

2020 SEEA Conference: Zoom into Environmental Education [virtual edition]

Conference At-A-Glance

Thursday, Sept 24th: Research Symposium & Trivia/Social Hour					
1:00 pm - 1:30 pm	Opening Remarks - SEEA + EEASC				
1:40 pm - 3:00 pm	Research Symposium: Session 1				
3:10 p.m.- 4:50 pm	Research Symposium: Session 2				
5:00 pm - 6:30 pm	Virtual Trivia				
Friday, Sept 25th: Keynote & General Conference Sessions					
9:00 am - 10:00 am	Keynote Speaker - Dr. Drew Lanham				
	Shaping Scientists	EE Resources	Content & Inquiry	Education & Outdoor Learning	Lesson Showcase
10:10 am - 10:40 am	Session A	Session A	Session A	Session A	Session A
10:50 am - 11:20 am	Session B	Session B	Session B	Session B	
11:30 am - 12:00 pm	Session C	Session C	Session C	Session C	Session B
12:10 pm - 12:40 pm	Session D			Session D	<NO SESSION>
12:50 pm - 1:10 pm	Closing Remarks - SEEA + EEASC				

Detailed Agenda and Session Abstracts

Thursday, Sept 24th

Opening Remarks (1:00-1:30pm) : SEEA Executive Director Ashley Hoffman will provide a welcome on behalf of the Southeastern Environmental Education Alliance and will share exciting updates from the regional affiliate.

Research Symposium: Session 1 (1:40-3:00pm)

- **Title:** Paradise Lost? A New Legal Theory to Combat Climate Change in South Carolina
Presenter: Anna Catherine Parham, University of South Carolina School of Law
Summary: In our session, we will dive into learning about ways climate change is affecting the state of South Carolina and explore a wholly new legal theory to combat climate change and protect South Carolinians from the its harmful effects. We will explore complex doctrines of property law, constitutional law, and environmental law in a way that creates easily understood concepts through which the climate crisis in South Carolina can be ameliorated.
- **Title:** The Future of Water Resource Protection: Exploring Potential Education Strategies of Diverse Political Audiences
Presenter: Kristin Gibson, University of Georgia
Summary: Freshwater resources are rapidly depleting throughout the world due to a variety of economic needs, making water one of the most politically contentious issues of the 21st century. Historically, environmental educators target broad audiences; however, studies have found engagement in environmental protection efforts differ based on political affiliation and ideology. This study used the theory of planned behavior to explore the impact attitude, subjective norms, and perceived behavioral control have on intent to engage in water conscious behavior; ultimately influencing behavior. Environmental educators should educate based on participants' political leaning to stand a chance at improving future water protection behavior.
- **Title:** Educating the Next Generation: Teach to a Phone

Presenter: Nicholas Schlereth, Ph.D., Coastal Carolina University

Summary: If you want to connect with the next generation, you have to build a relationship through their device. We experience this on a daily basis as we educate our students, continually adapting our pedagogical styles to enhance the educational environment for our students. In this presentation, we will discuss new strategies grounded in marketing and educational theory to enhance the process of environmental education for Generation Z and beyond.

- **Title:** Reading the Environment by Languageing the Landscape
Presenter: Arlene Marturano, Ph.D., South Carolina Garden-based Learning Network
Summary: Environmental education promotes concept development by engaging children in activities requiring reading the surroundings through a variety of conceptual skills including observing, describing, comparing, classifying, and generalizing – the same core of conceptual skills essential to reading printed material. A four-year pilot study in a rural Title One 4-5th grade classroom using natural phenomena on the schoolyard – trees, toads, soil, pine cones, butterflies – illustrated how reading and languageing the landscape is a prerequisite for reading printed material.

Research Symposium: Session 2 (3:10-4:50pm)

- **Title:** Finding Gaps in Education in the Field of Environmental Law
Presenter: Elisabeth Bulzomi, University of South Carolina
Summary: The goal of this project is to identify gaps in education and experience in the field of environmental law through interviews with attorneys throughout the state of South Carolina. The data will be collected via surveys and interviews in order to inform the University of South Carolina (UofSC) School of Law of identifiable areas for improvement within their environmental law program. With this data, the UofSC School of Law will potentially have the opportunity to better prepare students for future careers in this employment sector. The research from this program has the potential to be applicable to other law programs.
- **Title:** Charleston Planet Stewards: Building a Generation of Informed and Resilient Coastal Citizens
Presenter: Chloe VanderMolen, College of Charleston
Summary: Charleston Planet Stewards is a project created by the National Centers for Coastal Ocean Science, originating from NOAA Planet Stewards Education Project (PSEP). PSEP provides formal and informal educators working with K12 educators the knowledge and resources to build scientifically literate individuals and communities who are prepared to respond to environmental challenges monitored by NOAA. Students will create a stewardship project that will mitigate the impacts of climate change. Students' understanding of science and their perception of their role in their environment will be assessed to identify how environmental project-based learning experiences may influence student scientific literacy and personal motivation.
- **Title:** Analyzing Elementary Science Curricula for Outdoor Instruction
Presenter: Sagan Goodpaster, University of Kentucky STEM Education
Summary: Outdoor classrooms have been growing in popularity at elementary schools throughout the country within the last two decades. Although outdoor learning benefits students holistically, a variety of barriers still keep teachers from moving instruction outside. One potential barrier is the need for relevant curriculum materials. This study reviews the merits

