



3rd  
ANNUAL

Southeastern EE Alliance (SEEA)  
**CONFERENCE**



19-21  
SEPTEMBER  
2014

*“One from many. Stronger together.”*

CARAWAY CAMP & CONFERENCE CENTER  
Asheboro, NC

Hosted by Environmental Educators of North Carolina (EENC)  
[www.eenc.org](http://www.eenc.org)



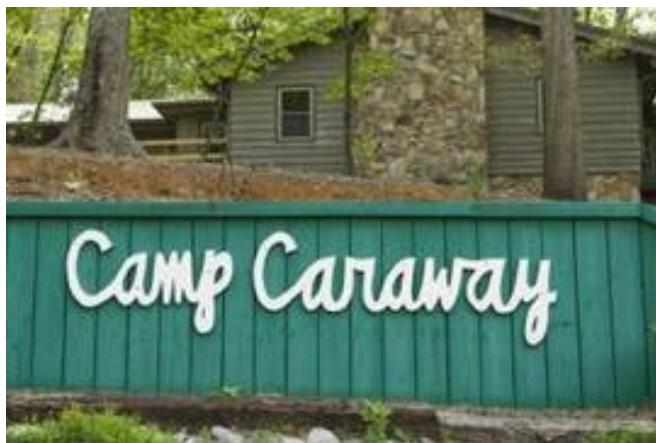
Environmental  
Educators of  
North Carolina

**Environmental  
Educators of North  
Carolina (EENC) is  
proud to host the 3rd  
Annual Southeastern  
Environmental  
Education Alliance  
Conference.**



Welcome to the ancient Uwharrie Mountains and to the conference!

It's important to remember that you can pronounce Uwharrie one of two ways; 1) ju:'hwa:ri or 2) **you:** ee. This week, we will learn about and celebrate all the great environmental education programs taking place across the southeast. Take the time to network with other EE professionals to enhance your own skills, to learn something new, and to look for partnership opportunities. We hope you will also enjoy the hiking, canoeing, and the other fantastic outdoor opportunities. Welcome to the 3rd Annual Southeast EE Alliance Conference, hosted by the North Carolina Environmental Educators of North Carolina!





Dear SEEA Conference Attendee,

On behalf of the Environmental Educators of North Carolina (EENC), I want to welcome you to the 3<sup>rd</sup> Annual Conference of the Southeastern Environmental Education Alliance (SEEA) at beautiful Caraway Conference Center. I also want to offer a special welcome to first-time attendees! EENC is pleased to host the conference this year. It is going to be an exciting one. You will have opportunities to interact with great speakers like David Sobel and Louise Chawla, and to network with environmental educators from Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee, as well as several other states. We have many exciting events planned for this conference including a new research symposium, a trends and issues panel with our keynote speakers, great workshops, and field trips to places such as the Uwharrie Mountains and the North Carolina Zoo.

We live in a time when environmental education is needed more than ever - education that engages the heart, stimulates the mind, and nurtures the spirit. With this in mind, the theme of the 2014 conference is "You are EE: One from Many, Stronger Together." We will learn from one another as we share our stories, interact over meals, and participate in workshops. We will be encouraged by stories of success across the Southeastern states. We will be motivated by the challenges that lie ahead and we will be better prepared to meet those challenges as a result of our time together.

*We are EE. We are one from many. We are stronger together.*

I hope that you have a wonderful conference!

*Brad Daniel*

Dr. Brad Daniel  
President, Environmental Educators of North Carolina (EENC)



# KEYNOTE SPEAKERS



## David Sobel



(Saturday morning)

David Sobel is Senior Faculty in the Education Department at Antioch University New England in Keene, NH and he consults and speaks widely on child development and place-based education. He has authored seven books and more than 60 articles focused on children and nature for educators, parents, environmentalists and school administrators in the last 25 years. In 2007, he was identified as one of the Daring Dozen educators in the United States by Edutopia magazine. He has served on the editorial boards of Encounter, Community Works Journal and Orion and writes a regular column for Community Works Journal. His articles and essays have appeared in Orion, Encounter, Sierra, Sanctuary, Wondertime, Green Teacher, Play Rights, Harvard Education Letter and other publications. His articles and essays have been included in Father Nature, Education, Information and Transformation, Stories from Where We Live-The North Atlantic Coast; Place-based Education in a Global Age; and The Child: An Encyclopedic Companion published by The University of Chicago. His most recent books are *Childhood and Nature: Design Principles for Educators* published by Stenhouse and *Wild Play, Parenting Adventures in the Great Outdoors*.

## Louise Chawla



(Friday night)

Louise Chawla is a Professor in the Environmental Design Program in the University of Colorado Boulder. She is Associate Director of the Children, Youth and Environments Center for Community Engagement (CYE Center) and Co-editor of the journal Children, Youth and Environments. As a member of the Executive Committee of Growing Up Boulder, she helps lead a partnership between the CYE Center, Boulder Valley School District, and the City of Boulder's Departments of Community Planning and Sustainability, Parks and Recreation, and Transportation, along with numerous community organizations, to integrate the ideas of children and youth into urban planning and design. As International Coordinator of the Growing Up in Cities program of UNESCO from 1996-2006, she revived an initiative that has involved young people in cities around the world in evaluating and improving their urban communities. She has written two books and many book chapters and journal articles on children and nature, children in cities, and the development of active care for the natural world.



