



NORTH CAROLINA  
BOTANICAL  
GARDEN

# CONSERVATION GARDENER

FALL/WINTER 2023/24  
\$4.95



THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

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## *Asclepias tuberosa*

butterfly milkweed

*Illustration by Dot Wilbur-Brooks*



*Asclepias tuberosa*  
butterfly milkweed

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*To inspire understanding, appreciation and conservation of plants and advance a sustainable relationship between people and nature.*

# Community

BY DAMON WAITT, NCBG DIRECTOR

Dear Members and Friends,

The word COMMUNITY is most often associated with a group of people with common characteristics or interests living within a larger society...the campus community, the religious community, the medical community. But did you know, community has a very specific meaning in biology? In biology, a community is a group of populations of two or more different species occupying the same geographical area at the same time. In fact, there is an entire discipline of biology called community ecology which studies the interactions between the member species of a biological community.

These interactions between species come in several different flavors. Some are mutualisms (+/+) benefitting both species. Think plants (+) and their pollinators (+). Commensalisms benefit one species with no impact on the other (+/0). Think Spanish moss (+) living on a host plant (0). It would be nice if all interactions between species were beneficial or at least neutral, but some can be quite antagonistic, such as parasitism, predation, and

herbivory benefitting one species to the detriment of the other (+/-). Think mistletoe (+) taking nutrients from its host plant (-), a Venus flytrap (+) eating a spider (-), or a deer (+) snacking on your begonias (-). Some interactions are detrimental to both species (-/-) such as maples and hickories competing for nutrients, light, water, and space in the same forest. There is even a term reserved for one-sided nastiness. An amensalism (0/-) is where one species impacts another negatively and receives no benefit from the interaction, as when shade from a big tree (0) hinders the growth of small plants underneath it (-).

These species interactions remind me of the old Woody Hayes football saying, "There are three things that can happen when you throw a forward pass, and two of them are bad." In biological communities, there are seven things that can happen when two species interact, and five of them are bad for one of the species.

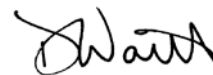
So, where do you fit in? We are all members of a biological

community sharing geographical space with other species at the same time. Is your impact on the biological community beneficial (+), detrimental (-), or neutral (0)? If you practice conservation gardening by using native plants in your landscape to support wildlife and local pollinators, you get a (+). If you transform your lawn into a carbon sink, you get a (+). If you volunteer to remove nandina and other invasive species from natural areas, you get a (+).

If you are reading this issue of Conservation Gardener, you support the work of the North Carolina Botanical Garden to manage natural areas, preserve biodiversity, and save rare plants from going extinct. That's a big plus (+).

Thank you for the interaction!

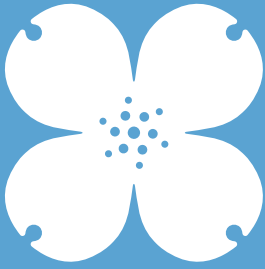
Sincerely Yours,



Damon Waitt

**A bee and monarda in a mutualist relationship.**





NORTH CAROLINA  
BOTANICAL  
GARDEN



THE UNIVERSITY  
of NORTH CAROLINA  
at CHAPEL HILL

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# Growing Community with Gardens

BY JENNIFER PETERSON, MANAGING EDITOR

There are probably many reasons you support the Garden with your membership. I would venture to guess one reason is community, whether it's belonging to a group of Garden enthusiasts or creating a community for insects and wildlife.

The North Carolina Botanical Garden excels at creating community. Several of our programs create a strong sense of belonging and purpose. Our community gardens, the Carolina Community Garden (CCG) and Edible Campus UNC, both develop a strong sense of community among their volunteers. Read more on the facing page.

In addition, our collaboration with UNC's American Indian Cultural Garden is building community for UNC students and Chapel Hill residents alike (p. 15).

And our Therapeutic Horticulture program is expanding their community across the nation and throughout the world! Find out more on page 14, and even more in an article on our website.

In addition to a community of people, a garden can be a natural community, too, bringing pollinators, birds, and other wildlife. Learn more about building a community of pollinators with an article by Adam Bigelow (p. 6) and our Staff Pick by Chris Liloia (p. 13). Building a community of beetles can be important, too. Learn how the CCG is doing just that in an article by Emily Oglesby (p. 12).

And you can help the larger community that is our planet by turning your lawn in to a carbon sink, pulling harmful carbon from the air to the roots of the plants you grow. Learn how in an article by Maya Peterson (p. 10)

I hope you enjoy this edition of Conservation Gardener, and I hope you find inspiration to strengthen the communities in your life...or yard!

As a garden focused on conserving the biodiversity of southeastern native plants, we recognize that just as biodiversity is critical to a healthy ecosystem, diversity in people and perspectives makes our organization and community stronger. NCBG is committed to creating an environment in our gardens and natural areas where everyone's voice is heard and everyone feels safe and welcome.

Students and community members  
enjoy working together at the  
Carolina Community Garden.



# Growing More than Food

BY JENNIFER PETERSON, MANAGING EDITOR

A community garden is a place where people in the community gather to garden. Some community gardens are divided into plots for each participant to care for, while in others, the community members work together to grow food for themselves or to donate. Deliverables from community gardens are often measured in pounds of produce, but there are definitely outcomes that are not so easily measured.

The North Carolina Botanical Garden manages two community gardens, the Carolina Community Garden (CCG) and Edible Campus UNC.

You will find the CCG on Wilson Street near UNC's campus. Several times each week, volunteers including students, staff, classes, and community members gather to care for the garden and harvest food. The food is given to UNC's lowest wage earners, often the housekeepers.

According to CCG volunteer Ann Koehler, "The garden is a vital community asset that fosters connections among the volunteers as they work alongside one another with tasks like planting, harvesting, watering, and weeding. The garden also nurtures friendships and provides the opportunity to reap the harvest of a shared community spirit while working together toward a common purpose."

And Shawn Womack, assistant director of housekeeping says, "The vegetable distribution is a good opportunity for us as housekeepers to feel valued by the University."

Edible Campus UNC creates working landscapes across UNC-Chapel Hill filled with edible and pollinator-friendly plants. In addition to eight satellite garden sites throughout campus, Edible Campus UNC operates a 1/4-acre garden directly behind Davis Library. The food grown at these locations is free for anyone in the community to forage. UNC students gather for workdays to care for the gardens.

Edible Campus UNC has become a meaningful part of many students' time at UNC-Chapel Hill, by participating in workdays throughout their time in college or by becoming a student leader. The sense of community they find among their peers in the garden is unmatched.

While the goal of a community garden might be to grow vegetables, they often grow much more than that, including a sense of belonging and community. If you live in the Chapel Hill area, consider joining a workday at the CCG. UNC-Chapel Hill students are encouraged to join Edible Campus workdays. Find out more online at [ncbg.unc.edu/ccg](http://ncbg.unc.edu/ccg) and [ncbg.unc.edu/ediblecampus](http://ncbg.unc.edu/ediblecampus).



FITCH  
LECTURE

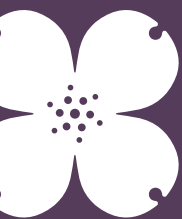
## A WORLD OF DISCOVERY: HOW SCIENCE AND HEART CAN MAKE YOU A MORE ECOLOGICAL GARDENER

NOVEMBER 5: 5:30-6:30 P.M., FOLLOWED BY RECEPTION  
VIRTUAL AND IN-PERSON OPTIONS

with Nancy Lawson, author, master naturalist and founder of *The Humane Gardener, LLC*

Much has been written about gardening for human senses, but how do plants and animals perceive the world around them? What do we miss when we landscape for human visual appeal but neglect the sensory experiences of our wild neighbors? Noise, light, and odor pollution can have many unintended consequences. Through science, heart, and our powers of observation, we can learn to mitigate these disruptions and create sensory refuges in an increasingly noisy world.

DETAILS AT  
[NCBG.UNC.EDU/FITCHLECTURE](http://NCBG.UNC.EDU/FITCHLECTURE)



# Building a Community in your Home Veggie Garden

BY ADAM BIGELOW

One of the most important actions you can take to have a positive impact on the environment, especially reducing biodiversity loss, is planting native plants. The interdependence of native plants, insects, and wildlife cannot be understated.

Many people maintain a separation between flower gardens and vegetable gardens. I certainly used to. Sometimes, plants that are cared for in the former are weeded out in the latter. And while there are native wildflowers I don't allow in my veggie beds (tall goldenrod (*Solidago altissima*) and common milkweed (*Asclepias syriaca*) among them because they spread aggressively), it is time to begin blurring the lines between what we plant for aesthetic beauty and what we plant for food. We need to make sure both are helping support wildlife and causing little environmental harm.

We use plants in the landscape to provide food, medicine, and beauty. We also use them to attract beneficial insects and cycle water and nutrients through our yards. There is no reason many of those roles can't be filled using native plants. We get to share the benefit of these functions and provide a haven and food for insects, birds, and other animals at the same time.

