2018 HORTICULTURE INDUSTRY INTEGRATED PEST MANAGEMENT SYMPOSIUM

The North Carolina Arboretum Society assists the Arboretum in its mission to connect people with plants through education, exhibition and demonstration, while continuing to create, preserve, and engage visitors in an active and lasting love of the environment.

Thank you to our Community Sponsors!

Biobest USA
Hilton Asheville/Biltmore Park

CLASS SCHEDULE …… AT A GLANCE

AUGUST
21 Fall Flora Identification A: 6 A.M-8:30 A.M.
22 Fall Flora Identification B: 6 A.M-8:30 A.M.
29 Painted Wings: Butterflies and Moths: 6 A.M-8:30 A.M.
29 Winter Trees: A 6 A.M-8:30 A.M.
30 Meet the Bird Turtle
30 Monocotiology of the Blue Ridge A: 6 A.M-8:30 A.M.
31 Shrubs and Shrubs: 6 A.M-8:30 A.M.
SEPTEMBER
6 Calligraphy Sampler: A 6 A.M-8:30 A.M.
6 Flower Arranging: Confidence and Country: 6 A.M-8:30 A.M.
7 Garden of the Blue Ridge: 6 A.M-8:30 A.M.
8 Building a Better Monarch Garden
10 Summertime: A 6 A.M-8:30 A.M.
14 Hidden Science Behind the Blues Night: 6 A.M-8:30 A.M.
15 Exploring Watercolor A: 9 A.M-5 P.M.
16 Deep Relaxation: Restorative Yoga A: 9 A.M-5 P.M.
17 Intermediate Watercolor Intensive
18 Botanical Latin for Gardeners: 9 A.M-5 P.M.
18 Landscape of the French Broad
19 Treasures of the Fall Night Sky: 9 A.M-5 P.M.
19 Approaches to Planting Design:
20 Nature of Drawing: Autumn Sketchbook:
21 Fall Gardening Tasks: 9 A.M-5 P.M.
22 Gardening on Slopes
24 Birds of the Blue Ridge: 9 A.M-5 P.M.
25 Winter Birding in the Carolinas: 9 A.M-5 P.M.
26 Understanding Lichens: 9 A.M-5 P.M.
29 Adobe Photoshop Lightroom: 9 A.M-5 P.M.
OCTOBER
31 Principles of Eco-Gardening: A 9 A.M-5 P.M.
31 Aquatic Habitat: A 9 A.M-5 P.M.
NOVEMBER
2 Watercolor: The Tools We Use: 6 A.M-8:30 A.M.
7 All About Blackbirds: 6 A.M-8:30 A.M.
8 Topography and Maps
9 Improve Your iPhone Photography: 6 A.M-8:30 A.M.
2 Weather for Gardeners: A 9 A.M-5 P.M.
2 Wildlife in the Garden
23 Winter Tree Identification A: 9 A.M-5 P.M.
24 Winter Plants of Interest
26 Exploring Watercolor C: 9 A.M-5 P.M.
28 Wreathmaking B: 9 A.M-5 P.M.
DECEMBER
7 All About Blackbirds: 9 A.M-5 P.M.
28 Meteorology of the Blue Ridge B: 9 A.M-5 P.M.
27 Build a Rustic Wren House: 9 A.M-5 P.M.
5 Poets of the Blue Ridge: A 9 A.M-5 P.M.
5 Point of the Blue Ridge: A 9 A.M-5 P.M.
5 Growing and Using Culinary Herbs: 9 A.M-5 P.M.
5 Tree Mammoth: The Winter Night Sky: 9 A.M-5 P.M.
5 Build Your Own Birdhouse Box: 9 A.M-5 P.M.
5 Winter Tree Identification B: 9 A.M-5 P.M.
5 Build a Rustic Wren House
5 Garden in a Changing Climate: 9 A.M-5 P.M.
5 Adobe Photoshop Lightroom: 9 A.M-5 P.M.
FEBRUARY
9 Weather for Gardeners: A 9 A.M-5 P.M.
15 Exploring Watercolor B: 9 A.M-5 P.M.
16 Climate Resilient Fruit and Vegetable Gardening
17 Intermediate Watercolor Intensive: 9 A.M-5 P.M.
20 Winter Topography and Maps: 9 A.M-5 P.M.
23 Winter Gardening Tasks: 9 A.M-5 P.M.
23 Winter Tree Identification B: 9 A.M-5 P.M.
23 Winter Gardening Tasks
24 Winter Plants of Interest
26 Exploring Watercolor C: 9 A.M-5 P.M.
26 Understanding Lichens: 9 A.M-5 P.M.
28 Adobe Photoshop Lightroom: 9 A.M-5 P.M.
APRIL
30 Adobe Photoshop Lightroom: 6 A.M-8:30 A.M.
31 Principles of Eco-Gardening: A 9 A.M-5 P.M.
31 Aquatic Habitat: A 9 A.M-5 P.M.
JUNE
10 Duck Day: A FIELD TRIP
12 Winter Tree Identification A: 9 A.M-5 P.M.
15 Methods of Eco-Gardening: A 9 A.M-5 P.M.
18 Unwind and Renew: A Mind-Body Wellness Retreat: 9 A.M-5 P.M.
22 Gardening in a Changing Climate: 9 A.M-5 P.M.
23 Winner Gardening Tasks
24 Congers and Coyotes in the Blue Ridge
24 Winner Plants of Interest
26 Exploring Watercolor C
26 Understanding Lichens: 9 A.M-5 P.M.
28 Adobe Photoshop Lightroom: 9 A.M-5 P.M.
SPECIAL EVENT
Gardening on the Historic Biltmore Estate
Lessons for Today’s Gardens
A Talk with Parker Andes
Biltmore Estate’s Horticulturist
Thursday, September 13; 6 to 8 p.m.
Open to the public; Free admission
Prior registration required; Space is limited
Parking fees for non-members apply
Two hour electric credit for the BRG Certificate

In the late 1880’s, George Vanderbilt began working with Frederick Law Olmsted to lay out the vision for his estate in Western North Carolina. He asked Olmsted to design an oasis that he and his family and friends could enjoy, but also a working estate, drawing on the latest scientific knowledge to manage farms and woodlands. Olmsted laid out the estate roads, fields, pastures, gardens and conservatory and, in turn, brought in Gilford Pinchot, America’s first forester, who would write the forester’s management plan. Andes will present some of the original design ideas that Biltmore strives to maintain today and will offer reflections on contemporary application in today’s landscapes. Looking at form and function, he will bring Biltmore’s garden spaces down on scale and will share wise words for managing any size landscape.

as a body system and positive and negative emotions. In this class, students will practice gentle chi gong movements that harness the five elements energy in the body to support physical, emotional and spiritual well-being. This class is suitable for beginners and those with some experience in chi gong and may be done seated or standing. Wear comfortable clothing.

