were just a couple of the many volunteers participating in the clean up.

Rachel Carson Reserve Dedicates New Boardwalk on Carrot Island

by Michele Walker, DCM Public Information Officer

Department of Environment and Natural Resources Secretary Bill Ross recently dedicated the new “green” boardwalk on Carrot Island during a ceremony at the Rachel Carson Reserve in Beaufort.

The boardwalk is a cooperative effort between the town of Beaufort and the Reserve. Funding for this project comes from the N.C. Division of Coastal Management’s Public Beach and Coastal Waterfront Access Program, the town of Beaufort and a memorial stewardship fund for DeSales Harrison Jr.

The decking and railing materials are manufactured from reclaimed wood and plastic and provide a surface that is splinter-free, highly durable and more environmentally sustainable than 100 percent wood decking.

The boardwalk traverses both marsh and successional dredge spoil habitats, providing an opportunity for visitors to experience the Reserve’s diverse array of plant and wildlife species with minimal impact to the site. Informational displays along the way highlight interesting facts about the surrounding flora and fauna.

The boardwalk entrance is on the Taylor’s Creek side (north side) of the Reserve directly across from the Front Street boat ramp at Lennoxville Road. There is no docking facility available but boaters can anchor along the shoreline to access the boardwalk.

Inundation Mapping Training A Success

by Whitney Jenkins, Coastal Training Program Coordinator

On July 8 and 9, the Reserve’s Coastal Training Coordinator and Geographic Information Specialist partnered with NOAA’s Coastal Services Center and Cape Fear Community College to offer Coastal Inundation Mapping training. The training taught participants about different types of coastal inundation, ways to map flood areas in the coastal environment, data and methodology limitations, and practical ways to apply this information to support state and local planning efforts. The 20 participants included county planners, National Weather Service personnel, and state agency staff. The training had 18 people on the waiting list, so the Reserve hopes to offer this training again in the near future. Thanks to Steve Walker from the Coastal Services Center for presenting complex information in a comprehensible way and to Cape Fear Community College, including Jason Rogers and David Seegar, for allowing us to use their computer lab!

Buckridge Coastal Reserve and the Evans Road Wildfire

by Woody Webster, Buckridge Site Manager

Buckridge Coastal Reserve saw a different kind of activity early this past summer thanks to the Evans Road wildfire. The 40,704-acre wildfire came within a few miles of the Reserve's western boundary. Fortunately, weather conditions and massive firefighting efforts halted the progress of the conflagration toward Buckridge. Hazardous smoke was widespread and closed the Reserve to the public for a short time. About sixty percent of the fire was on Pocosin Lakes National Wildlife Refuge property, and the flammable peat soils of the area burned an average of 3 feet deep. Large wildlife such as black bear appeared in much greater density at Buckridge as animals moved out of the fire area. The fire is currently 100% contained, but officials are unsure whether the underground fires have been extinguished. Parts of Pocosin Lakes remain closed because of falling tree hazards due to the fact that the fire burned much of the soil away from the trees' roots. It may be some time before they can determine whether the fire is truly out.

Staff News

Byron Toothman joined the staff of the NCNERR in April 2008 as a Research Associate in the Wilmington office. Byron grew up in Morehead City, N.C. and attended UNCW where he received a B.S. in Marine Biology and Environmental Studies and a M.S. in Marine Science. Byron's previous work experience includes working at Shrimp Improvement Systems (R&D Shrimp Aquaculture) in the Florida Keys and Dr. Mike Mallin's UNCW Aquatic Ecology Lab.

John Fear, Research Coordinator, and his wife Holly welcomed twins William Connor and Leigh Elizabeth on July 16.

Research Associate, **Heather Wells** and her husband Dave welcomed Lila Parker on September 3.

Rachel Carson Reserve Summer Public Field Trips

by Lori Davis, Education Specialist

The Rachel Carson Reserve in Beaufort offered public field trips this past summer every Tuesday and Thursday during the months of June, July, August and the first part of September. During low tides, the trips were a two-hour hike on the Reserve focusing on the different habitats and the plants and animals. During high tides, a boat ride took participants to our boardwalk on Carrot Island. This summer we had a total of 184 participants. Many thanks to the hard work of our volunteers Bruce McCutcheon, Pat and Bob Rapaport and Ann Goellner. We greatly appreciate their help in leading these very popular trips.

