



The NORTH CAROLINA ARBORETUM

AN AFFILIATE OF THE UNIVERSITY *of* NORTH CAROLINA SYSTEM

NCEE Criteria II

May Classes for Credit

Offered through Adult Education Programs at The North Carolina Arboretum

[Botany Basics I](#)

Instructor Alexandra Holland

Four Sessions: Tuesdays, May 12, 14, 19 and 21; 1 - 2:30 p.m.

Member \$85 | Non-member \$95

BRN | BREG Certificate - Core Requirement

NCEE Criteria II - 10 Hours

Plants have many amazing abilities to make their own food, pull water hundreds of feet in the air against gravity, and trick insects and other animals into helping them reproduce. They track the sun, recoil at a touch, and warn other plants of danger. Part I of Botany Basics covers cell biology basics, including photosynthesis, evolution and classification of plants, and plant structure and growth. The class is Zoom-based, consisting of lecture and discussion and focusing on practical applications of botanical principles. Resources and opportunities for self-guided observation in the “field,” meaning your own yard or neighborhood with nods to nearby trails reopening for recreational use, will be provided for reflection. Prompts will be distributed to students seeking certificate credit for opportunities to synthesize learning.

Instructor: Alexandra Holland graduated from Duke University and earned her Master's degree in botany from the University of Texas at Austin. She was in the first class of students to be certified as Blue Ridge Naturalists. Alexandra managed the UTEX Culture Collection of Algae at UT Austin and spent many hours working with education programs at the Lady Bird Johnson Wildflower Center. She has taught botany for over a decade and leads nature hikes in Western NC for groups of all ages.

[The Nature of Drawing: Botanical Illustration for Plant Identification](#)

Instructor: Preston Montague

Four Sessions: Tuesdays, May 12, 19, 26, June 2; 3:30 - 5 p.m.

Member \$85 | Non-member \$95

BRN | BREG Certificate - 6 Hours Elective

NCEE Criteria II - 10 Hours

Botanical illustration is a powerful tool for understanding nature's design. Join artist and landscape architect Preston Montague for tea and techniques for creating beautiful and accurate botanical illustrations at any skill level. Preston will also teach fundamentals of plant anatomy that will not only improve your skill in botanical illustration, but will also improve your skill in plant identification. Participants will meet and enjoy tea with Preston over four weeks in an online classroom, where they have access to personalized instruction as they submit drawings for critique, and engage in open discussion where everyone's work and comments can be shared for maximum learning.

Instructor: Preston Montague is an artist, educator, and landscape architect who developed a passion for the natural world while growing up in the rural foothills of Virginia. He works in Durham, NC, focusing on projects that encourage stronger relationships between people and their environment. Montague's latest body of work, *Codex Carolinum*, is a series of didactic botanical illustrations using art and storytelling to foster natural science literacy, which can be viewed on this website:

www.prestonmontague.com

[Introducing Arboretum Reads - *The Forest Unseen: A Year's Watch in Nature*](#)

Instructor: Rebecca Caldwell

Thursday, May 14; 3 - 4 p.m.

Free; Suggested Donation \$15

BRN | BREG - 1 Hour Elective [Up to 5 additional hours can be earned through participating in the small group discussions and special talks.]

NCEE Criteria II - 2 Hours with field-based reflection [Up to 5 additional hours can be earned through participating in the small group discussions, special talks and additional field-based experiences.]

Join in this spring and summer as we read together in community *The Forest Unseen: A Year's Watch in Nature* by biologist and award-winning writer David George Haskell. At this moment, when we've all been staying safe at home and seeing our surroundings through new eyes, we can learn a great deal from Haskell's contemplative return to one square-meter patch of old-growth forest in Tennessee almost every day for a year. Haskell traces nature's path through the seasons and brings the forest and its inhabitants to vivid life, explaining the science and describing the ecosystems that have cycled for thousands -- sometimes millions -- of years. A *New York Times* critic said of Haskell, "He thinks like a biologist, writes like a poet and gives the natural world the kind of open-minded attention one expects from a Zen monk..."

An introductory session will be offered on May 14 at 3 p.m. as part of our popular "Thursdays at 3" weekly series, providing an overview of the book's themes and sharing reading prompts. Arboretum volunteers and staff will lead a series of discussion groups in Zoom-based meetings

starting in June, culminating with a wrap-up featuring author David Haskell. Look for dates and more information on our website and in the next e-newsletter.

Resources and opportunities for self-guided observation in the “field,” meaning your own yard or neighborhood with nods to nearby trails reopening for recreational use, will be provided for reflection. Prompts will be distributed to students seeking certificate credit for opportunities to synthesize learning.

The first Arboretum Reads selection, read in community in spring last year, was *The Nature Fix: Why Nature Makes Us Happier, Healthier, and More Creative* by Florence Williams. Readers who participated in last year’s program had this to say about the experience: “The Nature Fix helped me open my eyes to these wonders around us. We all need to slow down and take in the beauty of our surroundings. I also learned ways to manage stress and anxiety more effectively. My walks now aren’t just about seeing but about truly ‘taking in’ the experience in a more mindful and meditative way.”

