



# Scotch Bonnet

*What we are hearing from the sea.*

North Carolina Sea Grant

[www.ncseagrant.org](http://www.ncseagrant.org)

FALL 2019

Welcome to the newest online issue of *Scotch Bonnet*.

At this time last year, communities were struggling to recover from Hurricane Florence and the subsequent flooding. This year, Ocracoke and Hatteras Islands were hit hard by record flooding during Hurricane Dorian. Our North Carolina Sea Grant thoughts go out to all the teachers, students, schools, and families that suffered damage from the storm or flooding.

We hope that you're up and back to normal very soon! Providing students with a strong foundation in science and knowledge about our environment will help prepare them for future disasters like this one.

Those of you who know me well know that I have a favorite fish: the ocean sunfish, *Mola mola*. For some reason these giant swimming heads caught my attention many years ago, and I have been fascinated and thrilled by them ever since!

I thought I knew a lot about these way cool fish, but I just learned about a new species of sunfish that has been documented recently in Monterey Bay. The hoodwinker sunfish, *Mola tecta*, was first described in 2017 by Murdoch University's (Australia) Marianne Nyegaard. After examining 150 DNA samples, she found four separate species of sunfish, yet only three had ever been seen!

Now the new species, the hoodwinker sunfish, has been documented in Monterey Bay. It was recently photographed by a friend of mine: J.R. Sosky, a middle school science teacher in Monterey, California! Read about this "Major Mola Moment" and check out J.R.'s underwater photo: [montereybayaquarium.tumblr.com/post/187517538903/major-mola-moment-first-confirmed-hoodwinker?utm\\_source=Septemberenews&utm\\_medium=email&utm\\_campaign=2019-enews](http://montereybayaquarium.tumblr.com/post/187517538903/major-mola-moment-first-confirmed-hoodwinker?utm_source=Septemberenews&utm_medium=email&utm_campaign=2019-enews)

Molas have been sighted regularly by fishing boats and from fishing piers here on the Outer Banks. I have been lucky enough to see two species of ocean sunfish over the last 35 years of living here, including several sightings of *Mola mola*.

One Friday, back in the mid-1980s when I was working at the N.C. Aquarium on Roanoke Island, a noted naturalist from the Edenton area came in to tell us about a large stranded (dying) fish he found on Pea Island. The way he described it made it clear to me that this was an ocean

sunfish. A friend and I left work early that day and headed down to Pea Island to see if we could find this unusual animal. YES, we located the animal, but it wasn't an ocean sunfish – it was a sharptail mola, with an elongated upper caudal fin!

You can learn more about the ocean sunfish group from the Two Oceans Aquarium in Cape Town, South Africa here: [aquarium.co.za/blog/entry/everything-you-need-to-know-about-ocean-sunfish](http://aquarium.co.za/blog/entry/everything-you-need-to-know-about-ocean-sunfish)

If you want to see an ocean sunfish, the Monterey Bay Aquarium has one (sometimes two) in its Open Sea tank. In fact, Monterey is the first aquarium in North America to maintain ocean sunfish in captivity!

If you can't get to Monterey, you can watch their Open Sea web cam on your streaming device. It's mesmerizing and calming to watch tunas, sharks, bonito, and other species (including the ocean sunfish) swim so gracefully through the water. I am gazing at Monterey Bay Aquarium's mola as I work on this issue! [montereybayaquarium.org/animals-and-exhibits/live-web-cams/open-sea-cam](http://montereybayaquarium.org/animals-and-exhibits/live-web-cams/open-sea-cam)

Thanks to Carrie Council, Lauren Daniel, Megan Davis, Melissa Dowland, Dymond Generette, Barbara Goldentyer, Ashely Hamlet, Jessican Janc, C.C. King, Gail Lemiec, Alison Manka, Jennifer Metzler-Fiorino, Jennifer Phelps, Tanya Poole, Gretchen Smith, Renee Strnad, Dave Sybert, Dana Thomason, and Brooke Wilson for their contributions to this issue.

Wishing you all a wonderful fall season!

As you explore this new issue of *Scotch Bonnet*, you will notice professional development opportunities and family adventures for everyone. Take advantage of these wonderful conferences, workshops and more, especially if you're working on your environmental education certification. There's a lot going on in North Carolina and beyond!

## Blue Heron Bowl Coming to Outer Banks

[coastalstudiesinstitute.org](http://coastalstudiesinstitute.org)

**What:** Blue Heron Bowl  
**When:** Saturday, Feb. 1, 2020  
**Where:** ECU's Coastal Studies Institute, 850 Highway 345, Wanchese  
**Cost:** FREE entry  
**RSVP:** Contact Dave Sybert ([sybertd@ecu.edu](mailto:sybertd@ecu.edu) or 252-475-5451)

The 2020 Blue Heron Bowl, a regional part of the National Ocean Sciences Bowl (NOSB), will be hosted by the Coastal Studies Institute on North Carolina's Outer Banks. This competition is open to high school teams in North Carolina.

Two teams, each composed of four students and one alternate, square off against each other to answer questions related to marine science. Many of these students are coached by a marine science or general science teacher that sponsors their training.

The Blue Heron Bowl consists of a set of matches. Each match consists six minutes of toss-up and bonus questions, followed by two team challenge questions, ending with a final six minutes of toss-up and bonus questions.

Winners of the Blue Heron Bowl will be sent to the national competition in April. Location of the national finals has yet to be determined. There, our Blue Heron Bowl champion will face-off against 25 other teams in the national finals!

Team registration for the 2020 competition will open soon!

