



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

I had a new experience this winter: For the first time, I conducted an online lesson with students! For three days in a row, I worked with fourth-grade art students in Alamance County, looking at shells and other beachcombing finds that I had shipped to them ahead of the Internet video calls.

I had met their teacher, Lauri Daughtry, while I was teaching at the North Carolina Center for the Advancement of Teaching (NCCAT) on Ocracoke in March. As part of her National Board Certification, Lauri had to invite an expert — on any topic — to visit her three fourth-grade art classes. She contacted me since she had enjoyed my sessions at NCCAT.

We decided to conduct the “Beach in a Shoebox” activity, a favorite exercise I had shared with NCCAT participants. Small groups of two or three open clear plastic shoeboxes filled with sand and beachcombing finds. They dig around, searching for treasures on their “beaches.” Once they have collected everything, they separate and classify their finds, and then participate in a group discussion about the items.

My schedule did not allow me to travel to Alamance County, so we decided to try video calls using Skype. I downloaded the software to my desktop, and then practiced with John McCord



at the University of North Carolina Coastal Studies Institute and with Chris Petrone at Delaware Sea Grant. Both were very helpful to this novice.

In the meantime, I collected beachcombing treasures and shipped them to Lauri so she could create her own set of shoebox beaches. Lauri and I practiced with Skype during her planning period, so we could be confident that this experiment would work when the time came.

Soon, it was time to meet with the first group of fourth-grade students. It was so fun to sit in my office on Roanoke Island and watch Lauri's students walk into the classroom and, all of a sudden, notice me on their white board.

I greeted the students, then got them started exploring their shoebox beaches. I enjoyed listening to their exclamations of excitement over the unusual things they were discovering. And it was equally exciting to talk to them about the beachcombing treasures, and to answer their questions.

Each of the three online sessions lasted for 40 minutes, with plenty of time for interaction with the students. The following week, Lauri had the students making contour drawings of their mollusk shells. That's how beachcombing treasures fit into art!

I thoroughly enjoyed my foray into teaching online and would love to continue to offer this type of outreach. It's not the same as being there in person, but with shrinking budgets for all the best (and cheapest) way educators can continue to bring outside experts into their classrooms might be through the Internet.

The big news here is that I have become a published author! By the time you read this issue, *North Carolina's Amazing Coast: Natural Wonders from Alligators to Zoetas* should be available in a bookshop — or museum, or aquarium, or nature center — near you.

A delight for learners of all ages, the book is a true partnership of the North Carolina and Georgia Sea Grant programs. Kathleen Angione, a former *Coastwatch* senior editor, and I collaborated with the Georgia team of writers David Bryant and George Davidson, and illustrator Charlotte Ingram.



More than two dozen new North Carolina entries — such as the red wolf, margined sea star, comb jelly, lugworm, blanket flower and maritime forest — join a selection of southeastern species that also appeared in *Georgia's Amazing Coast*, available at www.ugapress.org/index.php/books/georgias_amazing_coast/.

To learn more about *North Carolina's Amazing Coast*, go to www.ncseagrants.org/s/AmazingCoast. Additional events with one or more of the creators are expected during the summer and fall.

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 Linda Boyer, Melanie Buckingham, James Charlet, Lauri Daughtry, Kate Davidson, Melissa Dowland, Sara Hallas, Charlotte Patterson, Sarah Phillips, Shannon Ricles and Renee Strnad for their contributions to this issue.

Preview of Fall Conferences

There are many conferences scheduled for the fall. Join your fellow marine educators and beach lovers at one — or more — of these great events.

2013 Annual Fall Conference for Environmental Educators of North Carolina (EENC)

www.eenc.org



This fall's annual professional development get-together will be held Sept. 12 to 15 at the North Carolina Arboretum in Asheville. The Arboretum promises to be the ideal location for the conference with its stunning natural beauty, exceptional facilities, and proximity to a broad variety of accommodations from camping and budget motels to four-star hotels and even The Biltmore®.

International Beachcombing Conference

www.beachcombingconference.com



“Come Outside and Play!” the poster beckons, advertising the only conference of its kind in the world. The fifth annual International Beachcombing Conference (IBC), set for Oct. 3 to 6, offers new, novice and skilled beachcombers a weekend of serious learning fun about the beachcomb experience. Participants can attend tutorials, arts workshops and field expeditions to places such as Smith Island, Md., Cape May, N.J., and Delaware’s sea glass and shipwreck beaches.