Yoga Nidra is a guided lying-down exercise that induces full-body relaxation and strong states of awareness. Each session will begin with very gentle tension-relieving stretches for neck, shoulders and low back, followed by reclining “restorative” poses with soothing live music. The session culminates in a 45-minute Yoga Nidra experience. The various elements of this workshop taken together can assist in getting a good start to the fall season or ease holiday stress. These practices are highly accessible, ideal for beginners and seasoned practitioners alike, and require only an ability to get down onto the floor and back up again unassisted. Seated stretches can be done with the support of a chair if needed. Man and other props will be supplied or you may bring your own.

SPECIAL EVENT
Making Sounds: The Art and Passion of Fragrance
BAKER EXHIBIT CENTER
Friday, February 16, 2019
7:30 to 9:30 p.m.
Open to the public; Free admission
Prior registration required; Space is limited
Parking fees for non-members apply
Two hour electric credit for the BRG Certificate

In this three-day class, students will taste and learn about the evolution of pet-keeping, the impact of pets on human psychology affect the way we think about other species. In the second hour, the class will focus on how biology, culture, and the quirks of animal rights movement, recent years reflect the explosion of interest in our complicated relationships with animal species. This class is an introduction to the field of anthrozoology, the new science of human-animal interactions. The first hour will look at the power of practicing care for ourselves as a skillful means to deepen our sensitivity and attentiveness to others and the world.

Instructor: Miles Cramer
Saturday, January 20; 9:30 a.m. to 4:30 p.m.
Friday, January 18; 1:30 to 4:30 p.m.
Saturday, January 19; 9:30 a.m. to 12:30 p.m.
Sunday, January 20; 1 to 3:30 p.m.
Limit: 24 students
$159 Member / $169 Non-member
A THUNDER DAY CLASS
Unwind & Renew: A Mind-Body Wellness Retreat
A Mind-Body Wellness Retreat
Sip ‘n Smell

In this introductory course, students will taste and discuss tea, the stimulating beverage derived from the plant. The differences found in each of the five elements—wood, fire, earth, metal, and water—is connected to an internal organ as well.
Calligraphy Sampler 
A FOUR-WEEK CLASS
Instructor: Catherine Langsdorf
Thursday, September 6, 13, 20, 27; 5:30 to 7:30 p.m.
$59 Member / $69 Non-Member
Limit: 20 students

Learn basic floral design principles and express your creativity while making a floral centerpiece. The instructor’s goal is to empower students to buy a (chisel) tool will give students a foundation in instruction and guidance in using the broad-edge tool will help even the most hesitant person find a relaxing, creative outlet. Noprevious lettering experience is needed. All materials are provided.

Flowers and vases are included in the supply list will be provided upon registration. No prior experience is necessary.

Exploring Watercolor A
Instructor: Susan Ling
Saturday, September 15; 10 a.m. to 4 p.m.
$56 Member / $66 Non-Member
Limit: 16 students

This class is for beginners and for students who want to continue their study. The new student supply fee is approximately $45; continuing students may purchase a sumi-e paper pad from the teacher.

Exploring Watercolor B
Instructor: Susan Ling
Saturday, December 8; 1 to 4 p.m.
$56 Member / $66 Non-Member
Limit: 16 students

Hiking and Haiku
Instructor: Rick Daley
Wednesday, October 3, 10 a.m. to 2 p.m.
$135 Member / $145 Non-Member
Limit: 12 students

This class will discuss Thomas Wolfe’s highly autobiographical novel “Look Homeward, Angel,” in which Wolfe expresses both his love of and ambivalence about growing up in Asheville. The class is suitable for beginners and for students who want to continue their study. The new student supply fee is approximately $45; continuing students may purchase a sumi-e paper pad from the teacher.

Exploring Watercolor C
Instructor: Susan Ling
Saturday, December 15; 10 a.m. to 4 p.m.
$56 Member / $66 Non-Member
Limit: 16 students

This class offers new and useful information on tools and techniques in applying paints that are unique to watercolor. Beginning and intermediate painters are welcome to take one class or build their skills by taking all three. Using a limited palette, students will practice blending shapes and colors and study the techniques of laying transparent glazes, negative painting, spattering, and adding texture to create depth in their paintings. All supplies are included in the course fees.

Making a Hearth Broom
Instructor: Marlow Gates
Saturday, September 22; 9:15 a.m. to 4 p.m.
$69 Member / $79 Non-Member
Limit: 10 students

This class offers an opportunity to sample three different hand—Uncial, Italic and Blackletter—for beginning and intermediate photographers of all levels.

Moving beyond the traditional grand scenic, this workshop will help students learn ways to see more creatively and take more inspirational photographs. The class will include classroom demonstrations, photography practice in the garden and a review of student work. The class will work with composition, light and ideas that enhance vision and style. From realism to abstraction, intimate landscapes to nature sketchbooks or cards. This introductory class will be a relaxing, creative outlet. No previous lettering experience is needed. All materials are provided.

Exploring Calligraphy
Instructor: Niki Irving
Wednesday, October 2, 9, 16, 23; 5:30 to 7:30 p.m.
$59 Member / $69 Non-Member
Limit: 20 students

This class will discuss Thomas Wolfe’s highly autobiographical novel “Look Homeward, Angel,” in which Wolfe expresses both his love of and ambivalence about growing up in Asheville. The class is suitable for beginners and for students who want to continue their study. The new student supply fee is approximately $45; continuing students may purchase a sumi-e paper pad from the teacher.