Instructor: Rebecca Caldwell is a writer and educator who serves as the adult education programs manager at The North Carolina Arboretum. She has taught literature and writing at the University of Tennessee at Knoxville, Clemson University and Western Carolina University. She is also trained as a counselor specializing in expressive arts and ecotherapy. While working in Student Affairs at Western Carolina University, she started the Women’s Center, a resource, advising and advocacy center open to all students. Her doctoral coursework and research at the University of Virginia focused on creativity, intrinsic motivation and the adult learner.

[Contemplative Photography and The Enveloping Landscape](#)

Instructor: Susan Patrice

Four Sessions: Fridays, May 15, 22, 29, and June 5; 3:30 - 5 p.m.

Member \$85 | Non-member \$95

BRN | BREG Certificate - 6 Hours Elective

NCEE Criteria II - 10 Hours

Deepen your intimacy with your surroundings and the natural world through photography. Award-winning documentary photographer Susan Patrice offers a heart-felt photography workshop that combines contemplative practices with ways to document this extraordinary time that might keep us six feet apart from other humans but can inspire a closer and more intimate focus on nature and our surroundings. Through this simple photographic practice, a nearby green space can become an oasis of beauty and connection and your own backyard can come alive with extraordinary photographic opportunities. Four Zoom-based class meetings include photographic assignments, rich sharing and discussion, and supportive critiques.

Tools: Zoom, Google account for sharing images

Instructor: Susan Patrice is a documentary photographer, community artist, and founder of Makers Circle <https://makerscircle.org/>. She recently launched the Six Feet Photography Project www.lifeatsixfeet.com, a community project that encourages photographers to make and share images of their lived experiences of confinement and social distancing. Susan's own photography and public installations focus primarily on the Southern Landscape and its people and feature intimate images that touch deeply into the questions of place, gender, and belonging.

Spring Warblers

Instructor: Kevin Burke

Two Sessions: Tuesday, May 19, and Thursday, May 21; 11 AM -12:30 PM

Member \$40 | Non-member \$50

BRN Certificate - 3 Hours Elective

NCEE Criteria II - 6 Hours

North Carolina is home to more than 40 species of warblers, which are among the most brilliantly colored and tuneful of the songbirds. This class will provide an informative and enjoyable overview of warblers, allowing students opportunities to identify the birds and their distinctive songs. Resources and opportunities for self-guided observation in the “field,” meaning your own yard or neighborhood with nods to nearby trails reopening for recreational use, will be provided for reflection. Prompts will be distributed to students seeking certificate credit for opportunities to synthesize learning.

Instructor: Kevin Burke was introduced to birding while taking an ornithology class and has been birding every day since. He has a degree in resource recreation and tourism from the University of Idaho and honed his birding skills teaching environmental education. Kevin has led birding trips across the country to Washington's San Juan Islands and Idaho's back country and abroad with trips to Portugal and Colombia. His lifelong journey has developed into a desire to share his knowledge and help others grow their skills.

Spring Flora Identification

Instructor: Scott Dean

Five Sessions: Wednesdays, May 20, 27, June 3, 10 and 17; 1 - 2:30 p.m.

Member \$95 | Non-member \$105

BRN Certificate Core Requirement

NCEE Criteria II - 10 Hours

Learn to identify native mountain flora using a non-technical keying system, while studying the characteristics of plant families, the basics of plant community and the natural and the cultural history of the flora of the Blue Ridge. Presented online with resources, quizzes and exercises provided for conducting observations in the “field,” meaning your own yard or neighborhood with nods to nearby trails reopening for recreational use. *Newcomb's Wildflower Guide* and

Wildflowers of Tennessee, the Ohio Valley and the Southern Appalachians are recommended as references.

Instructor: Scott Dean was born and raised in the mountains of southern Appalachia, specifically the coalfields of West Virginia and southwestern Virginia. He developed the original Ecology, Botany, and Zoology curricula for the Blue Ridge Naturalist Program, and has been both a classroom and field instructor with the program since its inception. He has led walks for UNC Asheville and the Cullowhee Native Plants Conference, been a featured speaker at the Great Smoky Mountain National Park Wildflower program, and spoken at various social and civic events in the Asheville area over the last twenty years.

[Intro to Ecology Talk: Ecological Communities of the Southern Appalachians](#)

Instructor: Dan Lazar

Thursday, May 21; 3 - 4 PM

Free; Suggested Donation \$15

BRN | BREG Certificate - 1 Hour Elective

NCEE Criteria II - 2 Hours with field-based reflection

This illustrated lecture, part of our popular Thursdays at 3 series will take you from riverside willows and sycamores to mountaintop spruces and firs, with many stops in between to visit a diverse array of familiar and not-so-familiar Appalachian organisms in their natural habitats. We will stop by an amphibian breeding pond to observe tadpoles and toads, observe pitcher plants and prickly pear cactus clinging to the same rocky blue ridge summit, and locate the rarest tree in the Southern Appalachians to discover how it survives in a handful of extremely isolated sites. Join us for this Zoom-based program and experience (virtually) the diversity and beauty of the Southern Appalachian Mountains. This class is free with the option to include a suggested donation appearing in your cart at check out. Your generous contribution goes to support education programs at the Arboretum.

