

NORTH CAROLINA
BOTANICAL
GARDEN

CONSERVATION GARDENER

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THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

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Callicarpa americana

American beautyberry

Illustration by Dot Wilbur-Brooks



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

Diversity in All Its Forms

BY DAMON WAITT, NCBG DIRECTOR

Dear Members and Friends,

As a member and friend of a science-based botanic garden focused on the conservation of plants, you, like me, are keenly aware that biodiversity is critical to a healthy and sustainable ecosystem. We know that biodiversity is not just important in rain forests and coral reefs. It is relevant in every ecosystem at every scale from the vast Siberian tundra to the microcosm of your own backyard. Biodiversity is the raw material that enables species to adapt and communities to be resilient to environmental change. Of course, you also know that humans are part of that biodiversity but even if you have a little bit of an anthropocentric world view, you likely realize that biodiversity provides you with the foods you eat, the medicines you take, and the energy you consume. With such a profound effect on all life, including our own, it should come as no surprise that we care so much about biodiversity.

As a scientist, I am always looking for parallels between the laws that govern the natural world and those that govern the social one. This is most likely a coping mechanism because I know a lot about the former and almost nothing about the latter. In my mind, if biodiversity is critical to a healthy and sustainable ecosystem, then human diversity is critical to a healthy and sustainable social system, relevant

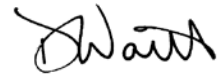
in every social system at every scale, and the raw material that allows us to adapt to social change. I recognize that this is a gross oversimplification of the inequities and complexities facing our society today, but it is the reason why the Garden has a role to play in the diversity, equity, and inclusion discussion and why “we are committed to creating an environment in our gardens and natural areas where everyone’s voice is heard and everyone feels safe and welcome.”

To that end, the Garden’s Diversity and Inclusion Committee with broad representation from across the Garden recently completed a preliminary diversity and inclusion strategic planning process with the help from experts at NC State University. As they wrote in the executive summary of our work,

“Connect with people in the community for the sake of connecting. True relationship building means that you connect to people without expectation of your own return. And from these relationships, true partnerships can begin to form. In those partnerships, together, programs and events can be developed that are both true to your visions of inclusivity AND cultural relevance to the groups with whom you are partnered.”

We are using this guidance as an open invitation to everyone who sees this letter. We are interested in building relationships with groups and individuals that represent diversity in all its forms, and those interactions and their input will guide what those collaborations look like. We are not calling on individuals or organizations to help us, but rather want to know how we can use the Garden’s assets to serve your needs.

Sincerely Yours,



PS. A note on Reopening

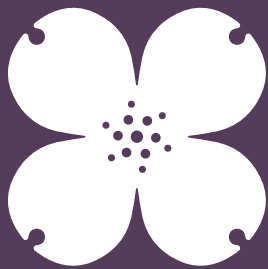
One thing we have all learned from this pandemic is that it is much easier to close a thing than it is to re-open one. While there is still much uncertainty in the world and our community regarding the pandemic, reopening the Garden for outdoor visitation on August 18 was the right thing to do. Now more than ever, people need a safe space, a community space, a place of respite and contemplation. I am confident we have performed due diligence to ensure the safety and well-being of our students, staff, volunteers, and visitors and look forward to welcoming you back into the Garden.

CONNECTING WHILE CLOSED

When our gates closed in mid-March, our team quickly switched modes to offer engaging content to our members and friends so we could stay connected at a distance. From a cookbook and virtual lunchbox talks to home-based activities and book lists, we tried to offer something for everyone. Find out more, and try some activities if you haven’t already!

[NCBG.UNC.EDU/CONNECTING](https://ncbg.unc.edu/connecting)





NORTH CAROLINA BOTANICAL GARDEN

North Carolina Botanical Garden

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Silver Linings

BY JENNIFER PETERSON, MANAGING EDITOR

As with most people, everything changed for me mid-March. My day-to-day schedule of collaborating with my coworkers in person suddenly switched to a world of Teams and Zoom, and my actual tasks turned from Garden events and other on-site projects to making sure we were communicating with our members and friends and providing them with meaningful virtual experiences.

My home life changed, too. Suddenly my evenings and weekends were not filled with driving kids to practices, meets, and rehearsals. I had long wondered what my life would be like in the coming years when I become an empty nester. I got a glimpse of my future self.

Turns out, when given a little more time, I plunge deep into the Garden's mission at home. Some of you may remember past letters where I bemoaned the English ivy and wisteria in my yard. Well, no more. I spent weeks pulling it out. And once I cleared the space, I put in an amazing native wildflower garden, or it will be in a couple years. Now, when I look at my yard, I don't frown at the wisteria and ivy in my

yard (although I do glare at vines starting to encroach from my neighbors' yards).

The pandemic has been difficult and scary, and the loss of life and economic problems have been depressing and overwhelming. I don't think there is much I will look back on with fondness when things return to some sort of normal. But I do think I will look at my little wildflower garden, and it will be a nice reminder that even in the worst of times, there can be some silver linings.

I hope this edition of the Conservation Gardener will help you find some silver linings, too. Read Catherine Bollinger's article (p. 6) to learn about easy wildflowers for your home landscape. Incorporate some untidy exuberance in your yard with Chris Liloia's article (p. 11). Or start collecting data for community science via iNaturalist with tips from Emily Oglesby (p. 16). With all the sadness and worry, we could all use some silver linings!

MEMBERSHIP SURVEY

We want to know what you think! The pandemic delayed our membership survey, but we are sending it out soon! Watch your mailbox in the coming weeks for information. Follow the instructions on the postcard, and provide us with your feedback.





ECO-TIPS DURING THE PANDEMIC

BY JANNA STARR, NCBG FACILITIES & EVENTS MANAGER AND SUSTAINABILITY OFFICER

In normal times, I am constantly exploring ways to reduce my environmental footprint. However, during this time of a global pandemic, it has been difficult to stay motivated to monitor my impact and inspire others to do the same, since my individual actions seem so insignificant. But months into this pandemic, I have realized we must believe our individual actions are still important, and our choices affect the environment, which in turn affect us. Our environment and public health are interconnected. When our earth heals, people and communities can also heal. So, I've been inspired to press on, and here are a few actions I think we can all explore to love our earth and each other a bit more during this time:

- Pick up three pieces of litter when you are out walking. Make sure to use gloves and wash your hands afterwards.
- Don't forget to bring your own bags! Research shows that single-use items are not inherently safer than reusables during the pandemic, and disposable items cause additional public health concerns once thrown away. If you bring your own bags to the store, clean them often and bag your own groceries. If you do end up using disposable plastic bags, remember to bring them back to the grocery store to be properly recycled.
- Eat through your fridge and freezer! At the beginning of the pandemic, many people stocked up on frozen and canned goods. See what you have on hand, and make sure it doesn't go to waste.
- Shop secondhand when possible. Consignment stores, thrift stores, and online secondhand markets are a great alternative to buying new.
- Support local businesses by getting takeout from your favorite restaurants! Make sure to leave a generous tip, too, if you can. Many restaurants are taking a financial hit during this time.
- Resist the urge to buy everything from Amazon, and instead support small businesses when possible. Want to be even MORE awesome? Support minority-owned and women-owned businesses!
- Start a compost pile or compost bin. This is a great way to turn your food scraps into a resource for your garden and reduce emissions, too, rather than transporting them to the landfill where food scraps emit harmful methane gas.

Cheers to striving for sustainability, even amidst a global pandemic!

