

Native Plant News

NEWSLETTER OF THE NC NATIVE PLANT SOCIETY

Native Plant News
Julie Higgie, editor

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MISSION STATEMENT:

Our mission is to promote the enjoyment and conservation of North Carolina's native plants and their habitats through education, cultivation and advocacy.

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Adapting to Change: Ash Borer Strikes NC

By Catherine Bollinger

In 2015, I realized Emerald Ash Borer (EAB) would be entering North Carolina over the next few years. Part of my five-acre property where I've lived for 30 years is an active floodplain, currently home to 37 canopy-size Green Ash (*Fraxinus pennsylvanica*) trees that dominate that area. I know because, in August of 2015, I counted them, noting by their seed load which trees were females. That was when I began to realize the devastating impact EAB would make to my floodplain's ecosystem, and I blogged about it

(<https://piedmontgardener.com/2015/08/03/ashes-ashes-all-fall-down/>)

so that others living with ashes might be prepared.

Late last year when I was talking to tree expert Katie Rose Levin, the dynamo behind TreesDurham (<https://treesdurham.org>) about my ashes, she encouraged me to contact Kelly Oten, Forest Health Monitoring Coordinator for the North Carolina Forest Service, to ask about their experimental parasitic wasp release program. I had assumed it was only for larger properties and was delighted when Dr. Oten expressed interest in my stand of mature ashes. She told me she would need confirmation of the presence of EAB on my site before she could release wasps, since they would quickly die if their prey were not present.

In April of this year, Dr. Oten hung two EAB traps on ashes to determine if EAB had found my trees. EAB had not yet (Cont. on P3)



Dr. Kelly Oten hangs a trap in an ash tree.

President's Report

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As vice president and now president of our Society, I am very much impressed with everyone's enthusiasm for native plants – identification, gardening, conservation, threats due to invasive species, and financial support of research and projects supporting native plants. I have also thoroughly enjoyed getting to know many of you at our Fall and Spring outings and our annual meeting.



I want to share with you my visions for the NC Native Plant Society:

- Assure our chapters have the resources they need to continue their programs
- Develop the Society's outreach and education
- Continue to improve the Society's presence on the web
- Increase donations to our Grants and Scholarships programs

I firmly believe that we have the energy, expertise and determination within our Society to achieve these goals, but it will take all of us working together. Nothing in our society is possible without volunteer efforts. I encourage you to become members of your local chapters, a committee, or a board member. Our strength as a Society is proportional to your involvement.

Please feel free to contact me about your visions for the Society. Let me know why you became a member and where we can make improvements. If desired, you can do this anonymously by sending me a letter – my mailing address can be found on the members directory <https://northcarolinanativeplantsociety.wildapricot.org/membership-directory>.

About me: I have a BS in Conservation and a MS in Botany (plant ecology). I worked as a plant ecologist in Wisconsin and South Carolina until 1990. In 1990 I moved to North Carolina and then my career focused on assessing levels of pollution in North Carolina's streams, lakes and estuaries. I retired in 2016 but recently accepted a part-time position with the Natural Resources Conservation Service.

Ash Borer Strikes in NC (cont.)

been reported in my county, but had been verified about 10 miles north in Orange County. The large EAB traps are purple and coated with sticky glue (think flypaper) to snare EABs. The color may work because new growth of ash trees often has a purplish hue. A scent lure inside the trap releases an odor that emulates the scent of an ash tree under attack.



Emerald Ash Borer Worms on Trap

A month later, my site gained the dubious distinction of being the first property in Chatham County with a verified EAB presence. One trap captured 37 of the small metallic green beetles; the other, 12. Dr. Oten told me this relatively low number probably means this is the first year EAB has been present on my site, which is why my ash trees don't look sickly yet. She told me she has seen traps that captured well over 100 EABs.

The verified presence of EAB meant Dr. Oten could apply to USDA Animal and Plant Health Inspection Service (APHIS) to designate my property as an experimental release site for parasitic wasps that prey on EAB. Scientists at APHIS hope these non-native wasps will successfully establish populations in EAB-infested areas, where they may exert at least some control, perhaps saving some ash trees. Exhaustive information about EAB is available on the APHIS web site (<https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/pests-and-diseases/emerald-ash-borer>).

