

2019 NCAEEC Annual Meeting and EENC Mini Conference Creative Collaborations by Design

February 28 to March 2
The North Carolina Arboretum

This conference consists of four paid events and a drop-in social gathering (Friday evening). The cost for each event is \$25.00 for EENC members and currently enrolled students, and \$30.00 for the general public. Attendees registering for all four paid events receive an additional \$10.00 discount, making the total fee just \$90.00 for EENC members and students; or \$110.00 for the general public. All events occur at The North Carolina Arboretum unless otherwise specified.

Event 1: EENC Mini Conference (Thursday, February 28)

9:00 AM Arrive, Check-In

9:30 AM Greetings, Introductions, Announcements

10:00 AM Morning Session (choose one)

- **Winter Birding.** Includes mist net demonstrations, birding by ear and winter behaviors of birds. Led by Anthony Squitieri (Wild Bird Research Group).
- **Salamander Monitoring.** Includes setting up study plots, identification of species, testing for disease. Led by Patrick Brannon (Highlands Biological Research Station) and Trudie Henninger (The North Carolina Arboretum and NCAEEC).
- **Winter Tree Identification.** Includes learning identification by winter characteristics, making a twig collection and noting phenological changes. Led by Jonathan Marchal (The North Carolina Arboretum).
- **Lichens as Air Quality Indicators.** Includes basic identification of lichen groups and common species as well as using techniques of monitoring lichens to evaluate air quality. Led by Keith Bamberger and Jonathan Navaro (North Carolina Division of Air Quality) and Jennifer Love (Macon County Schools).
- **Photographing Biodiversity.** Includes using traditional cameras and smartphone photography, documenting organisms by photography. Led by Chris Goforth (North Carolina Museum of Natural Sciences, EENC) and Kevin Fitzpatrick (All Species Photography).
- **Making Observations.** Includes the BEETLES (Better Environmental Education, Teaching, Learning & Expertise Sharing) method of

observing nature and journaling. Led by Amy Renfranz (Grandfather Mountain Stewardship Foundation, EENC).

12:30 PM Lunch (provided)

1:30 PM Afternoon Session (choose a different one than the morning session)

- **Winter Birding.** Includes mist net demonstrations, birding by ear and winter behaviors of birds. Led by Anthony Squitieri (Wild Bird Research Group).
- **Salamander Monitoring.** Includes setting up study plots, identification of species, testing for disease. Led by Patrick Brannon (Highlands Biological Research Station) and Trudie Henninger (The North Carolina Arboretum and NCAEEC).
- **Winter Tree Identification.** Includes learning identification by winter characteristics, making a twig collection and noting phenological changes. Led by Jonathan Marchal (The North Carolina Arboretum).
- **Lichens as Air Quality Indicators.** Includes basic identification of lichen groups and common species as well as using techniques of monitoring lichens to evaluate air quality. Led by Keith Bamberger and Jonathan Navaro (North Carolina Division of Air Quality) and Jennifer Love (Macon County Schools).
- **Photographing Biodiversity.** Includes using traditional cameras and smartphone photography, documenting organisms by photography. Led by Chris Goforth (North Carolina Museum of Natural Sciences, EENC) and Kevin Fitzpatrick (All Species Photography).
- **Making Observations.** Includes the BEETLES (Better Environmental Education, Teaching, Learning & Expertise Sharing) method of observing nature and journaling. Led by Amy Renfranz (Grandfather Mountain Stewardship Foundation, EENC).

4:00 PM Closing, EE Forms

Event 2: Joint NCAEEC/EENC Reception (Thursday Evening, February 28)

6:00 PM Reception Begins, Dinner (provided)

7:00 PM Keynote: Kim DeLozier, Author of *Bear in the Back Seat: Adventures of a Wildlife Ranger*

8:00 PM Joint NCAEEC, EENC, NC Office of EE Activity with Game Show Vibe

8:30 PM Night Hike and Evening Activities

10:30 PM Closing, EE Forms

Event 3: NCAEEC Annual Meeting (Friday, March 1)

8:30 AM - 4:00 PM

Keynote Speaker: Caren Cooper, Author of *Citizen Science: How Ordinary People are Changing the Face of Discovery*

Dr. Cooper is citizen science advocate and authority and is the author of *Citizen Science: How Ordinary People are Changing the Face of Discovery*. She does scholarly research and speaks internationally about citizen science, open science and science communication. We're fortunate to have here in North Carolina and at our conference!

KC Busch, one of Dr. Cooper's colleagues within the N.C. State University Leadership in Public Science Cluster, will also be on hand to share her exciting research on social networks within the North Carolina environmental education community. **Dr. Busch** is an Assistant Professor in the Department of STEM Education and has also been a high school science teacher and has worked as an environmental educator in Africa and in Nevada with the National Park Service, so we are sure you will want to meet her. Many of you provided the data for this research through your survey responses!