of comprehensive curriculum guides pertaining to outdoor science instruction at the elementary level. Each curriculum was evaluated in terms of its incorporation of teaching strategies, alignment with national standards, variety of learning activities, assessment opportunities, consideration of equity, and inclusion of resources.

- **Title:** Assessment of Public Reception of Climate News Media
Presenter: Kennedy Mayfield-Smith, University of Georgia
Summary: The interactive nature of the internet accelerates the spread of both factual and non-factual information. Using argumentation theory as a foundation a content analysis of Twitter posts about climate change from January 1 to December 31, 2019 was conducted. Results indicated social and political events along with natural disasters were the main triggers for conversations. Arguments were primarily seen in regards to climate change mitigation and the political versus environmental connections currently represented in media. The findings indicated social media may be a useful tool when exploring climate change conversations through a sociopolitical lens and called for additional research.
- **Title:** Improving EE Evaluation Individually and Collectively
Presenter: Charlotte Clark, Duke University, Nicholas School of the Environment
Summary: Duke University has been working with three EE case studies across the country (Oregon, Colorado, Delaware River Watershed) to explore and describe their path to improving evaluation of EE programs by program practitioners, organizations, and networks of organizations. This session will ascertain what the interests are of people at the Cafe, and present relevant experiences and learning from this research that would be of benefit to those in attendance.

Virtual Trivia (5:00-6:30pm): This fun social event will be moderated by SEEA Leadership Team Member Allie Sorlie (Education Coordinator, University of Alabama Museum of Natural History).

Friday, Sept 25th

Keynote Address by Drew Lanham, Ph.D., Clemson University (9:00-10:00am)

SEEING SELF AS SOCIAL CHANGE - CONSERVATION AND CONVERGENCE-

How do we blend our existences on this earth to live equitably and sustainably.? We share same air. Same water. Same soil. Same earth. Wild things and human beings will ultimately share the same fate. Dr. J. Drew Lanham will discuss the inalienable rights of living beings and our responsibilities as green stewards to not return to the old normal.

About Drew: Dr. J. Drew Lanham is a Clemson University Master Teacher, Alumni Distinguished Professor and Provost's Professor in the Department of Forestry and Environmental Conservation. A faculty member since 1995, Drew is an internationally respected conservation and cultural ornithologist. He is a past board member of several organizations including the National Audubon Society, Aldo Leopold Foundation, the American Birding Association and BirdNote. He is also the former Chairperson of the advisory board for Audubon South Carolina and was a twelve year member of the SC Wildlife Federation.

Dr. Lanham is a widely published author and poet focusing on a passion for place and the personal and societal conflicts that sometimes put conservation and culture at odds. Drew was

named the Poet Laureate for his home place county of Edgefield, South Carolina in 2018 and is the author of "Sparrow Envy- Poems" (Hub City Press 2019). His award winning book (Burroughs Medal Finalist 2016; 2018 SELC Reed Environmental Writing Award) "The Home Place-Memoirs of a Colored Man's Love Affair with Nature" (print by Milkweed Editions 2016/ audiobook by Tantor Media 2019) exemplifies his passion to define environmental sustainability and conservation in new ways by bridging the gaps between advocacy, education, inspiration and conservation. His essay, "Forever Gone" a lyrical treatise on extinction, was chosen as a Best American Essay for 2018. He has been summer faculty at the Bread Loaf Environmental Writing Workshop (2019, 2020) and the Writing in the Ruins Workshop (2012). As a Black American, he's intrigued with how ethnic prisms bend perceptions of nature and its care. An avid bird noticer and hunter, Drew lives with his wife Janice Garrison Lanham, in Seneca, South Carolina.