Prior to European contact in what is now called North America, the land where I live was the land of the *Aniyvwiya*, one of the original names for the people who are now called Cherokee. They live and thrive on the bounty of natural diversity that they actively manage here in Southern Appalachia and the Eastern Forest.

What is a native plant? While there are many different definitions to be found, I define native plant as those plants that were living in an area prior to European contact. This isn't to say that Indigenous people didn't move plants around or manage the landscape—they certainly did. A distinction lies in the relatively slow rate of spread of plants and the limits of geographical barriers like oceans and mountain ranges that Europeans were able to overcome rapidly with ships and colonialism.

## Attracting Beneficial Insects, Pollinators and Predators

Insects are our allies in growing vegetables. From pollinating the flowers of the fruits we eat like squashes, tomatoes, and peppers, to helping control pests, insects are best. Attracting beneficial insects into our gardens is an important tool in growing food naturally.

Instead of reaching for an insecticide (even organic) at the first sign of a pest, you can call in the help of predatory insects like wasps and lady beetles by making sure there is something blooming in your yard and garden throughout the growing season. While there are many lists of flowers and plants that attract beneficial insects, most of those are non-native ornamental plants.

What could be better at attracting indigenous insects than the native plants they have co-evolved with over millions of years? From the first blooms of red maple (*Acer rubrum*), golden ragwort (*Packera aurea*), violets (*Viola* spp.), and



**Bee balm and other native plants grow with vegetables in Edible Campus UNC's main garden.**

columbine (*Aquilegia canadensis*) to the abundant full summer blooms of bee balms (*Monarda* spp.), and the many species of composites like sunflowers (*Helianthus* spp.) and rosinweeds (*Silphium* spp.), through the fall blooms of asters (*Symphoricarpos* spp. and *Eurybia* spp.), goldenrods (*Solidago* spp.), ironweeds (*Vernonia* spp.), and Joe Pye weeds (*Eutrochium* spp.), blooming native plants will guarantee you will have a diverse abundance of insects for predation and pollination.

When it comes to attracting beneficial insects, there may not be a better choice than clustered mountain mint (*Pycnanthemum muticum*). Blooming from early summer through frost, the multiple small flowers of clustered mountain mint are covered in a diversity of insects not seen on most plants. I have spent an inordinate amount of time watching mountain mint throbbing with insects. Large, black and blue iridescent wasps, tiny green and gold metallic bees, bumble bees, ants, beetles, moths, butterflies, fireflies, and more all nectaring on the flowers at the same time. They are no more bothered by each other's presence than they are by mine, ogling them, taking pictures and videos, and even bravely petting their backs and getting "high fives" from the bumbles. If you add one native plant to your garden this year, let it be clustered mountain mint.

### **Edible Native Plants**

While I am not suggesting that we supplant all our garden vegetables that evolved in different parts of the world for native plants that evolved in our bioregion, there are many plants that are both native and delicious. We eat all kinds of different plant parts—leaves, stems, petioles, roots, flowers, and fruits. Among my favorite native leafy greens to eat are young leaves of sassafras (*Sassafras albidum*) and sourwood (*Oxydendron arboretum*) trees. While they may be eaten throughout their growing season, to me they are best when harvested young, while the leaves still have their emerging spring color. Add them to a salad for their interesting flavor and texture.

Other native leafy greens in my spring salad include violets (*Viola* spp.) which are a mild salad green loaded with nutrition. Violets contain five times more Vitamin C than an orange. Granted, you need to pick a big bowl of violet leaves to equal the volume of the orange, but when you do, you will have five times the Vitamin C, plus Vitamin A and soluble fiber that the orange doesn't have. In addition, the violets weren't grown under industrial agriculture conditions in Central and South America, picked early, and artificially ripened while being transported using fossil fuels. They

were picked for free in your yard, and the only energy cost was what you had for breakfast. Use them raw in salads when harvested in springtime, and you can add them to soups and stews any time of year to take advantage of their thickening properties while also benefiting from the nutrients.

There are plenty of delicious native cooking greens that can be grown in your garden as well. My favorite is also among the favorite spring greens of Cherokee and other



**The leaves of green-headed coneflower (*Rudbeckia laciniata*) can be sauteed for a delicious spring treat.**

southeastern Native peoples, the green-headed coneflower (*Rudbeckia laciniata*) or Sochan in Cherokee. These strongly-flavored leaves are great cooked as a potherb or sauteed in a skillet. And you know that feeling of joy and hope you get on that first warm spring day after the winter starts to fade? Eating a big bunch of cooked Sochan gives me that feeling from the inside out. My fingertips and toes tingle with the hope of spring.

Other edible native plant parts include the roots of sunchokes (*Helianthus tuberosa*), and Ground Nut (*Apios americana*). Delicious fruits are provided by serviceberry (*Amelanchier* spp.), persimmon (*Diospyros virginiana*), pawpaw (*Asimina triloba*), and Chickasaw and American plums (*Prunus* spp.), in addition to the many species and varieties of the native strawberry (*Fragaria virginiana*) and blueberry (*Vaccinium* spp.).

You can make tea from native plants including the leaves and fruits of teaberry (*Gaultheria procumbens*), leaves and roots of sassafras (*Sassafras albidum*), sweet birch (*Betula lenta*), spicebush (*Lindera benzoin*), and the dried flower heads and leaves of bee balms (*Monarda* spp.) among others. These last two, as well as the various species of mountain mints (*Pycnanthemum* spp.) make for delicious, dried spices. And various seeds can provide us with cooking oils or medicinal oils like evening primrose (*Oenothera biennis*), perennial sunflowers (*Helianthus* spp. and *Heliopsis* spp.) and tree nuts like hickory (*Carya* spp.) and black walnut (*Juglans nigra*).

### Native Plants to Grow for Medicine

I am not an herbalist and am not offering herbal medical advice through an article. However, there are certainly a lot of native plants with medicinal benefits. Most of the species recommended in modern American herbalism are European plants, as the tradition of using plants as medicine travelled with colonists and settlers across the Atlantic. But there is and was a deep knowledge and use of plants as medicine here in what is now called North America. Indigenous people use plants to effectively treat a variety of diseases and illnesses, and those plants still exist in the forests and grasslands around us. There are

native analogues for most every plant found in European herbalism and traditional Chinese medicine. Growing them in our gardens provides us with these medicinal resources while also helping to support the food web that drives energy through the ecosystem.

### Collecting Native Plants

When you consider adding native plants to your yard, you might be tempted to simply dig them up from a nearby natural area. Please keep in mind the idea of "Preservation Through Propagation." This ethic promotes propagating native plants, especially those at risk of overharvesting, and growing them in a garden setting instead of wildcrafting or foraging. This allows the mother plants to continue to thrive in natural areas, and we get to have these same species to use as medicine and food in our gardens and landscapes.

Before you forage or collect plants for seeds, food, or medicinal uses, make sure you have permission to do so. Foraging is not allowed at the North Carolina Botanical Garden, or on many public lands. In addition, use the "Ten Percent Rule" – try to not collect more than 10% of the seeds in a head, or more than 10% of the seeds from a plant, or more than 10% of the seeds or plants in a population. This allows for plenty of seeds and plants for the animals we share these resources with, plus plenty of propagules for the plants and populations to regenerate themselves in perpetuity. This Ten Percent Rule can also be applied to collecting any parts of the plant for consumption or propagation.

When it comes to collecting wild plants for use as medicine, there are plenty of exotic and invasive plants with medicinal benefits that can be harvested and used as a means of controlling the spread of these plants. For



**Mountain andromeda, a.k.a. fetterbush (*Pieris floribunda*) in front of pinkshell azalea (*Rhododendron vaseyi*), two showy Southern Appalachian, high-elevation species. Photo by Adam Bigelow**



example, goldenseal (*Hydrastis canadensis*) is an at-risk native medicinal plant that is often overharvested due to its high value in the herbalism trade. Turns out the invasive species of barberry (*Berberis thunbergii*) also contains high amounts of Berberine, one of the medicinal compounds found in goldenseal. So, let's harvest the barberry as a means of controlling its spread, and leave the goldenseal growing in the ground. There are many other examples of invasive plants with medicinal benefits that can be used by harvesting, with the added benefit of helping to reduce their populations in the forest.

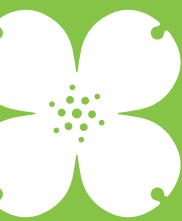
Of the many roles plants play in a garden setting, there is no niche or use that can't be filled by a native plant. As we attempt to reintegrate nature into our daily lives, homes, landscapes, campuses, and towns, native plants provide the foundation of the ecosystem and food web, which supports all of life as we know it. Especially as our culture places so many pressures on natural communities and ecosystems, it is imperative for us to try as hard as we can to do something about it. Planting native plants is among the best ways to help stem the tide of biodiversity loss, habitat destruction, and species extinction.