Recently, Dr. Oten informed me that my site has been approved, and she plans to release the first round of wasps on the property on August 16 – with a caveat. She tells me the scientists at APHIS are having difficulty producing enough wasps for the program. My site will only receive wasps if there are enough to go around to all the sites approved previous to mine.

Wasp release was more for the furtherance of

APHIS research than any hope of saving my ash forest. I gather the wasps don't work quickly enough to halt an infestation well under way.

Arborists around the country are offering ash tree owners the option of

having their trees injected with a systemic insecticide that kills any insect that takes a bite out of a treated tree. I had rejected this option, because in Doug Tallamy's well-known book, *Bringing Nature Home*, he states that ash trees serve as larval food for 150 lepidopteran species. However, I was told by local birders that Dr. Tallamy is now advocating insecticide treatments to save ashes from total annihilation. After consulting with Johnny Randall at the NC Botanical Garden (NCBG), who agreed with Dr. Tallamy's assessment, I have had three female trees and one male treated with a systemic insecticide that should last 2-3 years.

Additionally, Dr. Randall and staff from the NCBG are in the process of harvesting ripe seeds from the female ash trees on my floodplain, so that the seeds can be preserved. Randall and the NCBG are collecting seed as part of two nationwide programs: The Center for Plant Conservation (<https://saveplants.org/about-us/>) and the US Dept. of the Interior Bureau of Land Management Plant Conservation Alliance (<https://www.blm.gov/programs/natural-resources/native-plant-communities/national-seed-strategy/pca>).

Many ecologists are also encouraging ash tree owners to allow ash saplings to continue to grow on their properties in the hopes that these small trees can provide food for the native insects that rely on ashes.

None of these actions will save my 33 untreated ash trees, but perhaps they will contribute to the return of this species in the future. Here's hoping.

Native Plant Habitats

Some Recently Certified Gardens



A handsome Spicebush is a food plant for pollinators in the garden of Deborah Staves of Greensboro.



Hallie Walker of Weddington has the elusive summer-blooming Crane Fly Orchid in her garden.



This is a Gordlinia hybrid from Hallie's garden.



Judi West of Greensboro has a nice Baptisia 'Purple Smoke', which adds spring color.

For information on Native Plant Habitats, please contact **Larry Mellichamp** at lmellichamp@carolina.rr.com

BW Wells Stewardship Grant News

Plants of Promise

By **Lisa Baker**,
Donor Relations Manager

The **Plants of Promise Garden** is the North Carolina Arboretum's first garden and was intended to inspire visitors about what might grow in their own gardens. The Society's BW Wells Stewardship grant was used for much needed infrastructure and educational signage improvements, as well as to intro-



duce more native plants to the garden. We believe the improvements will encourage everyone who sees the landscape to think big about what is possible in their own backyard. The new signs present opportunities for both formal and informal educational programming in the garden. Native plants have also been added to the landscape and will continue to be added over the next two years as we continue to improve the Arboretum's first garden. When all the new plants are installed, 30% will be native plants. The board, staff and members of The North Carolina Arboretum Society remain very grateful to the NCNPS for enabling these results.

Chinqua-Penn Walking Trail

The popular **Chinqua-Penn Walking Trail**, located on the Upper Piedmont Research Station in Rockingham County, is receiving some much-needed attention from the Rockingham County Naturalist Club with funds provided by NCNPS's BW Wells Stewardship Fund. The trail was becoming fairly degraded and years of cattle grazing left few native wildflowers. The Naturalist Club has now planted almost 400 native plants, including Virginia Bluebells, Cardinal Flower, Sweet Betsy, Yellow Trillium, Buttonbush, Yellow Star Grass, Bird's foot Violet, and Columbine. Many of these natives were planted in stretches of the trail that run along a stream and through stands of mature hardwoods. The Rockingham Naturalist Club hopes their efforts will increase appreciation for native wildflowers in their mostly rural county. You can visit the trail, just west of 2138 Wentworth Street in Reidsville, NC, or find information about it at <http://www.chinquapenntail.org>



CHLOROFIENDS!*

Smotherin' Vines

By Lisa Lofland Gould



Vines seem to be among the most vexing invasives, sprawling all over as well as climbing high into surrounding vegetation. Kudzu (*Pueraria montana* var. *lobata*) is the poster child for out-of-control woody vines, but there are a number of up-and-coming herbaceous vines to recognize in North Carolina. Like Kudzu, they can all form dense stands and smother the plants they clamber over.