# WORKSHOPS



(Friday September 19, 2014)

FRIDAY

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## Workshop 1

### **Citizen Science**

**Led by Chris Goforth, Kim Smart and Mandy Cuskelly**

(NC Museum of Natural Sciences, Prairie Ridge Ecostation)

Workshop is 9 am to 4 pm in Conference Room 1

Citizen science has become an increasingly valuable tool for teaching the public about the natural world and science and gives everyone an opportunity to participate in real scientific research. This free 6-hour Criteria II workshop will introduce attendees to the concept of citizen science and provide everyone with the tips, information, and tools they need to incorporate citizen science into EE programs at their own sites. After a quick introduction to citizen science indoors, we will take participants outside and provide hands-on experience in a variety of citizen science projects. We will demonstrate how we incorporate citizen science into EE programs at our facility and engage participants in a discussion to share ideas for bringing citizen science to a diversity of other EE programs, centers, and sites. We will also discuss ways that the information gathered through citizen science projects can be useful to EE centers, resource managers, and others. Participants in this workshop will return to their EE centers or schools armed with the knowledge and experience necessary to incorporate citizen science into programs at their own sites.

## Workshop 2

### **PINEMAP: Climate Change's Impact on Southern Forest Ecosystems**

**Led by Martha Monroe, Annie Oxarart, Tracey Ritchie, Christine Li and Kristen**

**Kunkle**

(University of Florida)

Workshop is 9am to 4pm in Conference Room 5

PLT and PINEMAP have partnered to develop a new secondary module on climate change impacts on southern forest ecosystems, the role of forests in sequestering carbon, and strategies for reducing greenhouse gas emissions and adapting to changing climatic conditions. PINEMAP is an integrated research, education, and extension project focused on climate change impacts on southern pine forests ([www.pinemap.org](http://www.pinemap.org)). The module, which includes 14 engaging activities, is designed for use in life science, environmental science, and agriculture courses in grades 9-12, with adaptations for use in middle school classrooms.

(continues on next page)



# WORKSHOPS



(Friday September 19, 2014)

## **PINEMAP: Climate Change's Impact on Southern Forest Ecosystems (continued)**

Workshop is 9am to 4pm in Conference Room 5

During this workshop, we will engage participants in several of the activities that help students understand climate change, the carbon cycle, forest health, forest management strategies, how consumers can make a difference through purchasing choices and the interactions among these important concepts. These concepts are explored using current research and systems thinking with interactive teaching methods such as a role play and debate, webquests, and small group discussions. The activities focus on increasing student knowledge, building systems-thinking and decision-making skills, and instilling confidence that individual and community actions can help address climate change. Participants will be able to teach their own students from the resources provided or facilitate workshops for other educators.

- \* This workshop is eligible for credit in Criteria 1 for NC EE Certification.

## **Workshop 3**

### **Play Pedagogy at the NC Zoo led by Linda Kinney and Heidi Faris (NC Zoo)**

**\*Participants must provide their own transportation to the zoo. See directions on the direction page**

Workshop: 9am to 2:30pm

Lunch is provided on site



This workshop examines ways children and young people engage in and benefit from play outdoors and how adults can enrich those experiences. Using approaches employed in the playwork profession, participants will explore open-ended creative ways to encourage, expand and enrich opportunities for exploration and play in nature.. Participants will meet at the NC Zoo.

- \* This workshop is eligible for credit in Criteria 2 for NC EE Certification



# FIELD TRIPS



(Friday September 19, 2014)

FRIDAY

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**Field trips are a great way to explore the area, learn about local resources, earn Criteria 2 credit for NC EE Certification, and spend time with other environmental educators.**

## Field Trip 1

**"I don't know; this canoe trip sounds a little sketchy" led by Tom Shepherd** (City of High Point)

The van will leave Caraway Conference center at 8:15am and return by 4:00 pm

*Box lunch provided*

And it will be! We will be making observations of water from both an artistic and a scientific point of view. Piedmont Environmental Center and City of High Point Parks and Recreation Department will host a special canoe experience for the 2014 EENC Annual Conference. Participants will paddle canoes (no kayaks this trip, maybe next time) on two branches of High Point City Lake in Jamestown, NC. The Oak Hollow Branch is most appropriately used for water quality interpretations (testable parameters, BMP's, regulation, and conservation concepts). Following lunch, we will paddle behind small islands and into coves of the East Fork Branch to practice pencil sketching, watercolors, colored pencils and other portable media to render masterpieces from waters inspiration.

\*There is a supply list that will be sent closer to conference time.

## Field Trip 2

**Natural History of the Uwharrie led by Jerry Reynolds and John Gerwin**

(NC Museum of Natural Science)

The van will leave Caraway Conference center at 8:45 am and return by 4:00 pm

*Box lunch provided.*

There are no bathrooms on site.

Take a trip into the Uwharries with Jerry Reynolds from the North Carolina Museum of Natural Sciences. This trip will take you into the Uwharrie Mountains to see what they hold in the late summer. We'll spend time focusing on geology, birds, rattlesnakes and more. This is also a chance to learn techniques for leading groups in the natural world.



# RESEARCH SYMPOSIUM



(Friday September 19, 2014)

## Research Symposium

**Friday, September 19, 9:00-4:30pm**

We are excited to host the first SEEA research symposium this year, providing opportunities for environmental education researchers to learn about each others' work, discuss the latest research in the field, and foster collaborative relationships. Our program includes many incredible research presentations and a poster session highlighting work from several different colleges, universities and EE centers across the Southeast. The research symposium is an excellent opportunity for researchers, professors, students, and practitioners to learn about the latest EE research. Presentation topics include children's connection to nature, the role of service learning in EE, significant life experience research, children's perceptions of wildlife, fostering hope as well as the role of systems thinking in climate change education, and many others.

