

Friends of Plant



Conservation

Spring 2019

Editor: Katherine Schlosser

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WELCOME to our new Volunteer Coordinator

OLIVA DANNEMILLER

Olivia grew up and currently lives in Asheville, North Carolina. She always had an interest in the outdoors, but her passion for environmental sustainability began at Appalachian State University, where she received a B.S. in Sustainable Development with a focus in environmental studies and a minor in Biology. A few internships at environmental non-profits throughout and after college made her realize she wanted to continue a career in environmental non-profits. She is finishing up a second 11 month term in AmeriCorps Project Conserve as the Community Engagement Associate at Conserving Carolina, which involved running the volunteer program. Olivia is excited to start her position at Friends of Plant Conservation. In her free time, you can find her mountain biking, adventuring to swimming holes, seeing live music, or borrowing a friend's dog for the day.





Alvin Braswell, our President, recently sent a link to an article by Christine Ro on plant blindness, a term coined by botanists Elisabeth Schussler and James Wandersee in 1998. It is a term widely used as an expression of the human tendency to “see” animals in the landscape more quickly than plants. It’s a natural phenomenon likely evolved from the necessity of spotting animals before they spot us.

Today, however, with that feature firmly entrenched in our brains, we are hurting ourselves and our environment, a problem compounded by the growing loss of botany courses of study in our colleges and universities in favor of environmental studies.

The inability to see plants does not diminish their impact on our lives. As we all know, we are dependent on plants for our lives--oxygen, food, medicine, shelter—even water. Ro points out that more than 28,000 plant species are used medicinally, and there are likely many more to be found. She also reminds us that plants are 57% of our federally listed species but receive only 4% of federal endangered species funding.

Ro lists a few ways to combat the problem of plant blindness, including:

- Involvement in citizen-science projects
- Emphasizing environmental art projects using plants
- Planning regular outings with children in natural areas to learn plants
- Featuring plants in our literature

Read Ro’s article at BBC Future: <http://www.bbc.com/future/story/20190425-plant-blindness-what-we-lose-with-nature-deficit-disorder>



COMING SOON...WE HOPE

Home of the Flytraps North Carolina

The FoPC Board is currently working with the NC Botanical Garden Foundation to put together an application for a specialized license tag featuring Venus flytraps. Proceeds of the sale, should an agreement be reached and the legislature approves, will be divided proportionally.

Once a design is ready (it is underway), an application will be submitted to the legislature. At the time it is submitted, we must have 500 applications for a tag—each with a check. Once received, the legislature will consider whether or not we may have a specialized tag.

Watch for more information as the process moves forward.

The mind, once stretched by a new idea, never returns to its original dimensions.

— Ralph Waldo Emerson

2018 Award Winner



KATHERINE RANKIN

2018 PLANT CONSERVATION LEADERSHIP

Receives award from Alvin at the April 2019 meeting of the Board of Directors at Redlair.



With a spirit that flows across the decades and into the future, Katherine Rankin embodies the essence of Redlair. Following her mother's love of the land, Katherine has given generously of her personal resources, her knowledge, wisdom and her time to ensure that Redlair is restored and preserved for future generations.

The spirit of Redlair is in Katherine's heart and soul as she reaches out gently, though with determination and a keen mind, to keep the focus on restoration of the land. She speaks with authority when she feels it is needed, and listens with joy as progress is made.

Katherine is quiet. She knows what is needed, recognizes sound advice, and welcomes help and support from those who demonstrate an understanding of and appreciation for this special part of North Carolina.

Katherine encourages others by her example, demonstrating the support of plant conservation by whatever means one has available.

This certificate is a small token of gratitude for her leadership and an expression of an enduring commitment to the preservation of the spirit of Redlair Preserve.

~Kathy Schlosser, on behalf of the Board of Directors

2018 Award Winner



HAYWOOD RANKIN

2018 PLANT CONSERVATION LEADERSHIP

Receives award at April 2018 Annual Meeting,
congratulated by Cecil Frost.