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Watercolor: The Tools We Use
A THREE-DAY CLASS
Instructor: Elizabeth Ebel
Friday - Sunday, November 2 - 4; 10 a.m. to 4 p.m.
$149 Member / $159 Non-Member
Limit: 16 students
This three-day foundation-building course is for people who have always wanted to paint in watercolor and for those who feel that they are struggling with the medium. A lecture on color theory and composition will begin the class. The instructor will offer a number of demonstrations and allow students some hands-on practice. The course will allow ample time for participants to experience as many techniques as possible, to practice and build their skills and to ask plenty of questions. A list of supplies required for the class will be sent to students upon registration.

Intermediate Watercolor Intensive
Instructor: Lyne A. Lingg
Saturday, November 17; 10 a.m. to 4 p.m.
$78 Member / $88 Non-Member
Limit: 12 students
Students who have enjoyed introductory classes and intermediate students alike will build skill and confidence with the tools and techniques of watercolor. The day includes demonstrations and time for students to complete a series of smaller studies. Students may bring sketches, photographs and other collected images for inspiration and reference, then work with the instructor on composition, study line and shape. The class will offer opportunities to deepen familiarity with mixing colors and to explore the application of masking fluid and glazes. A list of supplies and sources for purchase will be sent to students upon registration.

Nature of Drawing: Autumn Sketchbook
A TWO-DAY CLASS
Instructor: Preston Montague
Saturday - Sunday, October 20 - 21; 9:30 a.m. to 4 p.m.
$139 Member / $149 Non-Member
Limit: 20 students
Designed for beginners with little to no artistic training, this foundation course focuses on creating accurate and beautiful botanical illustrations. Participants will learn basic observation and drawing techniques with pen and pencil and will use colored pencils to apply vibrant color. Though accurate and beautiful botanical illustrations are designed for beginners, students with more intermediate skills are encouraged to join in. Students are asked to bring sketchbooks, colored pencils, #2 pencils, erasers, a pencil sharpener and additional shooting. If time permits, there may be an opportunity for students to complete a full-sized door wreath using the hand-wrapped bundle method. Students will also learn an easy bow tying method. All wreath-making materials will be provided including a variety of fragrant sources for purchase. Students in this class will be invited to explore and become proficient in capturing images, making albums and using apps to make their images ready to import into Lightroom. The class will include a slideshow and hands-on practice the first day. During the second day, the class will share images and work on processing with Snapseed to improve image quality. If time permits, there may be an opportunity for additional shooting.

Improve Your iPhone Photography
A TWO-DAY CLASS
Instructor: Lynne Buchanan
Friday - Saturday, November 9 - 10; 1:30 to 4:30 p.m.
$79 Member / $89 Non-Member
Limit: 12 students
They say the best camera is the one you have with you, and the iPhone camera is an excellent device for making wonderful images of the world while you’re on the go. Students in this class will be invited to explore and become proficient in capturing images, making albums and using apps to make their images ready to import into Lightroom. The class will include a slideshow and hands-on practice the first day. During the second day, the class will share images and work on processing with Snapseed to improve image quality. If time permits, there may be an opportunity for additional shooting.

Adobe Photoshop Lightroom CC Classic
A FOUR-DAY CLASS
Instructor: Lynden Buchanan
Tuesday - Friday, January 29 - 31, February 1; 12:15 to 4:15 p.m.
$229 Member / $239 Non-Member
Limit: 20 students
Adobe Photoshop Lightroom CC Classic is specifically designed to help photographers organize, process, and share their images. Students will use their own computers and their image files to establish their personal Lightroom catalog. This class is designed to help participants develop a workflow that keeps them organized. Lightroom contains seven modules, but “Library” and “ Develop” will be the focus of this class. Students will become more familiar with storing your image files ready to import into Lightroom. No prior experience is necessary.

Trail Cameras
A THREE-DAY CLASS
Instructor: Tanya Poolie
Tuesday - Thursday, December 4 - 6; 10 a.m. to Noon
$134 Member / $139 Non-Member
Limit: 20 students
This class is intended to introduce participants to trail cameras and their many uses for exploring and monitoring wildlife populations or just to see who is visiting the backyard. Participants will learn how to program and deploy a variety of popular trail cameras, as well as how to download and interpret trail camera photos. The class will also explore citizen science opportunities such as the Cardin Critters program and discuss the use of trail cameras in research conducted by NC Wildlife Resources Commission staff.

Poets of the Blue Ridge
A THREE-WEEK CLASS
Instructor: Brent Martin, Rebecca Caldwell
Tuesdays, February 5, 12, 19; 1:30 to 4:30 p.m.
$70 Member / $80 Non-Member
Limit: 20 students
Join Clara Curtis, the Arboretum’s senior director for mission delivery, in this class to learn how to make a festive holiday wreath. Participants will learn classic wreath making methods and create a self-wrapping wreath using the hand-wrapped bundle method. Students will also learn an easy bow tying method. All wreath-making materials will be provided including a variety of fragrant greenery, ribbon and natural accent materials. Students should bring their own floral clippers.

Instructor: Clara Curtis
Wednesday, November 28; 10 a.m. to 2 p.m.
$78 Member / $88 Non-Member
Limit: 24 students
Join Clara Curtis, the Arboretum’s senior director for mission delivery, in this class to learn how to make a festive holiday wreath. Participants will learn classic wreath making methods and create a self-wrapping wreath using the hand-wrapped bundle method. Students will also learn an easy bow tying method. All wreath-making materials will be provided including a variety of fragrant greenery, ribbon and natural accent materials. Students should bring their own floral clippers.

Instructor: Clara Curtis
Tuesday, November 27; 10 a.m. to 2 p.m.
$78 Member / $88 Non-Member
Limit: 20 students
Wreathmaking B
This class is intended to introduce participants to trail cameras and their many uses for exploring and monitoring wildlife populations or just to see who is visiting the backyard. Participants will learn how to program and deploy a variety of popular trail cameras, as well as how to download and interpret trail camera photos. The class will also explore citizen science opportunities such as the Cardin Critters program and discuss the use of trail cameras in research conducted by NC Wildlife Resources Commission staff.

