



North Carolina Sea Grant

www.ncseagrant.org

Winter 2013

Welcome to the newest online issue of *Scotch Bonnet*. This marine education newsletter also is available as a PDF at www.ncseagrant.org/s/sb-win2013 — if you're like me and want to keep a hard copy!



Here is something to ponder as we move into the spring semester, while visitation and programming are at low levels for informal education facilities. Thanks to Sharon Settlege, former science communications graduate intern for North Carolina Sea Grant, for sharing this article! She writes:

As a parent of a middle-school student, I'm not there to see much of my child's schoolroom experiences. But then her algebra teacher "flipped" the classroom.

Flipping the classroom is a new technique where the teacher videotapes the lecture, and the student views the tape in lieu of written homework. Now, as she does her homework, I am able to watch with my daughter on the family room computer. I soon learned that her algebra teacher is great at explaining difficult math concepts.

Curriculum specialist Lodge McCammon of the Friday Institute for Educational Innovation at North Carolina State University shares the technique with middle- and high-school teachers at workshops and on his Facebook page at www.facebook.com/fizz.education. You can also watch a short video where he explains the process at www.fi.ncsu.edu/project/fizz/.

McCammon points out that the teaching program, which he calls the FIZZ learning framework, leads to higher-ordered thinking skills for students. As he shares in his video, FIZZ is designed to connect with all different types of learning styles so that students can create documents and publish what they have learned.

Award-winning teacher Meredith Cheetham at Exploris Middle School (www.exploris.org) in Raleigh learned the technique from McCammon. "Having the majority of lecture happening at home leaves much more time for problem solving and practice during class," she says.

"When lessons are flipped, you have time for group activities, problems that explore deeper concepts and mathematical discussions. There is also time for kids that don't understand the concept to get extra help or remediation in a small group with the teacher while other students work independently."

Students enjoy the new classroom style too. “The homework in the classroom was nice because you could work with other people and the teacher was nearby if you needed help,” my daughter said.

And FIZZ is not just for math. McCammon says that he has “seen this transform classrooms from 2nd grade to graduate school — across almost all the content areas including high-school English and history, middle-school language arts and social studies, as well as math and science.”



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, Sherry Graham, Rhana Paris, Shannon Ricles, Sharon Settlege, and Renee Strnad for their contributions to this issue.

2012 Annual Award Winners for Environmental Educators of North Carolina

www.eenc.org



Each year the Environmental Educators of North Carolina (EENC) publically recognizes environmental educators, members, organizations and partners for their valuable contributions to environmental literacy, the field of environmental education, the EENC as an organization and the environmental well-being of North Carolina.



Several individuals and organizations were recognized at the EENC Annual Conference at the Potash Eco Lodge at the East Carolina Scout Reservation on Oct. 12, 2012. They included, pictured at left, Elizabeth Burke, Chip Freund, Terri Kirby Hathaway and Sarah Yelton. Award winners were chosen from nominations from across the state for

unique accomplishments in environmental education and service to EENC. They are as follows:

2012 Environmental Educator of the Year

Sarah Haggerty received the 2012 Environmental Educator of the Year Award in recognition of her leadership as the director of education at the Piedmont Wildlife Center (www.piedmontwildlifecenter.org). As a teacher, she finds inspiration in Aldo Leopold and John

Muir, and helps students find a lasting connection with the natural world. As a leader, she mentors people to help them find a deeper way to appreciate the natural world.

2012 Environmental Educator of the Year

Eric McDuffie, an eighth-grade science teacher at C.W. Stanford Middle School in Hillsborough (www.orange.k12.nc.us/cws/index.htm), received the 2012 Environmental Educator of the Year Award. The award recognizes his effort to create an “eco-classroom” centered on water quality and water resources. Inspired by the “No Child Left Inside” movement, he identified a patch of mature deciduous forest with a creek running through it, and built an outdoor, hands-on learning space that both the middle- and high-school classrooms can use. He was a part of the leadership team that merged a stormwater runoff project with hands-on education. Students learn that surface water runoff is the largest contributor to water pollution, and they experience this hands-on through monitoring and observation of the eco-classroom.

2012 Exceptional Environmental Education Program

The winner of the 2012 Exceptional Environmental Education Program award was the Pisgah Center for Wildlife Education (www.ncwildlife.org/Learning/EducationCenters/Pisgah.aspx). The center is an ideal example of what an exceptional environmental education program can be. Annually the center has about 13,000 program participants, more than a 100,000 visitors, *and* it is free. It is a bridge between traditional hunting and fishing, environmental management for the common good, and education using the outdoors as a classroom. Their scope and scale reach tourists through the center, teachers through workshops, and students in the classroom with direct programming.