Goals of the NOSB competition are to increase knowledge of the oceans and to raise visibility and public understanding of the national investment in ocean-related research. The competition gives oceanographic research programs the opportunity to develop new connections with their local pre-college community and to open students' eyes to ocean-related careers.

Ultimately, the success of the Blue Heron Bowl requires the concerted efforts of many volunteer staff and sponsors. Sponsors help offset the costs incurred, while volunteers serve as moderators, scientific judges, rules judges, timekeepers, and scorekeepers. The 2020 event will need assistance from many, so consider joining the Blue Heron Bowl squad of volunteers! If you're interested in volunteering, you can sign up here: [forms.gle/suX3pEDZMLB6RbgB8](https://forms.gle/suX3pEDZMLB6RbgB8).

Interested teachers and prospective volunteers should contact Dave Sybert ([sybertd@ecu.edu](mailto:sybertd@ecu.edu) or 252-475-5451) as soon as possible to get started on this exciting event!

## Project WILD at Cape Fear Botanical Garden

[capefearbg.org](http://capefearbg.org)

<b>What:</b>	<b>Project WILD</b>
<b>When:</b>	Monday, Oct. 21; 9:00 a.m. – 4:00 p.m.
<b>Where:</b>	Cape Fear Botanical Garden, 536 N. Eastern Blvd., Fayetteville
<b>Cost:</b>	FREE (entrance fee waived)
<b>Credits:</b>	6 contact hours CEU credit; EE Certification Criteria I; optional homework

**RSVP:** Pre-registration required: email Barbara Goldentyer  
([bgoldentyer@capefearbg.org](mailto:bgoldentyer@capefearbg.org))

This wildlife education workshop, taught by N.C. Wildlife Resources Commission's Becky Skiba, will introduce environmental education techniques and activities for educators.

Project WILD is one of the most widely-used conservation and environmental education programs among educators of students in kindergarten through high school. It is based on the premise that young people and educators have a vital interest in learning about our natural world. Project WILD links students and wildlife through its mission to provide wildlife-based conservation and environmental education that fosters responsible actions toward wildlife and related natural resources.

Participants of this 6-hour workshop receive the Project WILD K-12 educator guide along with materials specifically about North Carolina wildlife. The educator guide contains more than 150 hands-on activities that focus on wildlife and natural resources.

There will be a 30-minute lunch break – please bring a sack lunch or plan to go off site. Portions of this class will be led outdoors, so please dress accordingly. Participants are eligible for 6 hours of Criteria I credit of N.C. Environmental Education (EE) Certification and school teachers receive CEU credit. A homework option is available to increase credits to 10 hours or 1.0 CEU. This workshop and all materials are free.

Please continue to check the Garden's website for more adult programs. For questions and information about all programs, email Barbara Goldentyer at [bgoldentyer@capefearbg.org](mailto:bgoldentyer@capefearbg.org).

## **Educator PD at N.C. Aquarium at Fort Fisher**

[ncaquariums.com/fort-fisher](http://ncaquariums.com/fort-fisher)

The N.C. Aquarium at Fort Fisher is offering a variety of professional development (PD) workshops this fall. More trainings may be added, so keep an eye on their website for updates.

**What:** Project OWL Workshop  
**When:** Saturday, Oct. 12; 9:00 a.m. to 3:30 p.m.  
**Where:** N.C. Aquarium at Fort Fisher, 900 Loggerhead Drive, Kure Beach  
**Cost:** \$10 for adults; \$5 for UNC-Wilmington students  
**Credits:** 6 contact hours CEU credit; EE Certification Criteria I or III  
**RSVP:** [reservations.ncaquariums.com/fortfisher/Info.aspx?EventID=20](http://reservations.ncaquariums.com/fortfisher/Info.aspx?EventID=20)

Are you a...

- ... classroom teacher looking to incorporate more environmental education (EE) into your lessons?
- ... non-formal educator hoping to incorporate more grade level standards into your programs?
- ... K-5 pre-service teacher looking for more resources to implement science methods?

If you said “Yes!” to any of these questions, then a Project OWL workshop is the place for you. Project OWL (Outdoor Wonders and Learning) is an EE curriculum guide written and designed to match North Carolina essential standards for elementary grades. It focuses on science, but also meets math, social studies, and English language arts standards when applicable.

During the workshop, participants will try out Project OWL activities and learn more about how they work on their own or as part of a larger lesson. This workshop also offers time for creating programs and lessons using a learning cycle method and opportunities for participants to update an old favorite lesson.

This workshop is led by Michelle Pearce, coordinator of school and public programs at The North Carolina Arboretum and for Project OWL. The workshop can count for continuing education units for classroom teachers and/or Criteria I or III credits for N.C. Environmental Education Certification.

Help keep our seas plastic-free! Please bring a waste free lunch, a reusable water container, and a coffee cup.

The cost of the Project OWL Workshop is \$10 for adults and \$5 for UNC-Wilmington students. For additional workshop information, call 910-772-0546. For assistance with registration, call 910-772-0542.

- What:** Project WET Workshop
- When:** Saturday, Nov. 2; 10:00 a.m. to 4:00 p.m.
- Where:** N.C. Aquarium at Fort Fisher, 900 Loggerhead Drive, Kure Beach
- Cost:** \$30 (includes Aquarium admission and activity book)
- Credits:** 6 contact hours CEU credit; EE Certification Criteria I
- RSVP:** [reservations.ncaquariums.com/fortfisher/Info.aspx?EventID=20](http://reservations.ncaquariums.com/fortfisher/Info.aspx?EventID=20)

Project WET is an interdisciplinary water science and education program for formal and non-formal educators of K-12 students. The keystone of the Project WET program is the Project WET Curriculum & Activity Guide. The hands-on, supplemental activities are meaningful and relevant to children and are correlated with the 2013 N.C. Essential Standards for Science, Social Studies and Health Education for grades K-8 and for high school earth/environmental science and biology.

