# flora



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#### Flora writer/editor: Orla Swift



### dear friends,

Welcome to the latest edition of Flora, our annual magazine, which in a few short pages attempts to impart the richness and diversity of the activities and achievements of our amazing staff, volunteers and friends here at Sarah P. Duke Gardens.

Though we write and publish Flora each year at a time when we are most busy with the awakening of the gardens, our contributors take time out of their insanely hectic spring schedules to share with you, our closest friends, and thank you for all you do to make what we do possible.

In these pages you will read of the development of our expanding mission of plant conservation in the Blomquist Garden of Native Plants; the exciting growth, reach and depth of our children's education program; how a witch's broom discovered along Chapel Drive years ago continues to grow in the Gardens and provide royalties to us; the allure of our iconic dawn redwood to a Duke genetics student; how staff and volunteers collaborated with an artist of international renown to create a marvelous, much photographed and thoroughly well-received sculpture on our South Lawn; and the emerging bold vision for a new Garden Gateway, a project that will transform our visitor and student experience and better position Duke Gardens as a major and even more beautiful portal into Duke University.

We also introduce you to new some faces and bid farewell, but not goodbye, to close friends including long-time advisory board chair and volunteer Cindy Brodhead, and Gardens superintendent Harry Jenkins, who will retire this year after 45 years of faithful service.

I hope you enjoy these developments and other news about our programs and the staff, volunteers and students who work with us in this special place that our dear friend the late Professor Horst Meyer described as "a little piece of heaven."

Please visit soon and often, and as always, thank you for your support of Duke Gardens and Duke University.

Sincerely,

William M. LeFevre **Executive Director** 



Artistry and teamwork bring a dramatic sculpture to the South Lawn

By Katherine Hale, Duke Gardens intern

A new sculpture constructed entirely out of locally harvested saplings took shape in February at Duke Gardens. It's called "The Big Easy," but don't let the name mislead you. As a work of art, it is a chameleon and will be whatever you wish it to be: a bird's nest, a treehouse, perhaps an alien spaceship?

Chapel Hill sculptor Patrick Dougherty spent three weeks constructing this dramatic new garden feature, working with a rotating crew of Duke Gardens volunteers, staff members and a few fortunate local fans who asked to play a role. Curious passers-by watched it take shape, speculating from the start what it might become. Their guesses varied wildly, and that's just how Dougherty likes it.

"We're trying to discover it at the same time we're doing it," Dougherty told a class of visiting Duke art students during a brief pause from the installation. "You really do not know what the material can do. That's one of the better parts of creativity. As you try to get yourself out of trouble, you do your best work."

Duke Gardens executive director Bill LeFevre approached Dougherty several years ago with an invitation to bring his artistry to the Gardens. This proposal was sparked—and made possible—by an anonymous donor who was an ardent fan of Dougherty's internationally renowned sculptures and yearned to see one at Duke Gardens. As the project date drew closer, Dougherty and LeFevre agreed upon the South Lawn as an open space big enough to support both the sculpture itself and the people exploring it. When the work began, LeFevre and Gardens staff members enthusiastically signed up for opportunities to play a hands-on role, along with the volunteers.





"We are thrilled and thankful to have had the opportunity to work with Patrick Dougherty and his team to create this site-specific work of art in Duke Gardens," said LeFevre, whose shifts with Dougherty left him somewhat scratched up but also energized and inspired.

Starting with the general idea of shelter in the midst of openness, Dougherty established a few basic parameters in his vision—some larval-looking bulges around a central ellipse—and then he improvised from there. The end results are organic, undulating, clearly fabricated yet oddly natural—and reflective of both the pond and the wide expanse of the South Lawn surrounding it.

"Since I had to deal with a such a large open space here, I wanted to be able to find an intimate moment with it by standing inside it—not just inside, but further in," Dougherty



"The end results are organic, undulating, clearly fabricated yet oddly natural—and reflective of both the pond and the wide expanse of the South Lawn surrounding it."

explained to the students. "It is an illusion I'm casting; I'm trying to intrigue people enough to come over and look at it, to come inside, using doorways as the focal point." There are so many doorways, in fact, that the real question for visitors is which to enter first: Some are tall and wide, others short and narrow. Each has its own allure to children and adults alike.

There were practical concerns as well, notably deciding where on the South Lawn to build the sculpture. The lawn is a popular gathering spot for visitors and Duke students. Families picnic there. Children run wildly and roll down the hills. Could the sculpture command attention even if it weren't center stage? "It's less difficult to hold a space if you're not right in the middle of it," Dougherty said. The decision to place it off-center meant that the structure needed to be larger than Dougherty had originally intended, in order to maintain the proper scale, which he calculates with emotion and intuition instead of measurements.

"We want people to move in and out easily, to have a sense of freedom, and a good experience," Dougherty said. "When you build in a public place, you have to make things serviceable, too."

By the third day on site, a small forest of red maple and sweetgum saplings harvested in Duke Forest earlier in the week had sprung up on the center of the lawn, complete







Room for long caption for all photos on this spread. living in the stream. Photos by Rick Fisher and Sue Lannon. The McNabb Family Bridge and Stream, and a bullfrog (*Lithobates catesbeianus*) living in the stream. Photos by Rick Fisher and Sue Lannon. The McNabb Family Bridge and Stream, and a bullfrog (*Lithobates catesbeianus*) living in the stream. Photos by Rick Fisher *catesbeianus*) living in the stream. Photos by Rick Fisher and Sue Lannon.

with a luxurious carpet of mulch and surrounded by a halo of temporary scaffolding. More saplings lay nearby, piled in thick bundles. Dougherty has been returning to the same locations in Duke Forest for 15 years, often cutting the same stumps over and over again with little forest disturbance.

Dougherty had no idea when he began his stick sculptures that he was using forestry techniques invented in early European history, when woven saplings were used to construct baskets, fences, walls and other structures, before manufactured metals and plastics became more widely available. Instead, his

### **DOUGHERTY'S DUKE CREATIONS**

- Radley House Sculpture (1985), Duke University Drama Program
- Hanging around the South (1985), Duke University Student Union
- · Set for Luyala (2000), Duke University Artists Series
- Side Steppin' (2005), Nasher Museum of Art

#### Side Steppin'

"Patrick Dougherty created the Nasher Museum's first art commission in 2005, for the grand opening of the museum. Visitors absolutely loved *Side Steppin'*—11 huge stickwork forms that drew children in to explore the half-hidden passages. The artist jokingly called them the 11 'good apostles,' and they did seem to climb the hill, bow down and pay homage to the architecture of the Nasher. I'm so thrilled that Patrick is back at Duke to make an enchanting new work at Sarah P. Duke Gardens!"

### — Sarah Schroth Mary D.B.T. and James H. Semans Director Nasher Museum of Art





### #mydukegardens student impact stories

#### Anne Li

Biomedical Engineering and Visual Arts Pratt School of Engineering, Class of 2018

"I didn't realize a Patrick Dougherty piece was being installed at Duke Gardens until I came across his familiar work on a Friday afternoon mid-run. I did a two-week independent study on Dougherty's sculptures back in high school, so I was beyond excited to recognize his distinctive sapling artistry.

"I approached Patrick and told him that I was a big fan of his work. He was very friendly and asked if I wanted to help on the sculpture, which I was more than happy to do! The weaving was quite intricate but Patrick and the rest of his team were persistent and passionate toward achieving a sense of whimsy with the directionality and bending of the saplings.

"I think the sculpture is a wonderful addition to Duke Gardens, especially since the viewers' interaction with it is integrated into the work. I love seeing families, students and kids roam around its many layers in awe. From far away, the piece leaves me breathless due to its immense size. And from close up, I am amazed by its intricacy. Its gracious essence captures the calm spirit that Duke Gardens provides to its visitors. I think his piece raises awareness to the Duke community that contemporary art can be enjoyed by everyone."

inspiration was the "the power of simple shelter, reverberations from childhood, atavistic feelings" of a wilder human life that everyone can connect with on some level.

Later that third day, Dougherty began to pull the tops of the branches into graceful, looping curves and lash them into place while three volunteers gracefully wove smaller branches in between the trunks at their base. The assistants worked carefully but efficiently, moving independently and only rarely stopping to consult with Dougherty when they reached an impasse. Unlike a building construction site, with its clanking machinery and top-down hierarchy, the atmosphere here was quiet and meditative, the work almost entirely self-directed. Dougherty constantly looks up and around as he works, assessing his evolving sculptures as they grow. "Your subconscious is working all the time," he says. This constant assessment is essential to create a structure that truly belongs.