Research Shows Lost Wildflower Grew Only in NC

BY EMILY OGLESBY, COMMUNICATIONS & EXHIBITS COORDINATOR

Thanks to research in the UNC-Chapel Hill Herbarium, part of the Garden, we now know that Appalachian Barbara's buttons (*Marshallia grandiflora*) was a distinct species that grew just in Henderson and Polk Counties in the Blue Ridge Mountains of North Carolina. And it has been lost forever.

Appalachian Barbara's buttons, a tall, intricate member of the sunflower family, hadn't been seen in North Carolina since 1919. Until now, it was presumed to be the same as a closely related species that continues to grow from Pennsylvania down to Tennessee. But when Derick Poindexter and Alan Weakley of the UNC Herbarium and Wesley Knapp of the NC Natural Heritage Program examined dried herbarium specimens of the lost North Carolina *Marshallia*, they found something striking: the North Carolina mountain species was demonstrably different from the surviving species.

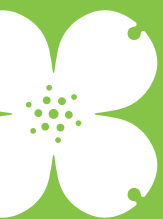
The surviving species is now renamed Monongahela Barbara's buttons (*Marshallia pulchra*), and it's extremely rare itself. The area of North Carolina where Appalachian Barbara's buttons once grew, south of Asheville, now bears the grim label of "extinction hotspot," as two other plants that grew only in that region have also gone extinct.

We can't conserve the precious biodiversity of North Carolina if we don't know what's here in the first place: that's why institutions like the UNC Herbarium are so critical.

Read more about the Appalachian extinction hotspot in an article in The Revelator at therevelator.org/extinction-hotspot-appalachia.



Herbarium specimen of Appalachian Barbara's buttons (*Marshallia grandiflora*)



Easy Native Wildflowers for your Home Landscape

BY CATHERINE BOLLINGER

Some people think of wildflowers as the blooms they see growing on the sides of roads. Others may think of the flowers they discover as they hike through forests and fields. In both cases, the blooming plants appear to occur naturally, hence the term “wild.” From the perspective of the botanists and ecologists at the North Carolina Botanical Garden, the wildflowers they focus on are perennial and annual plants native to the southeastern United States and especially North Carolina.

Benefits of Native Wildflowers

Because these flowers are native to our region, they are often more resilient in home landscapes than traditional non-native blooming plants, especially in the face of climate changes in temperature and rainfall. This resilience makes many wildflower species easier to grow, requiring less maintenance and no pesticides and fertilizers to flourish. Not only are many wildflowers easy to grow and beautiful assets to your landscape, their cultivation is increasingly critical to the survival of many native insect species, especially butterflies and moths, whose caterpillars provide food on which many native birds rely.

Critical Keystone Species

Douglas Tallamy, an entomologist at the University of Delaware, has written several popular books describing the critical relationship between native plants, insects, and the animals that rely on them. His most recent book, “Nature’s Best Hope,” describes his vision for saving our rapidly dwindling native animals and plants by transforming our lawn-dominated yards into native-focused landscapes. Tallamy has determined that across North America, a small percentage of plant species provide 90% of the food on which native insects rely. He uses the term keystone species to denote their critical role in maintaining native ecosystems. In his latest book, Tallamy encourages all landowners to incorporate keystone plant species in their landscapes.

Note: As you add more native plants to your landscape, expect to find holes in their leaves. This is an encouraging sign that insects, such as native leafcutter bees and caterpillars, are enjoying the food resource you provide. You should also soon notice an uptick in birds and other wildlife stopping by your yard to dine on insects and seeds. Personally, I think the cost of a few ragged leaves is more than repaid by an increase in caterpillar-reliant songbirds.

Ten Easy-to-Grow Wildflowers

Tallamy's keystone species list includes everything from native trees and shrubs to vines, flowers, and grasses, and ideally, every landscape should include as many of these components as possible. Here are some easy-to-grow native wildflowers that will add beauty to landscapes. This top-ten list covers a range of bloom times and growing conditions. Besides feeding pollinators, all ten are known to serve as food for native caterpillars. The first one – goldenrod – feeds enough species of caterpillars to be considered a Tallamy keystone species.



Black-eyed Susan (*Rudbeckia fulgida*).

Goldenrods (*Solidago* spp.) – Goldenrods have an undeserved reputation as the source of misery for fall allergy sufferers. However, goldenrod pollen is relatively heavy and does not float on the wind. The real culprit is an unassuming wildflower called ragweed, a member of the genus *Ambrosia*, that blooms at the same time as many of our lovely goldenrod species. Our native goldenrods are diverse, blooming over a long period, and varying in height, form, color, and growing conditions. Some are polite clumpers that will stay where you plant them, and some spread enthusiastically.

Members of this genus are top Tallamy keystone plants, known to support 102 species of caterpillars. And if you've ever seen a patch of goldenrod in full glorious bloom, you know that the flowers attract an enormously diverse array of pollinators – and predatory insects and arachnids that stop by to snack on a few pollinators. In the tables that accompany this article, you'll see several goldenrod species listed, but your options go far beyond those. There's even a white goldenrod – *S. bicolor*. Two of my favorites that demonstrate the range of this genus are *S. rugosa* 'Fireworks,' a floriferous beauty that blooms from late summer through fall, and *S. sphacelata* 'Golden Fleece,' a low-growing cultivar with heart-shaped leaves that blooms over the same time period.

I did not realize how many species of caterpillars rely on goldenrods until recently. Now that I do, I'm busy converting an open hillside of lawn into a goldenrod-dominated patch of wildflowers that I hope will serve as an all-you-can-eat buffet for local insect species. By next fall, it should be spectacular. I can hardly wait!

Ironweed (*Vernonia* spp.) – Purple-blooming ironweeds are a diverse genus of wildflowers known to support 21 caterpillar species. As is true of goldenrods, there's an ironweed species suitable for almost



any landscape. In my yard, ironweed flowers are one of my top butterfly attractors. A vigorous species I like is New York ironweed – *V. noveboracensis*. It blooms from mid-summer through fall. If grown in full sun, it will need a bit of extra moisture during dry periods.

Black-eyed Susan (*Rudbeckia fulgida*) – Most folks know this long-blooming wildflower. Its genus, *Rudbeckia*, provides an enormous array of flower forms and colors and is known to support 16 caterpillar species. An annual form, *R. hirta*, begins blooming a bit earlier than its perennial cousins. It self-sows so freely that I rely on its yearly reappearance in my garden – although I never know where it may pop up.

Fall-blooming Asters (*Symphyotrichum* spp.) – Personally, I think there's always room for at least one native aster species in every southeastern

landscape. Varying subtly in color and form, they bloom throughout the fall, attract all sorts of fascinating pollinators, and they are known to provide food for 11 caterpillar species. Many asters are quite drought-tolerant.

One of my favorites is *S. oblongifolium* 'October Skies,' a low-growing spreader that flowers so enthusiastically you can barely see its leaves when it is blooming.



Eastern Columbine (*Aquilegia canadensis*) – This workhorse of a wildflower blooms from early spring through early summer, is drought-tolerant, and will sow itself enthusiastically if you let its seeds mature.



I grow this wildflower in several parts of my landscape. In full sun in one of my pollinator gardens, it blooms nonstop for months, providing a key early nectar source for returning Ruby-throated hummingbirds. On a shady, bare slope, I'm using it as a long-blooming groundcover. Its taproots anchor the soil to slow erosion. Besides its popularity with pollinators, this wildflower feeds 10 species of caterpillars.

Left: A wheelbug on *Solidago*. Photo by Catherine Bollinger



Summer Phlox
(*Phlox paniculata*)
– The genus *Phlox* offers species that bloom at various times and prefer varying growing conditions, and it is known to feed seven species of caterpillars.