**“It is time to begin blurring the lines between what we plant for aesthetic beauty and what we plant to help provide us food.”**

*Adam Bigelow is a horticulturist and amateur botanist who lives in Cullowhee, NC, and has been studying the plants and wildflowers of Southern Appalachia for over 20 years. Adam is the owner/operator of Bigelow's Botanical Excursions, an eco-tour business leading guided plant walks in western North Carolina. He is an avid organic gardener and founded and managed the Cullowhee Community Garden for ten years. Adam is a member of the planning committee for the Cullowhee Native Plant Conference.*

## RECOMMENDED NATIVE PLANTS FOR YOUR HOME GARDEN

Common Name	Scientific Name	Plant Type	Uses
clustered mountain mint	<i>Pycnanthemum muticum</i>	herbaceous perennial	Edible, Medicinal, Kitchen Herb, Attracts Beneficial Insects, Beautiful
passion flower	<i>Passiflora incarnata</i>	herbaceous perennial vine	Edible, Medicinal, Beautiful, Host Plant for Fritillary Butterflies
green-headed coneflower, a.k.a. Sochan	<i>Rudbeckia laciniata</i>	herbaceous perennial	Edible, Attracts Beneficial Insects, Beautiful
jewelweed	<i>Impatiens capensis &amp; I. pallida</i>	annual	Edible, Medicinal, Attracts Beneficial Insects and Hummingbirds, Beautiful
goldenrod	<i>Solidago</i> spp.	herbaceous perennial	Edible (as a tea), Medicinal, Host Plant for over 100 species of Moth and Butterfly, Attracts Beneficial Insects, Beautiful
St. John's wort	<i>Hypericum</i> spp.	woody or herbaceous perennial	Medicinal, Cut Flower (seedheads), Attracts Beneficial Insects, Beautiful
common milkweed	<i>Asclepias syriaca</i>	herbaceous perennial	Edible (Flower Buds and Flowers as Fritters), Medicinal, Attracts Beneficial Insects, Favored Host Plant of monarch butterfly and milkweed tussock moth
asters	<i>Symphiotrichum &amp; Eurybia</i> spp.	herbaceous perennial	Fall Pollinator Support, Attracts Beneficial Insects, Beautiful



# Transform your Lawn into a Carbon Sink

BY MAYA PETERSON

Traditional lawn maintenance is a little ridiculous. Not only is it expensive and difficult to maintain, but it also does more harm than good to the environment. Typical grass lawns are monocultures that support no pollinators. They are commonly fertilized with synthetic fertilizer which can runoff into waterways and cause unsafe levels of nitrogen and phosphorus in the water. They are often maintained with gas-powered lawn mowers that pollute the air. Frequent mowing doesn't give the grass time to grow strong root systems because all of its energy goes into replenishing what has just been mowed off. Mowing also removes a lot of the necessary nutrients from the environment, requiring fertilizer to compensate for that loss. Soon enough, you're trapped in a lawn care cycle with no clear way out. Luckily, there are a few ways to make your lawn more environmentally-friendly on both a local and a global level. These options not only eliminate many of the traditional grass lawn concerns, but also sequester a higher amount of carbon from the atmosphere, helping to slow climate change.

A carbon sink is anything that absorbs and stores at least one carbon containing molecule and by doing so, removes carbon from the atmosphere. The biggest carbon sink is the ocean, followed by soil and forests. These sinks are necessary for maintaining manageable levels of carbon in the atmosphere.

When we talk about using lawns as carbon sinks, it may initially sound like our focus would be above ground. While some carbon is stored in the plants above ground, we are actually more focused on sequestering carbon in the soil where we find fungus and other microorganisms living on roots. These microorganisms are responsible for a lot of the carbon sequestration, so to make a lawn into a carbon sink, we want to support those organisms by increasing the roots available for them to live on.

A simple but incredibly impactful choice you can make in your lawn care is simply leaving it alone. Give your grass time to grow without fertilizing or trimming it. Not only is it easier for you, but it also allows the grass to build deeper root systems which support the underground fungus and microorganism communities required for soil health. Allow the native plants you may usually think of as weeds, like lyreleaf sage, to grow alongside your grass to boost the biodiversity of your lawn. Biodiversity is necessary for supporting the surrounding ecosystem. Above ground, having a variety of plant species allows your lawn to support a wider variety of pollinators. Below ground, the same happens with fungus and microorganisms supported by a variety of plant roots.

**Left: A yard near Chapel Hill showcases native plants and large trees. Both are beneficial for sequestering carbon.**

Once you have given your lawn time to grow on its own, you can start fertilizing it again, but stay away from synthetic fertilizers. Instead, feed your lawn compost. You can compost a wide variety of organic matter, such as grass clippings, coffee grounds, and food waste. This has the added benefit of decreasing your carbon footprint because these items would otherwise go to a landfill. When organic items decompose without access to oxygen, like in a landfill, they release methane, a greenhouse gas over 25 times as potent as carbon dioxide.

The next step to making your lawn an effective carbon sink is to add native plants, which capture a lot more carbon than common lawn grasses. Generally, it is a good idea to mirror your local natural environment in your yard by choosing native plants that benefit the local ecosystem and grow well with little intervention. However, if you want to prioritize the most effective plants for carbon sequestration, think about the roots since that is where the fungus and microorganisms that will sequester carbon live. Because of this, the best options are often woodier plants like trees and bushes with relatively large root systems. Some good options for North Carolina include beautyberry (*Callicarpa americana*) and persimmon (*Diospyros virginiana*) as well as oaks (*Quercus* spp.) and maples (*Acer* spp.).

If you are still not ready to give up the grass look, there are other things you can do to increase carbon storage. One simple way to decrease the impact of your grass lawn is to leave the clippings after mowing rather than raking them up. When the clippings decompose, they return the nutrients they used to grow back to the soil, functioning as a natural lawn fertilizer.

Another great option for grass lovers is to use sedges in your lawn. Sedges can have that signature grass look but require a lot less water and maintenance than the grasses typically used in lawns. There are several great options in North Carolina, including *Carex radiata*, *C. rosea*, and *C. cherokenensis*, all of which will be available at the upcoming Fall Plant Sale (details on page 16).



**This strip of lawn in the Herb Garden at the North Carolina Botanical Garden is a variety of sedge and rush species, including path rush (*Juncus tenuis*), *Carex texensis*, Baldwin's flatsedge (*Cyperus croceus*), and Bosc's witchgrass (*Dichanthelium boscii*).**

There are a wide variety of options to increase the carbon storing abilities of your lawn that fit a lot of different lifestyles. If you want to keep your grass, you can cut back on fertilizer, leave your clippings, let it grow, and compost. If you are up for changing your lawn landscape, you can choose native, woody plants with big root systems that support carbon storing microorganisms. Either way, it is easier than you might think to turn your lawn into a carbon sink.

*Maya Peterson, a Chapel Hill native, is studying Environmental Science at George Mason University.*



**SCULPTURE  
IN THE GARDEN**

**SEPTEMBER 17 - DECEMBER 3**

Our annual outdoor sculpture exhibition unites the work of North Carolina artists with the curated landscapes of the Garden. Free and open to the public.

**PREVIEW PARTY**

**SATURDAY, SEPTEMBER 16, 4:30-6:30 P.M.**

Meet the artists, vote for the People's Choice award, make early purchases, and enjoy beverages and hors d'oeuvres.

Tickets: \$30 per person.

**NCBG.UNC.EDU/SCULPTURE**



# Banking on Beetles: Native Grasses for Pest Control

BY EMILY OGLESBY, NCBG COMMUNICATIONS & EXHIBITS COORDINATOR

Did you know small, predatory ground beetles are some of your garden's fiercest protectors? These native insects are avid hunters who eat common plant pests, like aphids, mites, mealybugs, and slugs. Farmers have taken notice of this helpful habit and developed a tool to attract and protect ground beetles: beetle banks.

Conceptualized in England in the 1980s through a collaboration between the Game and Wildlife Conservation Trust and the University of Southampton, beetle banks are long, raised berms in between row crops planted with native perennial bunchgrasses. They provide a safe and warm spot for these beetles to spend the winter and rest during the day when they're not out hunting. At night, they emerge from the beetle bank and enter the surrounding rows of crops, picking off small pests in quick succession. Ground beetles can consume their body weight in food each day!

It can take a few years for a beetle bank to get established and attract large numbers of ground beetles, but because they're planted with native perennial grasses, they're low maintenance. Once you've created your beetle bank, you don't need to redo it the next year.

If you have a small home vegetable garden, there's no need to build an long bank for native grasses: simply planting native bunchgrasses near your veggies will help attract these natural predators. Beetle banks (or smaller beetle beds) don't have to be raised above the surrounding soil, but creating a raised berm makes the soil drier and warmer – just what the beetles are looking for. This helps them get started earlier in the year.

Planting native grasses doesn't just benefit ground beetles: all kinds of native insects, birds, and reptiles take shelter in them. Birds eat their seeds, and they can even be host plants for butterflies: little bluestem (*Schizachyrium scoparium*), for example, is a host for the common wood nymph caterpillar and several species of skipper.