Now that Dougherty's sculpture is complete, time and the elements will dictate how long it will remain—two years is typical. "You have to take them down while they still look good," Dougherty says with a chuckle. "The third year is a little rough."

At the end of its life, the sculpture will be turned into wood chips and used for mulch at Duke Gardens, its nutrients recycled into soil to grow flowers and trees. "There's a real temporal element to all of this," Dougherty says.

So, what does it mean to you, this wild creation on the South Lawn? Is it a castle? A forest? A home for elves? Is it a chance to get in touch with nature again, or an inspiration to build a tree fort of your own at home? One thing is for certain: whether you helped to create it or you come upon it fully formed like a magnificent mirage, Dougherty's work will call to you like it did to those who created it. Step inside and experience it for yourself!



Above: Dougherty at work; photo by B. LeFevre. Below: "The Big Easy" at night; photo by R. Fisher. Facing page: Anne Li portrait by C. Burke. Pp. 4-5, clockwise from top left: photos by R. Fisher, K. Webbink, Fisher, M. Unda, B. Feinknopf, O. Swift, Swift. P. 3: photo by Swift.





### **Evolution of a Conservation Strategy**

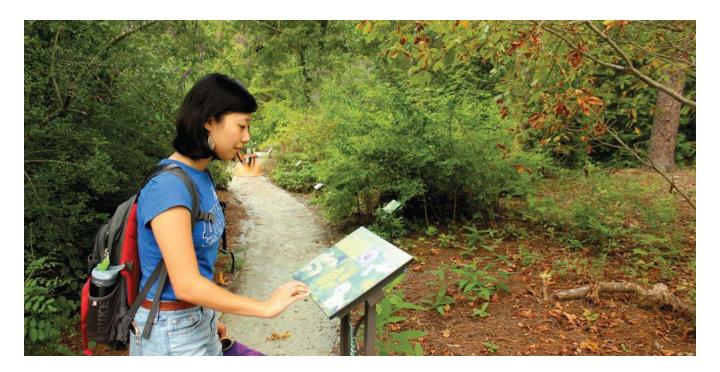
By Stefan Bloodworth, Curator, Blomquist Garden of Native Plants

More than 1,000 plant species grow in the Blomquist Garden of Native Plants. But one of the most gratifying things that has taken root there in the last 15 years is the garden's guiding mission: conservation horticulture.

This idea for this mission germinated on the heels of an inspiring two-week seminar at the Denver Botanic Gardens in 2005. The conference was focused on applied plant conservation, and the goal to build capacity within a broad range of organizations in the conservation arena, from botanic gardens to federal and state land management agencies. Attendees were tasked with finding ways to enhance the conservation focus within their missions, and to collaborate between institutions in order to share expertise and resources.

In our case at Duke Gardens, we had high exposure to the lay public through heavy visitation, as well as a team of talented horticulturists, but we lacked a dedicated conservation scientist on staff. Through collaborations with conservation scientists at the North Carolina Botanical Garden, Atlanta Botanical Garden, the Chattahoochee River Nature Center and other organizations, we procured a number of rare plant specimens and knowledge concerning their conservation. We used these to construct the Steve Church Endangered Species Garden in 2005. The garden is now quite well established, with our most impressive specimen being a lone 12-foot-tall male Torreya taxifolia.

Plant biodiversity isn't conserved in a vacuum. So we designed and built the Blomquist Wildlife Garden in 2009 to highlight



the inseparable relationship between plant and wildlife conservation, and to serve our many visitors who have a keen interest in animals and insects. This was just the beginning. Like many wanderers of the woods, I enjoy experiencing those organisms whose roots are in the soil and also the ones that can fly, jump, crawl and slither. Using the wildlife garden as a jumping-off point, we designed a series of signs to help visitors identify our native birds, as well as frogs and toads, offering sound samples via web links.

These signs represented an evolution in how we looked at conservation in the Blomquist Garden. From that point forward, every project we designed had some sort of wildlife component built into its design. This focus on making wildlife



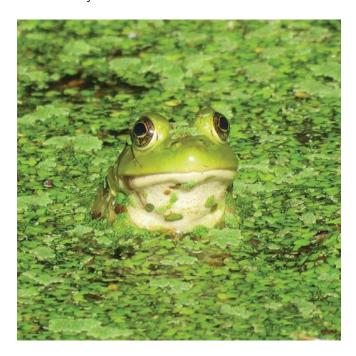
an integral part of the botanic garden experience, from simple identification to complex ideas such as pollinator attraction and seed dispersal, has produced a number of intriguing results. Among them is our wild ginger collection, built in 2010 to commemorate Dr. Blomquist's interest in these species, and the interpretation for our *Trillium* collection.

With the *Trillium* collection, built in 2011, we combined a fascinating insect-plant partnership with a study of history. Millions of years of evolution have moved *Trillium* species across the globe as the continents spread apart, all the while reinforcing a symbiotic relationship they share with flies for pollination and ants for seed dispersal. *Trillium* are beautiful, charismatic plants. Ants and flies are vital components of every ecosystem, but they are unfortunately more often associated with the flyswatters and insecticides used to eradicate them from our houses and yards. Using history and wildflowers to help people appreciate ants and flies helps serve the Blomquist's ultimate mission of valuing and conserving every component of the ecosystems where our beautiful native plants originate.

On a parallel course, the landscape design aesthetic in the Blomquist has evolved to more naturally complement its ecosystem-focused conservation mission. Probably most emblematic of this idea is the McNabb Stream project from 2014. Designed and built to mimic a natural woodland watercourse, this 275-foot-long recirculating stream blurs the

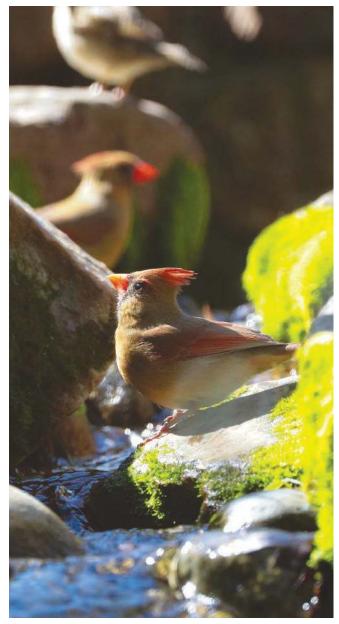
Clockwise from facing page: Harper's heartleaf ginger (*Hexastylis speciosa*), photo by S. Lannon; a student explores the Blomquist, by A. Wong; yellow trillium (*Trillium luteum*), by Lannon.

lines between natural and manmade environments. The sound and appearance of the water moving through the landscape, coupled with the collection of piedmont streamside native plants hugging the water's edge, contribute to the illusion that the visitor has left a typical garden behind and has entered something altogether different. Add to that our interpretive network focused on conservation education, and it becomes clear that they have indeed.

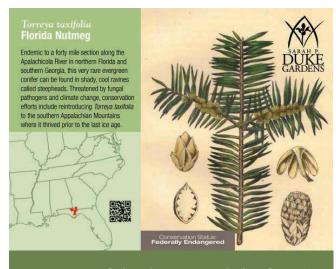


The culmination of this conservation horticulture strategy and naturalistic aesthetic focus can be seen in our most recent addition, the Piedmont Prairie, built in 2015. We designed this native ecosystem to resemble, in both appearance and species composition, the lost landscape of the southeastern piedmont prairies once common throughout our region. Native Americans embraced these prairies, actively managing them by using fire to create open hunting grounds attractive to mega-herbivores like deer, elk and bison. But the prairies began to vanish when the tribes were forced to make way for European colonists. Only isolated remnants remain on roadsides and power line right-of-ways. That was where Blomquist horticulturist Annabel Renwick went to collect the seeds for our prairie.

Prairies are incredibly biodiverse ecosystems, and ours is no different. The introduction of 100 species of native prairie grasses and wildflowers over the course of two years, all grown from seeds collected locally, has created a dynamic, evocative, ever changing landscape rife with birds, insects and amphibians. Research opportunities abound within the prairie as well, and etymology and ornithology students have been using the space as a living laboratory. Top it all off with a classroom built from timber harvested on site and using design cues from our native agricultural architecture, and you have a picture of what matters to us in the Blomquist Garden.







To see PDFs of the Blomquist Garden's informative panels about plants, insects, birds and more, please go to gardens.duke.edu/about/blomquist-garden.

Design must have context, and for us that context means little without the foundation of conservation. It governs how we conceive, design and build new projects, and it remains our enduring focus for the future of the Blomquist Garden.

"Conservation governs how we conceive, design and build new projects, and it remains our enduring focus for the future of the Blomquist Garden."