Chinese Yam (*Dioscorea polystachya*) is also known as Cinnamon Yam, due to the flowers' cinnamon-like fragrance. This perennial, dioecious vine thrives in disturbed areas and bottomland forests, in full sun to full shade, and is a fast grower that can break limbs with the weight of its vines. A native of China and India, it produces a large edible tuber and edible aerial bulbils and has medicinal uses as well. It was first observed naturalizing in the US in the 1980s and appears to be spreading rapidly;



Chinese Yam leaves and bulbils.

Weakley (2015) shows it as common in the NC mountains and piedmont, and uncommon in the coastal plain (it now grows from New England south to Florida and

west to Texas and Kansas). The leaves are heart- to arrowhead-shaped, often shiny, and are generally opposite but can be alternate or in whorls of 3. Rodents eat the bulbils and may help spread them; they are also dispersed in runoff water. Our native yam (*Dioscorea villosa*) has alternate leaves (or whorled near the base) that tend to be somewhat hairy on the top, and the vines twine clockwise, unlike the counterclockwise twining of Chinese Yam.

I recently observed **Japanese Hops** (*Humulus japonicus*) duking it out with Japanese Knotweed (*Reynoutria japonica*) and was amazed

to see the hops appearing to be winning in this Godzilla versus Kong battle! Japanese Hops has many uses in its native Asia but does not seem to be a good beer-brewing substitute for European Hops (*Humulus lupulus*). Introduced in the 1800s as an ornamental plant and for a tonic, it is now common in the NC piedmont but rare elsewhere in the state (it is a serious invasive along Virginia rivers, and grows from Canada south to Georgia and west to Kansas). This monoecious annual plant can grow as much as 35 feet in one season, forming stands that may be several feet deep. The toothed, prickly, long-petioled



Japanese Hops

(continued next page)

Chlorofiends! (cont.)

leaves are opposite, with from 3 to 9 (usually 5) lobes that have pointed tips. The seeds are carried by wind and water as well as on fur, feathers, and clothing. The vines can be hand-pulled but protective clothing is recommended, as the prickles can irritate skin.

Sweet Autumn Clematis (*Clematis terniflora*; older names include *C. paniculata*, *C. discolorifolia*, and *C. maximowicziana*) is another



Sweet Autumn Clematis



Our native Virgin's Bower

perennial Asian vine that is spreading across the US and parts of Canada. This showy, fragrant member of the Buttercup family was introduced into the US nursery trade in the 1870s; botanists began to report it naturalizing in the early 1950s. While it thrives in moist woodland soils and on stream-banks, it also does fine along roadsides and disturbed edges; at least here in the NC piedmont, from mid-summer into autumn it is hard to miss its mounds of snowy white flowers. Sweet Autumn Clematis has opposite compound leaves with 3 to 5 leaflets. Unlike the toothed leaf margins of our native Virgin's Bower (*Clematis virginiana*), this clematis has rounded leaf margins. The flowers have 4 white petal-like sepals, and the feathery seeds are showy as well. This plant is a prolific seed producer, and the vines can

form dense stands that block light from the plants it grows on.

Common on the NC coastal plain but still rare elsewhere,

Cypress-vine

(*Ipomoea quamoclit*)

appears to be on the path to becoming a more serious invasive. A native of tropical America,

Cypress-vine has naturalized in tropical areas around the world; in the tropics it is perennial, but here in NC it's an annual. It is sold in the nursery trade because it attracts hummingbirds, butterflies, and other pollinators. The tubular flowers (which can be red, orange, pink, or white) are up to 2" long, flaring into 5 points at the 1" opening. The feathery-looking, pinnate leaves are divided into 9 to 31 or more very narrow lobes; a twining vine, it can grow over 20 feet in length. While its appearance seems delicate, don't let that fool you: this plant is a prolific self-sower and it may require years to get rid of an infestation. It can be a problem on several crops, including young timber.

As always, GO NATIVE!

Chlorofiends! is a regular column in *Native Plant News*. If you have information or comments on invasive species in North Carolina, please share them with Lisa Gould (linalgould@gmail.com).

*Thanks to Jim Butcher's *The Dresden Files* for the column title.

*Cypress-vine photo by Karen A. Rawls, University of GA, Bugwood.org

*Virgin's Bower photo by Donald Cameron, <http://gobotany.nativeplanttrust.org/>



Cypress-vine

Cullowhee Conference Delights!



