



NORTH CAROLINA
BOTANICAL
GARDEN

CONSERVATION GARDENER

FALL/WINTER 2022/23
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THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

IN THIS ISSUE

ON THE COVER

Lobelia cardinalis

cardinal flower

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.*

Seed-Change

BY DAMON WAITT, NCBG DIRECTOR

Dear Members and Friends,

This issue of the Conservation Gardener is all about the “need for seed.” But not just any seed. As you might suspect from a Conservation Garden, the emphasis is on the need for native plant materials and seeds. Much of this magazine is devoted to how you the home or landowner can acquire, obtain, find, collect, and grow the seeds of native plants for your garden, landscape, restoration project, or natural area. You of all people know the important role native plants play in ecosystem health and, by association, your own health and well-being. But did you know that a sea-change* is on the horizon? Or as I like to call it, a seed-change?

In April 2021, North Carolina Senators Bill Rabon and Tom McInnis filed Senate Bill 628 entitled “An Act to Require the Use of Native North Carolina Plants and Seeds on State Property and Highways and on Local Projects that use State Funds for Landscaping.” On May 12, 2022, the Senate passed the bill with a 46-2 vote and referred it to the House Committee on Rules,

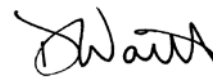
Calendar, and Operations. If passed by the House, this would be the strongest native plants legislation ever in North Carolina, possibly the strongest native plants legislation of any state in the Union. After a long list of whereas’ highlighting the importance of native plants, the bill specifies that:

- The Department of Administration shall require the use of native seeds and plants on all land owned or leased by the state or by any state agency.
- The Department of Transportation shall use native seeds and plants in the highway right-of-way in the promotion of erosion control, landscaping, and general protection of the highways.
- When Powell Bill funds are used for landscaping, cities and towns shall use native seeds and plants.
- Local projects funded under the Parks and Recreation Trust Fund shall use native seeds and plants.

If this all comes to pass, there will be a “seed-change” and a need for seed like never before. Rest assured

that the North Carolina Botanical Garden with over 50 years of experience promoting, propagating, and promulgating native seeds and plants is standing by to meet the need.

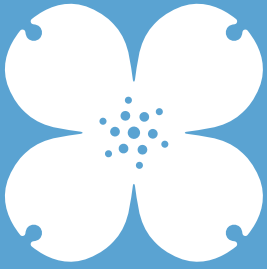
Sincerely Yours,



Damon Waitt

**Sea change or sea-change is an English idiomatic expression which denotes a substantial change in perspective, especially one which affects a group or society at large, on a particular issue. It is similar in usage and meaning to a paradigm shift, and may be viewed as a change to a society or community’s zeitgeist, with regard to a specific issue. The phrase evolved from an older and more literal usage when the term referred to an actual “change wrought by the sea”. Wikipedia ([https://en.wikipedia.org/wiki/Sea_change_\(idiom\)](https://en.wikipedia.org/wiki/Sea_change_(idiom))).*





NORTH CAROLINA
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THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

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Plants ready for sale at the 2021
Fall Plant Sale.
Below: Seed increase plots at
Mason Farm Biological Reserve.



Meeting the Demand

BY JENNIFER PETERSON, MANAGING EDITOR

If you have been searching for native plants for your home landscape in the past year, you've probably noticed they are a little harder to find. Interest in native plants has grown significantly, and suppliers are having a hard time keeping up with demand! We have definitely experienced this with our own plant sales.

The interest in native plants is wonderful for our local ecology. It's really a dream come true in so many ways. But having to compete for the available native plant supply is frustrating, and the dream would be even sweeter if we could supply all the plants people wanted.

So, what is being done to meet demand? We have devoted this edition of the *Conservation Gardener* to understanding this issue and offering you ways to find the plants you want.

One way the Garden is addressing the demand for native plants is by

working to supply plants and seeds for restoration projects through our Native Plant Materials Development Program. Find out more about this program in an article by Catherine Bollinger (p. 6). Bollinger also dives into the challenges for our local native plant nurseries and offers other sources for home gardeners (p. 10).

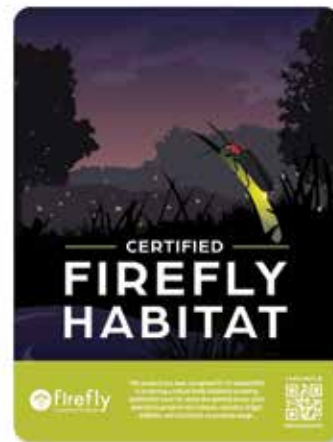
We also offer advice for collecting your own seed (p. 14), and we go in depth with this issue's Staff Pick, cardinal flower (p. 13) with instructions for collecting and planting this showstopper's seeds (p. 16).

I'm also excited to share tips for gardening for fireflies on the following page. These insects not only light up the night, but the whole summer.

From the entire Garden, thank you for your support and your enthusiasm for conservation! I hope you will find this edition useful as you support native plants in your own landscape.



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.



Gardening for Fireflies

BY JENNIFER PETERSON, MANAGING EDITOR

What is summer without fireflies? The wonder of watching them blink through the dusky night sky and the marvel of catching one to watch it glow then go on its way is a staple of North Carolina summer nights.

There are thousands of firefly species, and they are found on every continent except Antarctica. However, fireflies, including flashing fireflies, glow-worms, and daytime dark fireflies, are having a tough time. Throughout the world, these insects are threatened by light pollution, pesticide use, and habitat loss. You may have noticed this decline locally, too.

Fortunately, there are things you can do right in your own backyard to help our bright little friends!

Provide the right habitat

- Plant native trees – Fireflies, like many local wildlife, like local plants. Some research suggests they especially like pine trees because the shed pine needles make an ideal nursery for their larvae. Deciduous trees are great, too, so leave at least some of the fallen leaves throughout the year.
- Embrace long grasses – Fireflies rely on long grasses. Don't over-mow your lawn, and consider incorporating some native grasses into your landscape, such as little bluestem (*Schizachyrium scoparium*) and river oats (*Chasmanthium latifolium*).

- Let logs and litter accumulate – Fireflies spend up to two years in the larval stage, and leaf litter and rotten logs are their nursery. They need this environment to survive.
- Create water features with even just a small amount of water – Moisture is critical for fireflies in all life stages.

Turn out the lights and close your curtains

- Lights disrupt fireflies' bioluminescent courtship signals. Three quarters of firefly species need to communicate with light to find a mate. Dating is confusing enough, so turn off your exterior lights to make it a little easier for them.

Go chemical free

- Avoid pesticides – Even “natural” pesticides don't magically avoid fireflies and other wanted insects. The poison affects insects in various life stages in addition to the food they eat. And fireflies are not able to just move somewhere else. Female fireflies don't fly, so they are limited to where they can walk.
- Use natural fertilizers – Chemical fertilizers are also filled with poisons that affect fireflies and other beneficial insects.