Earlier this year, volunteers pitched in to help build two beetle banks at the Carolina Community Garden on campus. They planted three North Carolina native bunchgrasses: prairie dropseed (*Sporobolus heterolepis*), yellow prairie grass (*Sorghastrum nutans*), and switchgrass (*Panicum virgatum*). If all goes well, they'll be home to many helpful critters before long.



Switchgrass  
(*Panicum virgatum*)



Yellow prairie grass  
(*Sorghastrum nutans*)



Prairie dropseed  
(*Sporobolus heterolepis*)



Beetle bank at the Carolina  
Community Garden

Beetle banks are raised berms planted with native perennial bunchgrasses. Farmers build them near row crops (right) to provide habitat for predatory insects.



Common predatory beetles in North Carolina, L-R, top to bottom: six-spotted tiger beetle, dingy ground beetle, bronzed tiger beetle, big-headed ground beetle.

Adobe Stock | stock.adobe.com



# Staff Pick: Autumn Gold

BY CHRIS LILOIA, NCBG CURATOR, HABITAT GARDENS

Goldenrods are among the most valuable wildflowers you can plant to support biodiversity. They're important host plants for the caterpillars that feed our songbirds. They provide pollen to both specialist and generalist bees and fatten up bumblebees before they become inactive for the winter. Their nectar is a critical resource for migrants like monarchs and hummingbirds. And there are plenty of great garden plants among their numbers.

When the glorious waves of yellow flowers begin to roll through our area in late summer, you'll see goldenrods holding their own with the sunflowers and rudbeckias. One of the first is pineywoods goldenrod (*Solidago pinetorum*). It spends much of the year as a basal rosette. In flower, it is tall and upright but also loose and graceful with few leaves on often reddish stems.

Another early species is anise-scented goldenrod (*Solidago odora*), notable for its willowy form and anise-scented foliage. It forms a mid-sized clump and is tolerant of drier sites.

Eastern gray goldenrod (*Solidago nemoralis* var *nemoralis*) is a real winner. Its sturdy architecture remains upright and handsome all winter long, providing great garden interest as well as habitat. The lovely contrast between its cool yellow blooms and grayish foliage also persists far longer than one would expect.

If you garden in the shade, axillary goldenrod (*Solidago caesia*), is the one for you. This excellent plant is good for some color in a leafy green spot. Its common name, axillary goldenrod, refers to the way the flowers group in the leaf axils along arching stems.

Slender goldenrod (*Solidago erecta*) has a clean unbranched form with a relatively narrow flowering stalk. This makes it a great sunny companion to purple fall asters and warm season grasses.

Combining any of these goldenrods with plants like little bluestem, pink muhly grass, and purple asters will make for a rich and lovely planting that goes a long way to support pollinators and other insects.



Goldenrod species attract a variety of pollinators and are ranked among the most important plants for supporting insect life.

Common Name	Scientific Name	Light Requirements	Height	Soil Requirements	Bloom Time
anise-scented goldenrod	<i>Solidago odora</i>	sun to part-shade	to 3'	dry-avg	July-Oct
pineywoods goldenrod	<i>Solidago pinetorum</i>	sun to part-shade	to 3 1/2'	dry-avg	late June-Sept
eastern gray goldenrod	<i>Solidago nemoralis</i> var <i>nemoralis</i>	sun to part-shade	to 3'	dry-moist	late August-Nov
axillary goldenrod	<i>Solidago caesia</i>	part-shade to shade	1-3'	avg	August-Oct
slender goldenrod	<i>Solidago erecta</i>	sun to part-shade	2-3'	dry-avg	August-Oct



## THERAPEUTIC HORTICULTURE PROGRAM'S WORLDWIDE COMMUNITY

The North Carolina Botanical Garden has one of the oldest therapeutic horticulture programs in the United States. For 45 years, the Garden has provided community-based direct therapeutic horticulture services for diverse populations in the Chapel Hill area and offered educational training for experienced and emerging practitioners. Through the course of the program, we've touched the lives of individuals and groups who experience mental health concerns, traumatic brain injuries, those with disordered eating and substance use, caregivers, elders who experience memory loss and/or physical concerns, exceptional children, and many more who found healing, empowerment, and solace in expanding their relationship with the natural world.

In recent years, this program has expanded exponentially, offering training to students in 29 states and 11 countries!

Find out more about this program and how you can participate at [ncbg.unc.edu/th](http://ncbg.unc.edu/th)

# Herbarium Identifies Ten New Species in July

In July, researchers in the Herbarium and collaborators named ten new flowering plant species. These discoveries, all species endemic to the southeastern United States, add to the status of the southeastern United States as a global biodiversity hotspot.



**Holotype specimen of *Trichostema gracile*. A holotype specimen is the original specimen used for identifying a plant.**

Seven of the new species are mints in the genus *Trichostema* (blue curls) identified by recently graduated UNC PhD student Kevin Schoonover McClelland (now on the faculty at Elon University), working with Alan Weakley and Derick Poindexter. Most have distributions restricted to small regions of Florida, and were published in the journal *Phytotaxa*. The other three species, described by UNC Herbarium collaborators, include *Solidago ayuhwasi*, *Sabulina diffusa*, and *Rhynchospora vernalis*. These new species were named in an article published in the *Journal of the Botanical Research Institute of Texas*.

Read more at [ncbg.unc.edu/newspecies](http://ncbg.unc.edu/newspecies)



## IS IT TIME TO RENEW YOUR MEMBERSHIP?

Did you know you can check your renewal date by looking at the mailing label of this magazine?

If you are due for a renewal, use the envelope insert or go to [give.unc.edu/ncbgmembership](http://give.unc.edu/ncbgmembership)

Thank you for supporting the Garden with your membership!





The American Indian Cultural Garden begins to grow next to the Carolina Community Garden.

# American Indian Cultural Garden Begins to Take Shape

In 2019, the North Carolina Botanical Garden began collaborating with UNC's American Indian Center to create a gathering place to celebrate American Indian cultures and Indigenous ecological knowledge. This garden will also support American Indian students in adjusting to life on campus and serve as a teaching tool for the greater community.

Nestled along the perimeter of the Carolina Community Garden on Wilson Street in Chapel Hill, elements will include native and culturally relevant plants, ceremonial space to enable Native cultural use, event gathering space for educational programs, quiet spaces for small group and individual healing, and the inclusion of water and a firepit for cultural purposes. The garden will also feature art designed by Native creators, seating throughout, and a prayer tree envisioned by an Elder. The feel of the garden centers around culturally-significant native plants, trees, water, stone, wood, and natural elements.

This garden is a community-driven effort that comes from numerous conversations and a community charrette. Details can be found in the project's final report, including personal stories, details on how decisions were made, and a closer look at elements of the Garden. You can find this report at [go.unc.edu/AmericanIndianGarden](http://go.unc.edu/AmericanIndianGarden).

The garden is currently under construction. A path has been built through part of the space, and invasive plants continue to be removed. We are still fundraising for the garden. Once additional funding is in place, native and other culturally-relevant plants will be added, and other design elements will be constructed.

To donate please scan the QR code and select "The Native American Cultural Garden Fund 525431."



 **IN THE GARDEN SHOP**

Remember the Garden Shop when searching for unique gifts for any occasions. The Shop is stocked with puzzles, books, one-of-a-kind jewelry, shirts for all sizes (including baby onesies!) and more! Members receive a 10% discount.

**SHOP ONLINE @ [SHOP.NCBG.UNC.EDU](http://SHOP.NCBG.UNC.EDU)**



# Imperiled: Sensitive Jointvetch

BY MIKE KUNZ, NCBG DIRECTOR OF CONSERVATION

Sensitive jointvetch (*Aeschynomene virginica*) gets its name because its leaflets fold slightly when touched. It is an annual member of the legume family (Fabaceae) that grows in fresh to slightly brackish tidal marshes from New Jersey to northeast North Carolina, although the North Carolina populations are now likely gone. Listed as a threatened species under the Endangered Species Act, sensitive jointvetch has had significant decline in known populations, with fewer than 20 populations currently surviving.

Plants flower from July through September and can produce thousands of seeds through November. Despite this, populations often consist of fewer than a couple thousand individuals. Threats to this species include habitat alteration from dredging, filling or altering hydrology, and habitat loss from construction projects.

Sensitive jointvetch relies on tidal action to maintain its open habitat. However, climate change is potentially threatening this species as well. As sea level rises, tidal marsh water levels are drastically altered. Sea level rise also brings higher levels of salinity into the marsh. This salt water intrusion may be detrimental for the remaining populations as sensitive jointvetch relies on the open freshwater habitat.



**Sensitive jointvetch seedlings grow as part of our Plant Materials of the Atlantic Southeast program, planted at Lake Mattamuskeet National Wildlife Refuge.**

In 2021, the Garden worked with the US Fish and Wildlife Service to restore a population of sensitive jointvetch at Lake Mattamuskeet National Wildlife Refuge. Using seeds from the last known population in North Carolina, we grew plants to amplify the seeds available for restoration and seed banking, and we also grew plants for the reintroduction. To learn more about sensitive jointvetch, visit [ecos.fws.gov/ecp/species/855](https://ecos.fws.gov/ecp/species/855).