Summer Phlox thrives in sun or part shade and blooms from summer through early fall.



Lobed Tickseed
(*Coreopsis auriculata*) – This summer bloomer pushes out an impressive number of bright yellow flowers beloved by pollinators. Its genus is known to

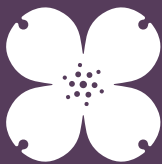
feed six species of caterpillars. The genus *Coreopsis* offers an array of options suitable for many landscapes.

Cardinal Flower (*Lobelia cardinalis*) – This long-blooming native of floodplains can handle full sun if kept moist. It also blooms well in shade. It produces towering spires of deep scarlet tubular flowers enthusiastically visited by Ruby-throated hummingbirds and an array of butterflies. It blooms from late summer through fall, and feeds six caterpillar species. In addition to flower beds



Joe-Pye Weed (*Eutrochium* spp.) with tiger swallowtail butterflies. Photo by Tom Scheitlin

“across North America a small percentage of plant species provide 90% of the food on which native insects rely.”

**FALL
PLANT
SALE**

We will have a fall plant sale this year but, based on the University’s COVID-19 guidance for gatherings, it will be very different from years past. We have created a special, online sale of about 150 species, exclusively for members.

In order for staff to be able to follow social distancing guidelines and because we anticipate a high volume of requests, we need to spread the sale out over several weeks. Starting September 14, our members can sign up for the week they would like to participate in our online sale at [NCBG.UNC.EDU/FALLSALE2020](https://ncbg.unc.edu/fallsale2020). At the beginning of your plant sale week, we will email you a password and link to our online order form where you can view our current availability and place your order. As a thank you for your support, we will include a special NCBG item with each order placed.

[NCBG.UNC.EDU/FALLSALE2020](https://ncbg.unc.edu/fallsale2020)

and naturalized areas in my yard, I also grow this one in pots on my deck. When it blooms, the hummingbirds visit the potted cardinal flower as often as they go to feeders.



Joe-Pye Weed

(*Eutrochium* spp.) – The species that naturally occurs in my yard is Hollow-stem Joe-Pye Weed, *E. fistulosum*. It can be quite tall and a bit gangly. However, many cultivars of this genus are available. Most grow a bit shorter and are profuse bloomers. The ones that bloom in my pollinator garden usually attract dozens of butterflies. Most species of Joe-Pye weed prefer moist soil, but *E. purpureum* tolerates drier conditions. The genus feeds two species of caterpillars and blooms from mid-summer through fall.

Purple Coneflower (*Echinacea purpurea*) – This sun-loving native of prairie habitats blooms enthusiastically throughout the summer. Numerous cultivars make it possible to grow it in an array of colors, but I am partial to the original purple species color and its white-blooming version. Pollinators fight over the chance to visit this beauty. When seeds in the central cones ripen, finches battle over access to those tasty morsels. This wildflower feeds one species of caterpillar, and adapts happily to any sunny garden area.



It is absolutely possible to design a lovely mix of native wildflowers suitable for any growing condition your landscape may offer. In addition to the ten listed above, the following three charts offer you more options. For those of you who live under trees with very little sun, there's a table of wildflowers

that require that habitat. Spring ephemeral wildflowers – those that bloom before deciduous trees leaf out and finish their life cycles as the canopy closes above them for the summer – offer diverse forms and colors. Some, such as trilliums, can be tricky to establish, but the ones in the first table are a bit easier to grow.

The next table offers a list of wildflowers that prefer sun to part shade. Those that prefer a specific moisture level are noted.

The final table offers a short list of sun- and moisture-loving wildflowers that are easy to establish. If you have a sunny moist spot in your landscape, these plants would be ideal choices for a rain garden in that location.

More Wildflower Resources

These lists are not exhaustive. I derived them by scrutinizing lists from local experts. The New Hope Audubon Society's website is an invaluable resource that identifies lists of native plants that best support wildlife, including identifying Tallamy's keystone species. You'll find their recommendations under the "Conservation" tab of their Web site – newhopeaudubon.org.

Another resource worth studying is the website of the North Carolina Native Plant Society – ncwildflower.org. You can customize search parameters to suit your interests. Results include categories that identify which species are readily available and recommended for homeowners and which species most benefit wildlife.

Finally, the website of the North Carolina Botanical Garden – ncbg.unc.edu – offers much valuable information. Visit the "Resources for Gardeners" section under the "Plants" tab.

Catherine Bollinger is a lifetime resident of North Carolina, where she has worked as a writer and gardened ardently for over half a century. On Facebook and her blog, she writes as Piedmont Gardener – www.piedmontgardener.com.

Find interactive tables with growing information and photos for each species at NCBG.UNC.EDU/EASYWILDFLOWERS.

Shade-loving Spring Ephemerals

Common Name	Scientific Name	Bloom Time/Notes
Wild Ginger	<i>Asarum canadense</i>	mid-spring
Jacob's Ladder	<i>Polemonium reptans</i>	mid- to late spring/moist soil best
Solomon's Seal	<i>Polygonatum biflorum</i>	mid- to late spring
Bloodroot ***	<i>Sanguinaria canadensis</i>	early to mid spring/moist soil best
Foamflower	<i>Tiarella cordifolia</i>	mid- to late spring/moist soil best
Large-flowered Bellwort	<i>Uvularia grandiflora</i>	mid-spring/moist soil best
Solomon's Plume***	<i>Maianthemum racemosum</i>	mid- to late spring/moist soil best

*** Known to support native caterpillar species

Wildflowers for Sun to Part Shade

Common Name	Scientific Name	Bloom Time/Notes
Green and Gold	<i>Chrysogonum virginianum</i>	mid- to late spring/groundcover
Threadleaf Coreopsis***	<i>Coreopsis verticillata</i>	late spring to mid summer
Purple Coneflower***	<i>Echinacea purpurea</i>	summer
Boneset***	<i>Eupatorium perfoliatum</i>	late summer to fall/moist soil best
White Wood Aster***	<i>Eurybia divaricata</i>	mid-summer to fall
Southern Sundrop***	<i>Oenothera fruticosa</i>	spring to summer
Golden Ragwort	<i>Packera aurea</i>	spring/groundcover
Fall Phlox***	<i>Phlox paniculata</i>	mid-summer to fall/moist soil best
Eastern Blue Phlox***	<i>Phlox divaricata</i>	spring/moist soil best
Mountain Mints***	<i>Pycnanthemum spp.</i>	summer/moist soil if in full sun
Green-headed Coneflower***	<i>Rudbeckia laciniata</i>	mid-summer to mid-fall/moist soil best
Brown-eyed Susan***	<i>Rudbeckia triloba</i>	summer to early fall
Hoary Skullcap	<i>Scutellaria incana</i>	summer to early fall
Axillary Goldenrod***	<i>Solidago caesia</i>	mid-summer to early fall/moist soil best
Anise Goldenrod***	<i>Solidago odora</i>	mid-summer to mid-fall
Stokes Aster	<i>Stokesia laevis</i>	through summer if remove spent blooms
Large-flowered Aster	<i>Symphyotrichum grandiflorum</i>	fall/some shade best
Smooth Blue Aster	<i>Symphyotrichum laeve</i>	fall
Narrowleaf Ironweed***	<i>Vernonia angustifolia</i>	summer to early fall