By following these suggestions, you can make your home landscape a great habitat for our local fireflies!



FITCH
LECTURE

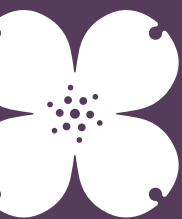
MOVEABLE GARDENS AND COMMENSAL TABLES: ROOTING IN AN AGE OF DISPLACEMENT

NOVEMBER 6; 5:30–6:30 P.M.
VIRTUAL AND IN PERSON OPTIONS

with Virginia D. Nazarea, Ph.D., Professor Emeritus of Anthropology, University of Georgia

Humans have been moving with plants as their traveling companions since the beginning of time. Currently, this movement has dramatically escalated in tempo and scale. In this presentation, Nazarea will address how remembrance embedded in seeds counters destruction of homelands, fragmentation of habitats, and cultural alienation, and how sanctuary is sought in gardening, cooking, and community building.

DETAILS AT
NCBG.UNC.EDU/FITCHLECTURE



Feeding the Need for Seed: Native Plant Materials Development

BY CATHERINE BOLLINGER

There's good news and bad news when it comes to the rise in public demand for native plants in landscapes of all sizes. The good news is that books by experts like Douglas W. Tallamy are being widely read. More people every day are understanding the dangerous consequences of habitat destruction and consequent species and ecosystem extinctions. More people every day are understanding that the only way to reverse this alarming trend is to re-imagine and revise our business and home landscapes to embrace a substantial use of native plant species that can support the insects, birds, and other animals that rely on these plants. More good news: many conservation-focused non-profit groups are devoting much time to educating the public about the need to "go native." Their programs, web sites, and other educational efforts all emphasize why and how native plants need to dominate our landscapes if native animals and plants of our region are going to survive. In North Carolina, Audubon North Carolina, the NC Native Plant Society, and the North Carolina Botanical Garden are just three such organizations devoting much energy toward this goal.

The bad news, so to speak, is really more of a big

challenge. As demand grows for native plants and seeds, suppliers of those materials are having great difficulty meeting that demand.

Demand for native plants and seeds falls into two broad categories:

- Large-scale, multi-acre projects. This category includes, for example, carbon sequestration businesses, solar farm developers that want natives growing beneath panels, and government agencies from federal to local levels working to restore ecosystems on public lands. Non-profit land conservation groups also need plants and seeds for restoration of lands they manage. More often these days, this category also includes large-scale land developers and public park designers that want to incorporate native-centric landscapes into their multi-acre designs. That's a lot of need for seed – and plants!
- Home and business landscapes. From church grounds to restaurants with outdoor eating areas to entire subdivisions, public demand for native landscapes increases every year. Home owners associations often now have environmental subcommittees devoted to educating members on the importance and value

Left: Seedlings get their start in growing flats at Mason Farm Biological Reserve as part of the Garden's Native Plant Materials Development Program.

of native plant-based landscapes. As more property owners begin to understand that native plants are not only critical to species survival but are also beautiful, easier, and less costly to maintain, demand for these species will continue to grow.

This article describes how the North Carolina Botanical Garden (NCBG) is helping to meet the demand for seeds and plants for large-scale projects via their Native Plant Materials Development Program. Also in this edition, *Sourcing Native Plants for Your Home Landscape* (p. 10) describes issues and possible work-arounds for individuals and businesses seeking native plant materials for their projects.



Emma York Marzolf, the Garden's conservation grower, tends to plants in seed increase plots at Mason Farm Biological Reserve.

Native Plant Materials Development Program

In 2019, funds from a private donor supplemented with grant money provided the Garden the opportunity to begin this program. Its long-term goal is to increase the capacity to provide groups working to restore ecosystems with the ecotype-specific seeds and plants they need. Garden staff are working to develop standards for collection, identification, and preservation and devising techniques for collecting, preserving, growing, and processing seeds and plants in collaboration with many organizations across the country, including the US

Department of the Interior Bureau of Land Management's Seeds of Success Program. As Garden staff and other agencies perfect these seed propagation and collection techniques for native species, large seed companies that specialize in producing native seeds will be able to grow out new ecotypic plants and harvest their seeds on the same multi-acre scale that food farmers grow wheat and corn.

Implementing rigorous scientific procedures

Growing native plant seed on such a scale presents challenges. Many of the desired species have never been propagated on this scale. Michael Kunz and Emma York Marzolf at the Garden are leading efforts to resolve these challenges by overseeing the collection and propagation of wild-collected seeds of an array of native plants from sites across North Carolina. They have devised collection procedures that involve identifying desired target species, locating where those species might be successfully wild-collected, calculating how much seed they can collect without negatively impacting the source site, and collecting, processing, and storing seed. They are also growing out some collected seed in a designated propagation area on the Garden's Mason Farm property.

Two seasonal technicians with botany degrees do most of the field-collecting of seed. When a potential site is found, they retrieve a voucher sample of the target species. This entire plant is preserved by UNC Chapel Hill Herbarium staff, who verify its identification, and retain it for future reference.

Many collections come from public roadways. Collections also come from land being conserved by non-profit groups partnering with the Garden in these efforts. Since 2019, Emma reports that the team has collected seeds from 181 different species. These include 567 individual collection sites that cover all four regions of North Carolina.

Collected seeds are stored in the seed-processing room in the Garden's Totten Center. Seeds are cleaned during winter months, rainy afternoons, or summer days too hot for outdoor work. After cleaning, seeds are stored in envelopes and put into the Garden's intermediate storage area.

Partnership with Roundstone Native Seed Company

Last year, Mike Kunz contacted Roundstone Native Seed Company in Kentucky about working with them to grow collected seed from this program on a larger scale. Roundstone grows native seeds on a large farm. Their large-scale operation is equipped to harvest multi-acre fields of native plant seeds. They offer seeds from many

ecotypes, but they currently don't have much ecotypical seed from the southeastern U.S. By working with seed companies like Roundstone, the Garden hopes that native ecotypical seed from North Carolina will soon be more widely available.

Mason Farm propagation work

At the Mason Farm propagation site, Emma is overseeing propagation of an array of native plants to meet two goals. First, the Garden has its own need for plants to add to conservation lands it oversees, such as Penny's Bend.



Rattlesnake master (*Eryngium yuccifolium*) growing in seed increase plots as part of the Garden's Native Plant Materials Development Program. These seeds will be used for restoration efforts.

Seeds from plants they wish to multiply were collected from the Penny's Bend site, grown into plants at the Mason Farm site, then planted out on the Penny's Bend site. The Garden also grows out desired plants for conservation groups, such as The Nature Conservancy, on a contract basis.