**FALL  
PLANT  
SALE**

**FALL IS FOR  
PLANTING!**

**MEMBERS' SALE:  
FRIDAY, SEPTEMBER 29  
GROUP A: 4-5:30 P.M.  
GROUP B: 5:30-7 P.M.**

Pre-registration required for a limited capacity (All NCBGF members will receive an email detailing the registration process.)

North Carolina Botanical Garden Foundation members enjoy the opportunity to register for the Members' Plant Sale! Both groups will have an amazing variety of native plant choices. In addition, we will have a shuttle bus running continuously from the Finley Fields parking lot to the Garden to accommodate off-site parking.

**FALL PLANT SALE:  
SATURDAY, SEPTEMBER 30, 9 A.M.-1 P.M.**

Choose from a wide variety of southeastern native wildflowers, shrubs, trees, vines, ferns, and native wildflower seeds at our annual sale. No timed entry or advance registration is necessary for Saturday.

## **BOOK SALE**

Drop by the Ritchie Bell Seminar Room during the Fall Plant Sale to find a wide selection of books on horticulture, plant identification, native plants, herbs, garden history, landscaping, gardening ideas, and design, all at bargain prices. Donated by members and kind supporters of the Garden, many of these books are duplicates of our library's collection. Sales of this wonderful array of books will support our library fund.

**MORE INFORMATION: [NCBG.UNC.EDU/FALL-PLANT-SALE](https://ncbg.unc.edu/fall-plant-sale)**





# Invasive Alert: **Nandina**

BY MIKE KUNZ, NCBG DIRECTOR OF CONSERVATION

Nandina (*Nandina domestica*), also known as sacred bamboo and heavenly bamboo, is not a bamboo at all. It is not even in the grass family, but in the barberry (Berberidaceae) family. You might recognize nandina from your neighborhood or the planting outside your grocery store or bank. Native to China and introduced to the US in 1804 for ornamental purposes, nandina is a commonly used landscape plant today. It flowers in May and June, with red shiny berries forming in the fall and persisting into the winter.

These fruits are the crux of the problem. The berries are commonly eaten by birds and spread from gardens in suburban areas into surrounding forests. Nandina is shade tolerant and reproduces by rhizome, so once it arrives in natural areas, it can form dense thickets and choke out native vegetation. Additionally, the fruits are known to contain cyanide. This means they are toxic to pets and wildlife, and have even been linked to death in cedar waxwings.

If you have nandina in your yard, consider removing it. Removal takes some persistence. Cut the stems close to the ground and immediately paint the stumps with concentrated herbicide, being careful to not affect other plants.

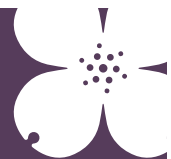
Once nandina is removed, consider replacing it with a great native shrub. Native haws (*Viburnum* spp.), spicebush (*Lindera benzoin*), holly (*Ilex* spp.), and the 2021 Wildflower of the Year, American beautyberry

(*Callicarpa americana*), are all great landscape plants that produce copious amounts of fruits for birds. If you still desire the red fall color or evergreen foliage as well as food for wildlife, consider chokeberry (*Aronia arbutifolia*) and inkberry (*Ilex glabra*), respectively. Evergreen options include Florida hobble-bush (*Agarista populifolia*), wax myrtle (*Morella cerifera*), and yellow anise-tree (*Illicium parviflorum*). You'll find many of these species for sale at our Fall Plant Sale on September 29 and 30. See page 16 for details about the sale.



**Nandina (*Nandina domestica*) easily spreads into natural areas, and its berries are poisonous to wildlife.**

## COMING IN 2024 **SAVING OUR SAVANNAS:** STORIES OF THE LONGLEAF PINE



Saving Our Savannas: Stories of the Longleaf Pine is a 6-month series of programs and events that honor the natural, cultural, and historic significance of these remarkable environments that are adapted to frequent fire, hold deep cultural significance, are the origins of the reference to Tar Heels, and extend across the southeastern United States from Virginia to Texas.

**[NCBG.UNC.EDU/LONGLEAF](http://NCBG.UNC.EDU/LONGLEAF)**





# Raney Preserve adds to Stillhouse Bottom Natural Area

We're excited to announce 25 acres ranked "exceptional" by the NC Natural Heritage Program have been added to the greater Stillhouse Bottom Natural Area, doubling its size. Our latest land conservation acquisition will be named the Raney Preserve after the former landowners who generously contributed to the purchase by offering the land as a bargain sale.

Adding this significant tract to the North Carolina Botanical Garden Foundation conservation preserves system takes us one step further in our hopes of a 100-acre Stillhouse Bottom Natural Area in southern Chapel Hill. It also adds to the Morgan Creek Bluffs Natural Area that connects with North Carolina Botanical Garden nature preserves along Morgan Creek, the New Hope Gameland, and wildlife corridor that extends all the way to the Atlantic Ocean through the Cape Fear River Basin.

The 2004 Inventory of Natural Areas and Wildlife Habitats for Orange County notes, "Stillhouse Bottom is the only undisturbed, steep, north-facing ravine left in Orange County." Over 100 plant species, vibrant bird species, and a healthy amphibian community thrive on this land. The 2019 Town of Chapel Hill Biological Monitoring Report indicates Stillhouse Branch, the stream running through the area, "could be mistaken for a mountain stream...probably due to the minimal development in the watershed."

The first European settlers in the Stillhouse Bottom area were the Merritt family, who used parts of their property for farming and select tree cutting. In the early 1960s, the land was purchased by the Morgan Creek Land Company, and part was sold to Duke Power. In 1967, Garden director C. Ritchie Bell inquired about purchasing the tract from Duke Power. They declined, but donated seven acres to the Foundation in 1985. Two years earlier, the Morgan

Creek Land Company donated an adjacent 10 acres to the Foundation. These 17 acres created the Stillhouse Bottom Nature Preserve, which became a state-dedicated nature preserve in 2001. Another seven acres was added in 2011 when the Foundation purchased the Ivey property. This preserve, along with the adjacent Raney Preserve and several conservation easements, puts hopes of a 100-acre Stillhouse Bottom Natural Area in southern Chapel Hill within reach.

Contributors to this significant land purchase include the Town of Chapel Hill, New Hope Audubon Society, 112 private citizens, and the North Carolina Land & Water Fund. Preserving this tract of land has been a goal of our conservation department since 1999, and there is no way to adequately express our thanks for the support that made this purchase possible. Currently, the preserve is not open to the public while we create a trail and map.

**Photos: Left: Raney Preserve. Right: Chapel Hill Mayor Pam Hemminger, NCBG Director of Conservation Programs Johnny Randall, Chair of the NC Land and Water Fund Board John Wilson, and NCBG Director Damon Waitt point to Raney Preserve on a map.**

## JOHNNY RANDALL RETIRES

Johnny Randall, director of conservation programs, retired at the end of June. For over 40 years, Johnny has worked tirelessly to protect plants and natural areas, to positively impact community decisions, and to teach others about the importance and beauty of nature. He is a botanist by training, and a naturalist and conservationist at heart, openly sharing his passion and wisdom with everyone around him.

At his retirement party, Johnny was awarded the Order of the Long Leaf Pine. Since 1963, North Carolina's governors have reserved this highest honor for persons who have made significant contributions to the state and their communities through their exemplary service and exceptional accomplishments. Congratulations, Johnny!

*Photo by Matthew Westmoreland for UNC Research*



If you would like to speak with someone about making a special gift to the Garden, call Stephen Keith at 919-962-9458 or UNC's gift planning experts at 800-994-8803.

# Your Gifts Build Community

BY STEPHEN KEITH, DIRECTOR OF DEVELOPMENT

More people are discovering the benefits of having a native plant public garden and managed natural areas in their community. The Garden continues to attract new visitors to enjoy the plant collections, engage with our exhibits, and participate in our educational courses, workshops, and lectures. With your support, the Garden will continue to engage the community in multiple ways to build a network of advocates to promote and preserve biodiversity.

The Garden has received many gifts in the last six months to assist with multiple mission-focused projects. **Lee and Libby Buck** organized a grant from the **Helen R. Buck Foundation** to provide funding to address several infrastructure improvement projects in Battle Park for the second year in a row. Improvements include new kiosks, an updated and improved map, trail enhancements, and upgraded infrastructure.

Gifts from **Burt's Bees Greater Good Foundation**, **Audrey Mellichamp**, and others sustain our Plant Materials of the Atlantic Southeast program at Mason Farm to produce seed for restoration projects across the region.

**The Chapel Hill Garden Club** presented the Garden with a second check to benefit the Children's Wonder Garden. This gift represented a portion of the revenue from the 2022 Chapel Hill Spring Garden Tour. Thanks to all the tour organizers and host gardens for their successful event which raised important funds for the operation of our Children's Wonder Garden.