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



*Keith Bamberger instructing an outdoor EE class looking closely at lichens as bio-indicators for air pollution.*



# RESEARCH SYMPOSIUM



(Friday September 19, 2014)

FRIDAY

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## 9:00 am: Welcome in the Auditorium

## 9:15 am – 10:45am: Research presentations

**Title: Children's Environmental Identity in the Context of Elementary School Science**  
**Presented by Linda Tugurian & Sarah Carrier (NCSU)**

**Description:** We will examine children's environmental identity in the context of their experience of elementary school science. We will describe the impact of an intervention designed to strengthen children's relationship with the natural world, identifying strategies that were effective in simultaneously enhancing children's connectedness to nature and interest in school science.

**Title: Educational implications of students' past experiences and their perceived connections to nature.**

**Presented by Steven Pruitt (Clemson)**

**Description:** This presentation will summarize a research study examining the relationship between students' past experiences and their perceived connections to nature. A short review of the current literature will be included as well as unique findings specific to this population. Future considerations and implications for informal and formal settings will be discussed.

**Title: What can we learn from significant life experience research?**

**Presented by Kathryn Stevenson & Sarah Carrier (NCSU)**

**Description:** Significant life experience (SLE) research is often cited when promoting experiences outdoors or the importance of

mentors. We will present findings that may question the universal application of SLE research to spark a discussion on avenues for future research.

## 10:45 am– 11:00 am: Break

## 11:00 am – 12:00 pm: Research Presentations

**Title: What makes kids care about wildlife?**  
**Presented by Kristin Frew (NCSU)**

**Description:** What attributes of wildlife do kids find important? Among adults, endemism tops the list, suggesting that conservation priorities should reflect these preferences. What do our future generations think? This presentation will highlight findings from our study with elementary school students and discuss implications for EE.

**Title: Service Learning, Environmental Education & Science Education: Friends or Foes?**

**Presented by Catherine Matthews and Lacey Huffling (UNCG)**

**Description:** This session centers on possible and potential relationships between service learning, Environmental Education and science education. Our guiding question is: Could engagement in service learning be a gateway, making EE and science education more meaningful and accessible to diverse audiences?

## 12:00 pm – 1:00 pm: Lunch in Cafeteria



# RESEARCH SYMPOSIUM



(Friday September 19, 2014)

## 1:00 pm – 2:00 pm: Research Presentations

**Title: An Evaluation of Societal Implications of Environmental Education through the Integration of Indigenous and Westernized Practices in the Piedmont Region of North Carolina**

**Presented by Eric McDuffie**

**Description:** Indigenous knowledge is valuable within localized cultures, but it has been historically under-represented in Westernized programs and systems. The knowledge from indigenous cultures offers many valuable practices that could be integrated into Westernized environmental education as generations search to improve sustainable and regenerative practices. Those best practices are now offered.

**Title: Making the Green Dream a Reality**

**Presented by Pat Curley (CMAST)**

**Description:** Queens Creek Elementary School is a large public school in Swansboro, North Carolina. We received approval from the school board to become an "international green school". Over the year we have found that "its not easy being green" as we move forward to make our green dream a reality.

**2:00 pm-2:15 pm: Break**



## 2:15 pm -3:30 pm : Reception & Poster Session in cafeteria

**Title: Applying a Motivated Reasoning Framework to Climate Change Education Development**

**Presented by Kristen Kunkle (UFL)**

**Description:** Communicating about climate change can be difficult, as the issue remains controversial and highly politicized. This study explores how to effectively communicate climate information to diverse audiences through the lenses of cultural and psychological predispositions.

**Title: Connecting School Gardens to Education Standards in North Carolina**

**Presented by Erika Hansen (Duke)**

**Description:** For my Masters Project, am looking to create a user-friendly matrix that correlates garden education programs and lesson plans to the Common Core and the North Carolina Essential Standards to make school gardens accessible and easy for teachers to integrate into the classroom.

**Title: Effective Climate Change Education: Making Hope Happen**

**Presented by Christine Li (UFL)**

**Description:** Why do some people more actively engage in climate change and make good things happen? It's because they have hope concerning climate change. So, what exactly is hope and how can we make it happen through environmental educational programs?

# RESEARCH SYMPOSIUM



(Friday September 19, 2014)

## **Title: Teaching science outdoors: Issues and trends**

**Presented by Sarah Carrier (NCSU)**

**Description:** The outdoors has been widely recognized for its potential as both a content focus and a context for learning elementary science. Yet, the outdoor environment remains underutilized by elementary school educators in the teaching of science. In this research, we seek to better understand educational stakeholders' views of the outdoors in the context of elementary school science, with the hope of more clearly understanding what it means to situate elementary science nearly exclusively indoors.

## **Title: Using Biophilia to Explore University Students' Connections with Nature**

**Presented by Lacey Huffling (UNCG)**

**Description:** Using a mixed methods design, we explore how university honor students' prior experiences influenced their views of ecology and sustainability and how the students' perceptions and meanings aligned with three tenets of Biophilia: environmental features, place-based relationships, and evolved human-nature relationships.

## **Title: Can Using Systems Thinking Improve Student Success with Climate Change Education?**

**Presented by Tracey Ritchie (UFL)**

**Description:** This poster demonstrates the successes and lessons learned of incorporating systems thinking into an activity about the connection between forest systems and climate change adaptation and mitigation strategies.

## **Title: KNOW THE CODE! Air Quality Outreach to Older Adults: An AmeriCorps and NC Department of Environment and Natural Resources Campaign**

**Presented by Shannon Culpepper and Jonathan Navarro (NCDENR DAQ)**

**Description:** AmeriCorps works with underserved populations and it was determined that older adults could benefit from learning about ways to better protect their health from air pollution. Our presentation will focus on the initial year of the campaign and will include: project planning, campaign development, piloting, establishing partnerships, and marketing strategies.