Haywood Rankin, his brother Charles (now deceased), and his sister Katherine made a decision that the best way to preserve the land that their father worked and their mother loved was to place it in the care of the NC Plant Conservation Program. Working with Rob Evans, they sold their land to the State, then amazingly put the proceeds of the sale into the Redlair Foundation. That Foundation exists to support the management and preservation of Redlair Preserve.

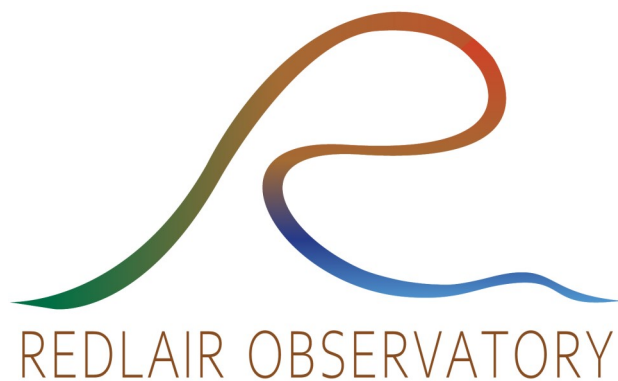
Haywood also serves as the Steward for Redlair. With a floppy hat reminiscent of Oliver Rackham, a faithful dog and cat following, Haywood daily strikes out across Redlair, intent on doing battle with invasive exotic species and restoring this 740+ acre tract of land—one of the largest in the southern Piedmont untouched by development—to a natural state.

In the capacity of Steward, he continues the efforts he has engaged in since he returned to the land following his career as a diplomat. He is tireless in pursuit of returning Redlair to pristine status, working from sun-up to sundown, many times arriving home well after dark. Haywood spends a minimum of 40 hours per week, and often 60 hours, removing fallen trees that block access, daily battles to control privet and autumn, pulling periwinkle, repairing the dam, repairing or replacing bridges and fences, and general maintenance required to keep the land tidy where needed.

He watches and reports as some acres are restored to natural grasses, taking delight in the grasses and wildflowers he sees returning to the land. In addition, Haywood identifies volunteers as he can and mentors them on best practices for keeping Redlair clear of invasives. He manages deer-hunting on the property, making Redlair defenders out of the hunters. He writes weekly essays on the work he performs and the needs of the Preserve. He sees that the funds in Redlair Foundation are used to their best advantage. And he works closely as well with Catawba Lands Conservancy, which owns an equivalent acreage adjoining Redlair Preserve, making up what is known as Greater Redlair.

Haywood is a model of devotion to the land. Without the hours and love that he pours into the land in the way of sweat-equity as well as financial support, Redlair would deteriorate into a privet/autumn olive haven.

~Kathy Schlosser, on behalf of the Board of Directors



Introducing the Redlair Observatory

For over 15 years a group of scientists from several regional Universities has been working with the Rankin family and the Catawba Lands Conservancy to establish a system for long-term monitoring of ecologic, biologic, environmental, hydrologic and geologic data on the group of protected properties known as the Spencer Mountain Conservation Area in Gaston County, NC, the largest parcel of which is the NC Plant Conservation Program's Redlair Preserve. These scientists have been acting as a de facto research group for some time with periodic meetings since at least 2007, but now – thanks to a generous grant from the Duke Energy Water Resources Fund – they have more formally formed the Redlair Observatory.

The Redlair Observatory is the name given to this collective effort to produce a much-needed long-term dataset for small watersheds in the Piedmont. The name "Observatory" is used because the Redlair Observatory is similar in its long-term mission in both research and education to prestigious, federally funded Critical Zone Observatories. Combined with its proximity to the rapidly growing Charlotte metropolitan area, the Redlair Observatory has strong potential to achieve distinction as a key location for natural data in the Piedmont of the southeastern United States.