The Project WET Guide is only available through a 6-hour Project WET workshop. WET is a Criteria I workshop for the N.C. EE Certification Program and consists of 6 contact hours that may count towards CEU credit for teachers.

Participants should dress in comfortable clothes, with shoes suitable for physical activity that can get wet and dirty. Help keep our seas plastic-free by bringing a waste-free lunch and a reusable water container and/or coffee cup.

For additional workshop information, call 910-772-0546. For assistance with registration, call 910-772-0542.

**What:** Flying WILD Workshop  
**When:** Saturday, Nov. 9; 9:00 a.m. to 3:30 p.m.  
**Where:** N.C. Aquarium at Fort Fisher, 900 Loggerhead Drive, Kure Beach  
**Cost:** FREE; \$10 reservation fee is required then refunded after workshop  
**Credits:** 6 contact hours CEU credit; EE Certification Criteria I; optional homework  
**RSVP:** [reservations.ncaquariums.com/fortfisher/Info.aspx?EventID=20](https://reservations.ncaquariums.com/fortfisher/Info.aspx?EventID=20)

Bring some binoculars and a sense of wonder as we learn how to educate ourselves and others about our feathered friends.

This workshop is for teachers, educators, or parents. Targeted for the middle-school audience, though widely adaptable, Flying WILD offers practical hands-on classroom and outdoor field investigation experiences connecting real-world experiences in bird biology, conservation and natural history.

Through activities involving language arts, social science and math experiences, coupled with community outreach and service learning applications, Flying WILD offers a whole-school approach to environmental education using birds as the focus.

The 6-hour workshop counts towards CEU credits and N.C. EE Certification Criteria I credits. Optional homework is available to earn up to 10 credit hours. This workshop and all materials are free.

This workshop will be partially outdoors, so please wear comfortable closed-toed shoes and dress for the weather. Feel free to bring bug spray, a water bottle, and binoculars (although some will be made available for people to use).

Please bring a bag lunch and a reusable water bottle. Registration fee of \$10 will be refunded when you attend the workshop.

Please contact Becky Skiba at [rebecca.skiba@ncwildlife.org](mailto:rebecca.skiba@ncwildlife.org) for specific workshop questions or Gail Lemiec for logistics questions at [gail.lemiec@ncaquariums.com](mailto:gail.lemiec@ncaquariums.com) or 910-772-0546. For assistance with registration, call 910-772-0542.

For more information on these upcoming workshops or to register, please visit:  
[reservations.ncaquariums.com/fortfisher/Info.aspx?EventID=20](https://reservations.ncaquariums.com/fortfisher/Info.aspx?EventID=20)

## **Playful Pedagogy Workshop at Rowan Wild**

[rowancountync.gov/183/Rowan-Wild-at-Dan-Nicholas-Park](https://rowancountync.gov/183/Rowan-Wild-at-Dan-Nicholas-Park)

**What:** **Playful Pedagogy**, a natural playwork workshop  
**When:** Monday, Oct. 14; 10:00 a.m. to 3:00 p.m.  
**Where:** Rowan Wild, 6800 Bringle Ferry Road, Salisbury  
**Cost:** FREE, but preregistration is required  
**Credit:** 5 contact hours CEU credit; EE Certification Criteria II; DCDEE training  
**RSVP:** Contact Brooke Wilson ([brooke.wilson@rowancountync.gov](mailto:brooke.wilson@rowancountync.gov) or 704-216-7834)

Playful Pedagogy, presented by Linda Kinney of the N.C. Zoo, is an introduction to children's play and playwork in outdoor environments.

Learners will determine creative approaches to planning for play and practical applications for playwork outdoors. Participants will "play with" aspects of nature and play, and explore their combined application in outdoor play and learning environments. This workshop provides strategies for incorporating nature play into curriculum, lesson plans and everyday life as a way to enhance children's opportunities for exploration, inquiry and play outside.

Participants can receive 5 hours toward Criteria II of the N.C. EE Certification Program, teachers can apply for 0.5 CEU credit hours, and early childhood providers can receive 5 contact training hours with N.C. Division of Child Development and Early Education (DCDEE). Certificates of completion, EE forms and DCDEE certificates will be given out at the end of the workshop.

The workshop will take place both indoors and outside. Please dress for the weather. Please bring a bagged lunch as there are no close restaurants where participants can get food in 30 minutes.

To register, please contact Brooke Wilson at [brooke.wilson@rowancountync.gov](mailto:brooke.wilson@rowancountync.gov) or at 704-216-7834.

## N.C. Museum of Natural Sciences Workshops

[naturalsciences.org](http://naturalsciences.org)

The N.C. Museum of Natural Sciences offers a variety of educator programs throughout the year. Here are a couple of professional development options from the museum for the fall.

**What:** IDEAS (Innovative Differentiated Exploration Activities in Space Science)  
**When:** Monday-Tuesday, Oct. 14-15; 8:30 a.m. to 5:00 p.m.  
**Where:** N.C. Museum of Natural Sciences, 11 West Jones Street, Raleigh  
**Cost:** \$25 (participants will receive a \$150 stipend upon completion of workshop)  
**Credits:** 16 contact hours CEU credit  
**RSVP:** [naturalsciences.org/calendar/educator-trek-registration](http://naturalsciences.org/calendar/educator-trek-registration)

In this interactive professional development, experts from the National Aeronautical and Space Administration (NASA) and the Special Education community will familiarize educators of exceptional students with the wide variety of standards-based space science education materials that are available from NASA. Presenters will share their knowledge and professional experiences through short presentations, interactive activities and group discussions. Participants are encouraged to simulate a variety of disabilities using visual impairment goggles, hearing impairment simulators and other materials and devices to simulate physical disabilities. Discussion regarding learning disabilities, including ADD and ADHD, will be held throughout the workshop.