## **3:30 am: Closing**



# “One from many. Stronger together.”

(Friday September 19, 2014)



JOIN US FOR THE

## EENC AWARDS CEREMONY & BANQUET

**Sit back and relax with old friends and new ones. Join us for a great night of conversation, drinks, and dining. Louise Chawla will be speaking and the Cetwick staff will be taking care of us. Please join us!**

FRIDAY

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### Ceremony & Banquet Details

#### The Cetwick

Cherry Street, Asheboro, NC  
Friday, September 19, 2014

<http://www.thecetwick.com/>

Located in the historic Cetwick Silk Mill, the venue's exposed brick and soft industrial feel is a perfect combination of southern and urban.

5:30 pm-6:00 pm Reception

6:00 pm Dinner

6:45 pm Keynote:  
Louise Chawla

7:45 pm Award & Scholarship  
Ceremony

8:15 pm Live Auction to  
support conference  
scholarships



# CONFERENCE KEYNOTES



Friday Night — 6:45 pm

## Louise Chawla

Teaching in the Field and on Natural School Grounds:  
Gains for People and Places



Evidence is mounting that EE about nature and for nature is done most effectively in nature, and that benefits extend beyond increasing care for the natural world now and in the future to include promoting the well-being of students in the immediate present. This talk begins by reviewing the elements of EE programs that are associated with increases in students' pro-environmental behaviors: with results that point to the importance of learning in natural settings as well as opportunities for students to plan and take action to improve the places where they live.

These experiences are consistent with key steps in the formation of an ecological identity and social environmental identity, which educators need to make available to students if they hope to see sustained action for the environment. In closing, the talk shares some highlights from research on the importance of routine contact with nature for the health and well-being of children and adults, including better functioning by students at school on a number of measures. These findings suggest that EE can play a role in a broad ecological model of health which serves both people and the planet.

- Louise

# CONFERENCE KEYNOTES



Saturday Morning — 10:30 am

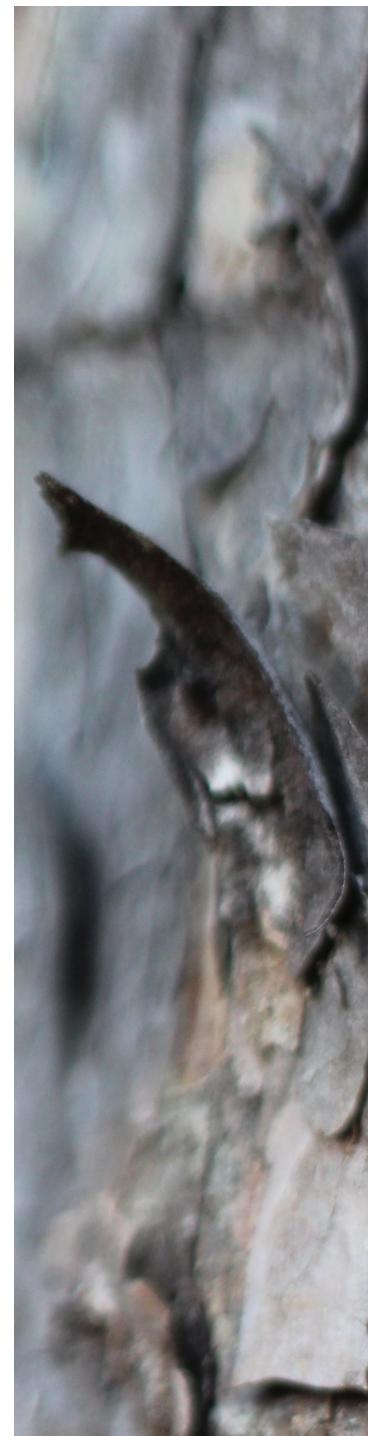
## David Sobel

Place-based Education:  
Making School More Like a Farmer's Market

The landscape of schooling has begun to look like the sprawl of America. Generic textbooks designed for the big markets of California and Texas provide the same homogenized, unhealthy diet as all those fast food places on the strip. Educational biodiversity falls prey to the bulldozers of standardization. What is nearby has become parochial and insignificant.

Place-based education is a response to the alienation of schools from community, and the decoupling of schools from historic sites, local landscapes, and farms. Instead, we need schools organized around the principles of the farmers' market, drawing on the resources and variety of the local community. To illustrate some of the possibilities, we'll view a variety of videos about schools throughout the country, and around the world, implementing place-based education.

- David



# CONFERENCE SCHEDULE



(Check Session pages for more detail)

## FRIDAY

9:00 am – 4:00 pm

- \* Workshops
- \* Field Trips
- \* Research Symposium

**12:00 pm – Lunch**



5:30 pm – 6:00 pm Social (at the Cetwick)

6:00 pm Dinner, Keynote (**Louise Chawla**)  
followed by EENC Awards

## SATURDAY

7:00 am Beginners Yoga with Kelly Hoke  
Wear clothes you can move in, a yoga mat  
or towel.

Patio

7:30 am – 8:30 am Breakfast

8:30 am Silent Auction Opens

**8:45 am – 9:30 am Concurrent Session A**  
Bring the Next Generation of Science  
Standards to life with PBS Learning Media

Preparing Fifth Grade Teachers to Engage  
Students in Their Watersheds

Leopold Education Project in North Carolina

Environmental Assessment and Ecosystem  
Restoration

## SATURDAY (continued)

**9:45 am– 10:15 am ROUNDTABLES**

- \* Don't Compete, Cooperate: NC's Unique Nonformal Education Center Network
- \* Action Research: A Tool for EE
- \* Case Study of a Stormwater Retrofit System at a Public School Campus
- \* EE Resources Right Out Your Front Door!
- \* Engaging the Younger Generations (Pre-K – 2nd ) in Marine Science Programs
- \* Systems-Thinking in Environmental Education
- \* Reaching Underserved Populations: AmeriCorps in NC Department of Environment and Natural Resources (NCDENR)
- \* TACO Isn't Just a Yummy Food
- \* Guerrillas in Our Midst: Stealth EE for Unsuspecting Audiences



## SATURDAY

**10:30 am KEYNOTE**

- \* **David Sobel**

**Place-based Education: Making School More Like a Farmer's Market**

- \* *See full description page*

# CONFERENCE SCHEDULE

(Check Session pages for more detail)

## SATURDAY

12:30 pm – Lunch



### 1:45pm Concurrent Session B & Service Project

Climate Change in the Classroom

Capturing the Energy of Youth: Making the Most of High School Volunteers

Interpreting Snakes

Sustainability Literacy: What is it and how can we measure it?