Second, Emma is experimenting with growing a number of natives that are not often found for sale elsewhere with the goal of perfecting germination and propagation methods for those species. Through trial and error, she discovers germination requirements, which vary widely for different species. She also determines the best methods for growing out seedlings to a size suitable for transplanting. For example, some species are finicky about root disturbance. Water requirements can also vary considerably.

Right now, Emma is growing 33 different species in seed plots on the Mason Farm site, including several species of milkweed and goldenrod, rattlesnake master, Maryland golden aster, coreopsis species, several grasses, and narrowleaf mountain mint. Some of the beds at Mason Farm are being used to grow out specific species for targeted restoration projects. Several of the sites restored with plants from this program are in their second year

after planting and are growing well – a welcome return on sweat equity investment put in by Emma and her team that she finds exciting and gratifying.

Volunteers make the work possible

Seed processing and plant propagation on this scale are enormous tasks that are made easier for Emma by a small group of dedicated volunteers who help her during the growing season on the Mason Farm site. Emma and these volunteers grow thousands of plugs suitable for transplanting for the Garden's own preserves and

conservation partners, including the Ellerbe Creek Watershed Association, the Eno River Association, and NC Sea Grant sites. In winter, these volunteers help clean the many seeds collected and stored over the summer.

Future goals

Mike Kunz says, "It is incredibly rewarding to see the challenges and needs being addressed through this program. Little by little, we are hitting our restoration goals by helping site-specific ecotypical species remain in their native landscapes to fulfill their ecological roles."

However, there is more work left to do. To reach the goal of having widely available native plant seed from North Carolina and other parts of the southeastern U.S.,

collaborations between conservation organizations and large-scale seed-growers must continue and expand. This includes a goal to work with farmers through the Rural Advancement Foundation International-USA to help them convert their traditional farms to native seed-growing operations, thereby opening up new markets for these farmers and the plant nursery operators who grow plants from their seed to sell to the public.

“Imagine the benefits to native insects and other animals living on North Carolina conservation lands teeming with healthy ecosystems full of plants that evolved here.”

Mike's hope is that soon every native species component needed for ecosystem restoration projects in our region will be readily available using seeds from plants that evolved in our region. Emma's vision includes a time soon when anyone doing ecosystem restoration in our region can find the seed and/or plant plugs they need from North Carolina sources.

Imagine the benefits to native insects and other animals living on North Carolina conservation lands teeming with healthy ecosystems full of plants that evolved here. Now imagine extending those benefits to home and business landscapes, where those same animal species can find those same ecotypical native plant species growing around homes and businesses. Through the efforts of the Garden's Native Plant Materials Development Program and its partners, these ecotypical seeds and plants could usher in a greener future for all of us.

Catherine Bollinger is a professional writer and editor and a lifelong lover of North Carolina's native plants and animals. Since 2011, she has blogged about her favorite subjects at piedmontgardener.com

Butterfly milkweed (*Asclepias tuberosa*) growing in a seed increase plot at Mason Farm Biological Reserve. Pouches are fastened over the ripening seed pods to keep milkweed bugs from eating the seeds.



**FALL
PLANT
SALE**

**FALL IS FOR
PLANTING!**

**MEMBERS SALE:
FRIDAY, SEPTEMBER 23
GROUP A: 1-3 P.M.
GROUP B: 5-7 P.M.**

Pre-registration required (All NCBGF members will receive an email by late August detailing the registration process)

North Carolina Botanical Garden Foundation members enjoy early access to the annual Fall Plant Sale and light refreshments. Members receive a 10% discount on plant purchases.

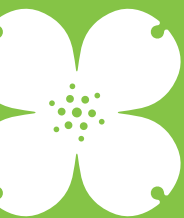
- NCBGF members will receive an email to sign up for their preferred session, 1-3 p.m. or 5-7 p.m.
- We will reserve half of the plants for the second session, so the same high quality and diverse native plant inventory will be available for both groups.
- The sales area will close for two hours between sessions to allow the first group of members to finish checking out and exit the parking lot and give our staff time to restock the sales area.
- A shuttle bus will run continuously from the Finley Fields parking lot to the Garden to accommodate all attendees on Friday.
- The Garden will close at 12 p.m. on Friday, September 23, to prepare for the sale.

**GENERAL PUBLIC SALE:
SATURDAY, SEPTEMBER 24, 9 A.M. - 2 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.

MORE INFORMATION: [NCBG.UNC.EDU/FALL PLANT SALE](http://NCBG.UNC.EDU/FALL_PLANT_SALE)





Sourcing Native Plants for Your Home Landscape

BY CATHERINE BOLLINGER

It's not just large-scale landscapers who are having trouble finding enough native plant materials to meet demand. Homeowners and small businesses are also finding it challenging to locate the native plant materials they want to use in their landscapes. In part, we can blame the pandemic for this rapid rise in demand. According to the July/August edition of *The American Gardener* magazine, "Over the past two years, more than 20 million people have turned to gardening as a way to enjoy nature and improve their home environment." Many of these new gardeners from younger generations are especially interested in creating native plant-focused landscapes that provide habitat for wildlife. Native plant nurseries are working diligently to meet this increased demand.

Native Plant Nurseries

Wherever you live, your favorite search engine will guide you to local sources for native plants. A search on "native plant nurseries near me" should offer you several options in most parts of the southeastern U.S. Native plant nurseries have adopted varying sales methods

that best meet the circumstances of the owners of these businesses.

- Retail sales – Many local nurseries offer at least some hours during which prospective customers can visit and select the plants they want. The benefit for customers is that they can see the actual plants they want to buy. The primary downside is that they may not find the plant species they are seeking.
- Wholesale sales – Some nurseries run strictly wholesale operations. This avoids issues that arise with sales to the public at large and allows owners to focus on generating as many plants as they can to sell to their retail clients. Sometimes it is possible to order from a wholesale supplier via a retail business that has a relationship with them, especially if you want to order a fairly large number of plants. This varies with every wholesaler and retailer, and you shouldn't count on this option working for you.
- Mail order-only sales – Some nurseries sell their products exclusively by mail. Often, such nurseries will offer an open-house event one or more times a year

Left: NCBG nursery manager Matt Gocke prepares plants for the annual Fall Plant Sale.

that local customers can take advantage of, but on the whole, they do not offer on-site sales. I have found that some mail-order nurseries with product quality I trust offer more varied options than I see at local retailers, especially if I order from them as soon as new offerings are advertised. Mail order plants are usually smaller than those you see in retail stores. Woody plants are often sold as bare-root plants, which means buyers need to be comfortable dealing with such plants when they arrive. One of my favorite mail order nurseries ships me consistently healthy, undamaged plants, but they are small. It usually takes three to four years of growing for them to begin looking like plants you might see in pots at local retail nurseries.