Once you complete the online registration form, you will receive an email confirming that there is a space available in the workshop(s) you requested and an invoice for the Trek deposit (typically \$25/workshop). If the workshop is already full at the time we receive your registration, you will be notified and placed on a waiting list.

*The IDEAS Workshop is sponsored by the North Carolina Space Grant and supported by the South Carolina and North Dakota Space Grant Consortia.*

**What:** Got Elk?  
**When:** Friday, Oct. 25 (depart Raleigh at 3:30 p.m.) – Sunday, Oct. 27  
**Where:** Great Smoky Mountains National Park, Haywood County  
**Cost:** \$90\* (includes transportation, lodging, most meals)  
**Credits:** 20 contact hours CEU credit  
**RSVP:** [naturalsciences.org/calendar/educator-trek-registration/](http://naturalsciences.org/calendar/educator-trek-registration/)

Join us as we search for the majestic elk, reintroduced to the Smokies after an absence of more than 200 years. Sample activities used to document the biodiversity of the park. Discover how you can bring the excitement of field research into your classroom.



\*The cost of this trek is reduced thanks to a generous gift through the Friends of the Smokies. Because of this cost reduction, Friends of the Museum discounts are unavailable.

Additional information: [naturalsciences.org/calendar/event/got-elk/](https://naturalsciences.org/calendar/event/got-elk/)

**What:** **Discovering Ecology through Nature Journaling**  
**When:** Friday, Nov. 8 (depart Raleigh at 4:15 p.m.) – Sunday, Nov. 10  
**Where:** Camp Chestnut Ridge, Efland  
**Cost:** \$95 (includes transportation, lodging, all meals through Sunday breakfast, journaling supplies)  
**Credits:** 20 contact hours CEU credit  
**RSVP:** [naturalsciences.org/calendar/educator-trek-registration/](https://naturalsciences.org/calendar/educator-trek-registration/)

Increase your observation skills and understanding of the Piedmont ecosystem while discovering how to use journaling to enhance science learning. We will explore the flora and fauna of the hardwood forest and document our experiences through a variety of techniques, including diagrams, sketches, digital photography, poetry and reflective writing.

**What:** **Yellowstone in Winter – applications due October 11**  
**When:** Wednesday, Jan. 15, 2020 – Wednesday, Jan. 22, 2020  
**Where:** Yellowstone National Park, Wyoming and Montana  
**Cost:** \$1,800 (includes airfare from Raleigh to Bozeman, MT; ground transportation; snowcoach tour; lodging, and some meals)  
**Credits:** 60 contact hours CEU credit  
**RSVP:** [naturalsciences.org/calendar/educator-trek-registration/](https://naturalsciences.org/calendar/educator-trek-registration/)

Glimpse the spectacular natural wonders of America's first National Park and discover its charismatic inhabitants — elk, wolves, bison and more. Explore the connections between Yellowstone and North Carolina and discuss how to link your experiences to the classroom. Via the Yellowstone in Winter blog, your students will be able follow our adventures in this winter paradise by reading daily journals and viewing pictures of the incredible beauty and wildness that we experience.

### **Applications are due October 11!**

Scholarships are available for public school teachers, counselors and assistant principals from Beaufort, Bertie, Bladen, Chowan, Columbus, Duplin, Edgecombe, Gates, Greene, Halifax, Hertford, Hoke, Hyde, Jones, Lenoir, Martin, Nash, Northhampton, Pasquotank, Perquimans, Robeson, Sampson, Scotland, Tyrrell, Warren, Washington, Wayne and Wilson counties who plan to continue work in the school system during the 2020-21 school year.

Looking for other opportunities? For information about additional teacher education programs, contact Melissa Dowland at 919-707-9898.

## Streambank Repair Workshop in Watauga County

[blueridgercd.com](http://blueridgercd.com)

- What:** Shade Your Stream Workshop  
**When:** Friday, Oct. 18; 10:00 a.m. to 2:00 p.m.  
**Where:** Watauga Agricultural Conference Center, 252 Poplar Grove Road, Boone  
**Cost:** FREE, but space is limited (lunch provided)  
**Credits:** 4 hours EE Certification Criteria II or III  
**RSVP:** Contact Jessica Janc ([hcwatershed@gmail.com](mailto:hcwatershed@gmail.com) or 828-406-6690)

Blue Ridge Resource Conservation & Development Council, along with partners from New River Conservancy and Watauga Riverkeeper, are hosting a Shade Your Stream workshop for homeowners, HOA officers, landscapers, local government personnel, engineers, educators and students.

Attendees will have the opportunity to observe, ask questions and install live stakes for streambank protection following the educational presentation. Experts will provide practical, cost-effective solutions using natural materials and native plants to create a healthy stream-side environment.

The workshop will start at the Watauga Agricultural Conference Center in Boone for classroom instruction and lunch and then head outside to take part in a hands-on stream repair exercise.

Please wear shoes/boots that you don't mind getting muddy. Lunch will be provided and participants will have the opportunity to take home free live stakes to implement the skills they've learned.

For more information or to register, contact Jessica Janc at [hcwatershed@gmail.com](mailto:hcwatershed@gmail.com) or 828-406-6690.