Limit: 8 students
Create a deeper understanding and appreciation of the poetry inspired in and by these mountains. Each meeting of this readings class will center on an acclaimed poet or writer – Robert Morgan, Fred Chappell and Kathryn Stripling Byer. The class will also discuss contemporary poets each laureate has mentored and influenced, who continue to practice their craft with voices distinct and diverse, in ways that distill the essence of this region.
The North Carolina Arboretum is proud to offer the Blue Ridge Naturalist Certificate of Merit program which promotes educational offerings on a variety of natural history topics. The courses provide ways to learn about the Southern Appalachian ecosystem and present opportunities to develop environmental awareness and to explore our mountains. For those interested in developing skills and knowledge as a naturalist, the program offers a Certificate of Merit curriculum that includes a series of core courses in zoology, botany, geology, and plant identification with elective classes in butterflies, birds, mushrooms, etc.

Students in the Blue Ridge Naturalist Certificate of Merit program attend 236 hours of education classes and conduct a 30-50 hour final project. The curriculum is designed to be completed in a minimum of 24 months, dependent on class schedule and instructor availability. Most students will need additional time to finish the program. There is a 75% minimum attendance requirement to receive credit for classes taken in pursuit of the Blue Ridge Naturalist Certificate.

There is a nonrefundable $55 application fee.

There is a 75% minimum attendance requirement to receive credit for classes taken in pursuit of the Blue Ridge Naturalist Certificate of Merit program.

The Blue Ridge Naturalist Certificate of Merit program attendees must attend 236 hours of education classes and conduct a 30-50 hour final project. The curriculum is designed to be completed in a minimum of 24 months, dependent on class schedule and instructor availability. Most students will need additional time to finish the program. There is a 75% minimum attendance requirement to receive credit for classes taken in pursuit of the Blue Ridge Naturalist Certificate. There is a nonrefundable $55 application fee.

The following classes qualify for the Blue Ridge Naturalist Certificate of Merit program:

**Core Field Studies**

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Hours</th>
<th>Description</th>
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<tbody>
<tr>
<td>Native Tree Identification — Trees of the Blue Ridge</td>
<td>12</td>
<td>12 hours consisting of the following four classes: Spring Season 3, Summer Season 3, Fall Season 3, Winter Season 3.</td>
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<tr>
<td>Native Plants/Fungi of the Blue Ridge</td>
<td>72</td>
<td>72 hours consisting of the following three classes: Spring 24, Summer 24, Fall 24.</td>
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<tr>
<td>Painted Wings: Butterflies and Moths</td>
<td>10</td>
<td>10 hours focusing on identification and understanding their life cycles.</td>
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<td>Core requirement for BRN Certificate</td>
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<td>Limit: 12 students</td>
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<td>$139 Member / $149 Non-Member</td>
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<td>9:15 a.m. to 12:15 p.m.</td>
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**Electives**

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<tr>
<th>Course Name</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Water Systems</td>
<td>12</td>
<td>12 hours elective credit for BRN Certificate.</td>
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<tr>
<td>Bring a hand lens, paper and pencil. Students should wear shoes that can get wet and bring binoculars.</td>
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<tr>
<td>Water Systems</td>
<td>10</td>
<td>10 hours focusing on identification and understanding their life cycles.</td>
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<tr>
<td>Bring binoculars. Participants should dress for walking outside on Arboretum property and should bring binoculars.</td>
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<tr>
<td>Water Systems</td>
<td>8</td>
<td>8 hours focusing on identification and understanding their life cycles.</td>
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<td>Bring binoculars. Participants should dress for walking outside on Arboretum property and should bring binoculars.</td>
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<td>Water Systems</td>
<td>3</td>
<td>3 hours focusing on identification and understanding their life cycles.</td>
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<td>Bring binoculars. Participants should dress for walking outside on Arboretum property and should bring binoculars.</td>
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**Final Project**

- **30 to 50 hours independent project**

**NORTH CAROLINA ENVIRONMENTAL EDUCATION CERTIFICATION PROGRAM**

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<tr>
<td>Fall Flora Identification</td>
<td>10</td>
<td>10 hours focusing on identification and understanding their life cycles.</td>
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**Water Systems**

- **A FOUR-WEEK CLASS**

**Painted Wings: Butterflies and Moths**

- **A FOUR-WEEK CLASS**

**Western North Carolina’s**

**NATURAL HISTORY**

**Fall Flora Identification A**

- **A SIX-WEEK CLASS**

**Instructor:** Scott Dean

**Tuesday:** August 21, 28, September 4, 11, 18, 25,

**9:30 a.m. to 1:30 p.m.**

$188 Member / $198 Non-Member

Limit: 20 students

Core requirement for BRN Certificate

**Final Flora Identification B**

- **A SIX-WEEK CLASS**

**Instructor:** Scott Dean

**Tuesday:** August 22, 29, September 5, 12, 19,

**9:30 a.m. to 1:30 p.m.**

$188 Member / $198 Non-Member

Limit: 20 students

Core requirement for BRN Certificate

**Natural History**

- **Painted Wings: Butterflies and Moths**

**Instructor:** Carlton Burke

**Wednesday:** August 29, September 5, 12, 19,

**9:15 a.m. to 12:15 p.m.**

$139 Member / $149 Non-Member

Limit: 14 students

Core requirement for BRN Certificate

Who does not love the sound of running waters in our creeks and rivers? Explore the importance of healthy natural water systems and the connection between watersheds and groundwater. Topics include the hydrologic cycle, how a watershed area flows and interacts with the surrounding land, and assessment and improvement of water systems management. Participants will gain knowledge about stream restoration techniques that could be used in their own backyards or neighborhoods. Students should wear shoes that can get wet and bring a hand lens, paper and pencil.
Meet the Box Turtle
Instructor: Carlton Burke
Thursday, August 30; 9:15 a.m. to 12:15 p.m.
$44 Member / $49 Non-Member
Limit: 24 students
Three hours elective credit for BRN Certificate
Box turtles are familiar to just about anyone who spends time outdoors, but few people are conscious of their ongoing decline in the wild. In this class students will learn all about box turtles including how to identify them, the class will head out into the mountains. After a classroom session, students will receive hand-outs and a copy of the National Audubon Society’s ‘Field Guide to North American Weather’

Salamander Diversity in the Blue Ridge
Instructor: Patrick Brannon
Monroe County, September 17; 10 a.m.
$44 Member / $49 Non-Member
Limit: 24 students
Three hours elective credit for BRN Certificate
The Southern Appalachians mountains are one of the most biologically diverse regions in the temperate world, and more species of salamanders exist here than anywhere else in the world. The class will begin with a lecture focusing on the biology of salamanders, reasons for the enormous diversity in this region and threats to salamander species. After the lecture, weather permitting, the class may go for a walk to search for various salamander species and investigate distributional patterns of salamander species that coexist in a stream.

