



Scotch Bonnet

What we are hearing from the sea.

North Carolina Sea Grant

www.ncseagrant.org

Autumn 2012

Welcome to the newest online issue of *Scotch Bonnet*. This marine education newsletter also is available as a portable document file (.pdf) — if you're like me and want to keep a hard copy!



Here is something to ponder as school gets started again, and as visitation and programming slow down at informal education facilities.

Results of an interesting study were presented at the [Ecological Society of America](#)'s annual meeting in August. Researchers found that science teachers, in conjunction with biological supply houses, could be an overlooked pathway for the introduction of non-native species into the wild.

Funded by the National Oceanic and Atmospheric Administration, researchers surveyed close to 2,000 classroom teachers in eight U.S. states and two Canadian provinces. The study included focus groups and interviews with teachers, curriculum specialists and owners/managers of biological supply companies.

The survey of classroom teachers from North America found that 25 percent (one in four) of teachers who use live plants and animals in their science classrooms released them when they were finished using them. When they realized that they might be part of the invasive species problem, most of the teachers were appalled — and indicated that they wanted to be part of the solution.

The teachers who were interviewed reported using more than 1,000 different organisms, including several species that could become invasive, including aquatic plants (such as elodea), snails, crayfishes, red-eared sliders and mosquitofish. The sources of the classroom plants and animals were evenly split between pet/aquarium stores and biological supply houses.

Using live animals in the classroom is a complex issue. Sam Chan, Oregon Sea Grant invasive species expert, stated “We don't want to discourage the use of live organisms in teaching because they can provide focus, enhance student interest, and foster responsibility and care. But there are consequences to using them and both teachers and suppliers should consider what will become of these organisms when the classroom lessons are over.”

For those of you using live organisms in your science classrooms, contemplate these questions. Where do you get your plants and animals? And more importantly, what do you do with them when you have finished using them?

A summary of the original article can be found at phys.org/news/2012-08-pathway-invasive-species-ndash-science.html.

Explore this issue of *Scotch Bonnet*. There are many professional-development opportunities and family explorations for all of us. Try to take advantage of these wonderful conferences, workshops and more. Keep reading for those unique opportunities and ideas for educators. There is a lot going on in North Carolina and beyond!

Thanks to Liz Bukvich, Lori Davis, Sara Hallas, Katie Mosher, Sarah Phillips, Pat Raves, Tracey Ritchie and Allison Vinson for their contributions to this issue.



Walnut Creek Wetland Center

www.raleighnc.gov/arts/content/PRecRecreation/Articles/WalnutCreekWetlandCenter.html

Join Jane Eckenrode from the [N.C. Museum of Natural Sciences](http://www.ncmuseumofnaturalsciences.org) for a workshop on nature journaling. It is a useful tool to sharpen observation and recording skills in order to better understand and experience the environment around us. This workshop is designed to build confidence in employing nature journaling as a teaching technique. Participants will learn some basic drawing techniques and spend time outside writing and drawing in journals. You will receive a basic journaling kit, but feel free to bring your favorite art supplies.

This class can fulfill Criteria II or III for the [N.C. Environmental Education Certification Program](http://www.ncenvironmental.gov).

Pre-registration is required at least four days prior to program. Register online at reclink.raleighnc.gov or call the Wetland Center at 919/831-1960. Workshop fee is \$8.

This workshop is being offered on the following three dates:

- #128566 Saturday, Sept. 15, 10:30 a.m. to 12:30 p.m.
- #128567 Thursday, Oct. 4, 10:30 a.m. to 12:30 p.m.
- #128568 Thursday, Oct. 25, 10:30 a.m. to 12:30 p.m.

Environmental Education Certification Workshops in Greensboro

www.greensboro-nc.gov/index.aspx?page=824

Earn Continuing Education Units and credit toward the N.C. Environmental Education Certification Program at fall workshops at the Kathleen Clay Edwards Library in Greensboro.

The Kathleen Clay Edwards Library is a branch of the Greensboro Public Library. It has an environmental education focus with environmental collections and programs for all ages. The

library is located in a 98-acre passive park, which includes a native plant garden, rain garden, a bird and butterfly meadow, and hiking trails.