## Flying WILD in Southport

[ncwildlife.org/educators](http://ncwildlife.org/educators)

- What:** Flying WILD  
**When:** Saturday, Oct. 19; 9:00 a.m. to 3:30 p.m.  
**Where:** Duke Energy Brunswick Nuclear Plant, 8520 River Road SE, Southport  
**Cost:** FREE (lunch provided)  
**Credits:** 6 hours EE Certification Criteria I; optional homework  
**RSVP:** Email Becky Skiba ([rebecca.skiba@ncwildlife.org](mailto:rebecca.skiba@ncwildlife.org))

Duke Energy Nuclear Plant in Brunswick County is hosting this FREE Flying WILD workshop led by Becky Skiba of the N.C. Wildlife Resources Commission. This is a special opportunity to learn more about the conservation and biological monitoring that occurs at the Brunswick nuclear plant, which brings power to the southeastern portion of the state. This workshop will include a free guided tour of the external portions of the plant, as well as a free lunch on site.

Mary Ellen Rogers from Seabiscuit Wildlife Shelter on Oak Island will bring some rehabilitated educational birds to teach us about each species and share their stories. We will learn about bird conservation and the many different ways you can help our feathered friends.

Targeted for the middle-school audience, though widely adaptable, Flying WILD offers practical hands-on classroom and outdoor field investigation experiences connecting real-world experiences in bird biology, conservation and natural history. Through activities involving language arts, social sciences and math experiences, coupled with community outreach and service learning applications, Flying WILD offers a whole-school approach to environmental education using birds as the focus.

Participants of this 6-hour workshop receive the Flying WILD: An Educator's Guide to Celebrating Birds along with materials specifically about North Carolina wildlife. The Guide provides activities that teach students about birds, their migration and what people can do to help birds and their habitats. Many activities can be used to teach classroom lessons or to initiate service-learning projects that help birds and their habitats. The Guide helps middle-grade students, teachers and community volunteers implement a bird festival at their school.

Participants are eligible for 6 hours of N.C. EE Certification Criteria I credit and school teachers receive CEU credit. A homework option is available, bringing potential to earn an additional four credit hours. This workshop and all materials are free.

Pre-registration is required, space limited to 20 participants. **Registration will close on Oct. 15 for this workshop.** To register, please email Becky Skiba at [rebecca.skiba@ncwildlife.org](mailto:rebecca.skiba@ncwildlife.org). When registering, please provide your cell number, driver's license number and state of issue.

**This is a secure area and all who enter must bring a valid driver's license to pass through security. Participants will need to arrive at the plant no later than 8:30 a.m. to be shuttled on site.**

## Watercolors at the Piedmont Environmental Center

[highpointnc.gov/pec](http://highpointnc.gov/pec)

**What:** Fall Leaves and Watercolors (adults only)

**When:** Saturday, Oct. 19; 10:00 a.m. to 3:00 p.m.

**Where:** Piedmont Environmental Center, 1220 Penny Road, High Point  
**Cost:** \$25 for members; \$30 for non-members  
**Credits:** 4 hours EE Certification Criteria II, III, or VI (continuing education)  
**RSVP:** Register online at [highpointnc.gov/pec](http://highpointnc.gov/pec) or contact Carrie Council ([carrie.council@highpointnc.gov](mailto:carrie.council@highpointnc.gov) or 336-883-8531)

Join a Piedmont Environmental Center naturalist for a morning hike on the trails focusing on the identification and natural history of trees and shrubs while they are in fall color splendor. Following the hike, participants will go into the classroom for an introduction to watercolor painting techniques. With the materials provided, participants will practice rendering fall leaves and autumn landscapes.

This program is for adults only. Participants will need to bring a bag lunch and water bottle. Credit for N.C. EE Certification Criteria II, III or VI (continuing education). **Please register by Oct. 15.**

Register online at [highpointnc.gov/pec](http://highpointnc.gov/pec), or contact Carrie Council at [carrie.council@highpointnc.gov](mailto:carrie.council@highpointnc.gov) or 336-883-8531.

## **N.C. CATCH at Lake Higgins**

[greensboro-nc.gov/departments/parks-recreation](http://greensboro-nc.gov/departments/parks-recreation)

**What:** N.C. CATCH workshop  
**When:** Wednesday, Nov. 6; 9:00 a.m. to 4:00 p.m.  
**Where:** Lake Higgins, 4235 Hamburg Mill Road, Summerfield  
**Cost:** FREE  
**Credits:** 6 hours EE Certification Criteria I; optional homework  
**RSVP:** Email Jennifer Phelps ([jennifer.phelps@greensboro-nc.gov](mailto:jennifer.phelps@greensboro-nc.gov))

CATCH is an interdisciplinary conservation education program focusing on aquatic environments through fish studies, outdoor ethics, water safety and fishing skills. The workshop, teacher guide and student materials were all developed by the N.C. Wildlife Resources Commission. The CATCH materials are designed to be used with youth ages 8-15. The workshop teaches educators how to organize and conduct a CATCH fishing clinic.

After completing a CATCH workshop, participants will be given free access to all the educational materials. The workshop offers 6 credit hours (with homework available for additional credit hours), with a 1-hour lunch break. Please bring your own lunch. Fishing is included in this workshop, so please dress accordingly!

Questions, or to register, please email Jennifer Phelps at [jennifer.phelps@greensboro-nc.gov](mailto:jennifer.phelps@greensboro-nc.gov)

## Upcoming Project Learning Tree Workshops

[forestry.ces.ncsu.edu/events/?q=PLT](http://forestry.ces.ncsu.edu/events/?q=PLT)

Since 1976, Project Learning Tree (PLT) has been using trees as a lens into our natural and built environments to teach students “how to think, not what to think” about complex environmental issues. [Check out this short video](#) to see some activities in action and hear from students and teachers!