Bird Feeding
Instructor: Deka Arnold and NCEC Staff
Tuesdays, October 2, 9, 16, 23; 10 a.m. to Noon.
$59 Member / $69 Non-Member
Limit: 32 students
Eight hours elective credit for BRN Certificate
Join Deka Arnold, NCEC staff member, and the Environmental Information (NCEC) in learning how climate and climate change shape the seasons, the weather, extreme events, and about our preparedness for these events. The course covers four main areas: 1) basic climate and climate change, including what drives the seasons, climate and what is known about climate past and present; 2) climate change and variability, including how scientific understanding of the climate is changing, and how “teleconnections” like El Niño shape our seasons; 3) climate and weather, including how climate is, what is known about climate past and present, and what is known about climate past and present; 4) climate and weather, including how climate is, how climate change is affecting our communities, and how science can be related to observations.

NATURAL HISTORY
Warblers in the Fall
Instructor: Simon Thompson
Wednesday, October 3; 9:15 a.m. to 12:15 p.m.
$44 Member / $49 Non-Member
Limit: 20 students
Three hours elective credit for BRN Certificate
North Carolina is home to more than 40 species of warblers, which are among the most brilliantly colored and tuneful of the North American songbirds. This class will provide an informative and enjoyable overview of warblers, allowing students opportunities to identify the birds and their distinctive songs.

Aquatic Habitats
A TWO-WEEK CLASS
Instructor: Tom Southerd
Wednesday, November 14; 10:15 a.m. to 12:15 p.m.
$50 Member / $59 Non-Member
Limit: 12 students
Six hours elective credit for BRN Certificate
We all know what dragonflies look like, but have you ever seen the wingless water dwelling nymph stage? Many insects such as mayflies, stoneflies and caddisflies begin their life in the water. This class is a hands-on exploration of aquatic habitats and the invertebrates that call them home. Studying their life cycles and sampling various parts of a watershed can reveal a great deal about the health of water ecology locally and throughout the region. Students should wear boots and bring a hand lens and notebook.

Lighthouses in the Fall
Instructor: Lynne Buchanan
Wednesday, October 17; 9:15 a.m. to 5 p.m.
$44 Member / $49 Non-Member
Limit: 20 students
Three hours elective credit for BRN Certificate
Capturing the image of a lighthouse in the fall is a favorite of photographers and a popular pursuit. In this class students will learn about the basics of photography, exposure and composition. The group will caravan to the Cape Hatteras Lighthouse, the May Island Lighthouse and the Beaufort Inlet Light Station. Please bring a camera, a tripod, umbrella and sunglasses.

Takes All the Light: The Photography of Lighthouses
A FIVE SESSION CLASS
Instructor: Steve Yurkovich
Saturday, November 24; 9:15 a.m. to 4:30 p.m.
$44 Member / $49 Non-Member
Limit: 15 students
Six hours elective credit for BRN Certificate
Taking a photograph of a lighthouse is a favorite pastime for photographers. This class will provide an overview of the lighthouses along the North Carolina coast and the style and approach which best suits the individual student. We will travel to the Cape Hatteras Lighthouse, the May Island Lighthouse and the Beaufort Inlet Light Station.

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The Mystery and Lure of Comets

Duck Day

Trees take on a whole new dimension in winter and this is particularly true for deciduous species. Identifying and observing trees in winter can be a fun and rewarding activity. In this class, students will view trees in the landscape and woodlot and learn to identify them based on silhouettes, bark, twigs and other characteristics. Participants will receive the booklet “Winter Tree Finder.” Students should wear weather-appropriate clothing for being outdoors.

Cougars and Coyotes in the Blue Ridge

Lichens are mysterious organisms that fascinate people. This class allows students to delve into the enchanting world of lichens to learn about their basic ecology, identification, natural history and folklore surrounding these mysterious mammals. This class considers both fact and fiction, exploring the history and mythology of harbingers of both doom and good fortune. Throughout history comets have been mysterious structures and conspicuous features that are helpful in identifying lichens to genus and species.

Understanding Lichens

Fire in the Sky: The Mystery and Lure of Comets

Cindy Gala

BREG Core Lectures

Limit: 20 students

Three hours elective credit for BRF Certificate

All ducks do not look the same! This class will visit several of the area’s better lakes for identifying ducks and other waterfowl. Winter is by far the best time of the year for viewing waterfowl in the mountains, and many of the birds should be in full plumages of those look-alike females as well. The class will spend time deciphering the cryptic seasonal plants, as well as elective classes in areas of interest and used to concentrate on the area of interest and will be clearly identified in the class descriptions.

Overview of BREG Program

Students in the Blue Ridge Eco-Gardener Certificate of Merit program will complete 120 contact hours from education classes which consists of 75 hours of core classes and required electives and 45 hours of electives. The curriculum can be completed in a minimum of 24 months, dependent on class schedule and instructor availability. Some students may need a longer time to complete the entire 120 hours. There is no requirement for a final project. There is a 75% minimum attendance requirement to receive credit for classes taken in pursuit of the Blue Ridge Eco-Gardener Certificate of Merit.

There is a nonrefundable $55 application fee.

Registration is open and more details are available through the Arboretum website. Email ejohnson@ncarboretum.org or call 828.665.2492 for more information.

BLUE RIDGE ECO-GARDENER CERTIFICATE OF MERIT PROGRAM

The North Carolina Arboretum is proud to offer the BLUE RIDGE ECO-GARDENER Certificate of Merit program presenting courses on gardening topics that explore ecosystem-based gardening. Ecological gardening is a way of thinking about gardens and landscapes in which gardens are no longer seen as a collection of plants, but a community with complex interdependencies between plants, soils, environment and animals. This certificate program explores the ecological principles at play in creating and managing healthy, self-sustaining landscapes. Anyone may take the Blue Ridge Eco-Gardener classes, but for those interested in developing their skills and knowledge in sustainable gardening, the certificate of merit curriculum includes a series of core courses on sustainable landscape design, botany, ecology and seasonal plants, as well as elective classes in areas particularly interesting to the candidate.