For the fourth year in a row, the Garden joined **GiveUNC**, UNC-Chapel Hill's annual day of giving. **Director**

**Damon Waitt** issued a challenge for at least 100 donors to support the Garden within the 24-hour time frame on March 28. We had 129 donors to easily surpass the participation goal, raising over \$23K for the Garden and many of its programs.



You can help build a new arbor at the Coker Arboretum on the UNC-Chapel Hill campus.

After a delay during the pandemic, the planning, approvals, and construction blueprints are nearing completion to allow us to replace the iconic arbor in the Coker Arboretum. Last year, the Class of 1997 celebrated their 25th reunion with a recommitment to the Coker Arboretum. With the leadership of North Carolina Botanical Garden Foundation Director and Class of 1997 Senior Class President **Ladell Robbins**, the Class of 1997 raised over \$50K. With additional community and alumni support, plus a recent gift from **David Robert's estate**, we are getting closer to our fundraising need. We are grateful for **Matt & Rosemary Putnam**, owners of the **Dead Mule Club** in Chapel Hill, for hosting a summer gathering to raise awareness of the arbor project. The Dead Mule

Club has a history of hosting an annual Coker Arboretum benefit, and we also thank **Mediterranean Deli** and **Big Sam's Barbeque** for providing food for this reception. See the Garden's website for updated construction information and timelines at [ncbg.unc.edu/arbor](http://ncbg.unc.edu/arbor).

Local conservation advocates joined neighbors in southern Chapel Hill to successfully preserve land adjacent to Stillhouse Bottom Nature Preserve. In June 2023, we celebrated the decade-long effort to purchase the Raney Preserve. With 112 households participating and over 125 private donations, the NCBG Foundation received a **NC Land and Water Fund** grant and an open space grant from the **Town of Chapel Hill** to have all the funding needed to close on the property. We are still raising additional funds to implement management projects such as pedestrian trails, an information kiosk, and forest restoration. We welcome the community's continued participation.

The Carolina Moonlight Garden Party, the North Carolina Botanical Garden Foundation's largest annual fundraiser, was a resounding success as a "Make a Difference" segment and a live auction were added to the 2023 gala. An **anonymous donor** allowed the Foundation to contract with an auction company to lead an engaging auction-style segment. Our Carolina Moonlight planning trio of NCBG Foundation directors **James Joslin**, **Gail Perry**, and **Melanie Christian** worked for many months to prepare this jubilant gala. **Tom Kenan**, **Harriet & DG Martin**, and **Florence & Jim Peacock** served as Carolina Moonlight Honorary Chairs. Attendees were welcomed by Matthew Hart of **Mother Earth Brewing**, sponsor of the opening reception for the second

Continued on page 22.

# Thank you for choosing to honor or remember friends and family through a gift to the North Carolina Botanical Garden.

## Tribute gifts received between January 1 and June 30, 2023

### IN HONOR OF

#### Frederick Otten Behrends

Janet Hornberger and  
Walter Andrzejewski

#### Todd Boyette

James P. and Linda E. Srebro,  
for *Coker Arboretum  
Improvement Fund*

#### William R. Burk

Jeffery S. Beam and  
Stanley G. Finch, for *Coker  
Arboretum Endowment and  
Friends of UNC Herbarium*

#### Jay Patrice Capan

For a *Botanical Garden  
honorary bench*  
Ersan Capan  
Jeyhan and Sean Wood

#### Coker Arboretum Volunteers

Paul F. Grendler, for *Coker  
Arboretum Improvement Fund*

#### Cindy and Tom Cook

Stephen L. Keith and Lisa C.  
Glover, for *The North Carolina  
Botanical Garden Student  
Intern Fund*

#### Steven Glenn Feingold

Arthur Feingold and Linda L.  
Campbell, for *Battle Park  
Endowment*

#### Karen H. Fink, in celebration of her 85th birthday

For *Summer Camp Scholarships*  
Liz Robbins and Ricky Reif  
Wendy H. Robbins

#### Laura Frazier

Susan and Steve Skolsky,  
for *Coker Arboretum  
Improvement Fund*

#### Matt Gocke

Triangle Chapter of the North  
Carolina Native Plant Society,  
for *Horticulture Fund*

#### Corey Gradin

Donna Dagavarian and  
Geoffrey Mock

#### Nicholas MacKenzie Graham

James P. and Linda E. Srebro,  
for *Coker Arboretum  
Improvement Fund*

#### Judy Jones

Eliza M. Wolff

#### Stephen L. Keith

Elizabeth N. Strickland  
Jordan E. Wilkins  
Ryan L. Willis

#### Thomas S. Kenan III

Smedes and Rosemary York, for  
*Botanical Garden Foundation  
Gala*

#### Michael T. Lee

For *Friends of UNC Herbarium*  
Paul J. Harmon  
Ken Moore

#### Chris Liloia

Triangle Chapter of the North  
Carolina Native Plant Society,  
for *Horticulture Fund*

#### Lucy Ontario (my pug)

Betty Ono

#### Margo Lassiter MacIntyre

For *Coker Arboretum  
Endowment*  
Charlotte A. Jones-Roe and  
Charles E. Roe  
Susan and Dorlin Kerr

#### For Coker Arboretum

*Expendable*  
Walter W. and  
Catharine G. Burns, Jr.  
Chapel of the Cross  
Laura and John Cotterman  
Jean S. DeSaix  
Ronald and Susan DiFelice  
Judith Drost  
Ella L. Engstrom  
Paul F. Grendler  
Stephen L. Keith and  
Lisa C. Glover  
Michael and Catherine Lee  
Diane McOmie  
David R. Michaud  
Ken Moore and Kathy Buck  
Edward Murray IV and  
Spencer E. Schold  
Donna Nixon  
Christine and Bill Piscitello  
Bob Schreiner and Maria Salazar  
Ann K. Schwab  
Marty Schweitzer and  
Jody Bisbee  
Theresa M. and David A. Scocca  
Justin S. Séguret and Allie Omens  
Peter and Carolyn White

#### For Coker Arboretum

*Improvement Fund*  
Louise M. Clifford  
Mark C. and Jane M. Ritchie

For *The North Carolina  
Botanical Garden Student  
Intern Fund and Youth &  
Family Education Programs*  
Dan Stern and Rose Byrnes

#### Harriet Wall Martin

Grier and Louise Martin

#### Ingrid Massey

Joanna Massey Lelekacs and  
Bill Lelekacs, for *Coker  
Arboretum Endowment*

#### Michael Allison Maxwell, Sr.

Margot C. Lester, for *Coker  
Arboretum Endowment*

#### Carol Ann McCormick

Triangle Chapter of the North  
Carolina Native Plant Society,  
for *Horticulture Fund*

#### Katherine Meehan

Triangle Chapter of the North  
Carolina Native Plant Society,  
for *Horticulture Fund*

#### Nell Hatley Morton

Elizabeth C. and James S. Wells

#### Mary Hart Orr

Santiago M. and Mary Hart  
Orr Estrada, for *The North  
Carolina Botanical Garden  
Student Intern Fund and  
Youth & Family Education  
Programs*

#### Robert K. "Bob" Peet

Jeffrey and Jenny Peet, for  
*Botanical Garden FloraQuest  
Fund*

#### Sims Preston and Posy Stone

John K. and Sherene S. Min

#### Johnny Randall

For *General Support*  
Daniel W. and Jane L. Heuser

#### For Mason Farm Biological

*Reserve*  
Sara Childs  
Norman L. and  
Portia H. Christensen  
Barbara and Tom Driscoll  
Jennifer Greenhoot and  
Matt Daley  
Stephen Keith and Lisa Glover  
Paula J. LaPoint  
Joanna Massey Lelekacs and  
Bill Lelekacs  
Anna and Matt Lorenz  
Sims Preston and Posy Stone  
Milo Pyne and Alexa McKerron  
Peter J. and Margaret F. Schubert  
Rich Shaw and Holly Reid  
Perry Sugg  
Dale W. Suiter  
Alan S. Weakley and  
Julie P. Tuttle

#### For Natural Areas Endowment

Charlotte A. Jones-Roe and  
Charles E. Roe

#### For Stillhouse Bottom

*Natural Area*  
Ed Harrison and Pat Carstensen  
Gregg E. and Lori A. Ireland  
Audrey Mellichamp  
Ken Moore  
North Carolina Botanical Garden  
Foundation Conservation  
Committee members

#### Cindy Shea

Elizabeth Swiman, for *North  
Carolina Botanical Garden  
Director's Fund*

#### Dan Stern

Triangle Chapter of the North  
Carolina Native Plant Society,  
for *Horticulture Fund*

#### Claudia Templeton

Jane A. Gibb

#### Becca Wait

Triangle Chapter of the North  
Carolina Native Plant Society,  
for *Horticulture Fund*

#### Scott Ward

Ken Moore, for *Friends of UNC  
Herbarium*

#### Alan S. Weakley

Paul J. Harmon, for *Friends of  
UNC Herbarium*

#### Fran Whaley

Sara T. Pottenger  
Jason M. Whaley and  
Meredith M. Quinn

#### Clarence Earl Whitefield

Charlotte A. Jones-Roe and  
Charles E. Roe, for *Botanical  
Garden Development Capacity  
Fund*