*** Known to support native caterpillar species

Wildflowers for Sunny Moist Sites

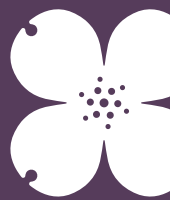
Common Name	Scientific Name	Bloom Time/Notes
Purple-headed Sneezeweed	<i>Helenium flexuosum</i>	summer
Swamp Sunflower***	<i>Helianthus angustifolius</i>	late summer to fall
Crimson-eyed Rosemallow***	<i>Hibiscus moscheutos</i>	summer to early fall
Sessile Blazing Star***	<i>Liatris spicata</i>	summer to fall
Great Blue Lobelia	<i>Lobelia siphilitica</i>	summer to fall/tolerates part shade
Bee Balm***	<i>Monarda didyma</i>	summer to fall/tolerates part shade
Wild Bergamot***	<i>Monarda fistulosa</i>	summer to fall/tolerates drier sites
Smooth Phlox***	<i>Phlox glaberrima</i>	spring to early summer/tolerates part shade
Obedient Plant	<i>Physostegia virginiana</i>	summer to fall/tolerates part shade

*** Known to support native caterpillar species



Staff Pick: Untidy Exuberance

BY CHRIS LILOIA, HABITAT GARDENS CURATOR



For some fall garden exuberance, try rough-leaf goldenrod (*Solidago rugosa* 'Fireworks') and obedient plant (*Physostegia virginiana*) with American beauty berry (*Callicarpa americana*). None of these plants are notable for demure behavior, and when you put them together, you can expect a scene.

This generous trio will take full advantage of a sunny spot with moist to average soil. The opposite branches of the beauty berry shrub will be arching with the weight of hot pink clusters of fruit at the same time that 'Fireworks' glows in gold and the anything-but-obedient plant opens its myriad pink blooms. It is a lot of color! Both rough-leaf goldenrod and obedient plant spread by rhizomes, so if they're happy, you can expect them to become more abundant over time. People who are familiar with this characteristic of obedient plant might be puzzled by its name, but the one obedient thing about this showy spreader is the individual flowers, which can be positioned on the stem to suit one's whims.

It's true that all three have a bit of a reputation for being unrestrained, but sometimes that's just what a garden needs. The birds and the bees won't mind a bit.

Top: The leaves of beauty berry provide a nice contrast to the bright fruits. When they take on their fall color they turn chartreuse, which is especially striking with the hot pink.

Middle: One of obedient plant's best characteristics is its long bloom time. It is also fairly shade tolerant.

Bottom: The cultivar 'Fireworks' was introduced by NCBG in 1993 and continues to be popular with people and pollinators.

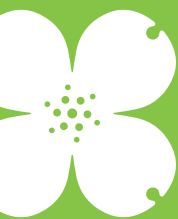
NORTH CAROLINA BOTANICAL GARDEN



Black lives matter. At the North Carolina Botanical Garden, we stand in solidarity with those calling for accountability and justice. We share your sorrow and anguish over the deaths of George Floyd, Ahmaud Arbery, Breonna Taylor, and David McAtee, and over the tragic reality that these are only the latest instances in our country's long history of violent racism.

Environmentalism, land conservation, and public gardens in the U.S. have long been framed from a white perspective, often at the expense of people of color. We acknowledge the continued impact of this history — that for people of color, today's gardens, parks, and natural areas may not be neutral, apolitical, or restorative spaces.

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



Reckoning at the Garden: Diversity, Equity, & Inclusion

NICK ADAMS, BATTLE PARK MANAGER

We made this statement back in early June in support of the Black Lives Matter movement. This statement was met with a lot of support... and a few questions, especially about framing environmentalism and land conservation from a white perspective. In response, we are writing a series of articles to share with you examples of systemic racism in environmentalism and land conservation, including policies and actions implemented by institutions large and small to actively exclude Black, Indigenous, and People of Color (BIPOC). Once we talk about the big picture, we can reckon the ways the Garden has benefited from systemic racism. Ultimately, we are counting on transparency and knowledge to move us forward to become an actively inclusive institution.

This first article is a brief introduction to racism issues in conservation and the Garden's history. In later articles, we will explore these issues in more detail,

including the birth of environmentalism and its interconnectedness with the social climate of the time, dispossession of land, exclusionary practices on lands protected for the sake of the public, and the Garden's strategy to become an actively inclusive institution. In each section, we will examine how the Garden's story relates to and can improve from the knowledge we gain from this process.

The Garden has discussed our growing concern over the visible and conspicuous lack of participation by diverse groups in our membership, visitors, volunteers, program participants, and staff for years. In spring of 2019, we created our diversity and inclusion committee to delve into this problem and attempt to find solutions. The primary goal of the committee is to formulate a strategy to become an actively inclusive institution. While the door has theoretically always been open to people of all backgrounds due

to our status as an outreach-focused public garden, in reality, simply leaving a door open for marginalized groups is not an effective way to include marginalized groups. There is a large body of research which characterizes why and how BIPOC were actively excluded from the environmental and conservation movement, and why and how they still do not feel included today, such as "Black Faces, White Spaces: Reimagining the Relationship of African Americans to the Great Outdoors" by Carolyn Finney.

The North Carolina Botanical Garden is a place of refuge, recreation, and learning, and each visitor sees the Garden through a unique lens. There is a great convergence of understanding and appreciation for the story we try to tell as an institution, regardless of the lens. That story begins with the plants of the Southeast and particularly North Carolina, and it adheres to a notion that the natural landscape of North Carolina

is an immense garden. The story grew over time to encompass the diversity of life that native plants support and benefit, as well as to emphasize reconnecting people with plants through food, therapy, and art.

We acknowledge the real benefits land conservation and environmentalism have provided to many citizens in this country over decades. We are grateful to the benefactors who helped make this Garden become a reality. However, we would also like to understand and acknowledge the social costs that led to the establishment of the Garden. To understand our history, it is helpful to understand the history of many public outdoor spaces and the genesis of the exclusionary policies and practices that led to the establishment of those spaces. Many exclusionary policies and practices are still in place today and serve as an obstacle to many groups.

Here at the Garden, there is a more complete story to tell about our own history. By telling that story, we hope to engage more community members and enrich the Garden experience by welcoming those who have been excluded to contribute to the story. One way we can tell the full story is to acknowledge and interpret the social history of the Garden's land.

According to Kemp Plummer Battle's History of the University of North Carolina, "Mark Morgan, one of the earliest settlers, lived on his lands, bought of Earl Granville, three miles southeast of the village, the land reaching to the summit of New Hope Chapel Hill. Of his two sons John moved west in 1823, and Solomon lived and died on the homestead. Half of his land, about 800 acres including the homestead,

descended to his daughter, Mary Elizabeth, the wife of Rev. James Pleasant Mason. She bequeathed it to the University to found a fund in memory of her daughters, Martha and Varina, who died within a month of one another."

This tale leaves us with many questions. Who was here contributing to the land use and stewardship on behalf



An enslaved person's grave at the Morgan/Mason Family Cemetery. It was customary to place a large stone behind a smaller field stone that marks the grave.

of and with the Morgans and Masons? Who lived here before the Morgans? And, throughout, in an attempt to maintain one major purpose of a botanical garden, what was the story of plants during those times? How were plants regarded and used by the people who lived here? This is one set of questions we can ask to help inform our interpretive materials moving forward.

As we acknowledge the past and understand how the Garden arrived here, we ask questions that are both simple and ponderous. How was the story of the Garden shaped? How does it fit into the environmental and land conservation narrative? How were those narratives shaped? And, how can we add to the Garden's narrative in the spirit of acknowledging that there is a deeper story to tell?

We don't have the answers to all of these questions, but we are embarking on a journey of discovery. We are intent on sharing with you, our members and friends, the deeper history of

the land by pondering the sense of the Garden's place, and, of equal importance, providing examples of exclusionary practices that are embedded in the environmental and land conservation culture, as we strive to become a more inclusive institution. This is a learning process, and we encourage you to email us at ncbg@unc.edu with suggestions.