2012 Outstanding Partner

The Potash Corporation of Aurora (www.potashcorp.com/about/facilities/phosphate/aurora/) received the 2012 Outstanding Partnership award for their role in supporting environmental education and the goals of the EENC. Through contributions to environmental education facilities in Eastern North Carolina, they have provided places for students to learn. They support hands-on education throughout the state by providing fossil soil. And they take considerable time and effort to return mine sites to their natural states in spite of significant challenges. They walk the walk, provide high-quality educational opportunities and are great environmental stewards.

2012 Melva Fager Okun Lifetime Achievement Award

Elizabeth Burke of Mud Pie Planet (www.mudpieplanet.com) received the 2012 Melva Fager Okun Lifetime Achievement Award. The award is not given every year, nor is it given lightly. The recipients of this award show a lifelong dedication to environmental education and have shown through action what is best in the field. Elizabeth has done all these things and more. As one of the first individuals to become a Certified Environmental Educator in North Carolina, it is easy to understand her dedication in environmental education.

Over the last several years, even though she has moved from North Carolina, Elizabeth continues to serve on the EENC Board as Communications Chair. She led the board through the

change from periodic print newsletters to a more environmentally sound e-newsletter, oversaw the development of EENC's web presence, and continued to be at the center of EENC communications while the organization hosted the international North American Association for Environmental Education, or NAAEE, conference in 2011.

Through that time she never lost sight of her expressed goal: "To know nature, it's critical to hold it in your hand. To fully understand the interdependence of organisms, there's no substitute for seeing it in action."

2012 Outstanding Service

Sarah Yelton, environmental education coordinator for the University of North Carolina Institute for the Environment (www.ie.unc.edu), is the 2012 recipient of the EENC Outstanding Service award. Regardless of her professional role, she has excelled at forwarding environmental education through her ability to form, nurture, and strengthen partnerships. Sarah has worked tirelessly on the N.C. Environmental Literacy Plan, and has been the liaison with the Southeastern Environmental Educator Association. Through her position on the EENC board, she has been the point of contact for a blossoming Green Schools program. In each role, she put the success of the project in the forefront, while keeping an eye on environmental literacy and stewardship. She has the gift of being able to bring people to the table, make hard decisions, and leave the room having gained respect and friendship.

2012 Outstanding Practitioner

Terri Kirby Hathaway, marine education specialist for North Carolina Sea Grant (www.ncsegrant.org), received the 2012 Outstanding Practitioner award. Terri has a daily impact on EENC and the field of environmental education. As an educator, she continues to expand her skills and helps others become better environmental educators. She is one of the facilitators for the Methods of Teaching Environmental Education, which is required for EE Certification. Terri travels the state to teach workshops about the ocean, and has presented at conferences for various educational organizations, including EENC, Mid-Atlantic Marine Education Association, N.C. Science Teachers Association, National Marine Educators Association and NAAEE. Beyond all else, Terri's warmth and enthusiasm for anything related to the ocean, environmental education and environmental health is contagious.

2012 Outstanding Newcomer

The EENC Newcomer Award goes to someone who is not only new to the organization but also has an immediate effect. A few days after becoming a member, Chip Freund was asked to be a part of the communications committee. He stepped into the role and was asked to become the Communication Co-Chair. Communications is a board position with many responsibilities and great consequences of failure. Chip merged his skills and abilities that of with the Communications Chair and helped create a more effective communications plan. He saved EENC money by becoming EENC's webmaster, helping create and hone our social media presence. Most importantly, he has a vision of moving EENC communication forward with cost-effective tools that will simplify communications.

Communicating Changing Conditions at the Coast

www.nccoastaltraining.net/Course-Catalog/Coastal-Training-Events/Communicating-Changing-Conditions-at-The-Coast-A-/180.aspx

This is an invitation-only workshop for public information officers and non-formal environmental educators. It is scheduled for April 17 and 18 at the K.E. White Graduate Center at Elizabeth City State University. Invitations will be sent out soon. If you are not sure if you are invited, please contact Whitney Jenkins at 252/838-0882 or whitney.jenkins@ncdenr.gov.

Help your target audiences better understand and cope with changing coastal conditions related to sea-level rise and hone your communications skills on this difficult topic. Through structured discussions with communications and climate specialists, you will contribute to the development of best practices for communicating sea-level rise issues to diverse audiences. Work sessions will enhance your understanding of sea-level rise and its potential impacts on the North Carolina coastal region, examine common misconceptions about sea-level rise, and explore local perceptions and diverse responses to this issue. Participants will help develop messages and outreach materials to use in their daily work, and become part of a community of practice focused on communicating the challenges we face with rising seas.

For workshop registration, go to www.nccoastaltraining.net and click on Scheduled Workshops in the top menu. For additional information on the workshop, contact Gloria Putnam at 919/513-0117 or gloria_putnam@ncsu.edu.