Meeting Overview:

8:30 AM Check-in, coffee, networking

9:00 AM NCAEEC Business Session
Welcome and updates

9:15 AM Morning Concurrent Sessions

11:00 AM Break and Silent Auction

11:15 AM Keynote Speaker. Caren Cooper, Author of *Citizen Science: How Ordinary People are Changing the Face of Discovery*

12:30 PM Lunch (provided) and Silent Auction

1:15 PM Afternoon Concurrent Sessions

3:30 PM NCAEEC Board Election and Closing

3:45 PM Meeting Conclusion

Concurrent Sessions Overview:

- Exhibits 2.0: Incorporating Interactive Technology into Exhibit Halls and Visitor Centers
Join Morgan Burns, program specialist at Stevens Nature Center at Hemlock Bluffs Nature Preserve as she shares some of the new and innovative exhibit designs being developed at the nature center, including their popular “Wildlife in Action” Selfie Camera. You will discover ways you can incorporate technology in exhibits that foster visitor engagement both on online and inside your site.
- Building a Bioblitz
Bioblitzes are a great way to get your visitors involved in monitoring the biodiversity of your center. Get tips from Chris Goforth, head of Citizen Science at the N.C. Museum of Natural Sciences and others on how to plan and implement a bioblitz at your site. We’ll also discuss our successes (and near-misses) with the group, so please bring your stories to share if you have conducted your own bioblitzes.
- Chronolog - An environmental monitoring project powered by citizen science
Representatives from the startup Chronolog will be on hand to discuss and demonstrate an exciting new method of environmental monitoring and data collection that also expands public engagement and environmental education outreach. You can use Chronolog to monitor your specific site by utilizing time lapse imagery taken by visitors on their mobile devices. Come learn how Chronolog can enable centers and their visitors to solve a problem together through citizen science.
- Real Help for Real Science! Engaging and Training Volunteers for Citizen Science
Volunteers help many centers in many ways. Learn how to engage volunteers by looking at the different citizen science projects carried out at the North Carolina Arboretum. Come see how you can implement these projects at your own site and see how utilizing volunteers can bring about important research for science! We will explore the methodology, tools and best practices of each of the seven citizen science projects conducted at the Arboretum, which include reptile and amphibian study plots, plant phenology, monarch larva monitoring and more!
- Learn More...About ecoExplore!
ecoEXPLORE engages kids in outdoor citizen science activities as they document plants and animals that call North Carolina home. Learn how your center can join this effort to connect kids with science professionals, create a statewide network of family-friendly wildlife observation locations and enable children to earn ecoEXPLORE badges and

field tool prizes. Funds are available to aid you in bringing this program to center visitors in all 100 North Carolina counties.

- Cultivating Equity, Diversity and Inclusion with Everybody's Environment
Everybody's Environment transforms organizations to effect institutional change through racially equitable leadership from WNC communities. This group is a collective effort by environmental and community organizations, colleges and universities and government agencies. Join us to hear about the work we've been doing and consider ways your organization can work to cultivate equity, diversity and inclusion within your organization.
- Citizen Science 101: Choosing and Maintaining the Right Program at Your Center
Want to get started engaging visitors in citizen science at your center but not sure where to start? Join Chris Goforth, head of Citizen Science at the N.C. Museum of Natural Sciences, as she leads a discussion of various ways to get started and get helpful hints about what works and what doesn't from your peers.
- Engaging Your Community Through Adult Learning Opportunities
Adult Learner Certificate programs provide a framework for learning and a pool of adult students who return for a series of classes. Get the low-down on The Arboretum's Blue Ridge Naturalists Certificate of Merit and the brand-new Blue Ridge Eco-Gardeners Certificate of Merit.

Drop-in Social Gathering at Highland Brewing (NO REGISTRATION- Dinner not provided)

6:00 PM Meet up and hang out with other educators at the Highland Brewing Tap Room

Event 4: Joint NCAEEC/EENC Field Experiences (Saturday, March 2)

9:00 AM Field Trips Depart from The North Carolina Arboretum, transportation and box lunches provided

Field Trip Options:

- **Bones in Bottles: An Examination of Roadside Litter as a Source of Small Mammal Mortality at Highland Biological Station.**
- **Behind the Scenes at the Asheville Museum of Science and the Botanical Gardens at Asheville**
- **BioBlitz Hike to Snowball Mountain with the Southern Appalachian Highlands Conservancy**
- **Citizen Science with eBird at Chimney Rock State Park**

- **Intro to Schoolyard Citizen Science with Project EXPLORE and TRACK Trails**

3:00 PM Field Trips End, return to The North Carolina Arboretum, Closing, EE Forms