HEIRLOOM SEEDS - SAVING STORIES, PRESERVING BIODIVERSITY

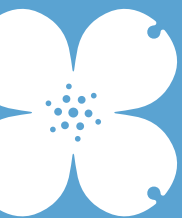
FITCH
LECTURE

NOVEMBER 1; 2:30 - 3:30 P.M.

Interest in growing organic and sustainable gardens has skyrocketed during the pandemic, evidenced by shortages of seeds and vegetable starts. Join us as visionary seed saver, storyteller, and former NCBG volunteer Ira Wallace explores how tradition, taste, place, and storytelling work to preserve biodiversity, regional food traditions, and seed saving. She will share stories of seeds and the gardeners who save them for great heirloom varieties like Greasy beans, Cherokee Purple, and Radiator Charlie's Mortgage Lifter tomatoes.

This free annual lecture, made possible through a gift in memory of Jenny Fitch, a local plant enthusiast and passionate gardener, has brought a renowned gardener or horticulturist to Chapel Hill each year since 1999.

DETAILS AT NCBG.UNC.EDU/FITCH



Saving the Crystal Skipper

BY JENNIFER PETERSON, ASSOCIATE DIRECTOR OF COMMUNICATIONS

The crystal skipper (*Atrytonopsis quinteri*) is a rare butterfly. In fact, it is so rare, it's only found on the Crystal Coast in North Carolina, specifically, a region stretching from Fort Macon State Park to Hammocks Beach State Park. Long thought to be a variation of the Loammi skipper (*A. loammi*) which is found farther south, it was identified as its own species in 2015. As with many insects, the crystal skipper relies on specific plants for survival, especially its host plant, seaside little bluestem (*Schizachyrium littorale*) and other plants in the barrier island dune system that provide nectar.

The state parks at either end of the skipper's range have an adequate supply of seaside little bluestem and will not be developed anytime soon. But coastal development, landscaping choices, and increased storm intensity have diminished dunes in both number and health. Along most of the islands, patches of seaside little bluestem remain to support the skipper and are important for connecting populations via "stepping stones." Dune restoration efforts often provide recreational uses and storm protection but have little focus on inner dune vegetation, resulting in less habitat for the skipper.

A survey conducted by North Carolina Aquariums and NC State University as part of the Coastal Landscapes Initiative found a decrease in seaside little bluestem from 2018 to 2019. The losses were likely a result of scouring during Hurricane Florence, and overwash from the hurricane also left significant bare ground at several sites. This study did not count all nectar plant populations, but it is probable some also experienced decreases. The coinciding skipper surveys showed fewer butterflies during the spring and summer flight periods.

To ensure a thriving crystal skipper population in the future, it is important to preserve and restore their host and nectar plants, however, seaside little bluestem and nectar plants are not readily available from nurseries. This is where the North Carolina Botanical Garden and our Native Plant Materials Development Program (NPMDP) come in.

Species of plants can vary regionally. For example, a butterfly milkweed plant in Wisconsin has adapted to the climate of the upper Midwest. Its seeds may not be able to survive and grow well in North Carolina. It is important to restore landscapes with seeds that are genetically appropriate to the space, even within species.

The NPMDDP is working to collect local seed and propagate plants for use in local restoration efforts throughout North Carolina. So, last fall, with cooperation and a collecting permit from NC State Parks, NCBG staff Mike Kunz and Emma Marzolf, NCBG interns, Gloria Putnam from NC Sea Grant, Carol Price from NC Aquariums, and Ben Fleming from NC State Parks collected seed at Fort Macon State Park. Funding was provided by NC Sea Grant. These seeds have been cleaned, stored, and propagated here at NCBG. Trays of seaside little bluestem and nectar plants are growing in Chapel Hill, and they will move to their new home along the coast this fall to restore degraded dunes and hopefully provide habitat for skippers next spring.

In addition to planting habitat for the skipper, education is also an important part of this project. Landowners, including owners of beach houses and hotels, don't usually landscape with native plants. This project seeks to illustrate that home and hotel landscapes are part of the larger conservation picture, encouraging landowners to develop a landscape that supports the local ecosystem in addition to looking beautiful.

To do this, the group is establishing a highly visible dune skipper plant garden, and they will present information to landowners through presentations to garden clubs and resources for master gardeners. Since dune plants are usually not available for purchase, the goal will be to encourage landowners to recognize the beauty and importance of native plants and to maintain habitat that is already in place.

Restoring native vegetation to the dunes is just one piece of the puzzle to conserve the crystal skipper. Several research questions remain, and would make excellent projects for interested graduate or undergraduate students. "We are especially interested in how hurricanes affect the skippers and aim to support their recovery after storms with targeted habitat restoration in case they can't manage on their own," says Price. "Ian Grace, one of my NC State University student interns, laid the groundwork for this research. We could really use a student to take the reigns of this project as their first priority."

This project was funded by a grant from NC Sea Grant and supported by the NPMDDP at NCBG. NC Sea Grant, NC Aquariums, NCBG, NC State Parks, NC State University, the US Fish and Wildlife Service, and the Master Gardeners Program collaborated on this project.

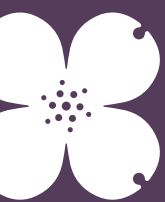


Left: The crystal skipper is named for both the region it is found in (the Crystal Coast of North Carolina) and for the white, crystal-like markings on its wings.
Photo by NC Aquariums

Top right: A prickly pear grows in Chapel Hill. One of many nectar plants for pollinators, it will be transplanted to the Crystal Coast this fall.

Right: Staff from NCBG, NC Aquariums, NC State Parks, and NC Sea Grant collect seeds to restore habitat for the crystal skipper.
Photo by NC Aquariums





Community Science with iNaturalist

BY EMILY OGLESBY, COMMUNICATIONS & EXHIBITS COORDINATOR

You walk slowly along a sun-dappled path, stream to your left, beech trees rising up the hill to your right. You scan the herb layer: Virginia creeper, tick-trefoil, some young tulip tree seedlings — the usual suspects. But then, in the corner of your eye, a flash of red. A small patch of fire pink flowers (*Silene virginica*) is unmistakable up ahead. You get close and snap a photo, saving it for later.

To the average observer, you're just a slow-moving hiker, maybe one with a passion for smartphone photography. But they're missing the bigger picture: you're on a critical wildlife documenting mission, noting any plant, animal, or fungus that catches your eye.

The goal: create research-quality observations for scientists working to better understand and protect nature – and learn to identify the plants and animals you're seeing yourself! The method: iNaturalist.

iNaturalist, with both a smartphone application and a standard website interface, is a free community science program that lets you record and share photos or observations of nature. You can identify them yourself, use iNaturalist's artificial intelligence model to narrow things down, or let other expert users from around the world identify what you've spotted.

Even if you're not interested in posting observations yourself, you can use iNaturalist to determine where others have seen a particular species. Say you want to know where in North Carolina people have observed bloodroot (*Sanguinaria canadensis*), the spring ephemeral woodland wildflower. You can search iNaturalist by species and location. If you're an expert at identifying a particular species, whether it's a bird or tree or insect, you can also participate by helping others figure out what they've seen.

Thanks to its robust search options, iNaturalist also serves as a helpful record-keeper of your adventures. Trying to remember where you saw a particular bird? Search for that species in your observations. Want to see what you have come across in Octobers past? Filter your search by month or day.