General Conference Session Tracks (10:10am-12:40pm)

Shaping Scientists

- **Session A:** BioBlitz – Citizen Science in Your Community
Presenters: Carley Lovorn (National Geographic Society), Shana Bury (PEEC) Jennifer Osbourne (Horry County Schools)
Summary: Join the National Geographic Society & SC Environmental Educator to learn how to conduct a BioBlitz in your community or with your students. This workshop will teach you how to organize and conduct a BioBlitz including how to locate, identify, and record organisms using the free iNaturalist.org website and app. along with other tools to help your community discover local biodiversity.
- **Session B:** Becoming Citizen Scientists with NASA's GLOBE Program
Presenters: Amy Ellisor, Karen Mott, and Heather Phelps (Camp Discovery)
Summary: Learn how Camp Discovery is partnering with NASA's GLOBE Education Division as we work together to engage communities as citizen scientists, gathering environmental data that explores factors affecting our climate. Join us as we share our findings and model hands-on activities and our data collection process. We will model creating a Cloud in a Jar, measuring surface temperature, and uploading data to GLOBE's website. Attendees will learn how they can use GLOBE data collection to incorporate citizen science through real-world investigations. All GLOBE support materials are free and easily accessible via the GLOBE website (globe.gov).
- **Session C:** Citizen Science: People-Powered Research that Increases Environmental Literacy
Presenters: Karan Wood and Jennifer McCoy (Environmental Education Alliance of Georgia)
Summary: Equipped with nets, cell phones, rulers and test-tubes, citizen scientists are crowd-sourcing data, making discoveries, and contributing to authentically-needed research. Explore ways that Citizen Science projects provide opportunities to connect with nature, hone critical thinking skills, and make a difference in the real world. Find out how citizen science can become culturally relevant for those typically underrepresented in STEM, including girls and children of color. Science teachers and non-formal educators will try their hands at four citizen science projects, make sense of phenomena in nature, engineer data-collection devices, and explore innovative instructional strategies that inspire, prepare, and empower future environmental decision-makers.

- **Session D:** Using Teens as Environmental Leaders: The Georgia 4-H Pollinator Ambassador Program
Presenter: Kasey Bozeman, Jenna Daniel, Melinda Miller, Deron Rehberg, and Lisa Starling (University of Georgia/Georgia 4-H)
Summary: Realizing the value of youth as environmental leaders, Georgia 4-H trained middle and high school students to serve as Pollinator Ambassadors in their communities. A multi-day training led by entomology and environmental education experts taught youth about the global concern of pollinator species decline and gave them the resources necessary to teach their peers.

EE Resources

- **Session A:** USDE Green Ribbon Schools in South Carolina
Presenters: Amy Curran (SC Department of Health and Environmental Control) and Weston Dripps, Ph.D. (Furman University)
Summary: SCDHEC has partnered with the US Department of Education (USDE) to promote the Green Ribbon Schools program in South Carolina. This program recognizes schools which have exhibited outstanding effort and achievement in reducing environmental impacts, improving the health and wellness of students, faculty and staff, and developing effective, hands-on learning experiences in sustainability. Audience members will learn about how the Green Ribbon Schools program promotes the Present-Day Plotlines strand by encouraging and recognizing effective environmental efforts in schools. They will also learn about Furman University's sustainability efforts from Dr. Weston Dripps, Executive Director of the Shi Institute for Sustainable Communities. Join this session to learn about the qualifications for the award and how your school can develop and submit a competitive application.
- **Session B:** Improving Evaluation in EE Individually and Collectively
Presenter: Charlotte Clark (Duke University Nicholas School of the Environment)
Summary: Duke University has been working with three EE case studies across the country (Oregon, Colorado, Delaware River Watershed) to explore and describe their path to improving evaluation of EE programs by program practitioners, organizations, and networks of organizations. This session will ascertain what the interests are of people at the Cafe, and present relevant experiences and learning from this effort that would be of benefit to those in attendance.
- **Session C:** Developing EE Partnerships and Alliances for Greater Impact
Presenters: Brad Daniel, Ph.D. (2nd Nature TREC), Ashley Hoffman (SEEA/KAEE), Sarah West Davis (SEEA/LEEF), and Kimberly Murray (SEEA/EEAA)
Summary: This session will be presented by the Officers and Executive Director of the Southeastern Environmental Education Alliance (SEEA). The session will present ideas and stimulate discussion on the value of developing partnerships on local, state, regional, and national/international levels of scale. Topics will include how partnering helps us to work smarter/not harder and how it can increase the impact of our work. Several effective strategies will be offered for engaging institutions and organizations in discussion about partnering. Participants will gain an understanding of what SEEA is, what it does, and how it functions as an example of the value of developing partnerships.

Content & Inquiry

- **Session A:** The future of stream bank health in South Carolina

Presenters: Katie Altman and Karen Jackson (Clemson Extension)

Summary: An essential part of a healthy stream is a stable bank and healthy riparian area. In this session you'll learn about Stream Bank Repair workshops and education efforts being developed in South Carolina and learn how to create a hands-on demonstration to discuss stream bank buffers with K-12 and adult audiences.