Prompts will be distributed to students seeking certificate credit for opportunities to synthesize learning. Resources and opportunities for self-guided observation in the “field,” meaning your own yard or neighborhood with nods to nearby trails reopening for recreational use, will be provided for reflection.

Instructor: Dan Lazar served for many years as the director of education at the Western North Carolina Nature Center, followed by several years as executive director of the Colburn Earth Science Museum. Dan has a degree in forest biology from the State University of New York College of Environmental Science and Forestry and has been an instructor in the Blue Ridge Naturalist program since 2005.

[Botany Basics II](#)

Instructor: Alexandra Holland

Four Sessions: Tuesdays and Thursdays, May 26, 28, June 2 and 4; 1 - 2:30 p.m.

Member \$85 | Non-member \$95

BRN | BREG Certificate - Core Requirement
NCEE Criteria II - 10 Hours

Plants have many amazing abilities to make their own food, pull water hundreds of feet in the air against gravity, and trick insects and other animals into helping them reproduce. They track the sun, recoil at a touch, and warn other plants of danger. Part II of Botany Basics covers transport processes and nutrition; plant reproduction; plant responses and regulation of growth; stress physiology and plant ecology. The class is Zoom-based, consisting of lecture and discussion and focusing on practical applications of botanical principles. Resources and opportunities for self-guided observation in the “field,” meaning your own yard or neighborhood with nods to nearby trails reopening for recreational use, will be provided for reflection. Prompts will be distributed to students seeking certificate credit for opportunities to synthesize learning.

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[Ecology of the Blue Ridge](#)

Instructor: Dan Lazar

Six Sessions: Tuesdays and Thursdays, May 26, 28, June 2, 4, 9, and 11; 3:30 - 5 p.m.

Member \$125 | Non-member \$135

BRN/BREG Core Requirement

NCEE Criteria II - 10 Hours

Discover why the Southern Appalachians are home to more tree species than all of Europe. Learn how ants and whitetail deer determine where trilliums grow. Take a virtual tour of the amazing natural ecosystems of Western North Carolina, from riverside amphibian breeding ponds to mountaintop Spruce-Fir forests. This Zoom-based class will include lecture presentations, discussions, self-guided explorations, and virtual field trips during which students will uncover the complex interactions between familiar organisms and their natural environment.

Prompts will be distributed to students seeking certificate credit for opportunities to synthesize learning. Resources and opportunities for self-guided observation in the “field,” meaning your own yard or neighborhood with nods to nearby trails reopening for recreational use, will be provided for reflection.

Instructor: Dan Lazar served for many years as the director of education at the Western North Carolina Nature Center, followed by several years as executive director of the Colburn Earth Science Museum. Dan has a degree in forest biology from the State University of New York College of Environmental Science and Forestry and has been an instructor in the Blue Ridge Naturalist program since 2005.

Embracing the Dark: Light Pollution and Our Health

Instructor: Stephan Martin

Three Sessions: Fridays, May 29, and June 5; 2 - 3:30 p.m.; Virtual Stargazing Friday, June 12; 9:30 - 10:30 p.m.

Member \$65 | Non-member \$75

BRN - 3 Hours Elective

NCEE Criteria II - 6 Hours

For over a century, we've been lighting up the night with artificial lighting. Until recently the dramatic impact of light pollution on wildlife, human health, and the environment has been largely underestimated and poorly understood. In this class, we'll discuss the importance of nighttime darkness and the many ways it's necessary for the natural world and our physical, mental, and emotional health. We'll also explore ways to mitigate the effects of light pollution in our homes and local environments and discuss strategies for making our homes more "dark friendly," thereby improving our health, saving money, and benefiting the environment. For our third and final session on June 12, join a virtual observing session to discover some of the spring stars and constellations. We'll also make observations for the Globe at Night (<https://www.globeatnight.org/>) citizen science dark sky challenge, in which user-submitted data helps astronomers and other dark-sky advocates evaluate the impact of light pollution on dark skies around the world.

Prompts will be distributed to students seeking certificate credit for opportunities to synthesize learning. Resources and opportunities for self-guided observation in the "field," meaning your own yard or neighborhood, will be provided for reflection.

Instructor: Stephan Martin is an astronomer and educator who has taught astronomy at colleges and universities across the U.S. for more than 25 years. He has lectured on light pollution and its effects on the environment and has offered stargazing and introductory astronomy workshops domestically and internationally. He was formerly the supervisor of the Williams College observatory, where he participated in research expeditions around the world to study and observe solar eclipses.