* * * *

I've never played Pokémon Go, the augmented reality game that lets you find and capture virtual creatures – Pokémon – who appear on your screen as if they were standing on the ground in front of you. But I'd like to think iNaturalist provides the same thrill, the same urge to keep going, to find more species, with the added benefit of contributing to scientific knowledge around the world. If you're like me, you end up competing against yourself to find species you've never

Left: Turk's-cap lily (*Lilium superbum*) in the mountains.

seen and get as many quality observations as possible. I've lost count of how many times I have audibly gasped upon seeing a species in the wild for the first time. Eastern bluestar (*Amsonia tabernaemontana*), cardinal flower (*Lobelia cardinalis*), Turk's-cap lily (*Lilium superbum*), and scarlet bee balm (*Monarda didyma*) are a few that come to mind. I even have dreams about finding species I haven't seen and photographing them for iNaturalist!

It's also a learning tool: when I first started working at the Garden, I didn't know much about the wonderful native insects that live in and around our native plants: bee, wasp, beetle, ant, or butterfly was as close as I could get. But I would take pictures of the insects I was seeing and upload them to iNaturalist. Slowly, thanks to the help of expert identifiers and to iNaturalist's artificial intelligence model, I began to see patterns. The common yellow and black butterfly? Eastern tiger swallowtail. The large bee with the shiny abdomen? Eastern carpenter bee. And so on.

As of July 2020, over 1.1 million iNaturalist users have contributed over 46 million observations of plants, animals, and other organisms around the world. Although those casual observations don't take the place of formal field surveys or species monitoring, scientists are discovering new ways they can come in handy.

Scientists can use iNaturalist observations to track the spread of invasive species, like David E. Bowles of Missouri State University, who used iNaturalist observations to show how the introduced Japanese burrowing cricket has continued to spread north and west in North America.

Researchers can also use photographs from observations to track changes in bloom time, an important indicator of climate change. Researchers from the University of Florida found that data about flowering time extracted from iNaturalist observations matched up with data from more formal tracking programs, and it was available at a much larger scale. Their takeaway was that as long as scientists used methods that took into account the inherent biases of a community science platform, these observations could be a valuable resource in understanding how climate change is affecting plants.

iNaturalist also allows scientists to enlist community members into the research process itself. Our conservation department recently began a Native Plant Materials Development Program to grow local ecotypes, or versions, of native species for habitat restoration around the Southeast. That process begins with collecting the seeds (with permission) from local sites with a bountiful population of a given species so as not to harm that population's survival. The Native Plant Materials Development Program uses an iNaturalist project to catalog observations of plants that might be a good fit for seed collection. Members of the public can add observations that may end up contributing to native plant restoration in our area.



iNATURALIST TIPS

If you're trying to get a photo of a fast-moving insect or bird, try taking a video. Later, you can scroll slowly through the video's frames and take screenshots of the clearest moments.

If you don't know what a plant is, try to capture as many parts of it as possible. The more angles (and usually the closer up) you can get, the more likely someone else will be to identify it for you. If you see a wildflower, don't just take a picture of the flower: capturing the leaf arrangement on the stem and of the basal leaves near the ground can be critical to reaching an ID.

Put your hand in the photo! It might seem counterintuitive (why ruin a beautiful plant photo with your hand awkwardly sticking out into it?) but a hand can provide a helpful size reference for what is otherwise a context-less sea of green. If you're carrying a pen or ruler, those work, too, but hands also provide color contrast to the plant: if something has a bunch of tiny, thin leaves that are blending into the green behind them, a hand can help distinguish those from the background.

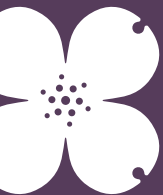
If you want to keep things simple and are not so interested in contributing public observations, check out the app Seek by iNaturalist. Designed with families in mind but a great resource for all ages, it's a highly accessible identification app that uses data from iNaturalist to help you figure out the plants and animals in your area.

iNATURALISTS IN ACTION: WILDFLOWER WORKSHOP

SATURDAY, OCTOBER 3, 9:30 – 11:30 A.M.

Join us for this online, interactive introduction to recording wildflower (and other plant and wildlife) observations with the iNaturalist!

FIND OUT MORE:
[NCBG.UNC.EDU/INATURALISTWORKSHOP](https://ncbg.unc.edu/inaturalistworkshop)



Fall Wildflower Hotspots

BY TOM EARNHARDT, HOST/PRODUCER OF EXPLORING NORTH CAROLINA



For a number of years, one of my fall favorites has been *Liatris*, commonly known as blazing star. Blazing stars are literally found across the state from August until October. One of my favorite areas is Carolina Beach State Park, where I have found three or four species in bloom at the same time. I've also seen multiple species of *Liatris* in Holly Shelter Game Lands, and in our southeastern state parks—Singleterry Lake State Park, Jones Lake State Park, and Lake Waccamaw State Park.



In the same areas you'll also find a variety of *Solidago* (a.k.a. goldenrod). Goldenrod, like *Liatris*, is a common late summer/fall flower and both are very important for our late season butterflies and other pollinators. I love the different shades of yellow/gold of goldenrod and their sizes; some are four feet tall. Goldenrods are also a fall flower found throughout the mountains. You'll see a variety of goldenrod along the Blue Ridge Parkway.



A third, favorite fall flower group, especially in mountain areas, are in the Gentian family. These are the deepest, richest blues and purples found in wildflowers. Go find them throughout the mountains from Linville Gorge in the northwest to Gorges State Park in the southwest. I've even found blooming Gentian in the second week in October near the top of Mount Mitchell.

Photos by Tom Earnhardt

OTHER HOTSPOTS

Looking for more hotspots? Staff recommend Weymouth Woods - Sandhills Nature Preserve.

You will find tons of goldenrods, and at least half a dozen different species. You'll also find four or five species of asters, and several species of blazing stars, bonesets, and golden asters. You'll also find snakeroot, Pityopsis, meadowbeauty, Xyris, and legumes. If you're lucky you might see

summer farewell (*Dalea pinnata* var. *pinnata*) and pine barrens gentian (*Gentiana autumnalis*). Grasses are flowers, too, and you will see beautiful shades of gold, silver, and bronze.

And don't forget the North Carolina Botanical Garden. Fall at the Garden is filled with asters and sunflowers!



NORTH CAROLINA BOTANICAL GARDEN
THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Wildflower Hotspot Emerging at the Garden's Entrance

If you have driven past the Garden's entrance on Old Mason Farm Road over the past 10 months, you have probably noticed some changes. What once was a brushy landscape with a fairly small sign announcing our entrance has transformed into a landscaped vista with a prominent sign visible from Highway 15-501.

While progress on this new feature has been evident to the public since November, work began long before. Discussions about the need for a more visible entrance had been frequent for several years, and Arthur DeBerry was the original visionary for this project. Marcella Grendler made a major commitment in Fall 2017, and the North Carolina Botanical Garden Foundation, Inc. Board of Directors came through to match her gift, plus a bit extra.

"The wall itself illustrates a continuum," says Dan Stern, director of horticulture. "The middle, structured, concrete section with lettering gradually transitions through irregular stonework and then loose boulders to the more organic patterns found in nature at the ends." Also, if you look closely, you can see an outline of North Carolina in the wall!

This spring, our staff worked in socially-distant, staggered shifts to fill our new entrance landscape with native

seedlings, including grasses and sedges that will provide year-round color and texture such as Pennsylvania sedge, blue wood sedge, and little bluestem. Showy wildflowers like black-eyed Susans, Joe-Pye weed, milkweed, southern sundrops, ironweed, and columbine will provide a varied splash of color throughout the seasons. Native shrubs and small trees will fill in behind and to either side of the new sign this fall.