As always, many NCNPS members attended the annual Cullowhee Native Plant Conference held at Western Carolina University, about 50 miles west of Asheville. Next year's conference is set for July 22-25. —Carol Fox

Cullowhee Native Plant Conference 2019 Scholarship Awards by NCNPS

Students:

Alyssa Chen, UNC-Chapel Hill
Alexandra Touloupas, UNC-Chapel Hill
Caleb Bollenbacher, NC State University
Ryan King, NC State University

Beginning Professional:

Hays Johnson, Terrafina Landworks

These are the scholarship recipients for the Cullowhee Native Plant Conference funded by the NCNPS in the amount of \$2,500. The Society also funded \$1,000 for Conference sponsorship and \$1,000 for vendor sponsorship for a total of \$4,500.

Recipients Thankful for Society's Help

My name is **Alyssa Chen**, and I wanted to thank you for making it possible for me to attend the Cullowhee conference. I had the time of my life. As a current summer intern at the North Carolina Botanical Garden, I was excited to travel to the mountains of western NC and enhance my understanding of native plants. Some of the most memorable parts of my trip include hiking from Clingmans Dome to Andrews Bald, attending a workshop on forest bathing, learning about Dr. E Lucy Braun, and above all, being surrounded by people from all walks of life with a common interest in plants. I was incredibly humbled to meet so many knowledgeable professionals and legends in various fields. Due to your generous support, my time at Cullowhee further cemented my interest in a career in conservation. I am so grateful to the North Carolina Native Plant Society for providing me with such an impactful experience. Thank you!

My name is **Alexandra Touloupas** and I am writing you to express my gratitude for funding my attendance to the Cullowhee Native Plant Conference this year. I have been eager to attend for many years and it was very rewarding to finally have this opportunity! After graduating from NC State (Plant Biology '19), I decided to pursue a career in native plant conservation. I have been lucky enough to do this work at the Native Plant Trust (formerly New England Wild Flower Society) as well as the North Carolina Botanical Garden. While at Cullowhee, I had amazing opportunities to learn from and meet many incredible local botanists and ecologists! I also presented a poster, and received lots of encouraging feedback about my citizen science project. I intend to stay involved in plant conservation in North Carolina, which is why I joined the NC Native Plant Society last year. Thank you again for your generosity!

Conference Brings Relief from 98 Degrees

By **Bettina Darveaux**

At Clingmans Dome, which is 6,643 feet above sea level, (although for some reason I keep wanting to say 4,118, why is that number stuck in my head?), the temperature was 57 degrees on this first day of the 2019 Cullowhee Native Plant Conference. The fog was dripping on the vegetation and on us as we hiked along the Forney Ridge Trail to Andrews Bald. Breathing in the cool, moist air was so wonderful, especially since back home in the Piedmont, it was 98 degrees and dry as a bone.

The misty fog created a magical experience in the forest that day and made for some great photography of the beautiful mountain flora. Many of the plants we saw are only found in the cooler mountain climates — such as Red Elderberry (*Sambucus racemosa*), Mountain Wood-sorrel (*Oxalis montana*); Bluebead Lily (*Clintonia borealis*), Alpine Enchanter's Nightshade (*Circaea alpina*), American Mountain-ash (*Sorbus americana*), Mountain Wood Aster (*Eurybia chlorolepis*), and Southern Mountain Cranberry (*Vaccinium erythrocarpum*) — as many of their names imply. One very special plant, Rugel's Ragwort (*Rugelia nudicaulis*), has a very narrow distribution, being only found in the higher elevations in the Great

Smoky Mountains. It was in full flower along the trail this July day, with its attractive dark basal leaves glistening with moisture.

Although the predominant colors of this spruce-fir forest were in the deep greens, there were pops of warm colors from the flowers of Joe-pye Weed (*Eutrochium fistulosum*), Turk's-cap Lily (*Lilium superbum*), Southern Mountain Cranberry (*Vaccinium erythrocarpum*), and Scarlet Beebalm (*Monarda didyma*); from the fruits of Red Elderberry (*Sambucus racemosa*), and Hobblebush (*Viburnum lantanoides*) and from the leaves of Witherod Viburnum (*Viburnum nudum* var. *cassinoides*), which almost appeared to be starting to show their Fall colors.