Current challenges to native plant nurseries include:

- Meeting the rising demand for native plants – I recently talked to a few local nursery owners in my area, and they all told me the same thing: demand for their products has never been higher. Matt Gocke, Greenhouse & Nursery Manager at the NCBG, says all the native plant nursery owners he talks to have the same issues he is experiencing with demand for their products. For example, the NCBG annual spring plant sale this year, which featured plants from several local nurseries as well as from the NCBG, sold out of everything they had to offer except for one nursery, which brought substantially more plants to the sale than other nurseries. Other local native plant nursery owners I talked with agree that they are finding it challenging to keep up with demand.
- Dealing with the rising costs of all aspects of their business – Gocke noted that the price of everything from pots to fertilizer to some soil additives has increased substantially in the last year. Shawna Joplin and Kurt Frega, owners of Dirtbag Gardens (located at the site formerly known as Niche Gardens) mentioned that labor costs are also a challenge – an issue Matt also noted. Alistair Glen, owner/operator of Growing Wild Nursery, runs a smaller-scale operation that has largely become a mail order business since the pandemic. He sold out during spring plant sale events and decided not to ship plants during difficult hot summer conditions, preferring to concentrate on building up his stock for fall sales.

- Sourcing and successfully growing native plant materials – Shawna and Kurt mentioned that they are finding it challenging to acquire some native plant materials to propagate for their business. Alistair mentioned that he is challenged by the lack of research on the best way to grow certain native species, forcing him to learn by trial and error. The NCBG Native Plant Materials Development Program described in the previous article is actively working to solve both of those issues.

Other Possible Sources of Native Plants

Enterprising native plant lovers looking for new species for their landscapes have a few other options beyond buying from native plant nurseries:

- Join organizations that promote gardening, especially those that emphasize native plants. Garden clubs and master gardener programs often sell/swap plants among their members and sometimes as fund-raising



Alistair Glen of Growing Wild Nursery recommends American beautyberry (*Callicarpa americana*) as a beautiful and reliable native shrub suitable for home landscapes.

events. In North Carolina, the NC Native Plant Society offers member events that include native plant sales. Among serious southeastern native plant lovers, the annual Cullowhee Native Plant Conference features a gathering of like-minded people that includes a plant sale, often of species less frequently seen in nurseries. Downsides to this option are uncertainties regarding

quality control. Amateur growers may or may not follow the standard growing practices of nurseries.

- Befriend a garden guru. The home landscapes of experienced gardeners are usually easy to spot, especially those of native plant gardeners. Birds and pollinators are abundant, and colorful flowers and foliage are also likely evident. Such gardeners usually enjoy talking about their landscapes. If you offer to help them with gardening chores in exchange for a share of their knowledge, you can establish a mutually beneficial relationship that will almost certainly result in gifts of free native plants for your garden. Such garden gurus usually have extra plants, because healthy natives tend to multiply. Quality control is again not a certainty here, but if the plants are multiplying, odds are good that they are healthy and likely well-adapted to your local growing conditions.
- Grow your own native plants. Quite a few native plants, especially wildflowers, are easy to grow from seed. If you are an experienced grower of vegetables from seed, you should definitely try germinating wildflower seeds. You'll get best results by starting the seeds in pots under controlled conditions. Broadcasting wildflower seed in home landscapes is rarely successful. Matt Gocke at the NCBG recommends these native species as some that are easy to grow from seed: *Lobelia* spp., *Penstemon* spp., *Echinacea* spp., *Rudbeckia* spp., and *Helianthus* spp. Swamp milkweed, (*Asclepias incarnata*) is one of the most reliable milkweed species to grow from seed

Creating your home or business landscape that features native plants may be a bit more challenging these days, but with some advance planning and an understanding of your site conditions, you can create not only beauty, but habitat for native wildlife from insect pollinators to birds to turtles, frogs, and small mammals. You'll know your efforts are succeeding when your native flowers are buzzing with pollinators, and their leaves show signs of being nibbled by the creatures that need them for food. Creating healthy native habitat is a win for wildlife, plants, and people now more than ever, as climate change affects all of us.



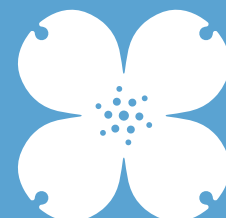
Bottlebrush buckeye (*Aesculus parviflora*) is a visually stunning pollinator magnet that Kurt of Dirtbag Gardens deems highly garden-worthy.

VERIFYING QUALITY CONTROL IN NURSERY OPERATIONS

When shopping for native plants, you will discover not all nurseries offer plants of equivalent quality. In my area, New Hope Audubon Society has visited almost all the local nurseries that sell native plants as part of their program to promote native plant landscapes to help provide food and shelter for native birds. Their web site (newhopeaudubon.org) is a treasure trove of useful information on native plants that includes their list of recommended local nurseries that meet their quality criteria. They provide such nurseries with signage that local plant buyers can look for.

Even if you don't live in the region where New Hope Audubon is active, you can use their criteria at any nursery you visit or order from. Ideally, New Hope Audubon looks for nurseries that:

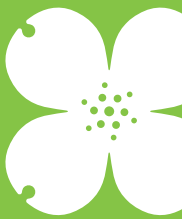
- Sell a good selection of their recommended natives (see their web site) for their region.
- Provide a method of differentiating native plants from those not native to your area if they sell both. If you can't tell, don't buy until you ask if a plant of interest to you is native to your region.
- Do not treat plants with neonicotinoids (also called neonics). These systemic pesticides are absorbed by treated plants and result in the death and/or decline of any insect that eats the plant or visits it for nectar or pollen. It defeats the goal of using native plants in your landscape if you offer plants that poison the insects you are attempting to attract and support. If you can't tell from labeling whether plants have been treated, ask. If the sellers don't know or say yes, don't buy the plants.
- Sell no non-native invasive plants listed on the NC Invasive Plant Council Shun List (PDF found at: go.unc.edu/shun). If you do see plants offered that are on this list, don't buy any of these non-native invaders!