**What:** Project Learning Tree, K-8 Workshop  
**When:** Wednesday, Nov. 6; 9:30 a.m. to 3:30 p.m.  
**Where:** Guilford College Community Center, 5800 W Friendly Avenue, Greensboro  
**Cost:** \$20  
**Credits:** 6 contact hours CEU credit; EE Certification Criteria I  
**RSVP:** [go.ncsu.edu/ncplt\\_guilford](http://go.ncsu.edu/ncplt_guilford)  
(registration deadline: Oct. 30)

Join other K-8 classroom and informal educators as we explore activities in the Project Learning Tree K-8 Curriculum Guide. Every participant will leave the workshop with this guide, which includes 96 activities correlated with the N.C. Standard Course of Study and Essential Standards.

The PLT activity guides are provided free of charge to participants through support from the N.C. Forestry Association. CEU credits are available. This workshop qualifies for Criteria I in the N.C. EE Certification Program. Questions? Contact Renee Strnad at [renee\\_strnad@ncsu.edu](mailto:renee_strnad@ncsu.edu)

**What:** Project Learning Tree, K-12 Workshop  
**When:** Monday, Nov. 11; 9:00 a.m. to 4:00 p.m.  
**Where:** Jordan Lake Educational State Forest, 2832 Big Woods Road, Chapel Hill  
**Cost:** \$20  
**Credits:** 6 contact hours CEU credit; EE Certification Criteria I or II  
**RSVP:** [go.ncsu.edu/ncplt\\_jordanlake](http://go.ncsu.edu/ncplt_jordanlake)  
(registration deadline: Nov. 6)

Join other K-8 classroom and informal educators as we explore activities in the Project Learning Tree K-8 Curriculum Guide. Every participant will leave the workshop with this guide, which includes 96 activities correlated with the N.C. Standard Course of Study and Essential Standards. This workshop will also use the secondary module, Focus on Forests, for educators working with middle and high school students

The PLT activity guides are provided free of charge to participants through support from the N.C. Forestry Association. CEU credits are available. This workshop qualifies for Criteria I or II in the N.C. EE Certification Program. For questions, email [JordanLakeESF.ncfs@ncagar.gov](mailto:JordanLakeESF.ncfs@ncagar.gov) or call 919-542-1154.

## Project WILD – Charlotte and Southern Piedmont

[ncwildlife.org](http://ncwildlife.org)

**What:** Project WILD  
**When:** Friday, Oct. 25; 9:00 a.m. to 4:00 p.m.  
**Where:** McGuire Nuclear Station, 13225 McGuire Nuclear Station Road, Huntersville  
**Cost:** FREE (lunch provided)  
**Credit:** 6 contact hours CEU credit; EE Certification Criteria I; optional homework  
**RSVP:** Contact Christine Pulley ([christine.pulley@duke-energy.com](mailto:christine.pulley@duke-energy.com) or 980-875-6012)

Project WILD is one of the most widely-used conservation and environmental education programs among educators of students in kindergarten through high school. It is based on the premise that young people and educators have a vital interest in learning about our natural world. Project WILD links students and wildlife through its mission to provide wildlife-based conservation and environmental education that fosters responsible actions toward wildlife and related natural resources.

Participants of this 6-hour workshop receive the new Project WILD K-12 educator guide along with materials specifically about North Carolina wildlife. This new guide contains some new activities, as well as some old favorites – more than 150 hands-on activities that focus on wildlife and natural resources.

Participants are eligible for 6 hours of Criteria I credit for N.C. EE Certification and school teachers receive CEU credit. A homework option is available to increase credits to 10 hours or 1.0 CEU. This workshop and all materials are free.

This workshop is indoor/outdoor; please dress for a trail hike and the weather. This workshop is inclusive and adaptive to all abilities.

To register, contact Christine Pulley at [christine.pulley@duke-energy.com](mailto:christine.pulley@duke-energy.com) or 980-875-6012.

## Educator Opportunities at Sylvan Heights

[shwpark.com/](http://shwpark.com/)

**What:** Ukrainian Egg Decorating Workshop  
**When:** Saturday, Nov. 30; 10:00 a.m. to 1:00 p.m.  
**Where:** Sylvan Heights Bird Park, 500 Sylvan Heights Park Way, Scotland Neck  
**Cost:** \$40 for members; \$45 for non-members  
(includes admission to the park for the day)  
**RSVP:** [eventbrite.com/e/ukranian-egg-decorating-tickets-72431252827](https://www.eventbrite.com/e/ukranian-egg-decorating-tickets-72431252827)  
Or call 252-826-3186 to reserve your space

The Ukrainian traditional art of pysanky is the decorating of hollowed eggs with colorful designs using dyes. Join us to learn the basics of pysanky and create two holiday-themed eggs to take home! Class fees include all class materials and admission to Sylvan Heights Bird Park.

This class is for ages 16 and up.

Due to the length of this program, participants are welcome to bring a snack and bottled drink to enjoy during the class.

Please call Sylvan Heights Bird Park at 252-826-3186 to reserve your space.