Held at University of Delaware’s Virden Center in Lewes, IBC ’13 includes tutorials ranging from sea glass genres and Miocene beach fossils to Thames River mud-larking and tsunami debris tracking. Tutors also will discuss factors negatively affecting marine health and beachcombing including the “plastic problem,” water-borne diseases and lack of beach access. This year’s speakers include British-born geologist, Dr. Richard Ash; marine scientist, Dr. Blair Witherington; marine education specialist for North Carolina Sea Grant, Terri Kirby Hathaway; and conference chair and beachcomb specialist, Dr. Deacon Ritterbush (aka Dr. Beachcomb).

Conference space is limited and preregistration is required. For information or to register, visit www.beachcombingconference.com.

2013 North American Sea Glass Association Annual Festival
www.seaglassassociation.org

For the second year in a row, the North American Sea Glass Association Sea Glass Festival will be held in Virginia Beach. Mark your calendars for Columbus Day weekend, Oct. 12 to 13, for this unique event.



Join beachcombers from around the world who will assemble at the Virginia Beach Convention Center for the eighth annual Sea Glass Festival. The event will feature sea glass aficionados, including artisans, who will be offering their nautical creations for sale, as well as collectors of the popular coastal gems, who will be eagerly sharing their unique, accrued sea glass exhibits with attendees.

In addition to various sea glass-related lectures and seminars, another highlight of the festival will be the renowned Shard of the Year contest. The grand prizewinner will receive \$1,000 for the most desirable, rare piece of sea glass.

2013 Annual Fall Conference for Mid-Atlantic Marine Education Association
www.mamea.org

Celebrate the 35th anniversary of the Mid-Atlantic Marine Education Association, or MAMEA, by joining marine educators from the region, Nov. 1 to 3, as we look back at and into the future of marine education. The 2013 MAMEA conference will be held on the campus of the Virginia Institute of Marine Science (www.vims.edu) in Gloucester Point, Va. More details on field trips, conference events and lodging will be available soon on MAMEA's website.



Environmental Education Certification Criteria I Workshops in Guilford County
www.eenorthcarolina.org/certification--requirements.html

Food, Land, and People

Guilford County Cooperative Extension, 3309 Burlington Road, Greensboro.

June 17, 9 a.m. to 3 p.m., and June 18, 9 a.m. to 3:30 p.m.

FLP teaches about the interrelationships between agriculture, food, people and the environment. Fee: \$30. To register, email Elizabeth Williams at ewillia0@co.guilford.nc.us.

Project WILD

Lake Higgins, 4236 Hamburg Mill Road, Summerfield.

June 19, 9 a.m. to 4 p.m.

Taught by the N.C. Wildlife Resources Commission, this program is a national interdisciplinary conservation and environmental education program emphasizing wildlife. Bring a bag lunch. To register, email melanie.buckingham@greensboro-nc.gov.

Project Learning Tree

Kathleen Clay Library, 1420 Price Park Road, Greensboro.

June 20, 9 a.m. to 4 p.m.

This K-12 interdisciplinary workshop explores forestry, resource management and biodiversity through various teaching techniques and hands-on activities. Bring a bag lunch. To register, email melanie.buckingham@greensboro-nc.gov.

Project WET

Kathleen Clay Library, 1420 Price Park Road, Greensboro.

June 21, 9 a.m. to 4 p.m.

Water Education for Teachers (WET) teaches about water conservation, water pollution, wetlands and water as a resource. Bring a bag lunch. To register, email melanie.buckingham@greensboro-nc.gov.

Summer Workshop on OBX

www.nccoastalreserve.net



The N.C. National Estuarine Research Reserve/Coastal Reserve, the Chesapeake Bay National Estuarine Research Reserve in Virginia, and North Carolina Sea Grant are presenting a Teachers on the Estuary (TOTE) workshop. The event is set for Aug. 13 and 14 at the Outer Banks Center for Wildlife Education in Corolla.