Staff Pick: Cardinal Flower

BY CHRIS LILOIA, NCBG CURATOR, HABITAT GARDENS



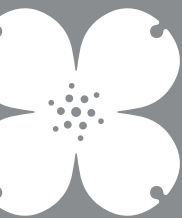
If you're having trouble finding native plants to buy, one alternative is to try growing some from seed. Natives are a diverse bunch and have a lot of different strategies to ensure they germinate in the right place at the right time. Sometimes these strategies can get in the way of easy propagation, but there are plenty that just beg to be seed-grown and cardinal flower (*Lobelia cardinalis*) is one. It will germinate quickly without stratification or any of the other techniques that are sometimes required. In addition, each plant produces abundant seed. If you're familiar with our Wildflower of the Year program, you know we distribute many seeds of the chosen species each year. Cardinal flower is our only repeat to date—in part because it's irresistible, but also because it makes a lot of seed. You can purchase it at our Garden Shop or ask a friend who grows cardinal flower to save some for you. It's ready to go once the capsules turn brown and the seeds look like cinnamon. (Detailed instructions on p. 16)

Ease of propagation is only the beginning of the list of reasons why you might choose to grow this plant. It's red and hummingbirds are the next two. I'll start with the color. There are only a few native perennials with red flowers, and all are much beloved. First Eastern columbine (*Aquilegia canadensis*), then fire pink (*Silene virginica*) and pinkroot (*Spigelia marilandica*) brighten the garden with red in the spring followed by beebalm (*Monarda didyma*) and scarlet rose-mallow (*Hibiscus coccineus*) in summer. Cardinal flower picks up the torch late and flowers into the fall. It's not just the color

of the blooms that is spectacular, but also the number of them. With good soil, moisture, and plenty of sun, plants can produce multiple flowering stalks up to five feet tall. That's a whole lot of red. You can expect some boisterous antics when the hummingbirds discover this source of nectar and hummingbirds are just one of the pollinators who will show up to take advantage. Lots of insects feed on the pollen and nectar produced by these powerhouses, including some of our showiest butterflies like swallowtails and sulphurs. It's also worth noting that when it's not in bloom, cardinal flower persists as a rosette of handsome foliage, often reddish in hue, and holds its place in the garden quite nicely in its off seasons.

In my experience, the secret to success is average to wet soil, part to full sun, and plenty of room to spread and seed in. More sun will lead to bigger plants and more flowers as long as there's enough soil moisture. In deeper shade, the flowering stalks will be smaller and fewer but the impression they make against a lush green backdrop can be breathtaking. Because it isn't the longest-lived perennial, be sure to give it enough space to seed in to ensure a steady supply of young plants. This will also require that you allow the seed to ripen and not cut the flowering stalks back too soon. I grow it in a pot at home to protect it from rambunctious dogs. My yard is shady and rarely dry so it doesn't mind a bit. The lack of competition in the pot is helpful as well.

Photo: Cardinal flower (*Lobelia cardinalis*)



How to Collect Seeds

BY HEATHER SUMMER, COLLECTIONS MANAGER & SEED PROGRAM COORDINATOR
& JENNIFER PETERSON, MANAGING EDITOR

One way to increase your access to native plants is to collect and share seeds. Seeds can be collected from your home garden or, with permission, from a friend's garden. Do not collect seeds from private property, state or national parks, public natural areas, or botanical gardens. In addition, avoid collecting rare species or non-native, invasive species. To ensure the plant continues to be successful after you collect the seeds, do not collect more than 20% of seeds from any individual plant.

Seeds come in all shapes, sizes, and textures, and they ripen at different times throughout the year, so the method for collecting seeds can vary widely. The chart on the next page explains seed collection in general, but for more detailed information about individual species, consult the resources in the sidebar.

Once you have collected and cleaned your seeds, you will need to either store or plant them. Some species have seeds that will lose viability when put into dry storage and need to be planted right away. This includes most spring ephemerals (particularly ones that have ant-dispersed seeds), some species with fleshy berries, and also some woody species with large seeds. Examples include bloodroot, wild bleeding heart, trilliums, spicebush, pawpaws, and oaks.

Other seeds can maintain long-term viability if they are stored in a cool, dry place. After collecting and cleaning this type of seed, dry them by leaving them in an open paper bag at room temperature for a few days to weeks. They can then be put into small envelopes or paper or cloth bags, labeled, and stored in a cool, dry place that is preferably between 40-60 degrees Fahrenheit with less than 50% humidity. If you want to store your seeds in a refrigerator, you need to control the humidity by storing them in airtight glass jars, plastic containers, or using silica gel packs.

In the next edition of the Conservation Gardener, we'll share tips for sowing your collected seeds and how to break seed dormancy to ensure successful germination. If you want to start this fall, you can find growing instructions for several common species at ncbg.unc.edu/germination. You can find germination codes for common species at ncbg.unc.edu/codes.

Removing seeds with the pappus, or a clump of hairs attached to a seed, prior to storing.





NATIVE SEED RESOURCES



Left: Seeds in a screen, ready to be cleaned.
Above: An assortment of seeds in storage at the Garden.

- Wildflowers: A Guide to Growing and Propagating Native Flowers of North America by William Culina, 2000.
- Native Trees, Shrubs, and Vines: A Guide to Using, Growing and Propagating North American Woody Plants by William Culina, 2002.
- Native Plant Propagation (5th edition) by Jan A. W. Midgley, 2020.
- Growing and Propagating Wild Flowers by Harry R. Phillips, 1985.
- Woody Plant Seed Manual by the USDA Forest Service: fs.usda.gov/nsi/nsi_wpsm.html

Seed type (example)	How to know when ripe	How to collect and clean
Fleshy fruits (beautyberry, pawpaw)	Color will often change from green (unripe) to red, purple, or black (ripe)	Remove all fleshy pulp from around the seeds by hand, rinse or soak seeds (note: the flesh of some berries, such as jack-in-the-pulpit, can cause skin irritation, so wearing gloves is advisable)
Asters (blazing star, sunflowers)	The clump of hairs attached to the seed, known as the “pappus,” will fluff out. Species without a pappus will usually turn tan-brown	Pull or shake seeds off plant by hand, no need to remove the “pappus” prior to storing or sowing
Grasses (muhly grass, little bluestem, river oats)	Seeds pull off stem or fall away easily	Pull seeds by hand, no need to remove attached hairs or awns prior to storing or sowing
Dry capsules (columbine, hibiscus)	Capsules will often change color, dry out, and/or split open	Shake the seeds out or crush capsules by hand and then use a sieve/screen or blower to remove any chaff



SCULPTURE
IN THE GARDEN

SEPTEMBER 18 DECEMBER 4

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 17, 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](https://ncbg.unc.edu/sculpture)





How to Collect Seeds: Cardinal Flower

As mentioned in the Staff Pick on page 13, cardinal flower (*Lobelia cardinalis*) is fairly easy to grow from seed, making this plant a great place to start when learning how to collect and grow your own seeds.

The first step with any seed collection is making sure you have permission to collect the seeds. Do not collect without permission. And when you do collect the seeds, don't take more than 20% of the seeds to ensure the original population has enough to remain healthy.

Cardinal flower seeds are formed in capsules. When they ripen, the capsules turn brown and papery and will split open slightly. The seeds are very small and light brown when they are ripe—they look almost like cinnamon. The flower stems can be tall and sometimes the capsules at the bottom are ripe when the ones on top are still green. Just clip or pluck off the parts of the stem that have ripe capsules. The capsules are pretty easy to crush apart with your fingers to remove the seeds. Put the seeds in a small sieve to separate the seeds from the little bits of crushed capsule. Let the seeds dry in a paper bag

(tape the bottom so the tiny seeds don't fall out!) for a few days, and then store them in your refrigerator in an airtight container, such as a glass jar.