Our most recent conservation initiative is a spinoff of sorts from the Endangered Species Garden, where the conservation horticulture mission started. We have spent recent years developing new ways to get the message of rare species conservation out to the public. In 2016 we unveiled an online interactive map of this garden that allows visitors anywhere in the world to explore the species in the collection (access it at gardens.duke.edu/about/blomquist-garden). And this year, our first conservation intern, Katherine Hale, began a research project focusing on the propagation of the rare conifer Torreya taxifolia. The Blomquist Garden was given the official designation of "ex-situ nursery" last year, for the purpose of producing seeds of this endangered species. Katherine, a University of Vermont graduate student, has been examining Torreya taxifolia conservation efforts across the Southeast, with a special focus on detailing the best practices for seed production and germination. This fall we plan to take delivery of a large number of new specimens to build our nursery. As a result, the solitary male Torreya in the Endangered Species Garden will soon be one of more than 250 of the species in our collection, many of which, we have assured him, will be female.





Clockwise from top right: smooth coneflower (*Echinacea laerigata*), by S. Bloodworth; slaty skimmer dragonfly in the Piedmont Prairie, by R. Lunn; Piedmont Prairie and Classroom, by A. Renwick; frog in the Millstone Pond, by S. Lannon; cardinals in the Wildlife Garden stream, by B. Wells; one of many informative Blomquist Garden signs.

# 7

### staff spotlight:

### Kavanah Anderson

**Education Program Coordinator** 

What are the mission and goals of programming for children and families at Duke Gardens and ways that you strive to reach them? Our goal is to connect people with plants as a way to better understand ourselves and the world around us. We do our best to plan engaging, hands-on programs that encourage investigative, critical thinking, spark curiosity and inspire participants to continue on their own exploratory quests.

We approach discovery from many angles, using a variety of tools that range from microscopes to soil thermometers to paint brushes. One program might involve writing poetry inspired by capillary action, while another focuses on assessing water quality by sampling macroinvertebrates from one of the many wetland areas. All of the programs connect the plants, wildlife and ecological systems of the gardens to participants' own lives.

Most of us recognize that it's important for children to spend time outdoors and learn how the planet functions. But the importance of nature in a child's development extends well beyond that. What have you discovered through your research and interactions with children? I've learned that plants can teach people a lot about resilience and community. Observing the adaptations that allow plants to survive in different settings gives children a way to think about their own survival needs. When children notice a lotus emerging from the pond and look down to see its underwater roots, observe a fern flourishing in the shade below a canopy of trees, or discover the tendrils of a vine twisting tightly around a support structure, these plants can become role models to help children find their own niches. Learning in a garden also gives them a chance to practice the





scientific skills of guessing and experimenting. This reinforces the idea that mistakes are a part of the learning process that can ultimately lead to success. Students can stop thinking in terms of right or wrong answers and instead focus on observation and questioning as tools for discovery.

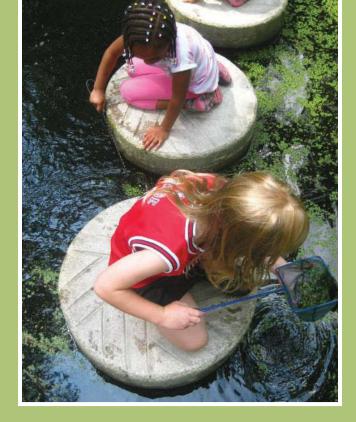
Did you have a strong relationship with nature while growing up? My family moved around a lot, which is part of what attracts me to the rootedness of plants! I did spent a lot of time exploring outside in all the places we lived—reading in my secret hiding spot under a juniper hedge, skipping rocks in the James River, chasing lizards around sagebrush mesas in New Mexico, winding through ancient cobblestone streets in Rome, and swimming in Lake Michigan in Chicago. On family vacations we did a lot of camping and hiking, and my grandmother taught me about vegetable gardening.

What was your professional path to Duke Gardens? I came to garden education in a roundabout way. My high school in Chicago had a service learning component, and we spent several weeks each year working on urban farms and community gardens. In college, I majored in oral history and did my senior thesis work on women in agriculture, which meant I spent a lot of time on farms. I also volunteered with immigrant youth as an ESL tutor. After college, I lived for a season on a small family farm in Illinois before moving to Durham, where I finally combined my interest in gardening and education. I

spent five years working with high school students in an urban market garden at SEEDS Community Garden before joining Duke Gardens in 2011.

You have taught and observed many children's programs at Duke Gardens. Can you describe a few memorable instances when you felt like a child was reaching an exciting juncture of understanding nature more deeply? My favorite moments with children in the garden happen when we take time the time to look closely and start to notice a tiny segment of the perceptible things happening around us all the time. There are many places in the garden where excitement is certain—for instance, the straight rows of yellow bellied sapsucker holes in the tulip poplar near the Maple Stream Gate. The nepeta in the Mary Duke Biddle Rose Circle is a great place to observe bees filling the pollen baskets on their legs. Seeing the way fruits and vegetables grow in the Charlotte Brody Discovery Garden is always exciting connecting the green slices that show up in a fruit salad with the fuzzy brown kiwis growing on a vine overhead, or reaching into the soil to feel the shoulders of a sweet potato. Finding an acorn on the ground leads to looking up to find the oak tree it fell from, and students often wonder how a tiny seed can grow into such a big tree.

These are all great moments to be a part of, but the most memorable experiences are the unpredictable ones. One of my favorite stories is from one unusually cold, early October day, when students had come to learn about insect life cycles. Undeterred by the lack of any visible insects, students began to gently poke around under a pile of leaves at the edge of the path. One student excitedly shouted that they had found a dead fly. They scooped it up in their hands and everyone gathered around to see. As they counted its six legs and identified its head, thorax



and abdomen, the fly's wings started to flutter. "It's alive!" the students shouted, and the topic shifted to an impromptu lesson on cold-bloodedness.

What lessons have children taught you about people and nature? I have learned that it is important to have a plan even though it is never possible to stick to it, as students always make fascinating observations that don't initially seem to relate to the planned topic. Fortunately, we usually end up discovering that everything can be connected!

Learn more about children's programs: gardens.duke.edu/learn/children-and-family-programs



### You've Got Mail

### Discovery Garden mailbox holds allure of a bygone era

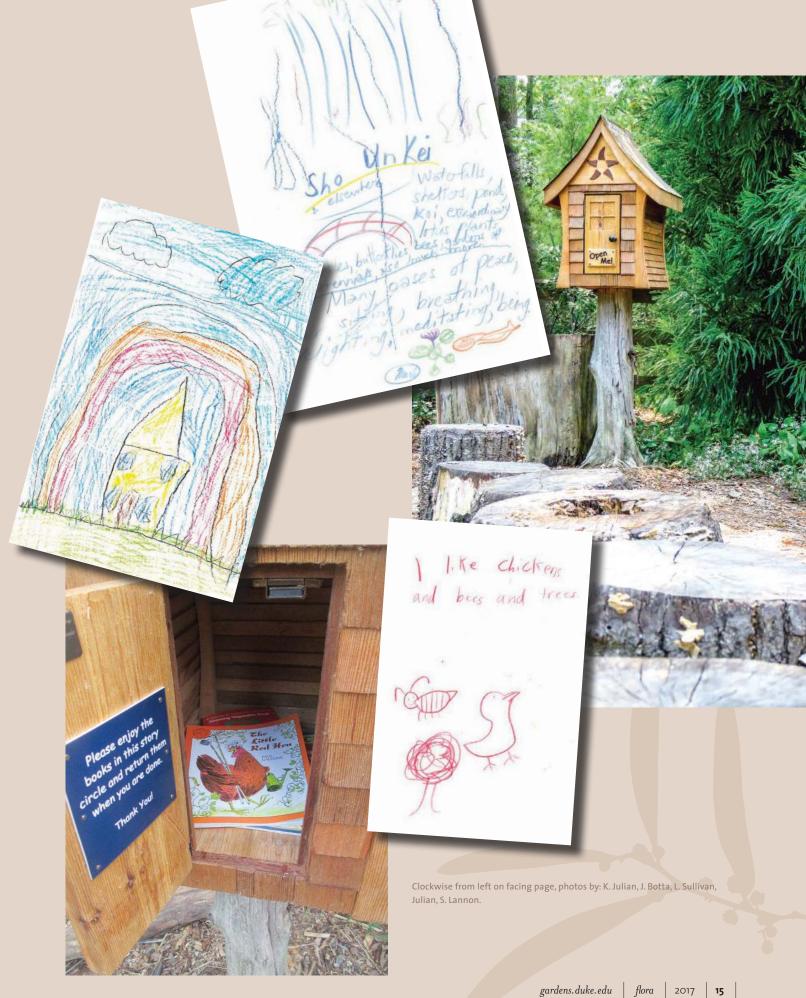
With the advent of emails and social media, it's easy to forget the thrill that our mailboxes used to hold. Through mailboxes, we shared exciting news with family and friends. We sent photographs, sketches, poems – whatever struck our fancy as we took pen to paper and settled down to share.