Blue Ridge Eco-Gardener Classes

The core classes and required electives and 45 hours of electives. The curriculum can be completed in a minimum of 24 months, dependent on class schedule and instructor availability. Some students may need a longer time to complete the entire 120 hours. There is no requirement for a final project. There is a 75% minimum attendance requirement to receive credit for classes taken in pursuit of the Blue Ridge Eco-Gardener Certificate of Merit.

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Building a Better Monarch Garden
Instructor: Adam M. Baker
Saturday, September 8; 10 a.m. to Noon
$44 Member / $49 Non-member
Limit: 20 students
Pollinator credit for BREG Certificate
Do monarchs actually use small gardens? How does garden design influence the discovery and colonization by monarchs and monarch predators? What type of milkweed is best for monarchs? For beginners and professionals alike, this class offers insights into pollinator foraging and host plant initiatives, the importance of citizen science, and involvement and planning. Participants will learn the life cycle of the monarch butterfly and how to use botanical Latin to improve gardening efforts.

Fall Gardening Tasks
Instructor: Geoffrey Stien
Tuesday, September 25; 10 a.m. to Noon
$34 Member / $39 Non-member
Limit: 24 students
Core requirement for BREG Certificate
This class will explore the reasons to use Latin for plant names and how to use botanical Latin to improve gardening efforts.

Camellia sinensis: History and Cultivation of the Tea Plant
Instructor: Miles Cramer
Saturday, September 29; 10 a.m. to Noon
$34 Member / $39 Non-member
Limit: 24 students
This class will cover the process of how and why camellia sinensis was first discovered to produce the stimulating beverage of thousands of dollars. The class will delve into the storied history of Camellia sinensis and the many ways the plant is cultivated while focusing on the reasons to use Latin for plant names. The class will cover the process of how and why camellia sinensis was first discovered to produce the stimulating beverage of thousands of dollars. The class will delve into the storied history of Camellia sinensis and the many ways the plant is cultivated while focusing on the reasons to use Latin for plant names. The class will cover the process of how and why camellia sinensis was first discovered to produce the stimulating beverage of thousands of dollars. The class will delve into the storied history of Camellia sinensis and the many ways the plant is cultivated while focusing on the reasons to use Latin for plant names.

Creating a Native Woodland Garden
Instructor: Lisa Wagner
Friday, October 5; 10 a.m. to Noon
$34 Member / $39 Non-member
Limit: 24 students
Two hours elective credit for BREG Certificate
This class covers the process of creating a native woodland garden, including how to choose appropriate species for a site. The class concludes with a visit to a long-established landscape fixture at the Arboretum that will be enjoyed by visitors for years to come. Safely learn the science, art and methodologies to construct a permanent area of space with flowers and plants such as bloodroot, foamflower, black cohosh, and beautiful woodland gardens. Spring wildflowers require constant attention and maintenance. This class will cover the process of creating a native woodland garden, including how to choose appropriate species for a site.
Fall Plants of Interest
Instructor: Clara Curtis
Thursday, January 24; 1 to 4 p.m.
Limit: 20 students
Core requirement for BREG Certificate

Winter Plants of Interest
Instructor: Clara Curtis
Thursday, October 17; 9:30 a.m. to 12:30 p.m.
Limit: 20 students
Core requirement for BREG Certificate

LANDSCAPE DESIGN

Approaches to Planting Design
Mountain Archetypes
Instructor: Preston Montague
Friday, October 19; 9:30 a.m. to 12:30 p.m.
$44 Member / $49 Non-member
Limit: 24 students
Three hours elective credit for BREG Certificate
Context is a big consideration for landscape design. The mountains of southern Appalachia provide a rich source of natural and cultural history that can be contextualized in the landscape to sync one’s garden with the surrounding environment as well as provide layers of narrative. This class will look at how mountain archetypes can help solve design challenges from a property masterplan to the perfect mailbox garden.

Japanese Maples and Companion Plants
Instructor: Tom Rosa
Tuesday, October 23; 9:30 to Noon
$44 Member / $49 Non-member
Limit: 24 students
Two hours elective credit for BREG Certificate Properly selected and placed, Japanese maples, roses and conifers can be showpieces that electrify gardens. Properly selected and placed, Japanese maples, roses and conifers can be showpieces that electrify gardens. This class will explore the various types and cultivars of Japanese maples and learn about selection, cultivation and care. Thirty types and classifications of Japanese maples and conifers can be showpieces that electrify gardens. Thirty types and classifications of Japanese maples and conifers can be showpieces that electrify gardens. Students will learn about selection, cultivation and care.

Droughty Benches
Instructor: Joe Dimidkewicz
Tuesday, October 30; 9 a.m. to 4 p.m.
$154 Member / $164 Non-member
Limit: 10 students
Five hours elective credit for BREG Certificate
Safely learn the science, art and methodologies to work with large blocks of stone as well as the tools, tools, tools and budget you need to complete your own project. This class will be a unique opportunity to work with a master craftsman to build and install several stone benches at the Arboretum that will be enjoyed by you and other visitors for years to come. These skills are useful when thinking about changing the grade in your yard or when taking a hike and trying to interpret the landscape. The class will also discuss how to do a simple grading plan and use-in-class activities to understand how to balance your cut and fill.

The Arboretum’s Bonsai Exhibition Garden in Autumn
CURATOR’S TALK AND TOUR
Instructor: Betsy Joura
Thursday, October 25; 5 to 6:30 p.m.
$12 Member / $17 Non-member
Limit: 30 students
Established in October 2005, the Bonsai Exhibition Garden is a signature feature of The North Carolina Arboretum and a unique environment displaying up to 50 specimens at a time. Traditional Asian bonsai subjects such as Japanese maple and Chinese elm are grown alongside diverse species from other parts of the world. Of particular importance are the plants native to the Blue Ridge region, including American hollyhock, red maple and eastern white pine, which enable the Arboretum to bring the rich source of natural and cultural history that can be contextualized in the landscape to sync one’s garden with the surrounding environment as well as provide layers of narrative. This class will look at how mountain archetypes can help solve design challenges from a property masterplan to the perfect mailbox garden.