### IN MEMORY OF

#### Carl William Anderson

Marsha and Tom Jepsen

#### Lois Anderson Annab

Marsha and Tom Jepsen

#### Louis Aronica

Rod Simmons, for *Friends of  
UNC Herbarium*

#### C. Ritchie Bell

John R. Bozeman, for *Friends of  
UNC Herbarium*

#### Mary Virginia Bender

Deborah E. Bender

#### Molly Corbett Broad

Stephen L. Keith and  
Lisa C. Glover  
Missy and Sam Rankin

#### Louise Moore Bryan

Charles I. Bryan

#### Claude J. Chauvigné

Fleeta Mae Chauvigné, for  
*Mason Farm Biological Reserve*

#### Elisabeth Kay Lanning Clements

Heather and Tiger Harris, for  
*Coker Arboretum Endowment*

#### Kate G. Coble

Rebecca S. Coble

#### Chicita Frances Culberson

Albert K. and Elizabeth H. Harris  
Charlotte A. Jones-Roe and  
Charles E. Roe, for *Friends of  
UNC Herbarium*  
Johnny Randall and  
Libby Thomas

#### John Stone Curtis

Linda N. Curtis

#### John E. Dodge

Katherine Delaney

#### Karen B. Elder

Glen H. Elder, Jr. and Sandy  
A. Turbeville, for *Botanical  
Garden Foundation Gala*

#### Dan K. Evans

Paul J. Harmon, for *Friends of  
UNC Herbarium*

#### Mary McKee Felton

Charlotte A. Jones-Roe and  
Charles E. Roe, for *The Mary  
McKee Felton Herbarium  
Internship Endowment*

#### Ken Frazier

Susan and Steve Skolsky,  
for *Coker Arboretum  
Improvement Fund*

#### Jean S. Harper

John R. Bozeman, for *Friends of  
UNC Herbarium*

#### Zelene Hart

Pansie H. Flood

#### Sarah Evarts "Sally" Haskell

Edward W. Billings  
John C. and Jennifer B. Boger  
Louise M. Clifford, for *Coker  
Arboretum Improvement Fund*  
Jeanne C. Harper  
John Haskell, Peter Haskell, and  
Tom Haskell, for a *Botanical  
Garden memorial bench*  
Betty B. James  
David H. Kiel and Amey S. Miller  
Timothy G. Logue  
Steven and Laurie Prentice-Dunn,  
for *Horticulture Fund*  
Anne Theisen  
Nancy L. Tunnessen

#### Georgette Hauck and Gertrude Crane

Emily Allred, for *Friends of UNC  
Herbarium*

#### Mercer Reeves Hubbard

Charlotte A. Jones-Roe and  
Charles E. Roe, for *The Herb  
Garden Endowment*

#### Mary R. Ishaq

Frances M. Allen, for *Botanical  
Garden Library*

#### Norman Kane

Tamsie and Staples Hughes

#### Caitlin Kennedy Kelly

Mildred G. Kelly

#### Jeanne and Conrad Kruger

Ken and Carol Horn

#### Jack Ralph Lamm

Susan and Allan Eure, for *Friends  
of UNC Herbarium*

#### Finley and Jean Lee

Michael and Catherine Lee

#### Steven Worth Leonard

John R. Bozeman, for *Friends of  
UNC Herbarium*

## MONTHLY GIFT

Support the Garden each month by establishing a recurring gift via your credit card. See the options on the Garden's giving page, or contact Stephen Keith at 919-962-9458.

**Harold F. Lindergreen**  
Lori S. Campbell

**Judith Logan**  
Greg A. Faris, for Coker  
Arboretum Improvement Fund

**Alan MacIntyre**  
Charlotte A. Jones-Roe and  
Charles E. Roe, for Coker  
Arboretum Endowment

**Charles C. Massey, Jr.**  
Joanna Massey Lelekacs and  
Bill Lelekacs, for Coker  
Arboretum Endowment

**Patricia Q. McElroy**  
Andrea R. and Robert E. Lewis,  
for Horticulture Fund

**Marshall Pully "Marsh" Mebane**  
Henry G. Grossberg, for Battle  
Park Endowment

**T. L. "Larry" Mellichamp**  
Audrey Mellichamp, for  
Stillhouse Bottom Natural  
Area and Native Plant  
Materials Development Fund

**Florence Melvin**  
Joseph T. Melvin, Jr.

**Carol Lasher Miller**  
H. Clay and Treva Miller III, for  
Living Plant Fund

**Robert E. Noble**  
Paul M. McKenzie, for Friends of  
UNC Herbarium

**Linda Brown Palladino**  
George and Ronnie Jackson

**Julie Mitchell Palmer**  
For Dr. Julie Mitchell Palmer  
Endowment for the Natural  
Areas  
John W. La Claire II  
Bonnie and Robin Worcester

**Pat Peavy**  
Franziskus Lepionka and  
Jennifer Lacroix, for Class of  
'97 Restoration

**Ruth Pinyan**  
Lisa and Gregory Rodgers

**Albert E. Radford**  
John R. Bozeman, for Friends of  
UNC Herbarium

**J.C. Raulston**  
Howard William Barnes, for  
Friends of UNC Herbarium

**Charles Buell Reddy**  
Donna S. Hart

**Linda Bray Rimer**  
Alan E. Rimer

**Francis Reid Senter**  
Jim Senter

**Henrietta H. Snow**  
John R. Bozeman, for Friends of  
UNC Herbarium

**Dixie Lee Boney Soo**  
Soo Foundation, for Friends of  
UNC Herbarium

**Helen Stedman**  
Mike and Jen Stedman, for  
Carolina Community Garden

**Barbara Lois Stiles and  
Bernice Stiles Wade**  
Paige S. Warren and  
Lynn S. Adler

**Madelyn Strickland**  
Elizabeth N. Strickland

**Nancy Clark Stronach**  
John R. Bozeman, for Friends of  
UNC Herbarium

**Cotton Sutton**  
Mary Clara Capel, for The North  
Carolina Botanical Garden  
Student Intern Fund

**Jan K. Symonds**  
Frances M. Allen, for Botanical  
Garden Library

**Nancy Tolley**  
Stuart G. Tolley

**Anne Dysart Varley**  
Sally Chamberlin, for Botanical  
Garden Conservation Fund  
Ellen Goodman and John Rudd  
Elise P. Guthridge  
Peggy and Bill Markham, for  
General Support and Seed  
Collecting Fund  
Ken Moore,  
for Seed Collecting Fund  
Kent R. and Miriam M. Mullikin,  
for The North Carolina  
Botanical Garden Student  
Intern Fund

Sandra A. Pearson, Mary and Bill  
Johnson, and Robert and Nina  
Pearson

**Sally Couch Vilas**  
High & Rubish Insurance Agency  
Stephen L. Keith and  
Lisa C. Glover  
Susan and Joseph Scharff  
Thomas R. Terry

**Elsbeth Utzig Walker**  
Martha A. Propst

**Laura Mayo Warren**  
Susan H. Ensign,  
for Battle Park Expendable

**Ida Robinson Wickham**  
Charles L. Wickham III

**Alice Zawadzki**  
Evelyn L. Caldwell

## DONOR SPOTLIGHT: MELANIE FORT CHRISTIAN LEARNING AND ENGAGEMENT TO BENEFIT CHILDREN

North Carolina Botanical Garden Foundation Director Melanie Christian wants more children to fall in love with nature. When Melanie joined the 2023 Carolina Moonlight Garden Party planning committee, along with James Joslin and Gail Perry, she steered the conversation to find ways to benefit the next generation of land stewards and policy makers.

Melanie is a great niece of Dr. William Chambers Coker, UNC-Chapel Hill's first botany professor and founder of the Coker Arboretum and the UNC Herbarium.

Melanie shared, "I grew up in Hartsville, South Carolina, in the same area as Great Uncle Will. My family greatly admired his ability to identify native flora and fungi, and he introduced me early to the idea of preserving native plants and habitats." When Melanie's cousin, Mary Coker Joslin, published the Essays on William Chambers Coker, a Passionate Botanist, Melanie purchased two boxes to share with friends and family.

Melanie continues her family's legacy of plant conservation and has served on multiple boards, including the NCBG Foundation since 2021. Melanie has a strong connection to the mission of the Garden, and also a keen interest in children's access to and education about nature. "As a child, my family taught me how to identify trees by their bark and leaves, we watched tadpoles morph into frogs, we listened for bird songs and

insect melodies, we studied bees and pollination, and of course, cultivated our own native plant gardens. I grew up in my own family-led Camp Flytrap!"

At the 2023 Carolina Moonlight, participants raised funds to help expand the Garden's Youth & Family programs, including Camp Flytrap, the very popular summer day camp for ages four to ten. Melanie wants more children to have access to the Garden's youth programs and stated, "Our climate-challenged world needs young people who understand the importance of preserving a balance between development and nature. I view Camp Flytrap as an important step in children's educational development to value and preserve nature." Thanks to Melanie's inspiration, the Garden has funds to expand our children's course offerings and Camp Flytrap well into 2024.