The mailbox in the Annie Nashold Story Circle of the Charlotte Brody Discovery Garden is reviving this fading tradition, encouraging young visitors to peek inside and poke through its contents—then sit down to read a book, write a note, draw a picture. Jason Holmes, curator of the Doris Duke Center Gardens, designed the charming mailbox. We hope you enjoy this little taste of what our young visitors "mailed" to us this year.











## An alternative "Chapel View" West Campus tree spawns a new plant variant

By Paul Jones, Curator, Culberson Asiatic Arboretum

On a campus where Blue Devils rule, it shouldn't be surprising to learn that witches are frequent visitors—at least this is the conclusion one might come to when considering the numerous witches' "brooms" in evidence around campus. Navigation apparently not being one of witches' strong suits, their brooms are most often found tangled and abandoned high in the canopies of oaks and maples and pines and such.

If you're wondering what the devil I'm on about, a witch's broom is a peculiar horticultural phenomenon that's more common than you might think. You'll see them in trees around Duke's campus, especially old pines, and they can be found in

many shapes and sizes. These brooms are not, as lore suggests, the wrecked vehicles-of-choice of old Wiccan aviators; nor are they, as was speculated in earlier centuries, the result of a tree having been bewitched. The abbreviated version of their story is that stressors to trees of many kinds, biological or environmental, can in some instances damage cells and lead to abnormal growth arising from the point of injury. Given ample time, this atypical growth develops in some cases into a twiggy mass that, when attached to a limb of broom handle diameter, begins to resemble the apparatus employed by the Wicked Witch of the West to chase Dorothy and Toto around Oz.



#mydukegardens student impact stories

### **Thomas Sauters**

graduate student

Duke University Program in Genetics & Genomics

"I've always been tied to the woods in general, so seeing something that was thought to be extinct and then was brought here in the 1940s is important to me. The dawn redwood at Duke Gardens represents almost like a tree of life."

Witches' brooms have long been sought by horticulturists as a potential source for variant plant selections, especially dwarf conifers. Though many of these aberrant growths are unstable and revert to normal characteristics when propagated, some are actually fixed mutations that, when asexually propagated, lead to new introductions for landscape use.



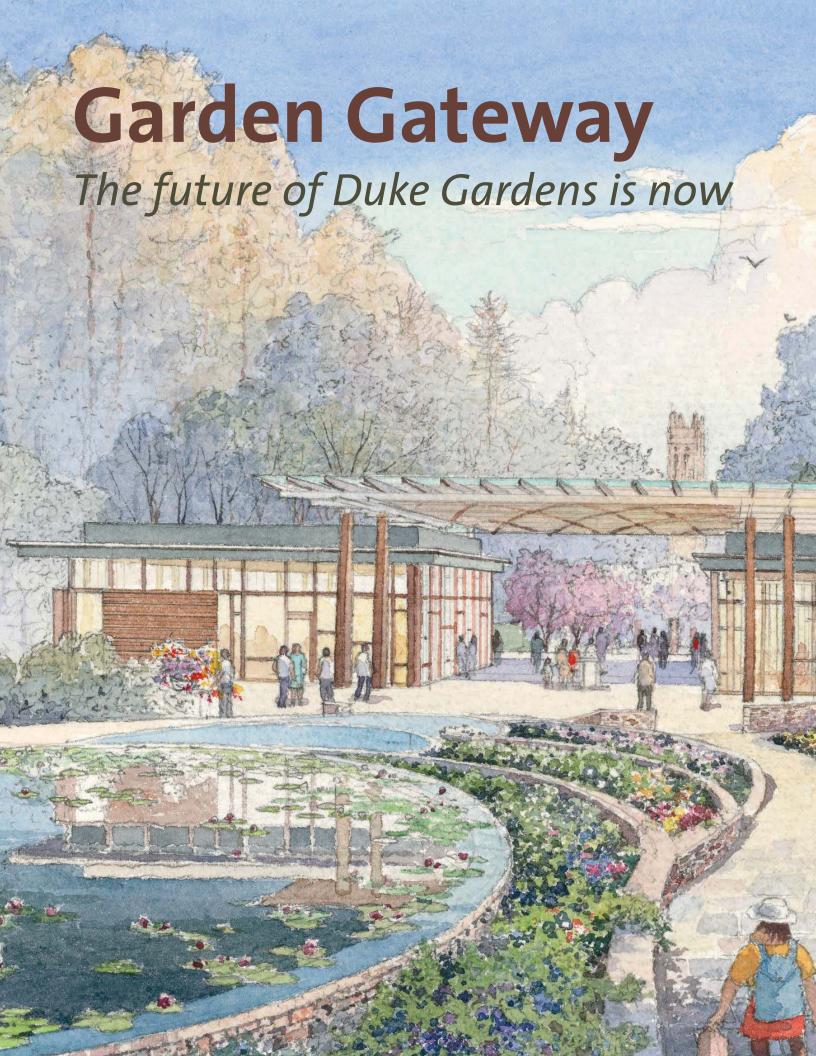
Clockwise from facing page: *Cryptomeria* 'Chapel View' on Chapel Drive, photo by O. Swift; inset photo by L. Sullivan; portrait by C. Xie; redwood by B. Wells; *Cryptomeria* 'Chapel View' in Duke Gardens by P. Jones.



Perched high in the top of an old Japanese cedar (*Cryptomeria japonica*) on the south side of Chapel Drive is a healthy and quite spectacular witch's broom that is probably about 30 years old. I first noticed this broom in the early 1990s, and being as I was at the time infatuated with dwarf conifers, I contacted the university grounds department and got permission to attempt propagation. Fortunately, the host tree was a very easy climb, and so I took about 100 cuttings and successfully rooted about 40.

The result is a stable, shrubby form of Japanese cedar that grows at about one-tenth or less the normal rate for this species. Its habit is slightly higher than wide, and when grown in good conditions in high light it is very dense. Fittingly, the name decided on for the selection is "Chapel View." The plant is now trademarked and in production, with Duke Gardens receiving modest royalties from its propagation.

Next time you head up Chapel Drive, consider diverting your gaze from the iconic Duke Chapel ahead of you, and instead look high in the trees for the witch's broom that produced an alternative new "Chapel View."





### **Getting Engaged**

### New interpretation elements aim to spark questions and offer answers

By Duke Gardens Programs staff

Special "Aha!" moments are not uncommon at Duke Gardens. For example, a young summer camper had a revelation as he was listening to a story about photosynthesis. He made a connection as he heard how plants photosynthesize sunlight into energy and nutrients for the plant, and that those same nutrients are then eaten by animals, including humans.

"If I understand this, it means that I am walking, talking sunshine!" the child exclaimed.

For the rest of the week, the children in summer camp talked about food and energy as sunlight: "Can we eat some sunshine apples?""I need to run off some of my sunshine energy!"

That "Aha!" moment helped the Gardens staff hone in on transformation as a theme in the Charlotte Brody Discovery Garden and became our jumping-off point as we crafted new informational signs for this organic, sustainable food garden.

As you stroll through the garden up to the Burpee Learning Center at the tobacco barn, you will encounter these new signs along the way. Together, the signs communicate a cycle of transformation:

- Plants transforming sunlight into usable energy
- · Plants being the source of all food
- The interactions between plants, water, soil and creatures that transform the Earth
- The role of humans

The signs invite visitors to think about questions and encourage a larger conversation. As you wander through, you might wonder, "Where do people get their energy?" "Are there pollinating insects in the Gardens?" or "Where does your water come from?"

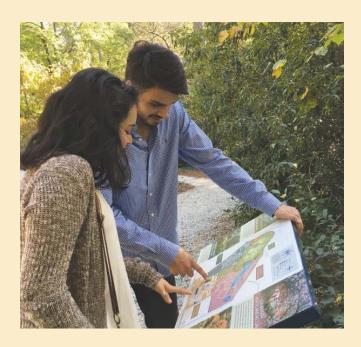
It is our goal to engage you throughout your visit to Duke Gardens. Informational signs are one example, but other methods of communication include chatting with a garden ambassador, joining a docent-led tour or activating the digital frog sounds in the Blomquist Garden of Native Plants. Sharing this information helps translate or interpret the Gardens and may help you more fully understand how plants impact your life.

