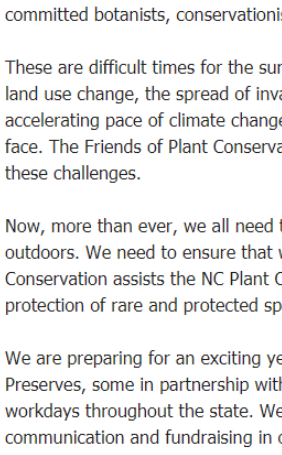


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Message from the President



Since I was very young, I have been fascinated by the concepts of rare species and species extinction. I grew up with stories of the Carolina parakeet and the Passenger pigeon. In the 1970s, I learned about the Endangered Species Act and the Tennessee coneflower, and of course the Venus flytrap.

During my "back-to-the-land" days in Tennessee, I spent many memorable times in the limestone cedar glades exploring their flora. I also spent hours reading Radford's manual and traveled with my father from the "mountains to the sea" on his quests to photograph North Carolina's bounty of wildflowers. We saw the southernmost extension of the northern Alder on Roan Mountain and the northernmost station of an epiphytic orchid at Lake Waccamaw.

These experiences gave me an affinity for rare and unusual native plants, and I was fortunate to put that interest to work in a career as a botanist and plant ecologist. My interest in, and love for, these plants in their native habitats has enriched my soul, inspired me to become part of the conservation movement, and enabled me to meet and work with many wise, knowledgeable, and committed botanists, conservationists, and educators.

These are difficult times for the survival of the rare elements of our native flora. The rapid pace of land use change, the spread of invasive non-native plants, the loss of native pollinators, and the accelerating pace of climate change are only some of the many challenges we and the plants now face. The Friends of Plant Conservation exists to help the NC Plant Conservation Program meet these challenges.

Now, more than ever, we all need the peace and inspiration that comes from time spent outdoors. We need to ensure that wild places remain for nature to thrive. The Friends of Plant Conservation assists the NC Plant Conservation Program in many ways, and especially with the protection of rare and protected species through the stewardship of its Preserves.

We are preparing for an exciting year of events, including field trips for members to our Preserves, some in partnership with the North Carolina Botanical Garden, as well as volunteer workdays throughout the state. We are also planning to improve our processes for communication and fundraising in order to build support for our work.

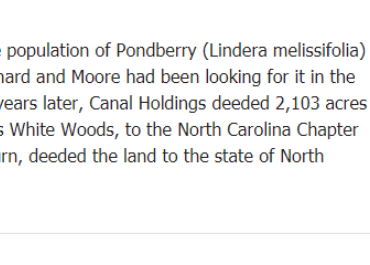
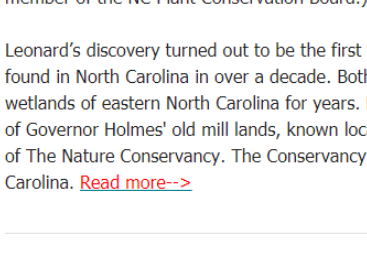
I want to specifically thank Olivia Dannemiller, who organizes our volunteer workdays and other events. We are hopeful that through careful planning and ongoing public health measures, we will be able to provide a steady program of field trips and workdays during the COVID era and beyond.

I invite you to join me in launching or renewing your involvement in and commitment to the cause of rare plant conservation through your membership in, and support of, the Friends of Plant Conservation. And please, make Olivia your Valentine!