TOTE is a research- and field-based teacher training initiative of the National Estuarine Research Reserve System, part of the National Oceanic and Atmospheric Administration. Its goal is to improve teachers' and students' understanding of the environment using local examples. The workshop also will provide resources and experience to support the use of estuary and watershed topics in classroom teaching. The course also is designed to promote stewardship of watersheds and estuaries.

Participating teachers will be introduced to information, research and classroom activities about watersheds, estuaries and coastal systems. The workshop incorporates fieldwork and the use of online data. Some of the course content and activities will align with national education standards and N.C. Essential Standards.

For more information or to register, contact Lori Davis at lori.c.davis@ncdenr.gov, 252/838-0883 or 252/220-0779.

Summer Programs at Chicamacomico Life-Saving Station

www.chicamacomico.net

For maritime history buffs, a visit to the Chicamacomico Life-Saving Station is a dream come true. This unique historic site — a seven-acre, eight-building complex — is considered the most complete remaining U.S. Life-Saving Service location in the nation.



There is something for everyone at Chicamacomico. Summer programs for 2013 are scheduled Monday through Friday. These program offerings include learning about the filming of the movie *Nights in Rodanthe* on Mondays, discovering lost tales about the U.S. Life-Saving Service on Tuesdays, sampling traditional Hatteras Island cooking on most Wednesdays, observing the Beach Apparatus Drill on Thursdays, and attempting to solve the mystery of the Lost Colony each Friday.

On three Wednesdays this summer (June 5, July 3 and Aug. 7), hear the true-life story of the heroic rescue of the *HMS Bounty* during Hurricane Sandy in October 2012. The U.S. Coast Guard Air Station in Elizabeth City responded to the distress calls from the *Bounty*. Members of the rescue team will be on hand for three Wednesday afternoons to share their dramatic stories.

Don't miss the thrilling Beach Apparatus Drill using black powder, Lyle gun and breeches buoy. Chicamacomico is the only place in the United States that performs the full Beach Apparatus Drill reenactment for the public during the summer months. It also is the only drill reenactment in the world performed by active-duty U.S. Coast Guard personnel.

For more details, please check Chicamacomico's online program guide at www.chicamacomico.net/Program-Guide.htm, or call 252/987-1552.

Teacher Workshops at the N.C. Museum of Natural Sciences

www.naturalsciences.org

Entomology 101 for Teachers

Prairie Ridge Ecostation, Raleigh.

July 10 to 12, 8 a.m. to 5 p.m., daily.

Cost: \$25 (includes a field guide, and some insect pinning and collecting materials).

Ever wish you knew more about insects so that you feel more confident incorporating them into your teaching? Join us for Entomology 101. Spend mornings in the field at Prairie Ridge Ecostation collecting insects, participating in citizen science projects and doing behavioral observations. After a lunch break, we'll gather downtown at the Museum for afternoon

sessions on insect identification, lab studies of insects and tours of the museum's insect resources. Come explore the wide world of insects, some of Earth's most important and fascinating creatures!

Genetics and our Food Supply

North Carolina State University Central Crops Research Station, Business 70 W, Clayton.
July 18, 9 a.m. to 3:30 p.m.

Cost: \$25 deposit (will be returned upon completion of workshop).

Genetically modified organisms: What does that really mean? In this workshop, teachers will connect cutting-edge research to current food issues. Participants will meet with researchers in the field, pollinate crops and complete hands-on plant genetics activities. Participants will receive a kit of plant genetics resources to use with students in their classroom. Designed for sixth- to eighth-grade teachers. *The cost of this workshop is reduced due to a grant from the National Science Foundation.*

Nature Journaling at Hammocks Beach

Hammocks Beach State Park, Carteret County.

Sept. 27 (depart Raleigh at 3:45 p.m.) to Sept. 29.

Cost: TBA (includes transportation, lodging, most meals and journaling supplies)

Discover the ecology of a barrier island and how to use journaling as a technique for enhancing science learning. We will explore a variety of barrier island habitats, from the salt marsh to the oceanfront, and document our experiences through a variety of journaling techniques, including sketching, digital photography, poetry and reflective writing.

To register online for any of the abovementioned Educator Trek workshops, go to files.naturalsciences.org/education/Ed_Trek_reg_form_2012.pdf.