At Duke Gardens, a staff committee meets regularly to identify other ways in which your experience at the Gardens can be enhanced. Over the last year, based on information and questions from visitors, we added signs and maps to assist visitors in

navigating the Gardens. Visitors are using the maps and signs to help them find those special places in the Gardens that appeal to them.

This year we are reviewing other questions regularly received from visitors. One common inquiry is for information about what the South Lawn looked like in the 1930s. The large open space where students gather to study and visitors enjoy picnics has not always looked as it does today. In fact, it was the site of the original Sarah P. Duke Gardens. Keep your eyes peeled for an informational sign coming soon that will illustrate what that first garden looked like.

"It is our goal to engage you throughout your visit to Duke Gardens. Sharing information about plants, wildlife and natural history may help you more fully understand how plants impact your life."





We are also creating a plan to help visitors know more about the story of prairies in North Carolina. The Piedmont Prairie in the Blomquist Garden has generated a lot of questions from visitors, such as, "Why do prairies exist?" "What makes them so different?" and "Why are they important?" Stay tuned to find out more about prairie ecosystems in North Carolina. It's an intriguing tale that includes glaciers and fires.

A visit to Duke Gardens can leave you feeling appreciation for the beauty of the Gardens or restored from your busy schedule. We also hope you will find information that intrigues and fascinates you. Plants still have plenty to teach us, and scientists are busy studying them for new ways of solving problems. Join us at Duke Gardens to find out more about their stories.



Clockwise from facing page: Visitors use the new "You are here" maps (photo by O. Swift); informative signs in the Charlotte Brody Discovery Garden (C. Xie); visitors on a tour (C. Burke).

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flora

### fond farewells

CINDY BRODHEAD has shaped Duke Gardens in many ways since her arrival in Durham in 2004, and we will miss her as her husband, Richard H. Brodhead, steps down from his role as Duke University president.

Brodhead joined the Duke Gardens team in the most handson way possible—as a horticultural volunteer. Each week, she devotedly planted bulbs, removed invasive plants and weeds, and did whatever it took to help the Historic Gardens team keep the gardens looking gorgeous all year long.

In 2008, Duke Gardens' recently hired executive director, Bill LeFevre, asked Brodhead to join the Gardens' Board of Advisors. In 2013, she became board chair. She also served on the board's executive committee and offered her expertise in countless other ways.

"Her leadership has helped us achieve incredible success growing our gardens, our programs and our outreach to alumni and the Durham community," LeFevre says. "She also chairs our Garden Gateway Capital Campaign Committee, which formed last fall to guide us through the process of planning and funding our most ambitious project to date, a complete redesign of the Doris Duke Center and our visitor entry experience, a new garden gateway for Duke University."

Duke Gardens volunteer Jan Carter said she braced for the possibility of a prima donna when Brodhead began volunteering and Carter was asked to mentor her.





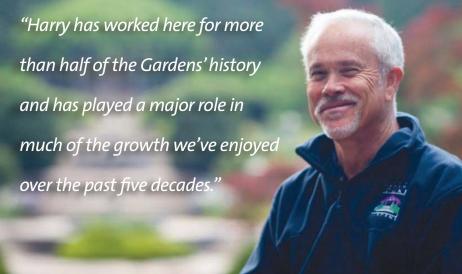
"I was totally wrong," Carter says. "No one works harder or longer or is less concerned with how messy things get than Cindy. She has always loved the huge, 'clean up this entire area' jobs, no matter how steaming hot or freezing cold the day may be. ... She is an artist with a rake and a broom and delights in fine tuning a bed to perfection."

Historic Gardens horticulturist Jan Watson agrees, praising Brodhead's work ethic and enthusiasm. "Cindy always gravitated to difficult tasks. The bigger the mess, the more motivated she was to fix it.... There is nothing she would not do to make Duke Gardens a better place."

Duke Gardens is profoundly grateful for all that Cindy and Dick Brodhead have done for Duke University and Duke Gardens, LeFevre says. "We are happy to know she intends to remain a part of the Gardens family far into the future as we make our vision a reality and take Duke Gardens to the next level among the best public gardens in America."

"We are happy to know she intends to remain a part of the Gardens family far into the future as we make our vision a reality and take Duke Gardens to the next level among the best public gardens in America."





**HARRY JENKINS** was still in college when he encountered one of the true loves of his life, but he was old enough to know this was "the one."

His love was Duke Gardens, and he has remained committed and smitten through a 45-year relationship that began when he was an intern and lasted through his retirement this spring as superintendent and horticulturist.

"It is impossible for me to thank Harry enough for his long and faithful service to the Gardens and his friendship to us all over the years," Bill LeFevre, Duke Gardens' executive director, said when announcing Jenkins' retirement. "Harry has worked here for more than half of the Gardens' history and has played a major role in much of the growth we've enjoyed over the past five decades."

Jenkins came to Duke Gardens at a pivotal time, when it became clear that in order for the Gardens to grow and thrive, it needed more trained horticulturists and fewer general laborers. Larry Daniel, who began at Duke Gardens as the superintendent and retired decades later as associate director, recalled that Jenkins was his first hire.

"He was from an eastern North Carolina farm family, just as I was," Daniel says. "Harry did an excellent job that summer, and he and I got along exceptionally well. ... It was a great joy for me to work with Harry and have his unfailing support for 30 years. Now with 45 years at Duke Gardens, he certainly has set a record for service and dedication."

Photos: a floral arrangement by Harry Jenkins (photo by Swift); portrait of Jenkins by R. Fisher. Facing page: Cindy Brodhead planting in the Walker Dillard Kirby Perennial Allée; Cindy and Richard Brodhead dedicate Pine Clouds Mountain Stream (*Sho Un Kei*). Photos by O. Swift.

Paul Jones, curator of the Culberson Asiatic Arboretum, has worked with Jenkins for more than 30 years. He praised Jenkins for his loyalty to the Gardens, his magnet of a memory, and a strong work ethic that served as a model to others.

Horticulturist Michelle Rawlins says she will miss Jenkins' personality, "his mischievousness, his sincerity. But what I will miss most of all is all of the countless hours we spent working together at his house planting bulbs," she says. "If I could tell Harry one thing, it would be that I promise to never plant more than one bulb in a single hole ever again!"

Jenkins' decades with the Gardens have created a deep appreciation for its plants and vistas. He is hesitant to name favorites, insisting that every area has its delights, depending on the season. But he is partial to peonies and irises, he says. Oh, and *Cephalotaxus* 'Duke Gardens', and the irresistible scent of osmanthus in fall, not to mention lilacs, daphnes and Chinese paperbush.

Jenkins' love for all plants was evident in the many flower arrangements he created for special Duke Gardens gatherings. And if you ask him to show you something special out in these 55 acres on any given day, you will get a taste of why Jenkins chose to spend his whole career at Duke Gardens.

As he helped shape Duke Gardens through the decades, the Gardens shaped Jenkins, too. Plants taught him that patience is a virtue, and that one must be able to adapt to change in order to thrive. Reeds must bend with the wind, he says, or they will break. And so off Jenkins goes, and we are all eager to see where the wind will take him next.

gardens.duke.edu

ra 2

### arts in the gardens



### MUSIC IN THE GARDENS

Duke Gardens and Duke Performances will continue the popular outdoor music series Music in the Gardens this summer. The concerts will take place on Wednesday evenings on the lawn behind the Doris Duke Center. They are a great opportunity to gather with friends and family members in a relaxed setting. The schedule is as follows:

June 7: Flock of Dimes June 14: Robert Finley June 21: Robbie Fulks June 28: Loamlands July 5: Birds of Chicago July 12: Kelsey Waldon July 19: River Whyless July 26: Caleb Caudle

All concerts take place rain or shine. Shows are at 7 p.m. The lawn



will open 30 minutes prior to the start of each show. Lawn chairs, picnics and blankets are encouraged. Dogs are not allowed. Food and beverages, including beer and wine, will be available for purchase.

To buy tickets, please call 919-684-4444 or go to tickets.duke.edu.

### **CIOMPI QUARTET PRESENTS**

Duke Gardens will again collaborate with the Ciompi Quartet, Duke's Department of Music and the Office of the Vice Provost for the Arts to organize a summer chamber music series.

"Ciompi Quartet Presents" concerts will take place at 7:30 p.m. in Kirby Horton Hall in the Doris Duke Center. The concerts typically feature one or more members of the Ciompi Quartet with guest artists.

The lineup is as follows:

Tuesday, May 30: Eric Pritchard Tuesday, July 11: Jonathan Bagg Thursday, August 24: Fred Raimi

Tickets are available at tickets.duke.edu or by calling 919-684-4444. Parking is free after 5 p.m. We recommend that you reserve early, because the series usually sells out in advance. Read more about the series at ciompi.org.