Updates From Our Southern Sites

by Hope Sutton, Stewardship Coordinator

In partnership with the Coastal Ocean Research and Monitoring Program at UNCW's Center for Marine Science an existing NCNERR System Wide Monitoring (SWMP) water quality monitoring location at our Zeke's Island component has been equipped with satellite telemetry. This system streams water quality data to the web in near real-time making it available to anyone with an internet connection. The data can be viewed at **http://cdmo.baruch.sc.edu.**

Future plans for this site include partnering with the North Carolina Aquarium at Fort Fisher to install a kiosk within the aquarium facility that displays the near real-time SWMP data. This kiosk will provide many educational opportunities to translate the importance of water quality and long-term monitoring to the general public.

In the absence of predators or other reproductive controls, deer can have deleterious effects on forests and other ecosystems through overgrazing. In recent years, the deer population on **Bald Head Island** (BHI) has experienced an increase in numbers. If left unchecked the expanding deer population could possibly compromise the ecological integrity of the ecosystems in the protected areas of the island, including the Bald Head Woods Coastal Reserve. Currently, two white-tail deer research studies are being conducted on BHI to address the above issues. Results of both studies will be used to inform future deer management strategies.

Dr. Steven Brewer – formerly of UNCW, now an independent researcher- is investigating impacts of deer on the Bald Head Island maritime forest using exclosure experiments to keep deer out. Preliminary results indicate that low recruitment of live oak trees is likely due to deer foraging. Dr. Anthony Snider - UNCW Assistant Professor of Environmental Studies– is working collaboratively with NCSU researchers to investigate movement patterns and habitat preferences of deer on BHI. Dr. Snider's research is being funded by the Village of Bald Head Island with additional support from the Bald Head Island Conservancy.

Dr. Anthony Snider is the former Southern Sites Manager and Stewardship Coordinator for the NC Coastal Reserve and National Estuarine Research Reserve. Paula Gillikin, a current Reserve employee, is a consultant to Dr. Snider's research. To learn more, visit **www.bhideer.com**.

Rachel Carson Reserve Summer Programs

by Lori Davis, Education Specialist

This past summer, the classroom located in the Reserve's Beaufort Headquarters was busy with future scientists looking through microscopes, dissecting sea urchins, making shirts and hats and working on other cool stuff. The Reserve hosted four different camps throughout the summer to give students of all ages in the community an opportunity to spend part of their summer focusing on estuarine studies.

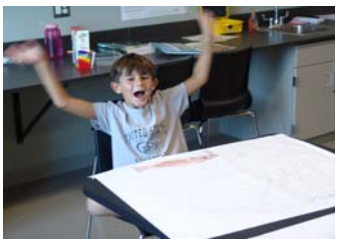
The **Junior Natualist Program** for students in grades 4-8 was a weekly course that ran every Wednesday from June 18-August 6. Students focused on water quality, horse studies, plankton, beach profiles and much more. One student who completed all eight sessions said, "I've learned so many new things even though I have lived here all my life." Each Junior Naturalist Program averaged seven students per session.

Adventures in the Estuary Program for students in grades 1-3 was a four-day session where students focused on habitats, invertebrates, vertebrates and plankton. Each session had six participants. When asked to comment on what they liked most about the class, one student answered, "Everything! Going to the estuary was fun."

Preschool Storytime Arts and Crafts was held once a month during June, July and August. Each session consisted of a story, estuarine critter observation and a craft project. Topics included hermit crabs, horseshoe crabs and birds. Each session averaged five participants.

Saltwater Science in partnership with the N. C. Maritime Museum was a three day program for students entering grades 4-6. Students focused on estuary basics, plankton and water quality. Six students participated in the Saltwater Science program this past summer.

Planning for next summer's programs has already begun. Our website **www.nccoastalreserve.net** will be updated soon with dates. For more information about these programs please contact Lori Davis at 252-838-0883.



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The North Carolina Coastal Reserve protects representative coastal habitats for research, stewardship, and education purposes and is comprised of ten sites. Four of these sites comprise the North Carolina National Estuarine Research Reserve (NCNERR). The NCNERR is part of the National Estuarine Research Reserve System and is funded through a state-federal partnership program between the NC Division of Coastal Management and the National Oceanic and Atmospheric Administration. Financial support for this publication was provided by a grant under the Coastal Zone Management Act administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration.

The Tidal Flat
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