You can see more information about the 2023 Carolina Moonlight Garden Party at [ncbg.unc.edu/moonlight](https://ncbg.unc.edu/moonlight). And you can still make a gift to support our children's programs!



## MEMBERSHIP RECOGNITION

Director's Circle and Sustainer members provide aspirational annual membership support to champion our plant conservation mission. The following are members of the North Carolina Botanical Garden Foundation's top membership categories as of June 30, 2023. Thank you!

### Director's Circle (\$1,500)

Anonymous (2)  
Jim and Delight Allen  
Michael and Mary Andrews  
Terry and Ernest Ball  
Ann Louise Barrick and  
J. Elaine McNeill  
Ruth N. Benton and  
Tod A. Sedbrook  
Bruce and Dianne Birch  
Christopher E. Bogan and  
Mary Katherine Barnett  
Bob and Vicky Borden  
Cotton and May Bryan  
Låle Burk  
Claire Asa and John Butts  
John J. Calhoun and  
Catherine C. Morris  
Jinny Clancy  
Cindy and Tom Cook  
Robin and Lewis Davis  
Amy Helwig Dunlap and  
Ken Dunlap  
Shelley Earp  
Muriel Y. Easterling  
Louise C. Greene  
L. Clayton and Jane M. Harrell  
Anne F. Harris  
Charles and  
Jeanne Hecht  
Travis Hornsby and  
Christine M. Chu  
Mary C. Howes  
Eric and Emily Iverson  
David and Laurie Joslin  
James Joslin and Beth Hahn

Thomas S. Kenan III  
Jeffrey M. Lang  
Paula LaPoint  
Nan Lawton  
George and Judy Lockhart  
Paul and Mary MacDougal  
Geraldine A. McDowell  
Janis E. McFarland and  
Richard A. McLaughlin  
Mike and Elston Miles  
Beverly and Bob Murdock  
J. Victor Nadler and  
Newell Olson  
Jim and Melinda Ogburn  
Stuart and Linda Paynter  
Sue and Charles Plambeck  
Sims Preston and Posy Stone  
L. Richardson and  
Marilyn Jacobs Preyer  
Judith Rizzo and  
Arthur Kempton  
Frances P. Rollins  
Kathleen and Todd  
Shapley-Quinn  
Thomas O. Stair and  
Lucy H. Caldwell-Stair  
E. Preston Stockton and  
Diane Wise  
Charles V. Taft  
Sandy and Reaves Thompson  
Carol Tresolini and Tom Fiore  
Steve and Denise  
Vanderwoude  
James and Mary Wescoat  
Fran and Gary Whaley  
D.J. Wilson

### Sustainer (\$500)

Anonymous (2)  
Mary and Gary Anderson  
Amy C. Barr  
Betsy and Walter Bennett  
Patricia C. Beyle  
Kerry D. Bird and  
Ken R. Gahagan  
Barbara V. Braatz  
Stephanie C. and Jon D.  
Briggs  
Alice and John May  
Nathan A. Bryant and  
Katherine Meeks  
Nathan and Stephanie Byrd  
Katharine M. Chapman  
David and Anne Cottingham  
Jeffrey L. Dangel and  
Sarah R. Grant  
Van W. Daniel  
Janet and Jim Dean  
Mignon R. DeBerry  
John and Gail Dove  
Sara and Robert Euler  
Jim and Ellie Ferguson  
Kinsey C. Fisher and  
Andrew N. Zachman  
Gene G. Foster  
June K. Foushee  
Kim and Stephen Fraser  
Julie and Pete Gaskell  
Cami and Charles Gregg  
Jan Hansen and  
Susan Blackford  
Nellie I. Hansen and  
Ron R. Benson

Pat and Gene Holder  
Zachary W. Howell and  
Garret G. Hall  
Claire and F. Hudnall  
Christopher  
Richard K. Johnson  
Susan and Lewis Kellogg  
Jodie A. LaPoint and  
Chris Weymouth  
Karen Levine and  
Andrew Sisson  
Winston Liao and  
Carol Hazard  
Don and Caroline Lloyd  
Junella and John Macrae  
H. R. and Betsy Malpass  
Joel D Mattox and  
Karen Perizzolo  
Eugenie and  
Matthew McDonald  
Ross and Holly McKinney  
Peter and Prudence Meehan  
Cyrus L. Miller  
Susan and James Moeser  
Pauline and David Moreau  
Sally Murray  
Edward Neal  
Scottie and David Neill  
Linda W. Norris  
Charlotte Offerdahl and  
Grady Burgin  
Joey and Jennifer Okun  
Robert and Sheila Oliva  
Marian and Jeff Olson  
Nick and Amy Penwarden  
Ona and Peter Pickens  
Chris and Bill Piscitello

Allan and Carrie Porterfield  
Nancy and Ed Preston  
Jane B. Preyer and Lark Hayes  
Missy and Sam Rankin  
Jim Protzman and Jane Brown  
Deborah L. Reichert and  
Chanchal Samanta  
Alan Rimer  
Sharlie and Todd Robbins  
Sallie S. Robinson  
Brenda H. Rogers  
Michael K. Salemi and  
Ariana Pancaldo  
Margaret E. Scarborough  
Yolanda V. Scarlett  
Marika and Jonathan Schoolar  
David and Nancy  
Schoonmaker  
Tom and Margaret Scott  
Jane M. and Robert H. Slater  
Sherry L. Stuesse  
Michael and  
Dominique Toedt  
Barbara and Raul Tuset  
Mary Coker Vilas  
Patrick W. Wallace and  
Laurie E. McNeil  
Ralph and Barbara Warren  
Mal and Amanda Watlington  
Deborah and  
M. Holland West  
Peter and Carolyn White  
Floyd and Diane Whitney  
Tin-Lup and Sandy Wong  
Rosilene Ziegler

Continued from page 19.

year in a row.

Our dynamic program reviewed the funding need to complete the NCBG Student Intern Endowment and to expand Youth & Family programming for the community's children. Summer 2023 NCBG student intern **Jessica Hoyt** described her beneficial summer job experience, while **Tom Earnhardt** detailed the importance of teaching our children to love and respect the natural world. **Cindy Cook** reviewed the vision she and husband **Tom Cook** had in 2018 when they provided the seed funds for a new student intern endowment. We are grateful for the exuberance of the crowd to raise over \$50K during this segment.

The auction included two biodiversity-focused field trips led by NCBG staff members **Johnny Randall** and **Alan Weakley**. Tangible auction items included a spirits and brew package from **Mother Earth Brewing**, a catered dinner for 20 from **Catering by Design**, and a turned bowl from a black locust post from the former arbor at the Coker Arboretum crafted by the **Chapel Hill Woodturners**.

Thanks to 25 Event Host individuals and families along with multiple supporters and ticket purchasers, everyone helped raise over \$137K through Carolina Moonlight.

There are many ways you can share in our plant conservation mission. Visit our native plant collections, register for an engaging NCBG education program, participate in Garden outreach activities, support plant



**Beth Hahn, James Joslin, Lynch Christian, Melanie Christian, and Gail Perry enjoy the 2023 Carolina Moonlight Garden Party.**

research efforts, and enjoy the mental and physical health benefits of using the trails in the Garden's managed natural areas. But, we also count on you, our loyal and dedicated community, to ensure the Garden always has the resources necessary to make lasting impacts to promote and preserve biodiversity.

Thank you for your continued support. I welcome the opportunity to speak with you to discuss your philanthropic passions and life legacy.

Stephen Keith  
skeith@email.unc.edu  
(919) 962-9458

# THANK YOU, CORPORATE PARTNERS!

Corporate Partners are businesses who support the North Carolina Botanical Garden year-round by sponsoring the full year of signature events. Thanks to our 2022 Corporate Partners for their commitment to the Garden's success. If you would like to become a Corporate Partner, please contact Stephen Keith at 919-962-9458.

## NATURAL AREA STEWARDS



## HABITAT SUSTAINERS



## GARDEN SUPPORTERS



## MARK YOUR CALENDAR

September 16  
**Sculpture in the Garden  
Preview Party**

September 17-December 3  
**Sculpture in the Garden  
Exhibition**

September 29  
**NCBGF Members' Plant Sale**

September 30  
**Fall Plant Sale**

October 22  
**Fall Family Funday**

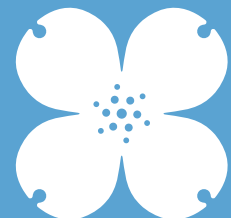
November 5  
**Jenny Elder Fitch  
Memorial Lecture**

November 17  
**NC Botanical Garden Foundation  
Membership Meeting**

December 2  
**Winter in the Garden  
NCBGF Member Holiday Party**

December 3  
**Winter in the Garden  
Craft Market**

For more information:  
[ncbg.unc.edu](http://ncbg.unc.edu)



**North Carolina Botanical Garden**

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