### ART & NATURE

Duke Gardens hosted the fourth annual Art & Nature exhibit in March, this time devoted to art inspired by the Doris Duke Center Gardens.

The exhibit in Kirby Horton Hall featured 50 works ranging from watercolors to sculpture, all made by area artists. It also featured 23 works by children aged 5 to 17 years old.

William Alberti's graphite rendering of the Page-Rollins White Garden (pictured above), titled "White Garden in Winter," won best in show. Duke Gardens presented this lovely piece

to Frances Rollins, whose generous support of Duke Gardens includes having funded the dramatic 2012 redesign of the Page-Rollins White Garden.

The first runner up was Kathryn DeMarco's "The Conversation." And the second runner up was Maria Tadd's "Tolerance."

Visitors to this free exhibit loved seeing the many ways the artistry of Duke Gardens serves as an inspiration to other artists. We look forward to hosting the fifth annual Art & Nature exhibit in spring 2018.

### **BONSAI EXPO**

Join us in July to enjoy Duke Gardens' first Bonsai Expo. The Triangle Bonsai Society will display an amazing array of these carefully pruned plants during this two-day exhibit.

The event will feature more than 40 bonsai created in multiple styles from a wide range of plant species, including maple, azalea, pine, elm, juniper, bald cypress, crabapple, ficus and

more. At daily demonstrations, you will have the opportunity to learn the basic steps of creating a bonsai.

The expo will be on the weekend of July 8 and 9. Saturday hours will be from 10 a.m. to 5 p.m.; Sunday will be noon to 4 p.m. You may drop in at any time. Admission is free, but parking fees apply after 1 p.m.

### Mad about mums

### The Festival of Fabulous Mums fills Kirby Horton Hall and the gardens

Visitors have been admiring the big, bold mums that horticulturist and award-winning mum-grower Michelle Rawlins displayed in Duke Gardens in recent years. So Rawlins and the program staff took the mum presentation to the next level last November by partnering with the Central Carolina Chrysanthemum Society for a Festival of Fabulous Mums.

The free-admission festival drew more than 1,400 people to see the mums and learn more about their history and how to grow them. Visitors also voted for their favorite flowers. Joan Matthews, president of the chrysanthemum society, won first place with a trio of 'Symphony' blooms. Patrick McCune, age 8, won second and third place with blooms of 'St. Tropez' and 'Lili Gallon'.

We hope you enjoy these photos of some of the beauties on display at the festival. You can see more gorgeous flowers at the second annual Festival of Fabulous Mums from Oct. 29 to 31.





### Falling for Orchids

The second annual Fall for Orchids exhibit drew enthusiastic crowds to the Doris Duke Center last fall. The exhibit featured roughly 1,000 gorgeous specimens representing a fascinating array of shapes and sizes.

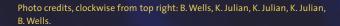
The exhibit was presented by the Triangle Orchid Society in partnership with Duke Gardens. Mark your calendars for this fall's exhibit on Nov.10-12. You won't want to miss it!

The Triangle Orchid Society meets on the second Monday of each month at Duke Gardens. For more information, please go to *triangleorchidsociety.org*.













### news Enotes

#### **NEW STAFF**

MANDY CUSKELLY (assistant horticulturist, Historic Gardens) grew up in North Dakota and moved to Durham in 2013. She graduated in 2009 with a bachelor's degree in zoology and in 2012 with a master's in marine science. While dealing with the stresses of graduate school, she found herself spending more and more time gardening. After living in the South



and learning people could garden all year long, she was drawn to the world of horticulture. In 2015 she started volunteering with Duke Gardens and going back to school to study horticulture. She became an intern last summer and started full time shortly after completing her internship, and she couldn't be happier!

LAURA DALY (assistant horticulturist, Blomquist Garden of Native Plants) spent most of her youth trekking through the woods near her house in Greensboro. From 2010-2012, she held a work-study position in the Marye Anne Fox greenhouses at N.C. State University, and she began an internship with Syngenta in 2013. She received her



bachelor's degree in horticultural science from N.C. State in 2014, unleashing her to work as a technician at the chemical company BASF and crew lead at Bland Landscaping. She finds the hardest job is often the most rewarding when done right, and the dirt under her fingernails and calloused palms are matters of pride. At all of her jobs, the invariable theme seems to have been, "Gardening requires lots of water—most of it in the form of perspiration."

KATI HENDERSON (education program assistant) has worked with children's education at Duke Gardens since beginning her graduate program at Duke in 2014, and she was excited to join the team full time after graduating. After studying molecular biology and visual art for her undergraduate degree at Princeton, she created her own master's



program in interdisciplinary public education. Through a work-study position at Duke Gardens that perfectly complemented her academic course, she discovered a love for teaching and the possibilities of environmental education. As education program assistant, Kati designs and leads school and public programs for children, university students and families.

LAUREN SMITH HONG (Annual Fund and membership officer) came to Duke Gardens from Cheekwood Estate and Botanical Gardens in Nashville, Tenn., where she was director of individual giving, responsible for securing annual fund donations as well as major gifts. Prior to Cheekwood, Lauren served as the chief client development strategist for



Sotheby's Contemporary Art division in London and New York. Although her background is in art, with master's degrees in both art history and art business, she has fallen in love with the world of botanical gardens and is thrilled to be working at Duke Gardens.

BARBARA MURPHY (registrar) came to Duke Gardens from her previous job in the Chancellor's Office at the North Carolina School of Science & Math. She previously worked for Duke

Performances. Barbara is originally from Miami; she moved to Durham with her family in 2006. She has worked for a creative writing program, in art galleries, and in the performing arts. Barbara says the best part of working for Duke Gardens is seeing how many visitors are provided the opportunity to enjoy such a beautiful place.



**SHEON LADSON WILSON** (publications coordinator) grew up in a large extended family in Charleston, S.C., a beautiful, lush, traditional city. Visiting Duke for her uncle's graduation, Sheon

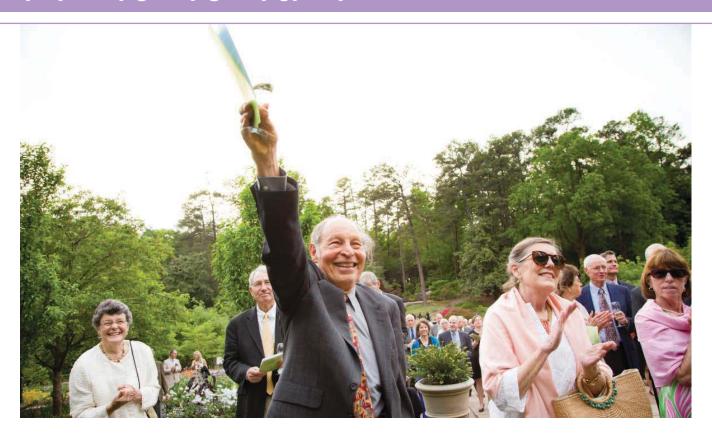
fell in love with Duke Gardens at age 11. Duke was her top college choice and she went on to earn a bachelor's degree in history. After graduation, Sheon became a journalist, covering courts, crime, education and more at the Greenville (S.C.) News and Greensboro News & Record. After joining the Raleigh News & Observer, Sheon worked as an assigning



editor, copy editor and style reporter. Sheon restyled more than 100 readers as The N&O's makeover expert. She relishes the chance to show how Duke Gardens merges beauty and intelligence.

Duke Gardens also said farewell to registrar **SARA SMITH**, who retired this year, and to visitor services coordinator **SARAH LEACH SMITH**, who left Duke Gardens in March.

### in memoriam



#### Dr. J. Horst Meyer

A few weeks before our dear friend Horst Meyer passed away, he told us that he had a wild dream that perhaps we could find a way to ensure the future care of all the bluebird box installations he had made and serviced throughout Duke Gardens and across the Duke campus over the years.

We put out a call, and plant records manager Beth Hall quickly responded. In short order, Beth mapped 51 boxes, recorded an oral history by Horst, and identified a dedicated volunteer named Mark Clark to make Horst's dream come true.

Our success in doing so made Horst very happy and will give us all the pleasure of continued bluebird sightings across campus.

Horst, a Duke physics professor and founding member of the Duke Gardens Board of Advisors, was a remarkably kind and generous human being who had an unbridled enthusiasm for living, deep humility, and the irrepressible nature of a 6-year-old, despite the fact that some of what life threw his way was profoundly unfair.

Thank you, Horst, for being such a force for good in the world, and for making Duke and Durham a far better place than it was when you found it.