The workshops are:

- Sept. 21, 12 to 6 p.m.: Project WET workshop
- Sept. 28, 4:00 to 5:30 p.m.: GIS 101
- Oct. 5, 12 to 6 p.m.: Leopold Education Project (LEP)
- Oct. 26, 12 to 6 p.m.: Project Learning Tree
- Nov. 2, 5 to 9 p.m. and Nov. 3, 9 a.m. to 4 p.m.: LEP Facilitators Training

For more information, email Melanie Buckingham at melanie.buckingham@greensboro-nc.gov.

National Estuaries Day and National Public Lands Day

estuaries.noaa.gov/GetInvolved/Default.aspx?ID=153

www.publiclandsday.org

Participate in various coastal celebrations planned to commemorate both National Estuaries Day and National Public Lands Day. Both environmental awareness days fall on Saturday, Sept. 29, this year, but events are scheduled over several dates.

National Estuaries Day, sponsored by the National Estuarine Research Reserves, is an annual celebration of the vibrant and essential coastal areas where rivers meet the sea. First celebrated in 1988, this public-awareness campaign informs people from coast to coast about their connection to these beautiful places and promotes the importance of estuaries and the need to protect them.

National Public Lands Day, started in 1994, educates Americans about the environment and natural resources, and the need for shared stewardship of these valued, irreplaceable lands and encourages volunteer opportunities to improve public lands for outdoor recreation.

Activities are as follows:



- **Saturday, Sept. 22: Cycling for the Coast**

Time: First wave of riders starts at 8 a.m., weather permitting. Rain date is Sept. 29.

What: Participate in a bike ride along beautiful Bogue Banks in Carteret County to raise awareness for North Carolina's coastal estuaries and beaches. Funds raised will benefit the [N.C. Coastal Federation](#)'s (NCCF's) restoration and protection projects. This annual ride is great for all ages and biking levels, offering 20 km, 40 km and 80 km options. Riders will leave in waves, beginning at 8 a.m., biking toward

Atlantic Beach and turning around at specified points on the island, with food and water stops along the way. For more information, contact Sarah Phillips at sarahp@nccoast.org.

Location: Begin and end at [Fort Macon State Park](#), Atlantic Beach.

Cost: \$35 for NCCF members; \$50 for nonmembers (includes an NCCF membership). All participants will receive a “Cycling for the Coast” t-shirt.

- **Saturday, Sept. 22: Kayak Adventure on Ocracoke Island**

Time: 10 a.m. to 12 p.m., weather permitting. Rain date is Sept. 29.

What: Join [Ride the Wind Surf Shop](#) and the NCCF for a kayak trip in honor of National Estuaries Day. Launching from [N.C. Center for the Advancement of Teaching](#), the group will paddle over to [Springer’s Point Preserve](#) and back. Come explore the shoreline and learn about different restoration techniques used to protect this fragile habitat. Snacks will be provided. Recommended supplies: bottled water, towel, hat, sun block, water shoes, sunglasses and clothes that can get wet. **Reservations are required.** Call Ride the Wind at 252/928-6311, email bob@surfocracoke.com or visit www.surfocracoke.com.

Location: N.C. Center for the Advancement of Teaching, Ocracoke.

Cost: With kayak rental (life jackets and paddles included): \$25 for NCCF members; \$35 for nonmembers. Bring your own kayak: \$15 for NCCF members; \$25 for nonmembers.

- **Friday, Sept. 28: Birding Trip to the Rachel Carson Reserve**

Time: 1 to 3:30 p.m.

What: Enjoy a bird watching trip to the [Rachel Carson Reserve](#). Participants will explore estuarine habitats to view various types of birds. The trip will be led by a seasoned birder. **Reservations are required.** Call 252/838-0886 for more information or to make a reservation.

Location: Rachel Carson Reserve, Beaufort. Boat transportation provided.

Cost: Free.

- **Saturday, Sept. 29: Coastal Cleanup at the Rachel Carson Reserve**

Time: 10 a.m. to 1 p.m.

What: Help protect the estuary and its wildlife and habitats by participating in a coastal cleanup. All supplies will be provided. Participants should bring a bagged lunch to enjoy after the cleanup. **Reservations are required.** Call 252/838-0886 for more information or to make a reservation.

Location: Rachel Carson Reserve, Beaufort. Boat transportation provided.

Cost: Free.

- **Saturday, Sept. 29: Celebration at the N.C. Maritime Museum**

What: Outdoor interactive education displays and indoor screenings of a film honoring the 50th anniversary of Rachel Carson’s *Silent Spring*.

Time: 10 a.m. to 2 p.m.