Getting the Word Out: Marketing your Organization & Programs

### 2:45 pm Concurrent Session C

Building Bridges One Large Event at a Time

Why Most People Don't Give a Rat's Rump about Environmental Education and What You Can Do About It

It's Our Air: Properties of Air

Growing a Grassroots Community of Environmental Educators

Effectively Communicating Complex Science

### 3:45 pm Concurrent Session D

Who Gives a Hoot About Ecology?

## SATURDAY (continued)

Role-Playing environmental policy negotiations to understand the science, the policy, and the stakeholders

Nest Boxes for Nuthatches: Make Room for a Native Southerner

Laying a Foundation for Discovery

A Return to Our Roots in EE

Hands-on Human Ecology and Geography for the Next Generation

4:45 pm – 5:30 pm

**Panel Discussion featuring Louise Chawla and David Sobel**

5:30 pm — Dinner



6:15 pm

Silent Auction Closes

6:30 pm

EENC Annual Meeting followed by sectional meetings

6:30 pm — Room 1

SEEA Leadership Meeting

8:30 pm

Bonfire & Star Gazing  
Live auction at bonfire



# CONFERENCE SCHEDULE

(Check Session pages for more detail)

## SUNDAY

7:00 am – 7:30 am Tai-Chi  
led by Mickey Jo Sorrel  
(On the outdoor patio)  
Please wear clothing that is good for movement. No equipment needed.

## 8:00 am – Breakfast



**REMINDER**  
**Make sure you have checked out of your rooms**

9:00 am – 9:45 am Concurrent Session E  
Basic Fishing Skills, Getting People Excited About Fish

Alien Invasions: Including Invasive Species in Your Education Programs

EcoYoga with Youngsters

Engaging Students in Hands On Learning

## SUNDAY (continued)

10:00 am – 10:45 am Concurrent Session F  
Using Nature's Notebook with Budding Citizen Scientists  
  
Guidelines, Get Your Guidelines!  
  
Know the Code! Air Quality Outreach to Older Adults: An AmeriCorps and NCDENR Campaign  
  
Technology in the Out-of-Doors: An Oxymoron?

11:00 am – 11:45 pm Concurrent Session G  
Encouraging commitment to EE through service learning  
  
Shake, Rattle and Learn - Music in Interpretation  
  
Sense of Place on the Trails and at the Food Forest  
  
12:00 pm – Lunch

12:30 pm CLOSING — Drive Safely



# MAIN CONFERENCE STRANDS



**Science Behind the Standards:** Classroom educators must provide learning opportunities that meet objectives as outlined in respective state standards, Common Core, or Next Generation Science Standards. Environmental education providers possess a wealth of background knowledge required to help address those standards. This strand focuses on providing classroom educators with knowledge to help them understand the content behind the standards.

**Field Ecology Skills:** EE practitioners must constantly hone their practical field ecology skills by learning new information about the surrounding flora and fauna. One piece that is sometimes missing is how to share this knowledge with others in the field setting. Field Ecology Skills sessions will take participants outside to focus on improving naturalist skills, with an emphasis on learning how to share these skills in a meaningful way with program participants back at home.

**Research to Practice:** This strand will highlight how environmental education research (action or traditional) has provided or could provide knowledge to create new programs or improve existing ones. The focus is not on the research method and process, but how the research can be applied in a classroom, a program, or EE Center.

**Business of EE:** Environmental educators have to know more than how to increase environmental literacy. Today's EE provider has to consider many facets including financial stability, staff development, risk management, messaging, marketing, and program value. Many organizations are small, and have limited staff that can devote time to these important pieces. Sessions in this strand will be geared towards program providers and making the business side of EE easier.

**New to EE:** The field of EE is unique in that it attracts recent college graduates and those moving into a second, or encore, career. The good news is that you are at a great event at the beginning of your career! Sessions in this strand will introduce participants to information they need to know when entering a career in environmental education.

**Innovative Ideas:** The field of environmental education is constantly changing with new resources, great success stories from new programs and new trends in the field. This strand is full of presenters that aren't afraid to try something new and share the results with others in their professional community!



# SATURDAY SESSIONS



(Detailed Session Descriptions)

SATURDAY

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## Concurrent Session A 8:45 am – 9:30 am

**Bring the Next Generation of Science Standards to life with PBS Learning Media**

**Presented by Lucy Lafitte - UNC TV**

**Room 1**

PBS Learning Media is a repository of over 100,000 digital learning objects available free. UNC-TV is contributing to these resources with stories about sustainability, the environment, and science in North Carolina every week. Find out how enliven your classroom with short context videos, feature deep-dive videos, interactive, animations, and self-paced modules.

## **Preparing Fifth Grade Teachers to Engage Students in Their Watersheds**

**Presented by Michele Drostin and Sarah Yelton - UNC Institute for the Environment**

**Room 2**

The EGRET Program (Exploring the Geographical Region and Ecosystems of the Tar-Pamlico Watershed) is designed to engage 5th grade teachers in inquiry-based activities, integrated across content areas, that will prepare them to incorporate current, place-based content into their classrooms and outdoors, sparking their students' interest in environmental stewardship.