— Bill LeFevre

Executive Director



Clockwise from top left: Dr. Meyer celebrates at Duke Gardens' 75th anniversary gala (photo by J. Gardiner); photographing irises (P. Jones); posing with arboretum curator Paul Jones (B. LeFevre); greeting daughter-in-law Simone Meyer at his surprise 90th birthday party (O. Swift); posing with Simone Meyer, son Christopher Meyer and Duke Gardens executive director Bill LeFevre (Swift); taking care of a Duke Gardens bluebird house (Swift).







### Remembering Our Volunteers

Duke Gardens is also thankful for the service and devotion of the following volunteers who passed away in the last year:

PATRICIA ALT began as a horticulture volunteer in spring 2013. She was diligent in maintaining the gardens around the Japanese Pavilion. Her skills as a fashion designer gave her a keen eye for adding beauty to Duke Gardens.

BRUCE BURNS was a tour guide in the late 1990s. An avid gardener himself, he enjoyed sharing his love and appreciation of nature with others. He was always interested in the newest plants that were being incorporated by the Duke Gardens staff, and he would often ask many questions about them so he could be as accurate as possible while leading tours.

HELEN CORBETT loved Duke Gardens. She enlisted as a volunteer in summer 2007 and for several years gave of her time as a tour guide and assisted visitors at the information desk. She especially enjoyed meeting new people and helping them have the best visit possible to the Gardens.

**PIERRE GERVAIS** loved plants. His experience as an employee of a local garden center made him knowledgeable about plants and their needs. He was faithful to his tasks as a volunteer in the Doris Duke Center Gardens for three years, often coming in on multiple days each week.

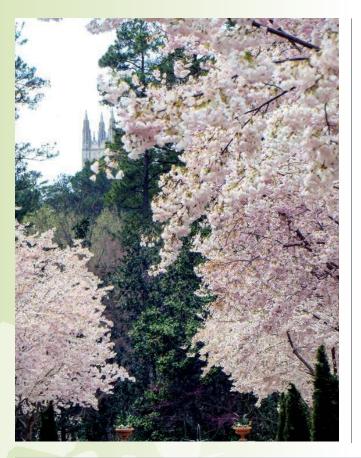
**ELIZABETH "BETTY" JORDAN** was a passionate gardener and a lover of animals. She volunteered faithfully and cheerfully at the information desk for nearly 10 years, providing guidance to many visitors. She also maintained the Duke Gardens lost and found. I can still hear her asking me, "How do so many people lose so much stuff?"

— Chuck Hemric

#### MEMORIAL GARDEN

If you'd like to learn more about the Memorial Garden at Duke Gardens, please call 919-684-5579 or email memorialgarden@duke.edu.

### news Enotes



#### AWARDS AND HONORS

Duke Gardens is still at No. 1 out of 74 Durham attractions in tripadvisor.com, maintaining our Certificate of Excellence with more than 1,500 reviews and a 5-star average. We're thankful to our visitors for sharing their enthusiasm about the Gardens' horticultural design and programs.

Among other accolades, the Charlotte Brody Discovery Garden won an annual award from the N.C. Chapter of the American Society of Landscape Architects, and *Magnolia ashei* (in the Blomquist Garden) won the Garden Club of America's Freeman Medal.

Duke and Duke Gardens were included in Fodor's Travel's "7 Reasons to Visit Durham, N.C." We won first place for the third year in a row in Durham Magazine's Readers' Choice Best of Durham awards for "best event space" and "best outdoor family outing location." Pine Clouds Mountain Stream got a gorgeous 2-page spread in Duke Magazine's summer 2016 issue. And Duke Gardens was featured in Our State magazine, as well as Southern Lady and Garden & Gun.

'Akebono' cherry trees in the Cherry Allée (photo by L. Sullivan); pergola dedication (by Jim Wallace/Duke Photography). P. 33: photos by Swift. P.35: portrait by Swift; Mary Duke Biddle Rose Garden (by S. Reuning).

### **DUKE UNIVERSITY BOARD OF TRUSTEES HONORS CINDY BRODHEAD**

Duke Gardens' iconic pergola is now named the Cindy Brodhead Pergola, in honor of Brodhead's service to Duke University and Duke Gardens (see pg.22).

At the May dedication ceremony by the Duke University Board of Trustees, board chairman David Rubenstein described the pergola as the most recognizable structure in the Gardens. "We thought in honor of her great service here and her great commitment to the Gardens and everything else she's done at Duke, we'd like to name this in her honor."

"There's nothing that you could have done for me that would have been more meaningful than this," Brodhead told the trustees, calling the dedication an extraordinary gesture. "This place really is the heart of the university. And if you wander through here on any day of the week, you will see people from

all over the world, happy people. How many places can we go and see happy people on this planet right now?

"So here's to more happiness," she said. "I certainly intend to stay involved with the Gardens and make sure that this remains a happy place, and even gets happier."





#### WEAVING RELATIONSHIPS

Duke Gardens hosted a stick-weaving workshop in April as part of the Duke Forward campaign celebration.

Attendees gathered at Patrick Dougherty's "The Big Easy" sculpture on the South Lawn and joined forces to weave large strips of sticks, with guidance and encouragement from artist Elsa Hoffman, one of Dougherty's assistants.

Hoffman talked about how best to weave a structure as sturdy as "The Big Easy." And Duke Gardens Executive Director Bill LeFevre presented a slideshow beforehand, talking about how the sculpture represents the interwoven relationship between Duke and Durham, and showing how it was made. When the participants were done, Hoffman demonstrated how the large strips they had created could be manipulated into a temporary mini sculpture.

We're grateful to Dougherty and Hoffman for giving us a window into their artistic approach and providing a fun activity for these enthusiastic supporters of Duke University and Duke Gardens.

### SOCIAL MEDIA: Join the Conversation

facebook.com/dukegardens
instagram.com/sarahpdukegardens
sarahpdukegardens.blogspot.com
twitter.com/dukegardens
youtube.com/dukegardens



#### GARDEN IN A BOX

Organizers of the Duke Gardens spring and fall plant sales came up with a new enticement for shoppers, and it has been a huge success.

The idea is a "garden in a box," in which we offer a starter kit for a themed garden. In the fall, organizer Beth Hall and her team created a pre-selected "pollinator garden in a box" that people could pre-order. In the spring, we offered a mix and match herb garden.

What themed mini-garden will the Sept. 30 Fall Plant Sale bring? Stay tuned to gardens.duke.edu/events/plant-sales, and you will see!



### **New Pets Policy**

Duke Gardens launched a new pets policy in March, allowing dog walking only before 10 a.m. and after 5 p.m. and prohibiting all other pets.

The policy brings Duke Gardens more in line with public gardens nationwide, most of which do not allow pets at all. We created new rules signs to ensure that visitors are aware of this and other Duke Gardens policies, and we hope that you will tell your friends who may not yet be aware of it. Service dogs trained to do work or perform tasks for a person with a disability will be allowed, in compliance with the Americans with Disabilities Act.

You can read more on our website about this policy and others designed to protect Duke Gardens' plant collections and provide the best garden experience possible for all visitors: gardens.duke.edu/visit/gardens-etiquette.

### news Enotes

#### SUMMER INTERNS

Internships at Duke Gardens offer exciting opportunities for students to be closely involved with the challenges and rewards of working in a growing organization with a fast-paced atmosphere.

Four students are hired for 12 weeks and work directly with the horticulture staff to gain practical work experience in all aspects of horticultural maintenance. In addition, as part of their training, interns are required to attend educational programming to broaden their general exposure to public horticulture. The educational component consists of field trips and workshops offered by the staff.

In 2016, we were fortunate to have a group of students utterly dedicated to their education and passion for horticulture.

BRADLEY HARMS joined us from North Carolina State University as a rising junior and was interested in helping to map the irrigation systems. SARAH MILLER was also a rising junior, attending the University of Tennessee at Martin. Along with pursing the internship for college credit, she also assisted in a large portion of the record keeping in the Charlotte Brody Discovery Garden. SARAH BRANDEWIE, a student attending Alamance Community College, was heavily involved with the Native Orchid Bog project being designed in the Blomquist Garden of Native Plants.

Our fourth intern, **Mandy Cuskelly**, was also a student at Alamance Community College. She assisted the propagation team in all aspects of growing plants for Duke Gardens projects and plant sales. Mandy is now a great asset to the Duke Gardens horticulture team as the assistant horticulturist in the Historic Gardens.

- Michelle Rawlins

#### HELP US SAVE THE DATE

We are creating a database of Duke alumni who chose Duke Gardens for their weddings or proposals. We've received some great stories so far, and we'd love to hear yours!

More information: gardens.duke.edu/alumniweddings

#### FOOD DRIVE

Duke Gardens has played a major role in reducing hunger in the community, with substantial donations of produce from the Charlotte Brody Discovery Garden and with an annual holiday food drive.