It has been a busy spring! Thanks to substantial in-kind donations from Geologic Exploration, Inc. and Hart & Hickman, PC., we have drilled 8 permanent wells at which we will eventually monitor water at 17 total vertical locations (each of the 8 holes has 2-3 wells of different depths). Also, six sites have been identified adjacent to the wells to deploy weather stations. Why so many? We hope to characterize small-scale variability in weather that most standard measurements do not capture.

As the monitoring equipment gets set up, thanks to support of the FOPC and the Redlair Foundation in the form of Cellular Data Plans, we will be able to 'talk' to the sensors from our offices, allowing us to remotely



download data and to know immediately if something stops working.

In addition, the Redlair Observatory has provided invaluable educational outreach this spring. Soil Science students from UNC Charlotte dug 13 soil pits, exposing key geologic and soil strata that are being sampled and analyzed this summer by other Earth Sciences students under the supervision of Dr. Martha-Cary (Missy) Eppes as baseline data for the Observatory. Additionally, Computer Science and Electrical Engineering Students are gaining multidisciplinary experience in assisting Dr. Eppes, along with Dr. David Vinson of UNC Charlotte, and Dr. Jill Marshall of the University of Arkansas in deploying monitoring sensors, including those of all of the wells and meteorological stations.

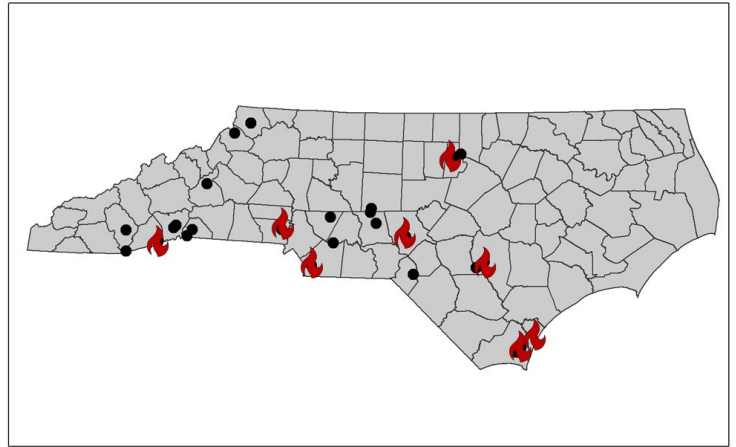
Finally, all information from or about the Observatory will be available on a new website, www.redlair.org. The Redlair Observatory Team hopes to have a formal kick-off event in early November 2019. Stay tuned.

*Martha Cary (Missy) Eppes, Ph.D. | Professor of Earth Sciences, Dept. of Geography & Earth Sciences
UNC Charlotte*

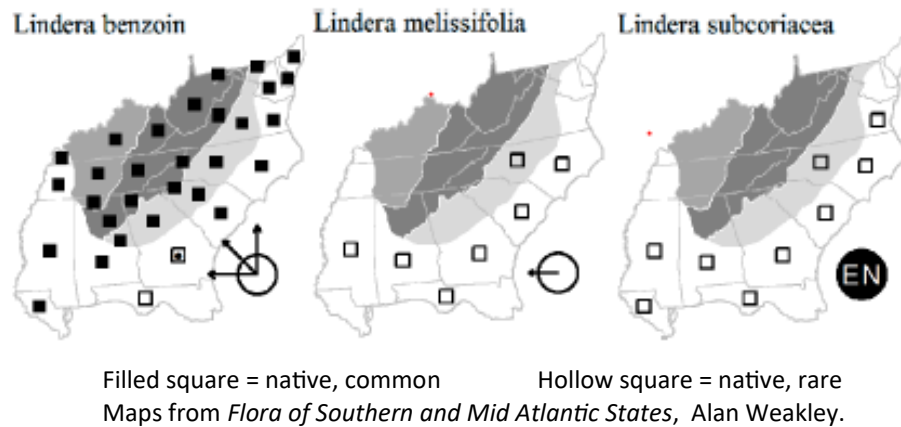
Update from NCPCP staff: Lesley Starke, Ecologist