--Milo Pyne, President

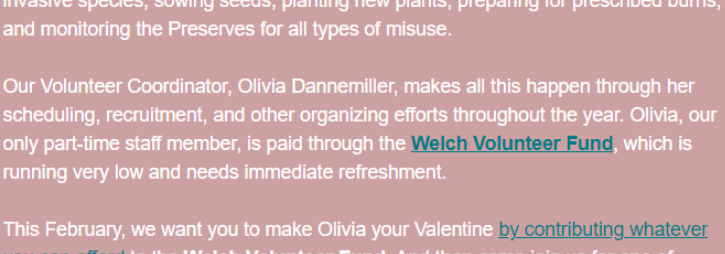
Preserve Spotlight

Pondberry Bay Plant Conservation Preserve



It was the summer of 1987 and Steven Worth Leonard, an environmental specialist and well-known botanist, with the North Carolina Division of Soil and Water Conservation, was surveying wetlands on the old Governor Holmes (1769-1829) plantation in Sampson County when he found something he never expected to find in North Carolina. The next morning, he called his friend Julie Moore at the North Carolina Natural Heritage Program and asked her to meet him at a crossroads near where he had been surveying. "Steve wouldn't tell me what he had found, but I knew it was big from the excitement in his voice," said Moore. (Note: Julie Moore is a current member of the NC Plant Conservation Board.)

Leonard's discovery turned out to be the second population of Pondberry (*Lindera melissifolia*) found in North Carolina in over a decade. Both Leonard and Moore had been looking for it in the wetlands of eastern North Carolina for years. Four years later, Canal Holdings deeded 2,103 acres of Governor Holmes' old mill lands, known locally as White Woods, to the North Carolina Chapter of The Nature Conservancy. The Conservancy, in turn, deeded the land to the state of North Carolina. [Read more-->](#)



Make Olivia Your Valentine!

Volunteers are a critical element of our Preserve stewardship plan. We cannot protect our rare and endangered plant species without hours of effort fighting invasive species, sowing seeds, planting new plants, preparing for prescribed burns, and monitoring the Preserves for all types of misuse.

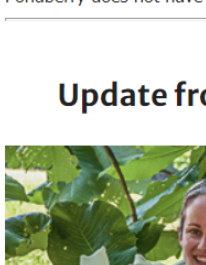
Our Volunteer Coordinator, Olivia Dannemiller, makes all this happen through her scheduling, recruitment, and other organizing efforts throughout the year. Olivia, our only part-time staff member, is paid through the [Welch Volunteer Fund](#), which is running very low and needs immediate refreshment.

This February, we want you to make Olivia your Valentine [by contributing whatever you can afford](#) to the [Welch Volunteer Fund](#). And then come join us for one of Olivia's [Work & Learn](#) sessions this summer.

Species Spotlight

Pondberry (*Lindera melissifolia*)

Federally endangered (July 31, 1986)



Lindera melissifolia, also known as Pondberry or Southern Spicebush, is a deciduous shrub in the laurel family, native to the southeastern United States. Only two communities (Sampson and Cumberland counties) are known to exist today in North Carolina, both on property protected through the Plant Conservation Program. A third colony is still listed with the Natural Heritage Program, but it can no longer be located. Historically, Pondberry also occurred in Bladen, Onslow, and Orange counties (North Carolina Natural Heritage Program, 2008). The first recorded discovery of Pondberry occurred in 1788 by Thomas Walter in South Carolina. As of 2013, there were known populations in seven (7) states (Missouri, Arkansas, Mississippi, Alabama, Georgia, South Carolina, and North Carolina). There are historical records of its existence in both Florida and Louisiana although no known populations exist in those states today.

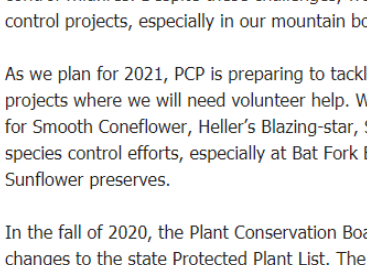
In North Carolina, Pondberry grows in dense colonies around the edges of Carolina bays. Yellow flowers appear in late February/early March before the leaves appear. Flowers have either male or female parts (dioecious). Colonies can be single sexed, leading to lack of pollination, contributing to the plant's endangered status.

Scarlet red berries with a single pit mature between August and October. Hermit thrushes, northern cardinals, brown thrashers as well as swamp rabbits and grey squirrels have all been observed eating the fruit. New plants rarely grow from seed, one of its major differences with Northern Spicebush (*Lindera benzoin*).