Location: [N.C. Maritime Museum](#), 315 Front Street, Beaufort.

Cost: Free.

Sea Turtles at the Virginia Aquarium

www.virginiaaquarium.com



Join the Virginia Aquarium & Marine Science Center in Virginia Beach on Oct. 1 for a workshop on how to incorporate sea turtle information, conservation issues and activities into programs for all audiences. Participants will receive materials to share.

As an added bonus, join staff for an exciting, optional excursion on Oct. 2 — a trip on the Research Vessel *Ocean Explorer*. Space is limited.

For more information or to RSVP by Sept. 21, contact Katie Vaughn at 757/385-0273 or at kvaughn@virginiaaquarium.com. A printable flyer is available [here](#).

International Beachcombing Conference

www.beachcombingconference.com



Last call to sign up for this year's International Beachcombing Conference.

As of Aug. 24, only 15 spots remained for this year's International Beachcombing Conference (IBC), Oct. 4-7 at the University of Delaware's [Viriden Retreat Center](#) in Lewes, so sign up now.

The only beachcombing conference of its kind in the world, IBC brings together leading beachcombing and ocean experts, authors and scientists to share their knowledge about what you find on the shore and why you find it there.

IBC '12 tutors include tsunami debris expert, Curtis Ebbesmeyer; sea glass specialist, Richard LaMotte; noted beach photographer, Josie Iselin; sea beaner, Ed Perry; beach geologist, Margaret Carruthers; marine educator, Terri Kirby Hathaway; British mud-larker, Richard Ash; and eco-educator, Deacon Ritterbush, who also is known as Dr. Beachcomb.

Along with lectures and slide presentations, the three-day conference includes films, beach and museum field trips, coastal arts workshops and vendor booths. We guarantee that you'll return home more knowledgeable about beachcomb artifacts and coastal issues, with new friendships and a bounty of beach treasures in your pocket.

Pre-registration is required. For more information, visit www.beachcombingconference.com or email beachcombingconference@gmail.com.

Mid-Atlantic Marine Education Association 2012
Aquatic Conservation Science through Research and Education
www.mamea.org/conf.html



Join educators from the Mid-Atlantic region to celebrate marine education, Chesapeake Bay style. The 2012 MAMEA conference will be held on the campus of the University of Maryland's Center for Environmental Science [Horn Point Laboratory](#) on the shores of the Choptank River in Cambridge, Md., from Oct. 12 to 14. Participants will have the opportunity to learn about all things aquatic during presentations by invited speakers, concurrent sessions and field trips. Saturday's schedule also will allow time for conference participants to tour the Horn Point Lab facilities during their open house.

Housing options include single-sex cabins on campus or the Holiday Inn Express in Cambridge. Be sure to book your lodging as soon as possible to ensure your first choice is available. All hotel rooms must be booked before Sept. 12 by calling the Holiday Inn Express Cambridge at 410/221-9900.

When: Oct. 12–14

Where: Cambridge, Md.

Venue: University of Maryland's Center for Environmental Science Horn Point Lab

Invited speakers are:

- Friday evening, Oct. 12: Naturalist and researcher Greg Kearns from Patuxent River Park will explain his work studying the nesting osprey population of the Patuxent River.
- Saturday morning, Oct. 13: Laura Baker of Maryland Environmental Service will share information on the restoration of Poplar Island and the educational opportunities available through the research being conducted on the island.

For more information, contact Kathy Fuller at 410/576-3888 or kfuller@aqua.org.

Marine Technology in the Classroom

www.oceans12mtsieehamptonroads.org/main.cfm/CID/4/Workshops/



Applications for the 4th annual Marine Technology Society/Institute of Electrical and Electronics Engineers Educators Workshop on Marine Technology are being accepted on a first come, first served basis. The workshop is free to educators and will be held at the Virginia Aquarium & Marine Science Center in Virginia Beach on Saturday, Oct. 13, as part of the Oceans '12 International Conference.

The workshop features an introduction to Remotely Operated Vehicles (ROVs), and remote sensing and Basic Observation Buoys (BOBs). Find the workshop flyer, agenda and application

at www.oceans12mteeehamptonroads.org/main.cfm/CID/4/Workshops/. Hurry, Sept. 21 is the registration deadline.

An aquarium tour and lunch are included. The lunchtime keynote speaker is Shannon Ricles, education coordinator for the Monitor National Marine Sanctuary. She will discuss the importance of shipwrecks as reefs and demonstrate how to map a mock shipwreck — a great STEM activity.