When you are ready to plant your cardinal flower seeds, sow the seeds in a pot with moist soil. Do not cover the seeds with soil but cover the pot with either plastic wrap or a plastic "humidity dome" to keep the seeds from drying out, and put the pot in a warm, bright place. They normally germinate within a few weeks to a month.

Following germination, they will form a small clump of leaves called a basal rosette. When the rosettes are about the size of a penny, they can be delicately divided and potted into 4" pots. The seedlings can be planted into the garden once roots appear at the bottom of the pot, but before the plant becomes pot-bound.

And remember, cardinal flowers like wet soil, so plant them in a moist spot or make sure to water them regularly.

**Left: Cardinal flower (*Lobelia cardinalis*) in bloom.
Right: Cardinal flower seeds resemble cinnamon.**



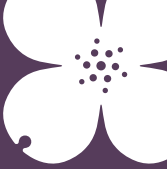
**IN THE
GARDEN
SHOP**

New! Bring the Garden into your kitchen with items in the Garden Shop! We have new handmade aprons, North Carolina honey, and handmade Garden mugs available now at the Garden Shop! Members receive a 10% discount.

SHOP ONLINE @ SHOP.NCBG.UNC.EDU



Garden Honors Larry Mellichamp



The North Carolina Botanical Garden is proud to award Larry Mellichamp with the Flora Caroliniana Award. Mellichamp is the seventh person to receive this honor, given for enthusiasm and service to the preservation, restoration, and appreciation of the natural world around us.

Mellichamp is a recently retired professor of botany and horticulture at the University of North Carolina at Charlotte where he taught for over 39 years. He was also director of UNC-Charlotte's Botanical Gardens with its 10 acres of outdoor gardens including many native plants. Their new Mellichamp Natives Terrace Garden demonstrates the use of natives directly for the homeowner. Larry is an expert on native wildflowers, trees, and shrubs, and also studies carnivorous plants, especially *Sarracenia* pitcher plants.

He has written many technical and popular articles on plants and gardening, and has co-authored five books, including: *The Winter Garden* (1997), *Bizarre Botanicals* with Paula Gross (2010), and most recently, *Native Plants of the Southeast* (2014). He has traveled extensively in the United States, and has made trips to see unusual plants in Costa Rica, South Africa, Borneo, China, Australia, and Madagascar.

The award was presented to Mellichamp by Johnny Randall, NCBG director of conservation programs, and Alan Weakley, director of the UNC Herbarium, at a ceremony at UNC Charlotte Botanical Garden's Mellichamp Natives Terrace Garden in April.

Previous Flora Caroliniana Award recipients include:

- Lady Bird Johnson for advocating for native plants and helping the North Carolina Botanical Garden launch its first fundraising campaign, *Celebrating Wildflowers*. (1988)



Alan Weakley, Director of the UNC Herbarium, Larry Mellichamp, Flora Caroliniana Award Recipient, and Johnny Randall, NCBG Director of Conservation Photo by Mariah Hoffman

- John Terres, naturalist and author best known for his work *From Laurel Hill to Siler's Bog: The Walking Adventures of a Naturalist*. (1991)
- William Lanier Hunt to honor him as the founder of the Botanical Garden Foundation. (1996)
- Ritchie Bell, the North Carolina Botanical Garden's first director from 1961 to 1986. (2000)
- Thomas Wright Earnhardt in recognition of his lifelong contributions to conservation. (2016)
- Charlotte Jones Roe in honor of 44 years of service, tirelessly advocating for the North Carolina Botanical Garden. (2018)

Invasive Spotted Lanternfly found in NC

The NC Department of Agriculture and Consumer Services has confirmed the first established presence of the invasive spotted lanternfly in North Carolina. Native to China, this pest was only detected in the U.S. for the first time in 2014 in Pennsylvania and has been spreading rapidly across the country since then. It can feed and cause damage on

over 100 species of plants, including apples, grapes, roses, and other agricultural and landscape plants. Early detection and response are critical to controlling this invasive species.

If you think you've spotted the invasive lanternfly in North Carolina, the state agriculture department

asks that you take a photo — ideally with a size reference like a quarter — and send it to badbug@ncagr.gov. When submitting a photo, include the location of the sighting, date, and your contact information.

The lifecycle of spotted lanternfly.
Image credit: North Carolina Department of Agriculture & Consumer Services



Flower dogwood (*Cornus florida*) displaying fall color.
Photo by Johnny Randall



Invite your Friends to Join!

Our revamped membership program has been up and running for over a year now, and we are pleased with the results. As you may remember, we updated member benefits and added three new membership categories (Digital, Director's Circle, and Sustainer). As you can see in the chart, we now have over 3,000 member households across all categories.

And September is a great time to join the North Carolina Botanical Garden Foundation! Members get first pick of all the plants offered at the Fall Members' Sale on Friday, September 23. See page 9 for details. Encourage your friends to join and make sure your membership is up to date. You can find your renewal date in the address information block on back of this magazine.

Members can always join or renew online at ncbg.unc.edu/membership, and during September, we'll make it even easier! We will be promoting and encouraging membership all

month long both on-site and in our communications.

Wondering which level is the right fit? In general:

- Families and grandparents should consider choosing the Household level to receive great access to the popular Youth and Family programs, including Camp Flytrap!
- Couples should choose the Dual level so each member can receive discounts and other membership benefits
- Students and non-local supporters can stay actively involved with the Garden virtually by choosing the Digital category

Thank you for your continued support of the Garden by your membership in the North Carolina Botanical Garden Foundation. We look forward to seeing you at the Fall Plant Sale and other events this autumn!

Members, as of 6/1/2022	
Digital	53
Individual	1,258
Dual	642
Household	906
Sustainer	102
Director's Circle	71
Total	3,032

The new membership program has resulted in members in a variety of categories that fit their needs.

REJUVENATE WITH YOGA IN THE GARDEN

Did you know that in addition to a full slate of classes about gardening, botanical illustration, hikes and tours, and more, the Garden offers opportunities for health and wellbeing?

Join instructors from Dogwood Studio Yoga on Wednesday mornings this fall and start your day with 60 minutes of rejuvenating outdoor yoga. Immerse yourself in the sounds and sights of early morning along the Streamside Trail.

Looking for other ways to stimulate your mind? Check out all of our upcoming programs!

NCBG.UNC.EDU/CALENDAR



An anole in cobra pose during Yoga in the Garden.