The drooping, alternate leaves with fuzzy undersides and sharply pointed tips distinguish *L. melissifolia* from the other *Lindera* species that grow in North America. When crushed, the leaves give off a sassafras-like odor. Pondberry leaves are an important host for Spicebush swallowtail butterflies (*Papilio Troilus*). Adults lay their eggs on the leaves and caterpillars eat the leaves before forming a cocoon.

Pondberry does not have any known horticultural, medicinal, or other uses.

Update from the Plant Conservation Program



Considering the challenges imposed by the COVID-19 pandemic, PCP staff made excellent progress on our 2020 land management and plant conservation goals, made possible by filling out the PCP team. Geoff Austin, Plant Ecologist, and Olivia Dannemiller and Fisher Stines, field technicians, were introduced in an earlier newsletter.

Our annual prescribed burning goals were hit particularly hard by the combination of travel limitations and stricter safety precautions, as well as the reduced capacity of our burn partner, the NC Forest Service, which had many of their staff deployed to the western states to help control wildfires. Despite these challenges, we made good progress on our invasive species control projects, especially in our mountain bog and Piedmont prairie preserves.

As we plan for 2021, PCP is preparing to tackle an optimistic set of goals involving several projects where we will need volunteer help. We will continue our long-term monitoring projects for Smooth Coneflower, Heller's Blazing-star, Schweinitz's Sunflower, and others, and our invasive species control efforts, especially at Bat Fork Bog and the Smooth Coneflower and Schweinitz's Sunflower preserves.

In the fall of 2020, the Plant Conservation Board proposed several additions, deletions, and status changes to the state Protected Plant List. The proposed changes constituted a legal rule change which required a 60-day public comment period (Oct. 1-Nov. 30). We received only positive comments in support of the proposal and expect the rule change to be finalized later this year.

One announcement I'm particularly excited to share with you is that PCP has been awarded a 2021-2025 Recovery Challenge Grant from the US Fish and Wildlife Service. We submitted the proposal in partnership with the North Carolina Botanical Garden, Friends of Plant Conservation, Redlair Foundation, NCDA-Research Stations Division, and the US Forest Service. The project includes:

1. Restoration and research activities at eight (8) PCP Preserves and four (4) partner sites in support of recovering three federally endangered plant species: Smooth Coneflower, Schweinitz's Sunflower, and Rough-leaved Loosestraw, and
2. an investigation into how we can improve our monitoring of targeted species to better evaluate the effectiveness of our land management practices.

Information on how you can volunteer to work on this project will be forthcoming.

--Lesley Starke, Plant Conservation Program Manager

Noxious Species Spotlight

Red Bay Ambrosia Beetle (*Xyleborus glabratus*)

Invasive species are one of the biggest threats to plants in North Carolina and to biodiversity conservation around the world. Invasive exotic species crowd out or otherwise harm native species and their habitats, disrupt natural processes, and/or hinder important ecosystem services.

Even the most intact ecosystems must be carefully monitored for invasive species, an important component of the monitoring we do at the Plant Conservation Preserves. At Pondberry Bay, there are very few invasive exotic plant species. However, of great concern is the Red Bay Ambrosia Beetle (*Xyleborus glabratus*) and its fungal symbiont (*Raffaella lauricola*).

Raffaella lauricola causes lethal laurel wilt disease. First discovered in the US in 2002, laurel wilt disease has spread through the southeast via the Red Bay Ambrosia Beetle. Many of you will have seen the resulting dead Swamp Bays (*Persea palustris*) along the highways in southeastern NC. Not only do we have swamp bay at Pondberry Bay Plant Conservation Preserve, but we are also protecting two imperiled members of the laurel family: Pondberry (*Lindera melissifolia*) and Pondspice (*Litsea aestivalis*).

The NC Forest Service has been tracking the spread of laurel wilt in North Carolina since it was discovered near Pondberry Bay Preserve. Confirmed cases of laurel wilt disease have been documented near Pondberry Bay Preserve and Big Pond Bay Preserve.