Principles of Eco-Gardening
A THREE-WEEK CLASS
Instructor: Nina Shippen
Wednesday, October 31, November 7, 14; 1 to 4 p.m.
$88 Member / $98 Non-member
Limit: 20 students
Core requirement for BREG Certificate
Five hours elective credit for BREG Certificate
Ecological gardening is a way of thinking about the created designed landscape in which gardens are no longer seen as a collection of plants, but a community with complex interdependencies between plants, soil, environment and animals. Students will learn macro ecological concepts such as niche, competition and succession that can be applied anywhere and will explore the ecological principles at play in creating and managing a healthy, self-sustaining garden and landscape. The class will also discuss how to do a simple grading plan and use-in-class activities to understand how to balance your cut and fill.

Weather for Gardeners
A TWO-WEEK CLASS
Instructor: Tom Ross
Friday, November 6; 12:30 to 4 p.m.
$49 Member / $59 Non-member
Limit: 24 students
Five hours elective credit for BREG Certificate
This class looks at the relationships between weather and gardening in the Carolinas. Wide variations in elevation and geography create a number of micro-climates across North and South Carolina. While Western North Carolina is not in a favored location for tornadoes like the upstate piedmont regions of South Carolina, it’s nevertheless prone to damaging thunderstorms with hail. Topics include winter weather, frost and freeze dates, growing season lengths, floods, droughts and other weather factors that affect growing season here. Home weather stations useful in monitoring area weather conditions will also be discussed.

Weather for Gardeners
Wildlife in the Garden
Instructor: Lisa Wagner
Friday, November 9; 10 a.m. to Noon
$34 Member / $30 Non-member
Limit: 24 students
Wildlife and Garden credit for BREG Certificate
Whether your landscape supports birds, butterflies, chipmunks or frogs, gardening for nature is a way to create resilient landscapes that support a diversity of wildlife. The instructor will share experiences using native plants to create functional ecological gardens and will recommend excellent native species to use in Western North Carolina. Focus will also be given to the benefits of promoting habitat diversity.

Climate Resilient Fruit and Vegetable Gardening
Instructor: Laura Lengnick
Friday, November 16; 10 a.m. to 3 p.m.
$44 Member / $49 non-member
Limit: 24 students
Three hours elective credit for BREG Certificate
Climate change will have an unavoidable impact on traditional ways of growing fruits and vegetables in the garden. This course teaches how to design and manage the garden to enhance functional and responsive diversity – two key qualities that can help reduce the need for irrigation, fertilizers and pesticides, improve crop quality, and sustain yields no matter the weather. Learn how to reduce climate risk in the garden through better design and management strategies that build soil quality and enhance plant health.

Methods of Eco-Gardening
Instructor: Laura Lengnick
Tuesday, January 22; 1 to 4 p.m.
$44 Member / $49 Non-member
Limit: 20 students
Core requirement for BREG Certificate
Prerequisites: Principles of Eco-Gardening
Topics in this class include the ecology-based methods used in design, site assessment, planting, and management of a garden. The class will consider gardening with site conditions that are frequently encountered in Western North Carolina, such as slopes, drought and water management, and plant material. The course will cover the latest research on climate change and its impact on traditional ways of gardening. Learn how climate change is already changing ways of gardening in Western North Carolina. This course will provide an overview of the many new tools that will help gardeners in creating a climate-resistant garden. Use the Georgina Garden tour to see examples of sustainable gardening practices and learn how to incorporate these techniques into your own garden.

Gardening in a Changing Climate
Instructor: Laura Lengnick
Tuesday, December 1; 10 a.m. to 1 p.m.
$44 Member / $49 Non-member
Limit: 24 students
Core requirement for BREG Certificate
Bringing dramatic variations in temperature and precipitation patterns, creating disruptions in phenology and even requiring adjustments to plant hardiness zones, climate change will have an impact on traditional ways of gardening. Learn how climate change is already changing ways of gardening in Western North Carolina. This course will provide an overview of the many new tools that will help gardeners in creating a climate-resistant garden. Use the Georgina Garden tour to see examples of sustainable gardening practices and learn how to incorporate these techniques into your own garden.

Growing and Using Culinary Herbs
Instructor: Phil Roudebush
Tuesday, February 5; 1 to 3 p.m.
$34 Member / $30 Non-member
Limit: 24 students
Two hours elective credit for BREG Certificate
Delicious and aromatic herbs are commonly grown in gardens and containers for a variety of uses. This class will provide general information about growing herbs in the home garden with a focus on those used for culinary purposes. Ideas about how to process and use culinary herbs year round will be discussed, and recipes for making various types of herb pesto, vinegars, butters, rubs and oils will be shared.

Build a Rustic Wren House
Instructor: Carlson Burke
Wednesday, February 27; 1:30 to 4:30 p.m.
$69 Member / $70 Non-member
Limit: 15 students
Wildlife and Garden credit for BREG Certificate
Even in the midst of winter, the resident birds of Western North Carolina are busy getting ready for the nesting season. The Carolina wren looks for little boxes of nooks and crevices close to human homes in which to build their nests. The students will be working on building nest boxes utilizing the type that has proven popular with bluebirds. No carpentry experience is required. Students take home a completed bluebird nest box, mounting pole and written information on attracting bluebirds to their property. Supplies are provided; however, students will need to bring a hammer and work gloves.