## **Leopold Education Project in North Carolina**

**Presented by Randy Senzig- Aldo Leopold Foundation**

**Room 3**

The Leopold Education Project (LEP) is a curriculum based on the teachings and writings of conservationist Aldo Leopold. It is an inter-disciplinary conservation ethics curriculum for grades 5-12 using outdoor activities that increase student awareness, appreciation for land community, making responsible choices while teaching social, collaborative and critical thinking skills.

## **Environmental Assessment and Ecosystem Restoration**

**Presented by Roger Shew - UNC Wilmington**

**Room 5**

Geological, biological, and environmental characterization are critical in habitat restoration. Two projects, including restoration of longleaf pines and old field succession areas, will be described. This information is also incorporated into an integrated curriculum of soil, water, flora and fauna identification, and mapping (GPS, GIS) to illustrate Environmental Assessment methodologies.

# SATURDAY SESSIONS



(Detailed Session Descriptions)



## Roundtables 9:45 am – 10:15 am — Dining Hall

### **Action Research: A Tool for EE**

**Presented by Coleen O'Connell - Lesley University School of Education**

In the Ecological Teaching and Learning MS degree program, the capstone experience of the graduate program is for the students to design and implement their own Action Research Project. This presentation will highlight the methods of Action Research, why it is important to EE, and give several examples of Action Research projects.

### **Case Study of a Stormwater Retrofit System at a Public School Campus**

**Presented by Eric McDuffie - Duke University Nicholas School of the Environment**

This Case Study shows the long-term environmental, educational, and economic benefits of implementing a storm water retrofit system on each school's campus. Typical school campuses are an attractive target for future investments of this type because of their enormous educational value as demonstrated by the project in Orange County, NC.

### **Don't Compete, Cooperate: NC's Unique Nonformal Education Center Network**

**Presented by Marty Wiggins - NC Office of Environmental Education and Public Affairs**

The NC Office of Environmental Education and Public Affairs and the NC Association of Environmental Education Centers will share their unique community of practice. See how the state office assists non-formal science and nature centers in promoting programs and how the centers work cooperatively toward the goal of environmental literacy.

### **EE Resources Right Out Your Front Door!**

**Presented by Millie Langley Soil and Water, Sandra Weitzel - NC Soil and Water**

Within your county government offices there is a host of professionals and experts in environmental and natural resource topics. Many of these experts are skilled educators too. We will share where to get resources and to great classroom proven hands-on techniques.

### **Engaging the Younger Generations (Pre-K – 2nd grade) in Marine Science Programs**

**Presented by Nicole Garris Warren and Heather Estep - North Carolina Aquarium at Pine Knoll Shores**

Children are our future and we realize the importance of environmental education and believe it's never too early to start encouraging our youth. We'll present on how to engage Pre-K through 2nd graders in marine science related activities concentrating on programs that have worked for us in an informal setting.

# SATURDAY SESSIONS



(Detailed Session Descriptions)



## Roundtables 9:45 am – 10:15 am — Dining Hall (continued)

### **Systems-Thinking in Environmental Education**

**Presented by Tracey Ritchie - University of Florida**

This presentation will review the theory behind systems thinking and its connection to environmental education. Participants will receive information about the new PLT secondary module, Southeastern Forests & Climate Change and tips on incorporating systems thinking into their curriculum through a variety of enrichment activities.

### **Reaching Underserved Populations: AmeriCorps in NC Department of Environment and Natural Resources (NCDENR)**

**Presented by Mickey Jo Sorrell - Mountain to Sea AmeriCorps**

NCDENR is hosting twenty AmeriCorps members who are tasked with reaching und underserved populations that have not traditionally had access to DENR's educational resources. Come hear how this new program has successfully engaged with multiple audiences, including Title I schools, older adults, Latinos, and children living in transitional housing.

### **TACO Isn't Just a Yummy Food**

**Presented by Beth Cranford- North Carolina Museum of Natural Sciences**

Take a Child Outside (TACO) is an international initiative coordinated by the NC Museum of Natural Sciences to help get kids outside September 24-30 annually. Stop by to join us as a partner or to make sure that existing information is correct.

### **Guerrillas in Our Midst: Stealth EE for Unsuspecting Audiences**

**Presented by Karen McKenzie - Covenant Day School**

Discover interdisciplinary activities to explore global population trends, carrying capacity, human impacts on environment systems and paths to sustainability. Engage in memorable lessons designed to meet the Next Generation Science Standards and North Carolina's standards for social studies, science and math.

# SATURDAY SESSIONS



(Detailed Session Descriptions)

## Concurrent Session B & Service Project 1:45 pm – 2:30 pm

**Service Project:** *The service project is open to all conference attendees who wish to get outside for a while and get dirty. We will be sprucing up some flower beds and cleaning up trails for Camp Caraway. No equipment needed. Please meet on back patio.*

### **Climate Change in the Classroom**

**Presented by Martha Monroe and Christine Li - University of Florida**

#### **Room 1**

This presentation will provide an introduction to climate change science and will discuss potential impacts in the Southeast, the reasons why this issue causes disagreement, and adaption and mitigation actions. We will share tips and tools for teaching about climate in the classroom.

### **Capturing the Energy of Youth: Making the Most of High School Volunteers**

**Presented by Lauren Pyle - WNC Nature Center**

#### **Room 2**

What can they do? Are they really a help? How can they be supervised? High school volunteers are an often untapped opportunity for EE centers; with proper planning, clear expectations, and good partners, fantastic formative experiences can be provided for youth and benefit your organization at the same time!