Unfortunately, there is no cure for laurel wilt disease. Researchers in Florida have identified an effective prophylactic fungicide which PCP has purchased and tested in the field on Pondberry plants with no harmful impacts observed.

Above Red Bay Ambrosia Beetles have a documented preference for host plants with stems greater than one inch in diameter, field observations from other states have confirmed that these beetles will use Pondberry and Pondspice as hosts in some cases. PCP staff is continuing to implement prescribed burns at the Pondberry Bay Plant Conservation Preserve to reduce the size and stature of the swamp bays present in an attempt to maintain low levels of suitable/preferable host plants.

How can you identify laurel wilt in the field?

The most noticeable symptom is wilting/browning leaves across the entire canopy of the tree or shrub. This disease spreads very quickly, so although the first symptoms may appear on just one branch, the entire canopy can be impacted in no time. Boring dust, tubes of sawdust coming out of the tree or shrub, on the trunk or stem are another visual clue of the disease.

If you suspect a possible case of laurel wilt on your property, use a sterilized hatchet or blade to remove the bark and inspect for wood stain or discoloration, which is often black or dark brown.

For more information, the NC Forest Service has created a set of [Frequently Asked Questions](#). The [Plant Disease and Insect Clinic](#) at NC can perform laboratory tests on samples suspected of containing the laurel wilt fungus. Confirmed cases should be sent to NC Forest Service for their records. If you find any evidence of the Red Bay Ambrosia Beetle or laurel wilt disease in Sampson or Cumberland County, [please let PCP know](#).

--Lesley Starke, Plant Conservation Program Manager

2021 Work & Learn Schedule

For all Work & Learn Days, please bring plenty of water and lunch, wear closed-toe shoes, and be prepared to work in an area with no facilities. Tools can be provided but we prefer for folks to bring their own if they have them including their own work gloves. *RSVP required for all events*, please email fovcvolunteers@gmail.com

Dulaney Bog Preserve Work & Learn

March 24th 10am-2pm

This is our annual Dulaney Bog workday in partnership with Highland Cashiers Land Trust, Highlands Biological Foundation, and the US Forest Service. We will continue our project working to remove encroaching woody species around the Mountain Purple Pitcher Plants (*Sarracenia purpurea montana*).

Caraway Preserve Work & Learn

March 18th* 10am-2pm

Help us remove a downed tree over the trail and non-native invasive species, English Ivy and Youngia. You will also have the chance to see Northern Oconee Bells (*Shortia brevistylis*) in bloom!

Tater Hill Preserve Work & Learn

May 1st 9am-3pm

Join us at Tater Hill on a hike led by Matt Estep to view the wonderful spring ephemerals. Hike followed by an afternoon working to remove encroaching woody species on the bald. **This will be a strenuous workday.** The hike to the top is fairly steep.

See the full schedule of Work & Learn days on the [Friends of Plant Conservation website](#) where new volunteer opportunities will be announced as they are scheduled.

2021 NCBG & FoPC co-events

The Friends of Plant Conservation and the North Carolina Botanical Garden are partnering on several Lunchbox Talks and field trips this year. Visit the [Friends of Plant Conservation website](#) for the full list.

Virtual LUNCHBOX Talk: Back to the Future: Suther Prairie Nature Reserve

Thursday, March 25, 12 - 1 p.m.

With Dennis Testerman

After being cared for by generations of the Suther family going back to the 1700s, this relatively undisturbed remnant Piedmont wet prairie on the floodplain of Dutch Buffalo Creek became a "must see" destination over the last two decades for scientists, conservationists, researchers, and reporters/writers from across the country after being listed in the Cabarrus County natural heritage inventory.

Suther Prairie Excursion

Sunday, May 9, 10:00 AM - 1:00 PM

With Dennis Testerman, Jim Matthews, and Mike Baranski

Registration coming soon.

See the full schedule of co-events with the North Carolina Botanical Gardens on the [Friends of Plant Conservation website](#) where new events will be announced as they are scheduled.