For more information, contact Erica Moulton at emoulton@marinetech.org or 727/804-2730.

Fall Conference for Environmental Educators of North Carolina

www.eenc.org



Scouting Out EE in NC is the theme of this fall's annual conference for the Environmental Educators of North Carolina. The fall conference is set for Oct. 26 to 28 at the East Carolina Scout Reservation at Blounts Creek, on the shores of the beautiful Pamlico River near Washington.

Concurrent sessions and workshops will focus on the following strands: Diverse Audiences in Environmental Education, Connecting Experiential Education and Environmental Education, Environmental Education through Sustainable Agriculture, Capacity Building through Research, and Rivers to the Sea: The Importance of Water Education.

There is something for everyone, so don't miss this opportunity to learn from and network with your environmental education resources from around the state. Registration information can be found at www.eenc.org/index.php/annual-conference/2012-conference-overview.

Bald Head Island Conservancy

www.bhic.org



Are you seeking a fun, educational, natural and exciting location for your scout group or students? Come explore the natural wonders of a North Carolina barrier island with the Bald Head Island Conservancy. They offer custom educational programs to meet your curriculum or badge requirements, fully furnished dormitories, classrooms and lab space.

The BHI Conservancy campus also is an ideal spot for a staff retreat or meeting space. Contact Tracey Ritchie, director of education, at tracey@bhic.org to set up your visit today. Fall weekends are filling up fast.

For more information about the Conservancy, its programs and facilities, please visit their website at www.bhic.org.

North Carolina Aquarium on Roanoke Island

www.ncaquariums.com/roanoke-island



The NEW Junior Marine Biologist program debuted at the N.C. Aquarium on Roanoke Island this summer. Created for kids ages 6 and up, this activity gives budding marine biologists an opportunity to explore the aquarium exhibits in depth, and earn a patch that can be sewn onto a t-shirt or backpack. More than 100 kids became Junior Marine Biologists during the first week of the program!

Participants begin their adventure by picking up an activity book and pencil at Visitor Services, after paying the appropriate admission fee. Then they investigate, imagine and discover the marine life of the aquarium at their own pace. After completing the activity book, participants receive their very own Junior Marine Biologist patch.

Become an honorary scientist today! Cost is \$5. Pre-registration is not required.

Curriculum/Activity Guides Still Available

Centers for Ocean Sciences Education Excellence SouthEast's (COSEE SE's) *The Educator's Guide to Marine Debris: Southeast and Gulf of Mexico* is a regional introduction to three main categories of marine debris: litter, derelict or abandoned boats, and lost or abandoned commercial and recreational fishing gear. This publication is available for free download on the COSEE SE website at www.cosee-se.org/marinedebris.php and also is available in hard copy, while supplies last.

N.C. Big Sweep's publication, *Undercurrents: A Big Sweep Middle School Teacher's Guide*, includes litter-awareness lessons that are correlated with state learning objectives for 8th grade science and math, as well as for healthful living, language arts and information skills. *Undercurrents* is available free to North Carolina educators while supplies last.

The *Coastal Processes and Conflicts* curriculum includes extensive background information for teachers, as well as student lessons that are relevant in any setting — not just the island environment. It is appropriate for middle- and high-school students. The curriculum can be downloaded free from www.ecu.edu/educ/csmte/coastal_processes.cfm. Or you can order a hard copy (\$10 includes postage), which comes with a CD containing color copies of figures used in the student activities.

Each of these education resources is available from Terri Kirby Hathaway, North Carolina Sea Grant, terrikh@csi.northcarolina.edu.

Need to Contact Me?

If you ever have information to share with other marine educators, please don't hesitate to send it my way for inclusion in a future issue of the *Scotch Bonnet*. Let me know what you're hearing from the sea!

Please share this website with others — and share my email address with anyone who wants to receive a message when each *Scotch Bonnet* is available online! Thanks for all you do for students and for other educators!

My contact information is: North Carolina Sea Grant, PO Box 699, Manteo, NC 27954; phone: 252/475-3663; fax: 252/475-3545; email: terrikh@csi.northcarolina.edu.

Best Fishes!

A handwritten signature in black ink that reads "Terri". The letters are cursive and slightly slanted to the right.

Terri Kirby Hathaway
Marine Education Specialist
North Carolina Sea Grant
terrikh@csi.northcarolina.edu