Registration Open for 2013 Sustainable Forestry Teachers' Academies

www.ncsu.edu/sfta



If you are looking for a summer professional-development opportunity that will take you into forests and mills, provide hands-on experiences with technologies used in the forest industry, and provide fun networking opportunities with teachers statewide, then the Sustainable Forestry Teachers' Academy is the opportunity you have been waiting for! Take some time to visit their website, read about the Academy and fill out the application at www.ncsu.edu/sfta. Applications will be accepted up to April 5.

Coastal Academy, based in New Bern **June 17 to 21**

Mountain Academy, based in Asheville **June 24 to 28**

The *Sustainable Forestry Teachers' Academy* is a four-day residential program that focuses on the social, economic and environmental aspects of sustainable forestry. Teachers will visit a variety of forests and mills to learn about forest management and the manufacturing of various wood products such as paper, furniture, plywood and lumber. Teachers will participate in tours and hikes in forests under a variety of ownership and management plans. Excursions to

museums, state forests, experimental forests and environmental learning centers will round out the experience.

Participants should expect a fast-paced week, with extended moderate walking, great food, networking and lots of fun. In addition, extensive materials and discussions prepare participants to transfer what they have learned back to the classroom.

Meals, lodging and transportation during the Academy are provided. However, participants are required to submit a \$100 deposit, which will be returned upon arrival. CEU renewal credits will be awarded (20 to 25 contact hours).

Multiple teachers from the same school, and teachers of all disciplines and grades, are encouraged to apply. This opportunity is available only for teachers associated with a school district within North Carolina. Full-time K-12 teachers receive priority. Questions? Contact Renee Strnad at 919/515-5518 or renee_strnad@ncsu.edu.

North Carolina Aquarium on Roanoke Island

www.ncaquariums.com/roanoke-island



From Jan. 7 through April 3, visit the Nature in Black & White: Biological Illustration from N.C. State University special exhibit in the Nautilus Art Gallery at the N.C. Aquarium on Roanoke Island. The exhibit contains 24 pen and ink drawings of subjects ranging from microscopic organisms to beetles, birds and bones. Viewing is included with admission.

The N.C. Aquarium on Roanoke Island, in partnership with the National Association for Interpretation (NAI, www.interpnet.com), is offering a professional certification course March 13 to 16 for individuals who deliver interpretive programs or have public contact at interpretive sites.



The Certified Interpretive Guide (CIG) program is designed for anyone who conducts programs for the public, both formally and informally. It combines both the theoretical foundations of the profession with practical skills in delivering high-quality interpretive programming to visitors.

This 32-hour course includes:

- History, definition and principles of interpretation;
- Strategies for making your programs purposeful, enjoyable, relevant, organized and thematic;
- Tips for using tangible objects to connect audiences to the intangible ideas and universal concepts of your site;
- Presentation and communication skills;

- Certification requirements (open book exam, program outline, 10-minute presentation); and
- All materials, course textbook and daily snacks.

Anyone 16 or older with a desire to increase their interpretation knowledge and skills may participate. Membership in NAI is not required, but NAI members pay a discounted certification fee to participate in the program. You can also elect to take the training without becoming certified.

All workshop activities will take place at the N.C. Aquarium on Roanoke Island near Manteo. Opportunities to explore the aquarium will be provided.

The CIG workshop is set for March 13 to 16, Wednesday to Saturday, from 8:30 a.m. to 5:30 p.m. daily. There will be breaks for lunch and light refreshments. Participants may bring their own bag lunch or eat lunch at one of several nearby restaurants. None are within walking distance so you will need to drive or car pool with other participants.

Cost:

Workshop tuition, includes workbook	\$230
Optional NAI one-year membership	\$50 (\$25 for full time students)
Optional certification fee	\$80 for members, \$135 for non-members

Lodging and meals are not included.

Registration or confirmation to attend must be received by Feb. 13. *Class size will be limited to 12 participants to ensure individual attention.* For more information about the workshop, please contact Rhana Paris, workshop instructor, at 252/473-3494, x266 or rhana.paris@ncaquariums.com. Download a PDF of the application at blogs.ncseagrant.org/scotchbonnet/files/2013/01/CIG_registraion_OBX_2013.pdf.

Spring 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 the N.C. Environmental Educator Certification.

Pre-registration is required at least four days prior to program. Register at reclink.raleighnc.gov or by calling the Wetland Center at 919/831-1960. The center is located at 950 Peterson Street in Raleigh. Its email address is wc.wetlandcenter@raleighnc.gov.

Nature Journaling

Class will be offered on the following Saturdays:

Jan. 26, Feb. 23, March 16 and April 27; 10 a.m. to 12 p.m.; \$5; all ages.

Nature journaling 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. We will learn some basic drawing techniques and spend time outside writing and drawing in our journals. You will receive a basic journaling kit, but feel free to bring your favorite art supplies.