Project WET at Cape Fear Botanical Garden in August

www.capefearbg.org

Project WET Generation II

Aug. 9, 9:30 a.m. to 4 p.m.

Project WET is an interdisciplinary water science education program for formal and nonformal educators or leaders of K-12 students. It promotes awareness, appreciation, knowledge and stewardship of North Carolina waters. The keystone is the newly updated Curriculum & Activity Guide. Hands-on activities correlate to the N.C. Standard Course of Study. The guide is available only through this six-hour workshop, which serves as Criteria I for the N.C. Environmental Education Certification and offers six contact Continuing Education Unit credit hours for teachers.

Preregistration is required by Aug. 2. Register at

app.etapestry.com/hosted/CapeFearBotanicalGarden/WorkshopRegistration.html, or call 910/228-2222, ext 27. Fee: \$30 (includes curriculum guide and a small fee for facilities use and

snacks). Make checks payable to Cape Fear Botanical Garden. Please mail payment to 536 North Eastern Blvd., Fayetteville, NC 28301; Attn. Education

If you are not able to attend, the entire amount is refundable minus a \$10 processing fee.

Summer Workshops at the Walnut Creek Wetland Center in Raleigh

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

These classes and a visit to the Walnut Creek Wetland Center can be used to fulfill Criteria II or III of your N.C. Environmental Education Certification. The center is located at 950 Peterson Street in Raleigh. For more, call 919/831-1960 or email wc.wetlandcenter@raleighnc.gov.



Wetland Birds Intermediate

June 18 or Aug. 7, 9 to 11 a.m.

Fee: \$5 for participants ages 18 and up.

Join local expert John Gerwin, curator of ornithology at the N.C. Museum of Natural Sciences, to learn how to observe, identify and appreciate birds. Learn about field markings, common birds in our area and how our local birds “make a living.” Observe birds at the feeders and then, weather permitting, out on the trail. Field guides, binoculars and instructions on how to use them will be provided. Taxidermy specimens will be used as teaching aids. This program is for the intermediate birder.

Wetland Tree Walk

June 28, July 26 or Aug. 23; 5:30 to 7 p.m.

Fee: \$5 for participants ages 15 and up.

Join an arborist on a stroll through the Walnut Creek Wetland. Learn how to use an identification key and field guide to name some native wetland trees, such as boxelder, bald cypress and cottonwood.

Preregistration is required at least four days prior to the program. Register at reclink.raleighnc.gov or by calling the Wetland Center at 919/831-1960.

North Carolina Estuarium Summer Highlights

www.partnershipforthesounds.org

Here is a partial listing of summer programs and events at the North Carolina Estuarium. Additional events and information can be found on the website. The Crab Pot gift shop showcases many North Carolina products and books. It also features unique gifts and cards with a natural flair.



River Roving Educational River Tours

Wednesdays to Fridays at 10:30 a.m. and 1:30 p.m., and Saturdays at 10:30 a.m.

Through October, take advantage of the free River Roving Educational River Tours. Take a boat ride on the Pamlico-Tar River and learn about the history and habitats of the Washington area. Maximum 10 riders per trip; reservations required. Free, but donations are requested for this enjoyable excursion. Children must be at least 6 years old to ride.

Summer Art Exhibits

- June: *Coastal Birds, Near and Far* — Paintings by Lee Mims.
- July: *Flowers and Sea* — Paintings by Williamston artist Kathy Daly.
- August: *Nature in Our Hemisphere* — Photographs by Sol Levine.

Storytelling with the Inner Banks Storytellers Group

June 12, July 17 and Aug. 14; 10:30 to 11:30 a.m.

Fee: \$2 (children and adults)

Enjoy stories, music and puppets from people who love spinning a good yarn. Stories are suitable for families and school-aged children.

Emerald Isle Sea Turtle Protection Program

June 18, 1 to 2 p.m.

Fee: \$2 (children and adults).

Jim Craig and Kevin Geraghty share the efforts of the Emerald Isle Sea Turtle Volunteers as they work to save these threatened and endangered species.

Aurora's Famous Fossils

July 23, 1 to 2 p.m.

Fee: \$2 (children and adults).