**What:** Project WET Workshop  
**When:** Friday, Jan. 24, 2020; 9:00 a.m. to 3:30 p.m.  
**Where:** Sylvan Heights Bird Park, 500 Sylvan Heights Park Way, Scotland Neck  
**Cost:** \$25  
**Credits:** 6 contact hours CEU credit; EE Certification Criteria I  
**RSVP:** Email Ashley Hamlet ([education@shwpark.com](mailto:education@shwpark.com)) or Lauren Daniel ([lauren.daniel@ncdenr.gov](mailto:lauren.daniel@ncdenr.gov))

Project WET is an interdisciplinary water science and education program for formal and non-formal educators of K-12 students. The keystone of the Project WET program is the Project WET Curriculum & Activity Guide. The hands-on, supplemental activities are meaningful and relevant to children and are correlated with the 2013 N.C. Essential Standards for Science, Social Studies and Health Education for grades K-8 and for high school earth/environmental science and biology.

The Project WET Guide is only available through a 6-hour Project WET workshop. WET is a Criteria I workshop for the N.C. EE Certification Program and consists of 6 contact hours that may count towards CEUs for teachers.

Participants should dress in comfortable clothes and shoes suitable for physical activity that can get wet and dirty. Bring a bagged lunch. Class minimum = 12; maximum = 25.

Email Ashley Hamlet at [education@shwpark.com](mailto:education@shwpark.com) or Lauren Daniel at [lauren.daniel@ncdenr.gov](mailto:lauren.daniel@ncdenr.gov) to register.

## Other Fall Programs

Oct. 12 (2:00 – 4:00 p.m.) – **Fungi Walk, Lower Haw River State Natural Area**. Register with [lowerhawevents@gmail.com](mailto:lowerhawevents@gmail.com), use “Fungi” in the subject line

Oct. 22 (9:00 a.m. – 4:00 p.m.) – **CATCH, Franklin Greenway**. Register with [jmeador@mainspringconserves.org](mailto:jmeador@mainspringconserves.org)

Oct. 25 (4:00 – 5:30 p.m.) – **Nature Walk with Triangle Land Conservancy** at the Bailey and Sarah Williamson Nature Preserve at Walnut Hill. Register here: [bit.ly/2ILn6PT](https://bit.ly/2ILn6PT)

Oct. 26 (10:00 a.m. – 4:00 p.m.) – **Wild About Bats, Cradle of Forestry**. Register with [cradleprograms@cfaia.org](mailto:cradleprograms@cfaia.org)

Nov. 2 (10:00 a.m. – 3:00 p.m.) – **Wild About Elk, Oconaluftee Visitor Center**. Register with [tanya.poole@ncwildlife.org](mailto:tanya.poole@ncwildlife.org)

Nov. 8 (10:00 a.m. – 4:00 p.m.) – **Wild About Elk, Grandfather Mountain**. Register here: [grandfather.com/event/all-about-elk-educator-workshop/](http://grandfather.com/event/all-about-elk-educator-workshop/)

## 2020 N.C. Marine Debris Symposium

[ncmarinedebrissymposium.com/2020-event.html](http://ncmarinedebrissymposium.com/2020-event.html)

**What:** N.C. Marine Debris Symposium  
**When:** Tuesday, Jan. 14, 2020; 1:00 p.m. – Friday, Jan. 17, 2020; 4:30 p.m.  
Final event: Whale Tales and Trash Talks Event, Friday, Jan. 17; 6:00 p.m.  
**Where:** Duke University Marine Lab, 135 Duke Marine Lab Road, Beaufort  
**Cost:** \$100 for full registration  
**RSVP:** [ncmarinedebrissymposium.com/2020-event.html](http://ncmarinedebrissymposium.com/2020-event.html)

Make plans to attend the 6th annual N.C. Marine Debris Symposium Jan. 14-17, 2020! Hosted by the Coastal Carolina Riverwatch, this event will be held at the Duke University Marine Lab in Beaufort.

The problem of marine debris continues to grow. Our waterways and ocean are constantly polluted with a wide variety of debris ranging from polystyrene trays and plastic bags to derelict fishing equipment and abandoned boats.

Marine debris is an eastern North Carolina concern not only because of the threats to native wildlife, the ecosystem and our own health, but also because it washes up on beaches and shorelines, degrading the environment and affecting our local economy and tourism.

Local cooperation and regional partnership are needed to create public awareness while developing ways to decrease the amount of debris going into the waterways, as well as cleaning up the trash found in our waterways and on our shores.



This symposium was originated to create local cooperation and regional partnership by providing a forum for the exchange of information on recent developments, program ideas and best management practices for marine debris prevention, education and removal.

## 2020 Science Competitions at CSI

[coastalstudiesinstitute.org](http://coastalstudiesinstitute.org)

East Carolina University's Coastal Studies Institute (CSI) is hosting multiple science competitions for middle and high school students during the 2019-2020 school year.

The **OBX Science Fair** is hosted at CSI in partnership with Jennette's Pier on Jan. 14, 2020. There are elementary, middle and high school divisions with a chance at prizes and the opportunity to compete in the regional competition at ECU.

On Feb. 1, 2020, CSI will host the state's regional competition for the National Ocean Sciences Bowl, the **Blue Heron Bowl**. High school teams from around the state will compete in an ocean science knowledge competition for a chance to move on to the national competition. There are opportunities to volunteer for the event as well as openings for teams.

Mark your calendar for March 21, 2020! The **N. C. Renewable Energy Challenge** will be hosted in partnership with Appalachian State University, Jennette's Pier and KIDWIND at CSI. Elementary, middle, high school, undergraduate and graduate students from all over North Carolina will engineer devices to create electricity from wind, solar, ocean waves and ocean currents. Experts in these alternative energy fields will judge the competition and interact with students.

For more information on these events contact David Sybert at [sybertd@ecu.edu](mailto:sybertd@ecu.edu) or 252-475-5451. Additional details can be found at [coastalstudiesinstitute.org](http://coastalstudiesinstitute.org).