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 Enhance and Preserve Biodiversity

BY STEPHEN KEITH, DIRECTOR OF DEVELOPMENT

Over the last two years, many of us have spent more time in our home gardens, home landscapes, community gardens, natural areas, and local parks. The North Carolina Botanical Garden is also experiencing an increase in annual visitation and a higher demand for native plants and native seeds. With your support, the Garden will continue to provide the community many ways to enhance and preserve biodiversity.

The Garden has received multiple gifts in the last six months to assist with multiple mission-focused projects. **Rani & Riju Ray** made a leadership gift and coordinated a matching gift from **GlaxoSmithKline** to help us raise the remaining funding needed to complete an audio-visual upgrade

for the Joslin classrooms. These classrooms now have smart-classroom infrastructure to allow for hybrid programs. These enhancements include new projectors, widescreens, and additional speakers and microphones to allow an external audience to participate fully.

We are grateful to **John La Claire**, for establishing a new conservation endowment to benefit the management of the Garden's natural areas, in memory of his wife. The Dr. Julie Palmer Mitchell Endowment for the Natural Areas is a conservation excellence fund that will allow the Garden freedom to use the annual distribution to hire a conservation student intern, provide funds for a conservation project, or provide for

any maintenance or special need in the natural areas.

The **Chapel Hill Garden Club** presented the Garden with a 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



The iconic arbor at the Coker Arboretum on UNC-Chapel Hill's campus.

tour organizers and host gardens that made this event a resounding success.

Neighbors in southern Chapel Hill have joined local land preservation supporters to raise funds and pledges needed to purchase and manage a ~25-acre parcel next to **Stillhouse Bottom Nature Preserve**. The North Carolina Botanical Garden Foundation has submitted a grant application with the NC Land and Water Fund to gain open space funding. One hundred households have made a donation or pledge to provide the important "community match." Our fundraising continues in order to ensure project success and we welcome the community's further participation.

Marcella and Paul Grendler are helping to expand the product lines in the Burke and Judy Davis Garden Shop. Marcella was one of the first volunteers in the Garden Shop when it opened 12 years ago. Marcella has delighted many customers over the years with colorful botanical fabrics sewn into hundreds of place settings, napkins, handbags, coasters, and more. Marcella wants the Garden Shop to thrive and continue to generate revenue to support the overall Garden. Their recent gift will address several shop improvements and fund new gift shop concepts.

After a planning delay during the pandemic, there is a renewed focus to replace the iconic arbor in the Coker Arboretum. Gifts from **Tom Kenan, James**

Joslin & Beth Hahn, David & Laurie Joslin, and Ione & John Lee have launched the fundraising efforts. Class of 1997 Senior Class President and NCBGF board member **Ladell Robbins** is also leading discussions with his former classmates to recommit to their original senior class gift. Ladell is working on a special fundraising strategy surrounding their 25th class reunion. An early gift from **Virginia & Shawn Cepeda** is a wonderful sign of the Class of 1997's continued participation in the success of the Coker Arboretum.

Carolina Moonlight, the Garden's largest annual fundraiser, was extremely successful as we returned to in-person gatherings. Thanks to

Continued on page 21.

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, 2022

IN HONOR OF

Frederick Otten Behrends

Janet S. Hornberger and
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Frank Berman and Kirsten Spencer, on the occasion of their marriage

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Alan Bridgeman MacIntyre

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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.

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Myra H. Pierce and Fred W. Dal Bello
Pine Needles Garden Club
Elaine Russell and Neighbors
Mary J. Speake and Kathleen K. Myles
Roberta and Douglas Tilden, for *The North Carolina Botanical Garden Student Intern Fund*
Sandra B. Uyterhoeven
Fran and Gary Whaley

Barbara R. Tepperman

Sallie S. Robinson

Nancy Tolley

Stuart G. Tolley

Melba and Kenton Van Vickle

Jennifer S. Van Vickle, for *General Operating Fund Endowment*

Rose Yano

Barbara Brognano, for *Friends of UNC Herbarium*

Continued from page 19.

Matthew Hart of **Mother Earth Brewing** for sponsoring our opening Carolina Moonlight reception. Twenty-two Event Hosts along with numerous supporters and ticket purchasers helped raise over \$55K to support the Garden. Closing gifts from **James Joslin & Beth Hahn, Anne Harris, and Ryan Willis** allowed us to surpass the \$50K fundraising goal.

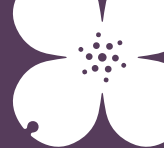
The Campaign for Carolina comes to a close at the end of 2022. The North Carolina Botanical Garden has currently reached **90% of its \$30 million goal**. Pledges, planned gifts, capital project funding, and annual giving are moving the Garden closer to its goal, and all gifts and commitments made by the end of the calendar year are counted. New student internships, the completed entryway masterplan, increased annual giving, and multiple commitments to build current endowments and the future Garden, are some of the many impacts from the campaign. You still have time to participate in the Garden's continued success.

There are many ways you can share in the vision and projects to preserve biodiversity. Visit our native plant collections, register for a dynamic NCBG education program, sponsor a child to attend Camp Flytrap, participate in Garden outreach activities, support plant research efforts, and enjoy the mental and physical health benefits of using the trails in the Garden's managed natural areas. And, consider your legacy, not only by maintaining your annual NCBGF membership, but through a plan with lasting impacts to preserve life on earth. Thank you for your support, and I welcome the opportunity to speak with you.

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

DONOR SPOTLIGHT:

JIM & DELIGHT ALLEN PROVIDE A LEGACY OF SUPPORT



With a focused resolve and profound intention, Jim and Delight Allen choose to leave a conservation legacy to benefit the North Carolina Botanical Garden through their estate. The Garden's James and Delight Allen Education Center, named in their honor, is a testament of the conservation values they share.

"Jimmy and I are pleased to have our names associated with the Garden, and it is very satisfying to be able to help in this way," Delight said. "The North Carolina Botanical Garden is a special place and an important part of the University. The Botanical Garden staff is very dedicated and provides a great service to our state and community. We want to be sure they have the resources they need to continue their good work."

A charitable bequest is one of the easiest and most flexible ways you can leave a gift to the North Carolina Botanical Garden Foundation and make a lasting impact. Over half the commitments raised for the Garden's current campaign were accomplished through documenting

planned gifts. Bequests, retirement plans, life insurance, charitable remainder trusts, charitable annuities, and even real estate are ways to leave a legacy.



Both Jim and Delight agree, "There is such beauty everywhere; conserving our natural resources and sustaining them for the future is really important to us."

Thank you Jim and Delight, and many additional Garden supporters, who are making decisions now that will have a phenomenal future impact on the Garden's core mission in conservation, research, native plant horticulture, education, and outreach.

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, 2022. Thank you!