With tremendous help from the NC Forest Service and The Nature Conservancy, PCP has accomplished many of their prescribed fire goals this year, all across the state. From January through April, a total of 16 prescribed burns (1,335 acres!) were completed ranging in size from 2 acres to nearly 600 acres. If you recall how wet the winter was, this is even more remarkable!

Habitats such as longleaf pine flatwoods and savannas, oak-hickory woodlands, grasslands, and mountain bogs were included in all of these fires for the benefit of rare species such as Venus flytraps, pitcher plants, Sandhills lilies, Schweinitz's sunflowers, and more. In nearly all cases, these burns also serve to reduce wildfire risk by reducing available fuels near homes and other developments. PCP staff is excited to get out to these sites in the coming months to monitor the effects of these burns and hopefully see improved growth and seed set!



Lindera species — a closer look



There are 3 species of *Lindera* in North America: *Lindera benzoin*, *Lindera melissifolia*, and *Lindera subcoriacea*. Only one, *Lindera melissifolia*, Pondberry, is listed as Endangered, both at the Federal and State levels.

The photos to the right are Bog spicebush (*Lindera subcoriacea*) which is a rare plant. The pictures are from April 11th of this year, taken on a Three Rivers Land Trust preserve in the Uwharries in Montgomery County.

Bog spicebush has an interesting history, first described in 1983, and still not much is known about it. Julie Moore, on our board and at the time with the NC Natural Heritage Program, assisted with identification and location of populations.

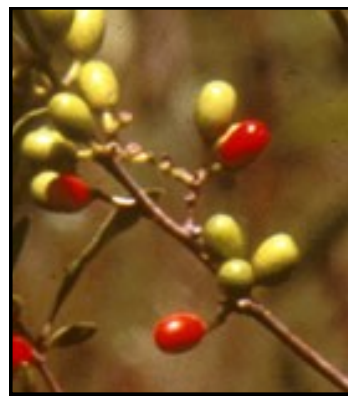
It has a narrow ecological niche and has a spotty distribution. It is found from southeastern Virginia to Florida and west to Louisiana. It is mainly found in seepage wetlands or bogs. There are currently around 100 occurrences and many of them are very small populations. We only have a handful of plants on our property, but we do have both male and female plants.

Andy Walker botanist with the US Forest Service confirmed that what we have is bog spicebush. The site where they occur is a historic longleaf pine property with some remnant old growth longleaf pine, and the rest of the tract has been restored to longleaf pine in various ages. It has been undergoing a rigorous prescribed burn regime conducted by the previous owner for more than 25 years.

The overall biggest threats to bog spicebush as a species include lack of fire on the landscape and alterations in land practices that result in changes from natural hydrologic conditions.



~Crystal Cockman



Bog Spicebush (*Lindera subcoriacea*) fruit. Photo by Kenneth L. Gordon.

https://www.fs.fed.us/wildflowers/plant-of-the-week/lindera_subcoriacea.shtml

TABLE 1. Character comparisons of the North American taxa of *Lindera*.

CHARACTER	TAXON		
	<i>L. subcoriacea</i>	<i>L. benzoin</i>	<i>L. melissifolia</i>
Leaf			
Texture	Subcoriaceous	Membranaceous	Membranaceous
Length × width (cm)	4–7.5 × 2–3.5	6–15 × 3–6	8–16 × 3–6
Shape	Elliptic to oblanceolate	Obovate	Ovate to elliptic
Apex	Obtuse to rounded	Acuminate	Acute
Base	Cuneate	Cuneate	Widely cuneate to rounded
Pubescence (abaxial side)	Present	Present or absent	Present
Orientation	Horizontal to ascending	Horizontal to ascending	Drooping
Fragrance	Faint, piny lemon	Strong, “spicy”	Strong, sassafras-like
Fruit			
Length (mm)	10	10	12
Pedicel	Not thickened at apex; deciduous	Not thickened at apex; deciduous	Thickened at apex; persistent

Wofford, B. Eugene. A New *Lindera* (Lauraceae) from North America, *Journal of the Arnold Arboretum* . 1983, v64, p 325-331.