Project WILD at Walnut Creek

Tues, Jan. 22; 10:30 a.m. to 4 p.m.; \$10; lunch is provided.

A nature-based workshop appropriate for classroom teachers, resource specialists, naturalists, park rangers, scout and youth leaders, camp counselors, and other informal educators. Expect to learn innovative techniques for teaching nature-based education.

All About Amphibians

Tues, March 5; 1 p.m. to 5 p.m.; \$5.

Join Jeff Hall, a herpetologist from the N.C. Wildlife Resources Commission and coordinator of the N.C. Chapter of Partners in Amphibian and Reptile Conservation, for a workshop on North Carolina amphibians. Spring is the perfect time to observe amphibians in the wetland adjacent to the Walnut Creek Wetland Center. Through fieldwork and classroom presentation, participants will learn identification techniques, basic biology and habitat requirements for these special creatures.

Aquatic WILD at Walnut Creek

Sat, April 6; 10:30 a.m. to 4 p.m.; \$10; lunch is provided.

A nature-based workshop appropriate for classroom teachers, resource specialists, naturalists, park rangers, scout and youth leaders, camp counselors, and other informal educators. Expect to learn innovative techniques for teaching nature-based education.

Creeks to Coast Workshop

Sat, April 13; 9 a.m. to 1 p.m.; free.

Join scientists from North Carolina State University and the University of North Carolina at Chapel Hill for a free workshop for all educators. The workshop will include presentations from real-life research projects. Main themes include abiotic vs. biotic factors, food webs, and inland stream environments and their impacts on coastal habitats. We'll go outside for some hands-on water quality testing. Earn environmental education credits while increasing your foundational knowledge of STEM concepts.

North Carolina Estuarium Winter Highlights

www.partnershipforthesounds.org

January Art Exhibit: "Beaufort County Beauty" — Photographs Liz Partrick



Jan. 17, 8:30 a.m. to 5 p.m. Birding Trips to Mattamuskeet National Wildlife Refuge. Transportation provided. Bring a bag lunch and a drink. \$20. Pre-registration and pre-payment are required. Call 252/948-000 to pre-register.

Jan. 24, 1 to 2 p.m. Waterfowl Identification Program. Winter is a great time for bird watching in the area. Learn the basics of identifying waterfowl and the best regional places to go birding. \$2.

February Art Exhibit: Art Quilts by Christine Zoller.

Feb. 9, 9 to 10 a.m. and 10:30 to 11:30 a.m. Children's Decoy Painting Workshop. For ages 4 to 12. Co-sponsored by the East Carolina Wildfowl Guild in conjunction with the Wildlife Arts Festival. Free. Pre-registration is required. Call 252/948-0000 to pre-register.

Feb. 9, 1:30 to 2:30 p.m. Children's Junior Duck Stamp Program. Sherrie Jager, the N.C. Junior Duck Stamp Coordinator, will be teaching the basics of the Duck Stamp program with sketching supplies and art instruction. Suitable for children grades K-12. Free. Call 252/948-000 to pre-register.

Feb. 21, 1 to 2:30 p.m. DVD showing: "Refuge – Alligator River." Blake and Emily Scott speak about the fifth installment in their series of Refuge films. This one offers a breathtaking view of wildlife flourishing in this unique river system. Exciting footage shows many rare and endangered animals, including red wolves, red-cockaded woodpeckers, black bears, wild turkeys, timber rattlesnakes and alligators. For all ages. \$2.

March Art Exhibit: Wall hangings by the Pamlico River Quilters Guild.

The Crab Pot Gift Shop showcases many North Carolina products and books. It also carries unique gifts and cards with a natural flair.

The Estuarium is located at 223 E. Water Street in Washington, N.C., and is open Tuesday to Saturday, 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, contact 252/948-0000 or email estuarium@embarqmail.com.

Monitor Sanctuary Announces Inaugural Film Competition for Students

monitor.noaa.gov



The Monitor National Marine Sanctuary and its Youth Working Group, along with the city of Beaufort, N.C., are sponsoring a student film festival for students in grades 6 to 12. The purpose of the competition is to inspire, encourage, recognize and promote the work of student filmmakers who are passionate about the ocean. It is through the work of young filmmakers that the sanctuary hopes to educate others about the interconnectedness of the ocean and to share the issues and concerns facing our ocean today.

Quick Look:

What: Student Film Festival

Who: Any student in 6th to 12th grade

When: April 12 and 13

Where: Beaufort, N.C.

Submission Deadline: March 15

Categories: 30-second public service announcement, 1- to 5-minute micro-short, and 5- to 12-minute short

There is a \$10 entry fee for each entry. Prizes are awarded for first and second place.

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

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: 252/475-5486; 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 somewhat stylized, with a long horizontal stroke for the top bar of the "T".

Terri Kirby Hathaway
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