## Winter Carnival at N.C. Aquarium

[ncaquariums.com/roanoke-island](http://ncaquariums.com/roanoke-island)

**What:** Winter Carnival  
**When:** Sunday, January 19, 2020; all day  
**Where:** N.C. Aquarium on Roanoke Island, 374 Airport Road, Manteo  
**Cost:** Included with paid admission

Have you ever wondered how animals adapt to winter? Or how we humans adapt to winter? Come join the Aquarium in January 2020 as we celebrate winter! Learn from games and activities what animals and humans do to face the cold!

## **Distance Learning with Greensboro Science Center**

[greensboroscience.org](http://greensboroscience.org)

Experience the wonders of the Greensboro Science Center's (GSC) Aquarium from your very own classroom — no school is too far and no schedule too tight for a virtual visit to the aquarium! During a Distance Learning (DL) program, students will interact with an educator in real time inside the aquarium to learn about and visit with animals such as African penguins and the inhabitants of Shark Reef.

The 40-50 minute DL programs are available Monday through Friday year round, with limited availability during March, April and May. Each program costs \$75. Title I schools are eligible for a discount through a grant from Lincoln Financial.

Programs correlate to the Next Generation Science Standards as well as North Carolina's Essential Standards for Science. Content is focused on comparing and contrasting the habitats and adaptations of the amazing animals of the GSC aquarium. Programs can be tailored to your grade level and subject to include specific vocabulary terms or a focus on a particular aspect of the program.

To find out more, please visit the DL website at [greensboroscience.org/learn/distance-learning/index.html](http://greensboroscience.org/learn/distance-learning/index.html) or email [distance@greensboroscience.org](mailto:distance@greensboroscience.org).

If you visit the GSC in person, don't miss their newest temporary exhibit, *Toys: The Inside Story*, which can be viewed through Jan. 5, 2020. Many of the exhibit elements are free-form and open-ended, allowing in-depth exploration by all! In addition, the GSC's popular maze will return with a toy theme. Activities in the Toy Maze include a virtual ball pit, fascinating facts about toys throughout time, and hands-on stations that inspire play for all ages.

## **Travel Internationally While Earning Advanced Degree**

[EarthExpeditions.MiamiOH.edu/](http://EarthExpeditions.MiamiOH.edu/)

Miami University's Project Dragonfly is accepting applications for 2020 Earth Expeditions graduate courses that offer extraordinary experiences in 16 countries throughout the world.



In Baja, students work in the diverse marine environments of the Bahía de Los Ángeles Biosphere Reserve, a UNESCO World Heritage Site. In Belize, students explore the world’s second largest coral reef system. And in Australia, students conduct research on the world’s largest reef system, working directly with the Great Barrier Reef Marine Park Authority, the organization responsible for the management and conservation of the Great Barrier Reef. Students in these courses apply field methods in reef, island, sea grass, mangrove and other marine ecosystems, while becoming part of a global alliance of professionals who work together to engage communities in science and conservation.

Earth Expeditions can build toward the Global Field Program (GFP), a master's degree that combines summer field courses worldwide with web learning communities so that students can complete the GFP master's part-time from anywhere in the United States or abroad. Learn more about the degree program here: [GFP.MiamiOH.edu/](http://GFP.MiamiOH.edu/).

Graduate tuition for all programs is greatly reduced because of support from Miami University.

## Save the Dates

Join your fellow marine educators and beach lovers at one — or more — of these great learning opportunities planned for the future.

	<p><b>International Sea-Bean Symposium</b>  <a href="http://seabean.com">seabean.com</a>          Oct. 25 to 26          Cocoa Beach, Florida</p>
	<p><b>Mid-Atlantic Marine Education Association Annual Conference</b>  <a href="http://mamea.org/conf.html">mamea.org/conf.html</a>          Nov. 1 to 3          Chincoteague, Virginia</p>

 <p>COME OUTSIDE &amp; PLAY!</p> <p>INTERNATIONAL BEACHCOMBING CONFERENCE   2020</p> <p>March 23-26 Annapolis/Chesapeake Bay, Maryland The Land of Pleasant Living</p> <p>The 19th annual International Beachcombing Conference returns to celebrate and begin the summer of the Chesapeake Bay. Join a host of speakers, hosts and speakers, educators, artists and activists. Building 12000+ years of human settlement history and teach museum guests. Learn more about what you find on the shore this season. Register now and don't miss this experience.</p> <p>Advance Registration Request <a href="http://www.thebeachcombingconference.com">www.thebeachcombingconference.com</a></p>	<p><b>International Beachcombing Conference</b>  <a href="http://thebeachcombingconference.com">thebeachcombingconference.com</a>      March 23 to 26, 2020      Annapolis, Maryland</p>
 <p>National Marine Educators Association</p>	<p><b>National Marine Educators Association's Annual Conference</b>  <a href="http://marine-ed.org">marine-ed.org</a>      July 13 to 17, 2020      Honolulu, Hawaii</p>
 <p>EENC</p>	<p><b>Environmental Educators of North Carolina Annual Conference</b>  <a href="http://eenc.org">eenc.org</a>      Sept. 17 to 19, 2020      Hendersonville, North Carolina</p>

## 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 *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 a new issue of *Scotch Bonnet* is available online. Thanks for all you do for students and for other educators!

Best Fishes!



Terri Kirby Hathaway  
 Marine Education Specialist  
 North Carolina Sea Grant

**Email:** [hathawayt@ecu.edu](mailto:hathawayt@ecu.edu)

**Phone:** 252-475-5486

**Address:** North Carolina Sea Grant, PO Box 699, Manteo, NC 27954