### **Getting the Word Out: Marketing Your Organization & Programs**

**Presented by Chip Freund - CenturyLink Technology Solutions and Jonathan Marchal**

#### **The NC Arboretum**

#### **Room 3**

This session will explore a variety of methods for promoting and spreading the word about your organization and programs including: brand management, social media, digital advertising, and co-marketing.

### **Interpreting Snakes**

**Presented by Joseph Shimele - New River State Park**

#### **Room 4**

Come and learn more about native snake biology, natural history, behaviors and identification. This session will also include hands-on techniques and program ideas on how to interpret these amazing creatures to an engaged or an intimidated audience.

# SATURDAY SESSIONS



(Detailed Session Descriptions)

## **Sustainability Literacy: What is It and How Can We Measure It?**

**Presented by Charlotte Clark - Duke University, Nicholas School of the Environment**

### **Room 5**

What is sustainability literacy? How do we assess individual progress towards such literacy? This session will describe Duke University's process defining sustainability literacy and will explore our process towards choosing a means to measure/evaluate undergraduate student progress towards that goal. The content is transferable to contexts outside of higher education.

## **Concurrent Session C 2:45 pm – 3:15 pm**

### **Why Most People Don't Give a Rat's Rump about Environmental Education and What You Can Do About It**

**Presented by Robert Bixler - Clemson University**

### **Room 1**

Environmental socialization is offered as an expanded strategy if environmental education is to have wide appeal. People pay attention to, and internalize information and experiences that they can readily relate to what is already familiar and valued. Environmental education must be integrated with play, outdoor recreation, and hobbies.

### **It's Our Air: Properties of Air**

**Presented by Keith Bamberger and Jonathan Navarro - NC Division of Air Quality**

### **Room 2**

Air is all around us and is essential to life. It is also hard to detect and teach about. Staff from the North Carolina Division of Air Quality, will lead participants through several stations designed to help students learn about air followed by an evaluation and discussion of the activities.

### **Growing a Grassroots Community of Environmental Educators**

**Presented by Lisa Tolley and Marty Wiggins - NC Office of Environmental Education and Public Affairs**

### **Room 3**

Environmental Education Certification programs strengthen the profession and foster statewide capacity building. Learn how the NC Office of Environmental Education and Public Affairs has certified 1000+ educators and built a strong environmental education community through partnerships. We will highlight resources including professional development opportunities, environmental education centers, jobs and grants.

# SATURDAY SESSIONS



(Detailed Session Descriptions)

## Concurrent Session C 2:45 pm – 3:15 pm (continued)

### **Effectively Communicating Complex Science**

**Presented by Sarah Yelton- UNC Institute for the Environment**

#### **Room 4**

Through hands-on activities and discussion, participants will explore different methods for communicating complex scientific research with a variety of audiences. We will emphasize the elements of good (and bad) science communication, and discuss the usefulness of diverse communication channels including storytelling and social media in educating audiences.

### **Building Bridges One Large Event at a Time**

**Presented by Michelle Pearce - The North Carolina Arboretum**

#### **Room 5**

Expos, festivals and celebrations, OH MY! Large events are a great way to become more involved in your neighborhood, professional and regional communities. We'll discuss planning a large event for your site, making strong connections in your area and creating a hoopla that will mark calendars for years to come!

## Concurrent Session D 3:45 pm- 4:30 pm

### **Hands-on Human Ecology and Geography for the Next Generation**

**Presented by Karen McKenzie - Covenant Day School**

#### **Room 1**

Discover interdisciplinary activities to explore global population trends, carrying capacity, human impacts on environment systems and paths to sustainability. Engage in memorable lessons designed to meet the Next Generation Science Standards and North Carolina's standards for social studies, science and math.

### **Who Gives a Hoot About Ecology?**

**Presented by Pamela Mould - Franklin County Schools, Cyndi Williams - Nash-Rocky Mount Schools**

#### **Room 2**

Lab: Who Gives a Hoot About Ecology? Purpose: The purpose of this activity is to help understand how the survival of a group of organisms is influenced by various factors, including family size, personal health, pollution, food source, and such.

# SATURDAY SESSIONS



(Detailed Session Descriptions)

## Concurrent Session D 3:45 pm- 4:30 pm (Continued)

**Role-playing Environmental Policy Negotiations to Understand the Science, the Policy, and the Stakeholders**

**Presented by Eileen Thorsos and Charlotte Clark- Duke University**

**Room 3**

We will explore using role-playing to teach students about the science and policy of thorny environmental issues and about negotiating with diverse stakeholders. Participants will examine a model about flame retardant toxicity and the Toxic Substances Control Act, discuss good case study design, and brainstorm their own role-playing case studies.

**Nest Boxes for Nuthatches: Make Room for a Native Southerner**

**Presented by Ann Walter-Fromson - Greensboro College**

**Room 4**

Based on scientific studies showing declining numbers of brown-headed nuthatches, Audubon NC aims to erect 10,000 nest boxes for this southeastern native in the Piedmont and Coastal regions by 2015. Come learn about the science supporting this goal, how to construct BHNU nest boxes, and how to monitor the nests.

**A Return to Our Roots in EE**

**Presented by Coleen O'Connell - Lesley University School of Education**

**Room 5**

With the kindergarten to jobs mentality, environmental education has become increasingly co-opted by the standards craze. This participatory workshop is interactive and generative. Using our own experiences, we will design standards for age levels focused on igniting a sense of wonder, developing ecological literacy, and creating engaged, passionate Earth citizens.

**Laying a Foundation for Discovery**

**Presented by Dawn Mak and Beth Cranford- North Carolina Museum of Natural Sciences**

**Patio**

What are developmentally appropriate practices in early childhood education and how do you know what is appropriate? We'll use North Carolina Foundations for Early Learning and Development and NAAEE Guidelines for Excellence in Early Childhood EE as tools to explore this and other questions about creating solid programs for young children.