Join George Oliver, educator at the Aurora Fossil Museum, to learn about the unique fossils of the Aurora area. Do you know what kinds of sharks left behind so many teeth? Find out about prehistoric life in the Pamlico area. Bring in sharks' teeth you have found for identification, and enjoy the opportunity to search for more fossils.

Exploring the North Carolina Coast and Estuaries through Maps and Mapmaking

Aug. 13, 1 to 2 p.m.

East Carolina University scientist Michelle Covi leads kids and adults on an exploration of the North Carolina coastal region using online digital tools and interactive activities. Participants will learn about shoreline mapping and how geographers use high-tech tools to visualize the changing conditions at the coast. Fee: \$2 (children and adults).

The Estuarium is located at 223 E. Water Street, Washington, and is open Tuesday to Saturday, from 10 a.m. to 4 p.m. Admission is \$4 for adults and \$2 for students. *Please call ahead for program information as space may be limited.* Educational programming is supported by The Karns Fund. The Estuarium is a Partnership for the Sounds (www.partnershipforthesounds.org) facility, an organization promoting ecotourism and sustainable economic development in the

Albemarle-Pamlico region. For more information or to make reservations for any programs, contact 252/948-0000 or estuarium@embarqmail.com.

New Outer Banks Maritime Heritage Trail

monitor.noaa.gov/obxtrail

All along N.C. 12 on North Carolina's Outer Banks, visitors can find iconic places and landmarks that tell the stories of the area's rich maritime history. The Outer Banks Maritime Heritage Trail is a new online resource that can help visitors, both in person and virtually, experience this unique past. From lighthouses and natural resources to offshore shipwrecks, everyone with Internet access can access these wonderful accounts of the Outer Banks' links to history, including oral histories from longtime residents. See the Summer 2013 issue of *Coastwatch* for more on this trail.

An iPad app is in the works, and additional videos and stories are planned, so keep checking the website for updates.

One Ocean Student Film Festival Winners Announced

monitor.noaa.gov

The National Oceanic and Atmospheric Administration's *Monitor* National Marine Sanctuary (MNMS) held its first One Ocean Student Film Festival on April 11 and 12 at the North Carolina Maritime Museum in Beaufort. The film festival was the idea of MNMS's Youth Working Group (YWG), which consists of teens from Virginia and North Carolina schools. Interested students apply to the YWG to participate for a year as active members of the site's Sanctuary Advisory Council. They provide feedback to the council on various youth concerns and topics pertaining to the ocean. The YWG not only helps to promote MNMS's mission and objectives, they also work throughout the year to inform and educate their peers on ocean issues. The film festival was the culmination of their yearlong endeavor.



On Friday evening, invited guests attended a reception to announce the winners, along with a preview of all the entries. To kick off the event, Mayor Richard Stanley of Beaufort welcomed the guests and NOAA representatives, and afterwards the guests enjoyed light refreshments. On Saturday, the film festival was open to the public, with the student-produced videos and other NOAA films featured throughout the day. The YWG members hosted five table displays that helped to educate people about marine debris, ocean acidification, preserving shipwrecks, the importance of watersheds, and MNMS. Throughout the day, there also were guest lecturers presenting on topics such as *Titanic*, fisheries acoustics, dolphin research, Scientists with Stories and more.

The winners of the student film festival are:

Micro-Short Video (1 to 5 mins)

1st Place—*Raising Awareness* by JiSung Seo; Thomas Jefferson High School for Science and Technology, Alexandria, Va.

2nd Place—*Pine Knolls Shores* by Karleigh Smith and Alyssa Graham, Newport Middle School, N.C.

2nd Place—*How are You Connected to the Ocean?* by Terrell Moore; Ashley Hall, Charleston, S.C.

Short Video (5 to 12 min)

1st Place—*Human Connections* by Sallie Hutson; Ashley Hall, Charleston, S.C.

Each first-place winner received \$300 and second place received \$100. All participants were awarded a certificate of appreciation for their participation. The film festival was a great success and the YWG looks forward to hosting it again next spring.

For more information, contact Shannon Ricles at 757/591-7328 or Shannon.Ricles@noaa.gov, or visit the website at monitor.noaa.gov.

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 or newsletter 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: 252/475-5486; fax: 252/475-3545; email terrikh@csi.northcarolina.edu.

Best Fishes!



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