In 2016, we exceeded the one ton mark in fresh produce donations to the hunger relief organization Healthy Families of Durham. Since opening in 2012, the 1/10 of an acre in which we grow most of this produce has provided a total of 8,589 lbs. of fresh fruits and vegetables to help feed local families.

In addition, our sixth annual holiday food drive for Gardens staff and volunteers enabled us to donate 819 lbs. of food and other greatly needed items to the Food Bank of Central & Eastern North Carolina. In all, we have donated more than 7,500 lbs.

In the 34 county area serviced by this food bank, more than half a million people wonder where their next meal will come from; one-third of those are children. The food bank distributes donations to nearly 800 agencies that serve more than 837,000 meals per week.

As our core value of "community" states, "by connecting people with plants, we improve quality of life and strengthen the communities we serve." Every day we strive to meet and exceed these core values, and this is a testament that we provide so much more than our mission states.

- Jason Holmes

### **EXEMPLARY SERVICE**

Duke Gardens volunteer Deb Marion did the Gardens proud recently, when she was unwittingly put through the Durham Convention and Visitors Bureau's "mystery shopper" test.

The bureau hired a mystery shopper team to interact with people in Durham who serve



the public. Debra got high marks across the board for her knowledge, attitude and the quality of information she provided about Duke Gardens, Duke University and Durham. Thank you, Deb!

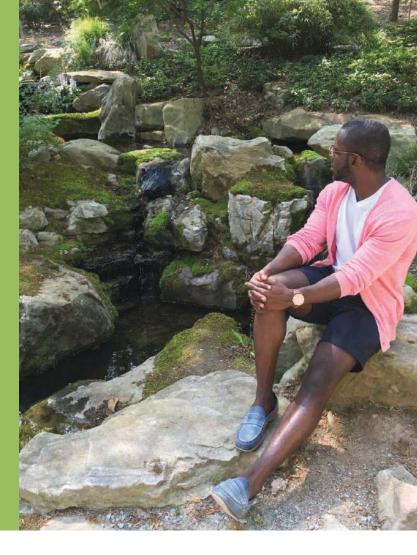
### #mydukegardens student impact stories

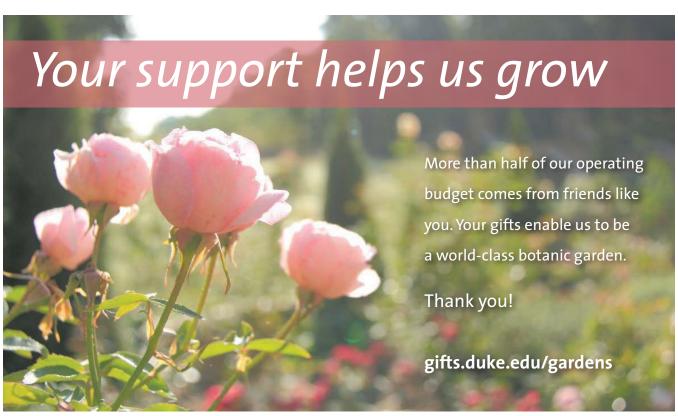
### **Alex Brunson**

Majoring in economics and philosophy, Class of 2018

"Duke Gardens is one of the few places on campus in which students enthusiastically and shamelessly seek respite—allowing ourselves hours of people-watching, sunbathing, meditation, quality time with a good read for leisure, or quality conversations with friends and family.

Duke Gardens fosters community, reminding us all how good it feels to simply be: to worry less and feel more. Simply put, the Gardens are indulgence. And each visit is—for students and the larger Duke and Durham community—a much needed dose."





### a closer look: Duke Gardens curators on interesting plants in their gardens







### **CHIONANTHUS VIRGINICUS**

Describing a plant species as having either male or female specimens can be confusing. This phenomenon, known as dioecy, occurs in about 6 percent of our native flowering plants, including the fringetree, (Chionanthus virginicus).

This southeastern native small tree is known primarily for its feathery, white male flowers, which are found on male plants (Chionanthus is Greek for "snowflower"). The less conspicuous female flowers, found on female plants, can be easy to miss. Both flowers can be observed in May and June.

A member of the olive family (Oleaceae), fringetree's female flowers can mature to form blue-black, single seeded drupes favored as food for more than 70 species of wild birds. Like its olive family cousins the ashes, fringetree is susceptible to infestations by the emerald ash borer beetle, a pest that is anticipated to impact our area in coming years.

- Stefan Bloodworth, curator, Blomquist Garden of Native Plants

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Winterberry holly is a deciduous holly native to the eastern United States and adaptable to a wide variety of soil types. This holly prefers moist soil but is quite happy in dry or boggy soil, and it can tolerate very wet areas. This rounded and upright shrub grows slowly to about 6 to 10 feet high and prefers sun but can take some shade. The small white flowers in spring are mostly insignificant; its main attribute is the abundance of bright red berries that begin to ripen in the fall and persist into winter. Birds love the berries, and how quickly they are eaten depends on the sugar content of that variety. Cultivars differ in the size of the berry, color (red, orange, gold), abundance and shininess. Some varieties such as 'Red Sprite' have huge berries, but the birds devour them quickly.

The cultivar 'Winter Red', my favorite, has possibly the longest lasting berries of any winterberry holly on the market; I have seen them last until May. These hollies are dioecious, meaning that there are separate male and female plants. They have fair pollination rates with other hollies found in the landscape and surrounding woodlands, but to get a really good berry set a male holly needs to be planted nearby. One male holly is sufficient for about 10 females. Good cultivars include 'Southern Gentleman', 'Jim Dandy', and 'Ruritan'. This plant is useful for wildlife and handy for difficult moist areas, as well as rain gardens.

- Mike Owens, curator, Historic Gardens









Horticultural oddities and rarely cultivated species have a magnetic appeal, and air plants, also known as epiphytes, fit this niche. The genus *Tillandsia*, one of close to 100 genera of epiphytic species found worldwide, comprises 600 individual species of air plants that are limited to the southern United States and Latin America. Many people have seen *Tillandsia usneoides* (Spanish moss) draping from trees along North Carolina's inland coastal lands. This is a prime example of a member of this genus growing without roots, absorbing moisture from the humid air. I have grown various species and forms with success.

Many of the lesser known species thrive in mesic (wet) habitats. However, many of the well-known species flourish in xeric (arid) environments. *Tillandsias* have an amazing array of flowers that are typically held in colorful stalks at various times of the year. They can be left outdoors during the summer, but they should be brought inside in winter due to their lack of cold-hardiness. Indoors, *Tillandsias* should be kept in areas with high light. Interesting and creative ways to mount or hang them might include using tree bark panels or hanging wires.

While indoors, air plants like *Tillandsias* should submerged in water for about 12 hours every other week. This allows the plant to soak up enough water to sustain it in the dry indoor environment.

We have a number of species on display outside of the Doris Duke Center during our active growing season. Come see this fantastic oddity that all can grow and enjoy.

-Jason Holmes, curator, Doris Duke Center Gardens



By the time you read this, the remarkably cold-tolerant, fragrant and often brightly-colored flowers of witchhazels will be but a memory. Reliably, though, they will have balked at winter's worst and, having consumed the spare warmth of January, unfurled their crinkly, linear flowers to grace the bleak landscape and restore confidence to gardeners hungry for winter's drabness to cease. Though Punxsutawney Phil may predict the contrary, witchhazels' flowers always proclaim, "Yes! Spring and reawakening is assured."

Botanists recognize seven species of witchhazel, which is known by the scientific name *Hamamelis*. Three are native to North America, and four to Southeast Asia. Of special interest to gardeners, several spectacular hybrids have resulted from crossing *Hamamelis mollis* and *H. japonica*. Classified as *Hamamelis X intermedia*, many of these hybrids can be found throughout Duke Gardens, examples being 'Goldcrest', 'Wisley Supreme' and 'Sunburst'. North American natives, *H. virginiana* (which flowers in late autumn) and *H. vernalis* can both be found in the Blomquist Garden.

Witchhazels are underutilized in home landscapes. As for cultivation, they are neither finicky nor burdened by pest or disease problems. Also, since hybrids are typically grafted, one must attentively check for and remove any vigorous sprouts arising from understock. Though they disdain wet feet, witchhazel stems are purported to be excellent tools for dowsing, should you find need to locate underground water on your property—a fact that contributed to the shrub's common name.

– Paul Jones, curator, Culberson Asiatic Arboretum



Is there a plant at Duke Gardens that you're curious about?





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We hope you will join us as we look forward to the next chapter of growth at Duke Gardens—The Garden Gateway.