Director's Circle (\$1,500)

Anonymous
Jim and Delight Allen
Terry and Ernest Ball
Ann Louise Barrick and
J. Elaine McNeill
Ruth N. Benton and
Tod A. Sedbrook
Bruce and Dianne Birch
Bob and Vicky Borden
Cotton and May Bryan
Lee and Libby Buck
C. John and Läle Burk
Barbara J. Burns
Asa and John Butts
Nathan and Stephanie Byrd
Pam and Bill Camp
Claire and F. Hudnall
Christopher
Jinny Clancy
Camilla A. Collins and
Jane R. Bramham
Robin and Lewis Davis
Amy and Ken Dunlap
Jo Anne and Shelley Earp
Louise C. Greene
L. Clayton and
Jane M. Harrell
Anne F. Harris
Charles and
Jeanne Hecht
Pat and Gene Holder
Bob S. Hogan and
Maratha J. Diefendorf
Travis Hornsby and
Christine M. Chu
Lu and Larry Howard
Mary C. Howes
Eric and Emily Iverson
William A. Johnson and
Shirley J. Werner
Allen and Gina Jones

David and Laurie Joslin
James Joslin and Beth Hahn
Thomas S. Kenan III
John and Betty King
Paul and Phebe Kirkman
Paula LaPoint
Nan and Edgar Lawton
Karen Levine and
Andrew Sisson
Martha S. and
Charles A. Lewis
Paul and Mary MacDougal
Harriet and D.G. Martin
Alice and John May
Geraldine A. McDowell
Janis E. McFarland and
Richard A. McLaughlin
Mike and Elston Miles
J. Victor Nadler and
Newell Olson
Charlotte Offerdahl and
Grady Burgin
James and Melinda Ogburn
Peg Parker
Stuart and Linda Paynter
Gail Perry and Bill Cobb
Jordan E. Pomeroy and
Summer A. Crabtree
Sims Preston and
Posy Stone
Judith Rizzo and
Arthur Kempton
Frances P. Rollins
Jenny and David Routh
Joseph Harold Roycroft Jr.
Mark Schubel and Mary
Christoph-Schubel
Kathleen and Todd
Shapley-Quinn
Preston Stockton
Charles V. Taft
Sandy and Reaves
Thompson
Carol Tresolini and
Tom Fiore

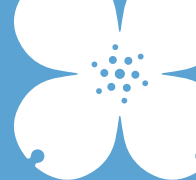
Damon E. Waitt
Fran and Gary Whaley
Mark and Stacey Yusko

Sustainer (\$500)

Anonymous (5)
Michael and Mary Andrews
Amy C. Barr
Chris Bogan and
Mary Jo Barnett
Patricia C. Beyle
R. Larry Blanton and
Candace H. Haigler
Barbara V. Braatz
Stephanie C. and
Jon D. Briggs
Eleanor H. Broadus
Valerie B. Bronner-Zamora
Nathan A. Bryant and
Katherine Meeks
Wood and Catharine Burns
Cliff and Linda Butler
Susan T. Clark
Susan Coppola and
Michael W. Tilson
David and Anne Cottingham
Van W. Daniel
Janet and Jim Dean
Mignon R. DeBerry
Nancy Doubrava
Muriel Y. Easterling
George R. and Mary B. Elmore
Katherine and Joseph Ely
Mary M. Engel and
Shawn R. Kruse
Sara and Robert Euler
Jim and Mary Jo Fickle
Greg Fitch and John Sweet
Kinsey C. Fisher and
Andrew N. Zachman
Kim and Stephen Fraser
Julie and Pete Gaskell
Joanne K. Gardner
Sally Sue Glover

Brooks and Chris Graebner
Lester and Judith Grant
Cami and Charles Gregg
David and Joan Guilkey
Elise P. Guthridge
Jan Hansen and
Susan Blackford
Ellen and Thomas Herron
Deborah L. Hill and
Julia G. Mack
Susan Hollobaugh
Herbert Hurwitz
Richard K. Johnson
Charlotte Jones-Roe and
Chuck Roe
Susan and Lewis Kellogg
Betty P. Kenan
Robert and Susan Knapp
Lynn K. Knauff
Thomas H. Krakauer
Susan J. Lamb
Randy and Cathy Lambe
Max Leach and Kate Sullivan
Mark R. Little
Caroline and Don Lloyd
George and Judy Lockhart
Eve A. Ma
H. R. and Betsy Malpass
Joel D. Mattox and
Karen Perizzolo
Michael and Marcia Mayo
Melissa W. McCullough
Eugenie and Matthew
McDonald
Ross and Holly McKinney
Cyrus L. Miller
Susan and James Moeser
Pauline and David Moreau
Jef Morgan
Nell and C.L. Morton
Beverly and Robert Murdoch
Edward Neal
Scottie and David Neill
Linda W. Norris
Marian and Jeff Olson

Michael and Julie Papay
Florence and Jim Peacock
Nick and Amy Penwarden
Ona and Peter Pickens
Allan and Carrie Porterfield
Nancy and Ed Preston
Jane B. Preyer and Lark Hayes
L. Richardson and
Marilyn J. Preyer
Jim Protzman and Jane Brown
George S. Ramseur
Susan E. Read
Deborah L. Reichert and
Chanchal Samanta
Linda and Alan Rimer
Mark and Jane Ritchie
Sharlie and Todd Robbins
Sallie S. Robinson
Brenda H. Rogers
Katherine T. Rohrer
Margaret E. Scarborough
Yolanda V. Scarlett
Marika and Jonathan
Schoolar
David and Nancy
Schoonmaker
Tom and Margaret Scott
Nancy S. Spencer
Mary P. Stephenson
Michael and Dominique
Toedt
Steve and Denise
Vanderwoude
Richard and Judith Vinroot
Patrick W. Wallace and
Laurie E. McNeil
Mal and Amanda Watlington
Deborah and
M. Holland West
Peter and Carolyn White
Floyd and Diane Whitney
Pauline H. Williams and
Rob Davis
Tin-Lup and Sandy Wong
Cynthia Kaye Woodsong



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 Jordan Wilkins at 919-843-2411.

NATURAL AREA STEWARDS



HABITAT SUSTAINERS



GARDEN SUPPORTERS



MARK YOUR CALENDAR

September 17
**Sculpture in the Garden
Preview Party**

September 18-December 4
**Sculpture in the Garden
Exhibition**

September 23 & 24
Fall Plant Sale

October 23
Fall Family Funday

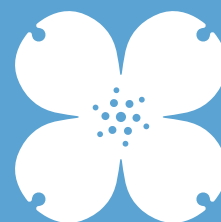
November 6
**Jenny Elder Fitch
Memorial Lecture**
featuring Virginia Nazarea

November 18
**North Carolina Botanical Garden
Foundation
Membership Meeting**

December 3
**North Carolina Botanical Garden
Foundation
Holiday Party**

December 4
**Winter in the Garden
Craft Market**

For more information:
ncbg.unc.edu/calendar



North Carolina Botanical Garden

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