Learning From Trees
Instructor: Artur Jorul
Thursday, February 28; 4 to 6 p.m.
$12 Member / $17 Non-member
Limit: 30 students
What makes trees so compelling? Long the potent symbol of myths and fables across cultures, the source of inspiration for poets and philosophers, trees apparently have something to teach us. In this abundantly illustrated lecture, Adroverum Bonai Curator Artur Jorul considers trees for the fascinating organisms they are, while examining the imagination they have for the human imagination. Why do old trees and trees with unusual shapes seem to be of particular interest? The art of bonsai will make an appearance, but this is not a bonsai program. It is instead a contemplation on a possible hidden reason for the deep and meaningful connection felt by so many people when in the presence of trees.
Caroline Burke is a naturalist and educator who operates the Center for the Environment at the Great Smoky Mountains National Park. She is a graduate of Appalachian State University, with a B.S. in biology and an M.S. in environmental science from West Virginia University. She is the Nature Center director at the Arboretum of Asheville and oversees the interpretive program. Prior to working at the Arboretum of Asheville, she worked at the Corcoran Gallery of Art in Washington, D.C., where she held the position of senior curator of education and worked with photographers at every level, from mentors to professionals. She has taught workshops on a wide range of topics, from more creative ways of photographing the world around us to the technical aspects of photography. She is the author of "The Beginnings of Photography: A History of the Medium," which was published by Harvard University Press in 2019. She has also served as a consultant for the National Geographic Society's annual State of the Climate series for over a decade with Dobra Tea, a full-service tea house that has been in operation since 2007. She is the publisher of New Native Press (www.newnative.wordpress.com) and has written for numerous publications, including The Asheville Citizen-Times, Our State magazine and by the Associated Press. Curtis spent her career as an environmental educator, author, and publisher of New Native Press (www.newnative.wordpress.com). She is the author of "The Beginnings of Photography: A History of the Medium," which was published by Harvard University Press in 2019. She has also served as a consultant for the National Geographic Society's annual State of the Climate series for over a decade. She is a professional artist with a gallery and studio in Bryson City, N.C. She is noted for depicting the...
Joshua Lohmann is an associate education officer. He works in Raleigh, focusing on project-based learning and outdoor education methods. He is passionate about connecting people to the natural environment at the Arboretum. His training includes a bachelor's degree in marine studies from Old Dominion University and an environmental education certification from The National Wildlife Federation's Project WILD Coordinator.

Yun潔 Park is the Project WILD Coordinator and has served at the Southern Mountain Education Specialist for the North Carolina WRRA National Commission for 14 years. She previously taught elementary school grades. She holds a master of science in environmental education from Montreat College and a bachelor of science in elementary education and biology from Western Carolina University.

Tom Rash graduated from UNC Chapel Hill with a degree in English and completed his master's in English at Western Carolina University. He has taught English and writing at Clemson University, A-B Tech Community College, and Shaw University. Rash has worked as an extension master gardener in the upstate South Carolina area for nearly 10 years before starting work in 1985 with the National Weather Service. He was a senior forecaster at Accu-Weather, Inc., for more than 20 years. On the side, Rash is a tree enthusiast and an agroforester. He got his start in forestry in the high deserts of California through a peach operation and graduated from Wofford College with a Bachelor of Science in forestry and agriculture. His current work is focused on sustainability and professionally. He is the proprietor of Raven Ridge Farmcapes.

Simon Thompson is an international birding expert originally from Suffolk, England, who has called Western North Carolina home for the last 10 years. He spent six months in China studying birds and flight of prey migration at a number of sites across China. He later returned to England to work with the British China Crane Watch expedition. Thompson is the director of the Oriental Crane Nature Travel Program in Yunnan, China, and a volunteer for the UK Crane Project.

Lisa Wagner is a botanist who grew up in the rural foothills of Virginia. He works in the natural gardening and design program at the Radcliffe Institute for Environmental Education. His training includes a Bachelor of Science in forestry and agriculture. Steen has worked as a landscape designer and presented programs on agroforestry nationally and internationally. His training includes a Bachelor of Arts in environmental science, art, and storytelling to foster natural science literacy, which can be seen in his book, "The Nature of the Landscape Design Program at the Radcliffe Institute for Advanced Studies, he has lived and trained in Transylvania County since 2005.

Jenise Snyder is a qualified mental health professional in South Carolina. She is an enrolled clinical therapist at Theraclinic as a trauma-informed therapeutic yoga instructor. She has a master of science in psychology and a bachelor’s degree in nursing from New Mexico University and specializes in mind-body approaches to improving mental and physical health. Montague’s latest body of work, “Codex Homeward, Angel,” is a series of didactic botanical illustrations using an ornithological approach to nature study. Montague is a birding guide for Montreat College and a birding enthusiast who volunteers at Carolina Arboretum grounds.

Geoffrey Steen is a tree enthusiast and an agroforester. He got his start in forestry in the high deserts of California through a peach operation and graduated from Wofford College with a Bachelor of Science in forestry and agriculture. His current work is focused on sustainability and professionally. He is the proprietor of Raven Ridge Farmcapes.

Tom Rash graduated from UNC Chapel Hill with a degree in English and completed his master’s in English at Western Carolina University. He has taught English and writing at Clemson University, A-B Tech Community College, and Shaw University. Rash has worked as an extension master gardener in the upstate South Carolina area for nearly 10 years before starting work in 1985 with the National Weather Service. He was a senior forecaster at Accu-Weather, Inc., for more than 20 years. On the side, Rash is a tree enthusiast and an agroforester. He got his start in forestry in the high deserts of California through a peach operation and graduated from Wofford College with a Bachelor of Science in forestry and agriculture. His current work is focused on sustainability and professionally. He is the proprietor of Raven Ridge Farmcapes.

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Lisa Wagner is a botanist who grew up in the rural foothills of Virginia. He works in the natural gardening and design program at the Radcliffe Institute for Environmental Education. His training includes a Bachelor of Science in forestry and agriculture. Steen has worked as a landscape designer and presented programs on agroforestry nationally and internationally. His training includes a Bachelor of Arts in environmental science, art, and storytelling to foster natural science literacy, which can be seen in his book, "The Nature of the Landscape Design Program at the Radcliffe Institute for Advanced Studies, he has lived and trained in Transylvania County since 2005.

Jenise Snyder is a qualified mental health professional in South Carolina. She is an enrolled clinical therapist at Theraclinic as a trauma-informed therapeutic yoga instructor. She has a master of science in psychology and a bachelor’s degree in nursing from New Mexico University and specializes in mind-body approaches to improving mental and physical health. Montague’s latest body of work, “Codex Homeward, Angel,” is a series of didactic botanical illustrations using an ornithological approach to nature study. Montague is a birding guide for Montreat College and a birding enthusiast who volunteers at Carolina Arboretum grounds.

Geoffrey Steen is a tree enthusiast and an agroforester. He got his start in forestry in the high deserts of California through a peach operation and graduated from Wofford College with a Bachelor of Science in forestry and agriculture. His current work is focused on sustainability and professionally. He is the proprietor of Raven Ridge Farmcapes.

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NEW CLASSES THIS ISSUE:

Tea Tasting
Pets and People and Plants
Cougars and Coyotes
So You Think you Want a Greenhouse?
Making a Hearth Broom
Trail Cameras
Poets of the Blue Ridge

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