The new entrance was created to make more people aware of the Garden, inspire them to come visit, and to make finding the Garden easier.

"The landscape also provides us with an opportunity to demonstrate how native species can be used on a large scale to create a beautiful display that can be enjoyed from a distance, modeling a new way to think about using native plants in commercial and corporate park settings," says Stern.

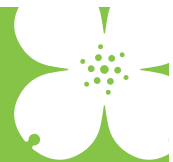
This entryway project was made possible and underwritten by the board of the North Carolina Botanical Garden Foundation, Inc. and from support by several Garden friends. Thank you for this gift to the community.

COMMUNITY PHOTO EXHIBIT

We're looking for photographers of all ages and skill levels to submit photos of native flowers in North Carolina. Only have a smartphone? No problem! In November and December, we will display hundreds of selected photos in an

exhibit online, and depending on the course of the pandemic, in our DeBerry Gallery, too.

LEARN MORE AND SUBMIT YOUR PHOTOS AT
NCBG.UNC.EDU/COMMUNITYPHOTO





Include the North Carolina Botanical Garden in your will or estate plans. Contact Stephen Keith at 919-962-9458 or Stephen.Keith@unc.edu for more details.

Keep the Garden Growing

BY STEPHEN KEITH, NCBG DIRECTOR OF DEVELOPMENT

How have you celebrated the 2020 Year of the Wildflower? Perhaps you spent the last six months focused in your own native plant and/or vegetable garden, or you enjoyed more frequent hikes in the Botanical Garden's natural areas, or you participated in a NCBG virtual lunchbox talk, or maybe you even sowed those NCBG wildflower seeds you requested. This season of life has shown us what is most important, what we need to preserve, and what we can all do to keep the North Carolina Botanical Garden growing for future generations.

After a challenging spring, the community rallied behind the message of conservation and biodiversity protection at the North Carolina Botanical Garden. In late March, we recognized we could no longer hold the traditional Carolina Moonlight Garden Party. After much discussion, we decided to host a virtual event and invite all to attend. Presentations from **Jacob Boehm** of Snap Pea Catering, **Brie Arthur** of foodscaping fame and a current NCBGF board member, UNC creative writing professor and environmental advocate **Bland Simpson**, and Exploring North Carolina director and producer **Tom Earnhardt** (as well as former Botanical Garden Foundation president), all joined the NCBG Nightly News cast to make the 2020 Carolina Moonlight Virtual Party a roaring success.



Nineteen households served as Carolina Moonlight Event Hosts, and over 150 Carolina Moonlight attendees donated funds to provide over \$52,800 (as of June 30, 2020) to bolster the Garden's biodiversity efforts. You can still view this production on YouTube at go.unc.edu/moonlight2020.

Thank you to over 3,600 donors and members of the North Carolina Botanical Garden in fiscal year 2020 (July 2019 – June 2020). Membership dues provided more than \$130,000 for general operation support and are tremendously helpful in meeting the Garden's annual budget. The Garden continues to find ways to build a base of engaged members who are committed to the conservation mission. Healthy membership numbers are a great indicator of future financial strength and continued growth of the North Carolina Botanical Garden.

End of fiscal year donations to the annual fund were a big factor in allowing the Garden's budget to balance. A huge thanks to the following individuals and many others, who filled the gap in a time of uncertainty; **Anne Harris, Lee & Libby Buck, David & Laurie Joslin, Janise Stratton, Barbara Braatz, Julie Irwin, Muriel Easterling, Sandra Brooks-Mathers & Mike Mathers, Edward Neal & Iola Peed-Neal, Peter & Ona Pickens, and Ryan Willis.**

And, world events have reminded it's a good time to review legacy plans. The Garden has long benefited from

planned gifts from supporters who desire the mission to continue to thrive. During the Garden's current fundraising campaign, over 15 supporters have documented their planned gift intentions. These future gifts will provide important resources for the Garden's operations and allow the Garden staff to manage and curate plant collections, natural areas, rare plant populations, and exhibits to inspire the public. There are many options for planned gifts (reviewed on page 22) and experts are available to answer your questions and provide information for you and your estate attorney.

Thank you for your continued support and care for the North Carolina Botanical Garden. Your annual, recurring, project, and planned gifts are all essential to the success of the Garden and allow the Garden to keep growing.



In memory of Bob Broad, NCBGF honorary director. Bob passed away on July 16, 2020, after a brief illness. In Bob's two terms on the board, he expanded the Garden's Corporate Partner program, brought new networks to the Garden, and actively worked to build the board's success and legacy of supporting the conservation mission. Plans are in the works to honor Bob & Molly Broad's service to the state, the community, and the North Carolina Botanical Garden.

**Thank you for choosing to honor friends and family
through a gift to the North Carolina Botanical Garden!**
Tribute Gifts below were received from January 1 to June 30, 2020.

IN HONOR OF

Mary U. Andrews
Michael L. Andrews

Brie Arthur
MacGregor Downs Country Club

Ryder Barnhart
Lisa Yemma

John Theodore Benning
Thomas F. and Betsy Lark Benning

Al Briggaman
John D. Cheesborough and Ellen M.
Flanagan, *for Friends of UNC Herbarium*

**On the occasion of our
25th Wedding Anniversary**
Sandra Brooks-Mathers and Mike Mathers

Catharine and Wood Burns
C. Lynch and Melanie Christian,
for Coker Arboretum Endowment
Emil and Lisa Kang

Matthew Jack Childs
R. Michael Childs

Arthur St Clair DeBerry
Charlotte Jones-Roe and Chuck Roe, *for
NCBG Garden Entry Landscape Fund*

Nancy Lynn Easterling
Charlotte Jones-Roe and Chuck Roe,
for Educational Outreach

Steven Glenn Feingold
Arthur Feingold and Linda L. Campbell

Remi, Enzo, and Roger Gaskell
Julie and Pete Gaskell

Christine Geith
Brian K. Reasor

Marcella T. Grendler
Charlotte Jones-Roe and Chuck Roe, *for
NCBG's Garden Entry Landscape Fund*

Ed Harrison
Kris and Loyd Little

Sarah Huppert
Michael and Mary Andrews

Stephen Keith
Sally S. Glover,
for Carolina Moonlight Virtual Party

Mary Lewis
Charlotte A. High and William R. Deans
Susan Robinson

Margo MacIntyre
Dorlin C. and Susan M. Kerr

My grandma
Sarah T. Manfred,
for Carolina Community Garden

Harriet and D. G. Martin Jr.
Louise and Grier Martin

Larry Mellichamp
Bill and Jan Truitt

Mike Miles
Wendy and Jefferson Baer,
for Forest Theatre Restoration Fund

Liz Moore
Lisa Hatch

Jefferson, Jack and Edward Murray
Allison Essen,
for Carolina Community Garden

NCBG Staff
Charlotte Jones-Roe and Chuck Roe

Lyn Olson
Megan Ferguson

Johnny Randall
Springdale Estates Garden Club

Margaret Ray Scott
Abbie J. Royster

Patrick Livingston Vernon
Nancy L. Vernon

James L. Ward
Stephen L. Keith and Lisa C. Glover,
for NCBG Student Intern Fund

Alan S. Weakley
J. Dan Pittilo

Fran Wooten
Anne B. and William E. Urquhart

IN MEMORY OF

Phyllis C. Barrett
Jane and Moyer Smith

Zachary Bassin
Phyllis Bassin

Phyllis and Barry Burns
Mika Drew
Carroll L. Gray-Preston
Camille Parker
Paula Passmore
Leigh A. Thomas