- **Session B:** National Geographic's Geo-Inquiry Process in Action

Presenter: Carley Lovorn (National Geographic Society)

Summary: Geo-Inquiry is an integrated, project-based learning process that connects real-world challenges to the classroom. The Geo-Inquiry Process incorporates the attitudes and skills of an Explorer: curious, responsible, and empowered to make a difference in the world. In this interactive session, educators will learn new strategies to help students develop critical thinking skills, ask questions, collect information, visualize and analyze data, create a compelling story, and ultimately become advocates for change in their local communities.

- **Session C:** Restoring Culture in the Longleaf Pineywoods: Connecting People and Landscape

Presenters: Johnny Stowe (SC Department of Natural Resources Heritage Preserve), Charles Babb (Sandhills Longleaf Pine Conservation Partnership), Sue Griggs (USDA-Natural Resources Conservation Service), Bob Franklin (Longleaf Alliance), Jesse Wilberley (Sandhills Area Land Trust), and Savannah Hebler (Francis Marion University)

Summary: We restore the natural and cultural heritage of the southeastern longleaf pineywoods. Our work centers on the inter-generational, multi-cultural role of humans as a part of the land they live in, and we engage with all ages in the classroom, as well as in the woods. We will share how through deep-time to present stories, ecosystem restoration, and field trips we connect people with local landscapes. We will bring an old-growth longleaf cookie and show how to read the tales it tells; share cartoons, books, poems and paintings.

Education & Outdoor Learning

- **Session A:** Flipping the Narrative

Presenters: Karan Wood and Jennifer McCoy (Environmental Education Alliance of Georgia)

Summary: How can we inspire students to save the earth instead of disheartening them? "Flipping the narrative" is rooted in research that shows kids need an opportunity to love the earth before they can heal it, and that childhood experiences outdoors provide more motivation for environmentalism than does erudition. We can transform the field of EE by taking the emphasis off ecological footprints, or negative human impact, and focusing on ecological handprints, or positive actions. Environmental stewardship then becomes an essential, scaffolded process that empowers students to make a difference rather than the project there is never enough time to do.

- **Session B:** Planning a Field Excursion? Try the 3C Method!

Presenter: Brad Daniel, Ph.D. (2nd Nature TREC)

Summary: Field experiences can be educational, inspirational, and fun. This session will describe an effective way to plan and organize natural history field trips in order to maximize learning. The model, developed by Brad Daniel, is called the 7C Model of Field Instruction. The 7 C's in the model stand for communication, context, concepts, connections, community, closure, and celebration. The components will be described and discussed along with some best practices and common mistakes.

- **Session C: Playing for Pennies: Creating Nature Play Spaces on a Budget**
Presenter: Lauren Pyle (Environmental Educators of North Carolina)
Summary: Want to build a nature play space, but don't have loads of money, staff, or space? Through a photo showcase, we'll share success stories, tips and resources from several facilities in North Carolina who created play spaces without breaking the bank.
- **Session D: Become a National Geographic Certified Educator**
Presenter: Carley Lovorn (National Geographic Society)
Summary: During this interactive session, you will engage with the National Geographic Learning Framework (the Attitudes, Skills, and Knowledge students need to develop an explorer's mindset) and learn how to become a National Geographic Certified Educator.

Lesson Showcase

- **Session A: Energy from the Sun and Exploring Climate Science**
Presenters: Kimberly Swan, Emily Hawbaker, and Tom Spencer (National Energy Education Development Project)
Summary: Join in hands-on activities to explore the scientific concepts of solar energy and how we utilize the sun's energy. Activities include UV beads, creating solar art and making a solar oven to showcase the transformation of radiant energy to thermal energy. Climate science interactive lessons to help students understand and comprehend through visual simulations and informational text. Participants will also be able to identify items and tasks in their daily lives that can contribute to carbon emissions and form an action plan.
- **Session B: Take Action SC Environmental Education Lessons**
Presenters: Amanda Edwards and Angie Perry (Take Action SC Environmental Education Partnership, S.C. Department of Health and Environmental Control's Office of Solid Waste Reduction and Recycling)
Summary: A showcase of environmental lessons taken from "Action for a Cleaner Tomorrow: A South Carolina Environmental Curriculum Supplement" through the Take Action SC Environmental Education Partnership. A focus will be on technology-rich lessons that inspire and empower teachers and students to protect and preserve the environment and take action for a cleaner tomorrow – all while learning virtually.

Closing Remarks (12:50-1:10pm): EEASC Board President Chanda Cooper will conclude the 2020 conference with exciting updates from EEASC and information about 2020 board member nominations and elections.