# SUNDAY SESSIONS



(Detailed Session Descriptions)

SUNDAY

21

## Concurrent Session E 9:00 am – 9:45 am

### **Basic Fishing Skills, Getting People Excited About Fish**

**Presented by Kelly Ondek - NC Wildlife Resources Commission**

**Outer Banks Center for Wildlife Education**

#### **Room 1**

Teach basic fishing skills without even going to a pond! This program shows indoor methods for basic fishing skills and identifying parts of fish. Students of all ages can learn how to fish in hopes for a future fishing trip.

### **Alien Invasions: Including Invasive Species in Your Education Programs**

**Presented by Colleen Bockhahn - Wake County Parks, Recreation and Open Space (also representing North Carolina Invasive Plant Council)**

#### **Room 2**

Invasive species are a serious problem in North Carolina and throughout the Southeastern US. This session will teach the basics of invasive species education, improve field ID knowledge, and provide resources and activities to use in your own invasive species programs.

### **EcoYoga with Youngsters**

**Presented by Kelly Hoke - Catawba Soil & Water Conservation District and Lori Flemming – Studio Mainstreet Yoga and Pilates**

#### **Room 3**

Whether in a classroom or in a non-formal setting, understanding learning styles is imperative. Finding unique ways to meet students where they are is a never ending task. Come join us for a whole-body and mind exploration as we bring yoga to EE!

### **Engaging Students in Hands On Learning**

**Presented by Sarah Davis, Jennifer Macbeth and Nairruti Jani- Florida Gulf Coast University**

#### **Room 4**

Join faculty from Florida Gulf Coast University (FGCU) to engage in conversation about environmental education and sustainability service-learning and experiential learning. Faculty will share their approaches to engaging students in service-learning projects related to sustainability. Learn about teaching strategies to engage students in local and global issues.

# SUNDAY SESSIONS



(Detailed Session Descriptions)

## Concurrent Session F 10:00 am – 10:45 am

**Using Nature's Notebook with Budding Citizen Scientists Presented by Mary Ball**  
**Tennessee Environmental Education Association**

### **Room 1**

When did redbuds and dogwoods bloom in your town this spring? And when did they bloom last spring? Has the bloom time shown any trend over the last 10 years? Students report data to Nature's Notebook and use the online mapping feature to look for patterns over time and space. Bring along your smart phone or other electronic devices you have.

**Guidelines, Get Your Guidelines!**

**Presented by Renee Strnad- NC State University**

### **Room 2**

Through the National Project for Excellence in Environmental Education, NAAEE has taken the lead in establishing guidelines for the development of balanced, scientifically accurate, and comprehensive environmental education programs that help develop an environmentally literate citizenry. This session will introduce participants to the guidelines and distribute copies of the materials.

**Know the Code! Air Quality Outreach to Older Adults: An AmeriCorps and NCDENR Campaign**

**Presented by Shannon Culpepper and Jonathan Navarro - NCDENR Division of Air Quality**

### **Room 3**

Through its work with underserved populations, AmeriCorps works determined that older adults could benefit from learning about ways to better protect their health from air pollution. Our presentation will focus on the initial year of the campaign and will include: project planning, campaign development, piloting, establishing partnerships, and marketing strategies.

**Technology in the Out-of-Doors: An Oxymoron?**

**Presented by Catherine Matthews, Lacey Huffling and Aerin Benavides from UNC Greensboro**

### **Room 4**

Learn how students have been using mobile technologies and communication/networking tools to manage, integrate, and collect data on reptile and amphibian field science projects. These media-rich activities can help learners connect their varied lived worlds with the world of EE.

# SUNDAY SESSIONS



(Detailed Session Descriptions)

## Concurrent Session G 11:00 am – 11:45 am

### **Encouraging Commitment to EE through Service Learning**

**Presented by Kathryn Stevenson, Kristin Frew - NC State University**

#### **Room 1**

How do you get a bunch of undergraduates excited about EE? Give them some hands-on experience with it! This presentation will highlight how a service-learning project completed at NCSU which trained 50 undergraduate students in Project WILD and placed them in elementary school classrooms affected the students' views of EE.

### **Shake, Rattle and Learn - Music in Interpretation**

**Presented by Joseph Shimel - New River State Park**

#### **Room 2**

NO musical talents are necessary! Participants will learn how to incorporate the powerful tools of music, rhythm and sounds into their interpretive programs - whether musically inclined or not. Topics include the benefits of using music and how to use music in your interpretive programs. Come ready to have fun!

### **Sense of Place on the Trails and at the Food Forest**

**Presented by Sarah Davis and Jennifer Macbeth - Florida Gulf Coast University**

#### **Room 3**

Come meet students, staff and faculty from FGCU who work together to empower students to connect with the local environment and contribute towards sustainable initiatives. The presentation will highlight cultivating a "sense of place" as a tool for sustainability education. Learn about the food forest and the student naturalist program.

# 2014 EENC Board Members



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



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Consider joining the EENC Board! EENC is an all volunteer organization and we need your talents and dedication to environmental education to continue our mission. If interested, speak to one of the Board Members during the conference; they will be wearing red lanyards and would love to talk to you about service to EENC and our community of practice.

## **COMMITTEE CHAIRS**

Conference Co-Chairs	Brad Daniel, Sarah Fuller, & Beth Cranford
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# 2015 EENC CONFERENCE



See you next year at Eastern 4-H Environmental Education Conference Center  
in Columbia, NC. September 25th-27th.



<http://sustainability.ncsu.edu/campus/buildings/leed/eastern-4h-environmental-education-and-conference-center>



*“One from many. Stronger together.”*