Jack H. Childs and Jack S. Childs
R. Michael Childs

Janet Keyser Cumberland
Martha Ann Propst

John Stone Curtis
Linda N. Curtis

Elizabeth Joan (Betty) Davis
S. S. Schwartz

Robert Bigelow DeMaine
Ann W. DeMaine,
for Natural Areas Endowment

Mary McKee Felton
Christine M. Levesque,
for Friends of UNC Herbarium

Priscilla Freeman
Maxine S. and Alan J. Stern

Rob Gardner
Rufus M. Dalton
Judith and Howard Owen, *for Botanical
Garden Conservation Fund*

Sarah L. Greene
Sally Greene and Paul Jones

Frank Hampshire
Nancy Hampshire

Jim Hart and Frances Hart
Elman and Janese Frantz

Frederick Johnston Houk Jr.
Virginia Houk, *for Fred and Virginia Houk
Sustainability Internship*

Jonathan Howes
Sallie S. Robinson

Robert Howes
Sallie S. Robinson

Mercer Hubbard
Charlotte Jones-Roe and Chuck Roe,
for the Herb Garden Endowment

Mary Coker Joslin and William Joslin
Charlotte Jones-Roe and Chuck Roe,
for Natural Areas Endowment

Meg Kemper
Joyce C. Trygstad

Jeanne and Conrad Kruger
Kenneth and Carol Horn

Jack Ralph Lamm
Susan D. and C. Allan Eure

Erica Lorch
For Carolina Community Garden
John A. Bell and Judy Lee Whisnant

Maya Bell
Gary E. Duggan
Larry E. Galpert
Shannon Green and Chris Prokosch
Michael and Alma Guajardo
Kathleen Kearns
Lee Kraftchick
Joanna and Bill Lelekacs
Susan Robinson, *for School Programs*
Barbara P. Sirvis
Howard and Jill Stang

George Dyer McCoy
Phillip R. Poovey

Margaret Hammons McCullough
Linda Anne McCullough



**SCULPTURE
IN THE GARDEN**

Plans are moving forward for this year's Sculpture in the Garden exhibit. Although some parts of the exhibit, like the Preview Party and awards ceremony, may look different this year, we hope visitors will be able to come see the show – always an outdoor, distanced experience – as usual.

Since 1988, Sculpture in the Garden has brought the work of local artists to the North Carolina Botanical Garden each fall. It's free to visit, and it's geared toward all ages.

We'll be updating our website as plans for the show evolve.

NCBG.UNC.EDU/SCULPTURE





You can keep the Garden growing 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.

Anne Marie McNevin
Mary Jo and Jim Fickle

Carol L. Miller
Cyrus L. Miller
Anne D. Varley

Richard Paul Moseley
Michelle Froedge
Stephanie Fulbright

Mary Mitchell Murphy
Stephanie S. Bertsche

Grover Elmer Murray
Sally M. Murray,
for Coker Arboretum Endowment

Karen Oswald
Lynn W. Zimmerman,
for Botanical Garden Library

Nancy Margaret Pruden
Jeannette Leigh P. Tolley,
for Battle Park Endowment

Anthony Eden Rand
Phill and Connie Haire

Charles Buell Reddy
Donna S. Hart

Nancy Howes Robinson
Sallie S. Robinson

John Rodgers
Lu and Carol Rose

Barbara Roth
Charlotte Jones-Roe and Chuck Roe,
for Mason Farm Endowment

Delane Shelley
Rebecca and C. Vernon Marlin

Harry Sledge
Marion Sledge, *for Horticulture Fund*
and the North Carolina Botanical
Garden Student Internship

Jane Talbot
Andrea and Robert Stark

Norwood A. Thomas, Jr.
Carolyn Thomas

George W Troxler
Carole W. Troxler

Carolyn Sue Underwood
Theo Underwood
Farge

Bernice Stiles Wade and Barbara Lois Stiles
Susan H. Ensign
Barbara and Ralph Warren,
for Battle Park Expendable
Paige S. Warren and Lynn S. Adler

Warren Wagenseil
Wynn Wagenseil, *for Coker*
Arboretum Endowment

Jean Weakley
Allison L. Essen
John Harvey
Rhonda L. Hensley
Paulette S. Housh
Charlotte A. Jones-Roe and Chuck
Roe, *for Friends of UNC Herbarium*
Stephen L. Keith and Lisa C. Glover

Alexa McKerrow
J. D. Pittillo
Milo Pyne
Johnny Randall and Libby J. Thomas
Franklin Robinson
David and Melanie Vandermast,
for UNC Herbarium General
Endowment
Damon and Sara Waitt

Gerrit Jan Wessels
Kitty Harrison

WHAT IS THE BEST WAY TO MAKE A PLANNED GIFT?

This is a partial listing of opportunities to help envision your legacy at the North Carolina Botanical Garden. For more information, see unclegacy.org, call the UNC Office of Gift Planning at 919-843-3321, or call Stephen Keith at 919-962-9458.

Gift Type	Advantages
Beneficiary Designations retirement plan assets, life insurance, brokerage and bank accounts	<ul style="list-style-type: none"> • May avoid payment of income tax on retirement assets • May reduce estate tax liability • Simple to implement
IRA Charitable Rollover (must be 70½ years of age)	<ul style="list-style-type: none"> • Makes an immediate impact • The gift counts toward your required minimum distribution • Eliminates paying income taxes on the distribution
Appreciated Securities and stocks, intellectual property, tangible personal property	<ul style="list-style-type: none"> • Makes an immediate impact • Provides a current charitable income tax deduction • Offers possible capital gains and/or ordinary income tax savings
Charitable Gift Annuity	<ul style="list-style-type: none"> • Provides a current charitable income tax deduction • May reduce estate tax liability • Offers possible capital gains tax savings • Fixed lifetime payments to you or someone you choose
Charitable Remainder Trust	<ul style="list-style-type: none"> • Provides a current charitable income tax deduction • Other tax savings depending on your circumstances • Lifetime payments to you or someone you choose • Can be funded with real estate
Charitable Bequest	<ul style="list-style-type: none"> • May reduce estate tax liability • May allow for a transformative gift to benefit conservation

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 2020 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 STEWARD



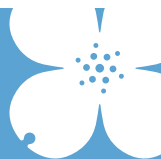
HABITAT SUSTAINERS



GARDEN SUPPORTERS



UPCOMING EVENTS & PROGRAMS



This year has been unpredictable, to say the least. Consequently, it has been difficult to plan our usual slate of events and classes. We have been taking this opportunity to be creative and inventive, and when we can, we will still offer them in the best way possible. At press time, the logistics for several events later this fall and winter are still unknown, but we are offering several classes both in-person and virtually. Please subscribe to our e-newsletter or check our website for the most up-to-date information.

SUBSCRIBE TO THE E-NEWSLETTER
NCBG.UNC.EDU/SUBSCRIBE

OUR EVENTS WEBPAGE
NCBG.UNC.EDU/CALENDAR

MEET THE FAMILY

Orchid Orchidaceae

Species worldwide: 28,000

Species in NC: 72

Distinguishing characteristics:

Elaborate pollination mechanisms; flowers with only one plane of symmetry, often upside down



snake-mouth orchid
(*Pogonia ophioglossoides*)



nodding ladies' tresses
(*Spiranthes cernua*)



lily-leaf twayblade
(*Liparis liliifolia*)

North Carolina Botanical Garden

The University of North Carolina
Campus Box 3375
Chapel Hill, NC 27599-3375
Phone: 919-962-0522
ncbg.unc.edu · ncbg@unc.edu

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