We enjoyed our lunch on the bald amongst the grasses (*Danthonia* sp.), and forbs including Roan Mountain Goldenrod (*Solidago roanensis*), and Filmy Angelica (*Angelica triquinata*).

Although the limitless mountain views were obscured by the dense, blowing fog, one could still sense this high-elevation open grassland as a very special place. Our hike back from the bald brought us rain, which quickly transformed the trail into a mountain stream! While my feet were completely soaked, I was grateful to even be feeling rain on my skin again and mindful that it is this life-giving rain that creates this beautiful, lush, mountain ecosystem.

All photos by the author.



So much to see along the Forney Ridge Trail!



Red Elderberry



Rugel's Ragwort

Membership Spotlight: Amanda Chapman



Amanda is working on her master's degree at UNC Wilmington. After graduation, she hopes to continue to contribute to the protection and identification of native plants by performing plant surveys for a consulting firm or a governmental agency, or work as an herbarium employee.

Amanda has been active in the SE Coast Chapter since 2016.

What is your background?

I was raised in Asheville and spent much of my free time as a young adult hiking, mountain biking, or camping along the Blue Ridge Mountains. With a slowdown in my previous career during the last recession, I contemplated ways to turn my love of hiking, identifying plants, and flower gardening into a new career. In 2011, I decided to become a botanist and enrolled part-time in college for a few years before transferring to UNC Wilmington to pursue a biology degree.

How did you get interested in native plants?

I was always naturally curious about my environment. In my mid-20s, I began using plant guides and herbalism books, and attending local plant walks to learn how to ID useful or edible native plants. For a few years, I experimented with making skin salves and other products using mountain natives that I wildcrafted or grew in my garden. After moving to the coast, my interest deepened as I learned about the broader importance of native plants.

How do you support native plants in your chapter?

I have twice led a native tree ID workshop for our chapter. Work on my master's thesis, identifying all of the vascular plants at Carolina Beach State Park, has led me to uncover native species that are new to the park. I'm preparing a plant guide for the park.

Do you have a favorite native plant?

I'm fond of asters, milkweeds, butterworts, and the false foxgloves. My favorite tree is *Gordonia lasianthus*, the Loblolly Bay of our coastal plain, for its lovely flower and interesting bark pattern.

Native Places: Green Swamp Preserve



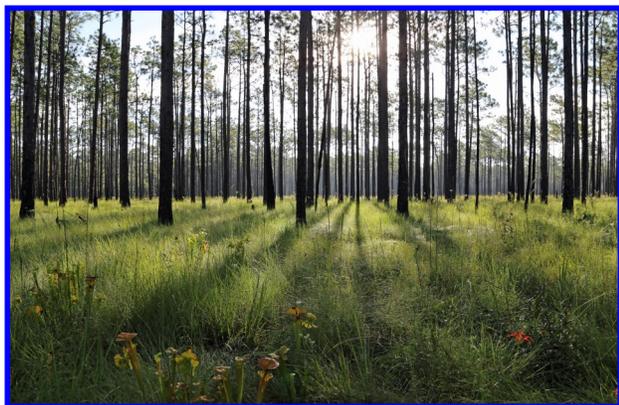
Orange-fringed Orchid



Catesby's Lily

I spend much of my time in the "natural gardens" of the Carolinas, those native plant communities so wonderfully described by B.W. Wells. In Well's own words the savannas of our coastal plain are "the most beautiful gardens" where "nature attains her fullest and most varied expression". And, as Wells points out, there is a parade of species from spring through late fall. Many savannas have been lost to development since Wells first admired the Burgaw Bog in 1920. The 16,000-acre **Green Swamp Preserve**, managed by The Nature Conservancy (see their website), may be the best place in the Carolinas to experience this one-of-a-kind beauty. As with any fire-managed property, check the burn schedules when planning a visit. (I once arrived to find a smoldering landscape. Call the phone number on the TNC website.) Arrive early to avoid mid-day heat, park in the small lot on the east side of NC 211, six miles north of Supply, N.C., and follow the red diamond trail out and back through three savannas. If you have time, visit Big Island savanna on the west side of the highway, perhaps the best spot in the preserve for fall wildflowers.

—Article and photos by **Will Stuart**



Green Swamp Preserve in the morning.



North Carolina Native Plant Society

C/O Julie Higgin

176 Huntington LN

Mooresville, NC 28117

**We're
Wild
About
Natives!**



Fringed Meadow-beauty —Will Stuart