2019 Preserve Workdays

June DATE TBD - MacIntosh Bays - Herpetological survey - DATE WILL BE ANNOUNCED SOON

What: Join Alvin Brasswell, president of Friends of Plant Conservation, to survey for salamanders and other amphibians and reptiles. We will also be looking for the presence of invasive fish. We may have some plant work to do as well - the day is still in planning phases.

Where: MacIntosh Bays (Sandhills region of NC)

When: TBD

RSVP: email mamie.fopcvolunteers@gmail.com to sign up! Thank you.

ADDITIONAL DATES TO BE ADDED LATER.

Sign up early as group size is limited according to the site.

Meeting times will generally be at 10:00 a.m. -- a specific time will be sent on registration, along with other details for each trip

REGISTER EARLY AS SPACE IS LIMITED. Directions and other details will be emailed about a week before the event. Please also leave a telephone/cell number so we can reach you.

PLEASE NOTE: Dates may need to be adjusted depending on weather and bloom times. We will advise you as best we can.



Oxypolis canbyi, Nora Murdock,
USFWS

TO REGISTER: Send an email to Volunteer Coordinator Olivia Dannemiller
olivia.dannemiller@gmail.com

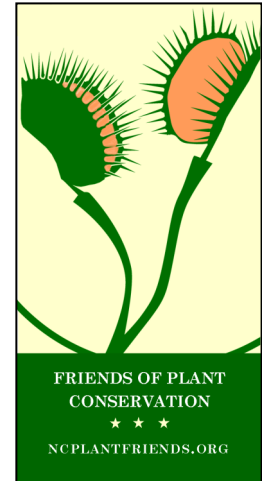
ADDITIONAL WORK & LEARN DAYS WILL BE HELD IN JUNE, JULY, SEPTEMBER, OCTOBER, NOVEMBER...POSSIBLY AUGUST. Email notification will be send via MailChimp.

Friends of Plant Conservation, Inc. is recognized by the Internal Revenue Service as a 501(c)3 tax exempt organization and is maintains a Charitable Solicitation License with the North Carolina Secretary of State.

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Raleigh, North Carolina 27699-1060

2019 Board of Directors

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Meet our newest board member: Cynthia Lincoln

A dedicated scientist and educator with a unique, broad botanical background including over 15 years as a researcher and instructor in the fields of biotechnology, plant developmental biology and horticulture plus 8 years of experience in environmental education. A passion for plants and gardening reflected in creative work done as a landscape designer at local and national landscape design firms. Excellent written communication skills with a growing publication record in both technical and popular science.

EDUCATION , Ph.D. in Plant Science, Indiana University, Bloomington, IN

Naturalist Center Coordinator, North Carolina Museum of Natural Sciences, Raleigh, NC Jan. 2013-Present

- Manages an interactive, hands-on space containing collection of 10,000 natural history specimens enjoyed annually by over 75,000 museum visitors
- Communicates value and importance of museum collections to the public
- Supervises 20+ combined staff, volunteers and interns
- Answers online questions via “Ask a Naturalist” link and Twitter @NaturalistNC
- Invited 10 science experts or researchers for museum speaker series in 2018
- Ongoing collaborations with NCSU faculty in 5 different Colleges to provide class resources or grant outreach
- Coordinated effort to digitize important herbarium collection of ~2,000 specimens now accessible via the SERNEC online data portal