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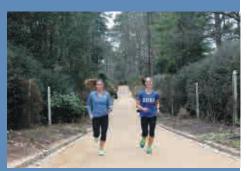












from the director

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Flora writer/editor: Orla Swift Editorial assistants: Ashley Wong (T'16) and Cecilia Xie (T'18) Cover photo: Silky camellia (Stewartia malacodendron) by Sue Lannon.

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dear friends,

The past decade has been marked by dramatic growth for Duke University, Durham and Sarah P. Duke Gardens—and *Flora* has grown as well. We are pleased to bring you the first-ever 40-page edition for 2016. I would be remiss not to mention that this beautiful magazine is skillfully created and edited each spring by Orla Swift, director of marketing and communications, in collaboration with a wide range of contributors, including students, staff and volunteers.

Each year when I read the early draft and am asked to write this opening letter, I am reminded of, and awed by, the wide variety of talents and dedicated people required to make Duke Gardens and its programs grow and thrive.

In these pages you will read of the numerous water features we developed over the past few years, dramatically reducing our use of city water as well as adding great beauty and a rich undercurrent of sound throughout the Gardens. You will also see and read of the incredible biodiversity found in our new Piedmont Prairie in the Blomquist Garden of Native Plants, which in less than one year completely transformed a lonely stand of pines into a rich and diverse habitat.

Insight into why people are drawn to Duke Gardens can be found in the many profiles of our staff, students, volunteers, donors and advisory board members—as well as what they gain in the process by being involved. Articles by work-study assistants Ashley Wong (T'16), Kati Henderson (G'16) and Tyler Coe (T'17) highlight just three of our many exceptional student workers and reveal their experience connecting the garden to their studies and finding in it a place of quiet contemplation.

We also have anniversaries to share: the 25th of our volunteer program and of our board of advisors, as well as the centennial of Charlotte Brody, the pioneering organic gardener from Kinston, North Carolina, whose legacy is honored in our Discovery Garden that bears her name.

It is an exciting time for Duke Gardens as we strive to be recognized as one of the best public gardens in the country. We are able to do this only because Duke University and our growing list of friends value and support the Gardens. Thank you, and I hope to see you in the garden soon.

Sincerely,

William M. LeFevre Executive Director



Growing with the flow

New recirculating water features merge beauty and sustainability



"I have left almost to the last the magic of water, an element which owing to its changefulness of form and mood and color and to the vast range of its effects is ever the principal source of landscape beauty, and has like music a mysterious influence over the mind."

— Sir George Sitwell "On the Making of Gardens" Water has always played a vital role in Duke Gardens' allure, from the Fish Pool and fountains in the historic Terrace Gardens to the large pond in the Asiatic Arboretum and smaller ponds and streams throughout the Gardens.

This magnetic force has grown dramatically in the last five years, with three stunning new recirculating water features and the restoration of the historic Leubuscher Rock Garden waterfall and Terrace Gardens Fish Pool.

We invite you to read about them in the following pages, and to join us in thanking the donors whose generosity has left this lively legacy to be enjoyed by the Duke and Durham community and visitors from around the world.





Above: Pine Clouds Mountain Stream. Photos by Lori Sullivan and Karen Webbink. Previous page: Pine Clouds Mountain Stream with potted mums (*Chrysanthemum* 'Paintbox') in the foreground. Photo by Orla Swift.

PINE CLOUDS MOUNTAIN STREAM

Dedicated in October 2015

Picture this: A "strolling garden" just below Flowers Drive at the western border of the Asiatic Arboretum, with waterfalls and streams, a Japanese-style shelter, and meandering paths designed to look as if they have been there for generations.

How the water flows: The small stream uses a submersible pump located in a reservoir at the base of the stream to recirculate about 50 gallons per minute through several outlets upstream, creating the illusion of springs issuing forth from the boulders and tumbling downstream.

The water flow in the larger stream is controlled by two pumps. One pump simply recirculates water from the pool at the base of the waterfalls back up to the top of the falls. The second pump removes water from a reservoir at the bottom of the system, moves that water through a sand filter, and then reintroduces the clean water at three locations in or around the waterfalls.

Total water recirculating: 13,000 gallons in the large stream and 4,500 gallons in the small stream.

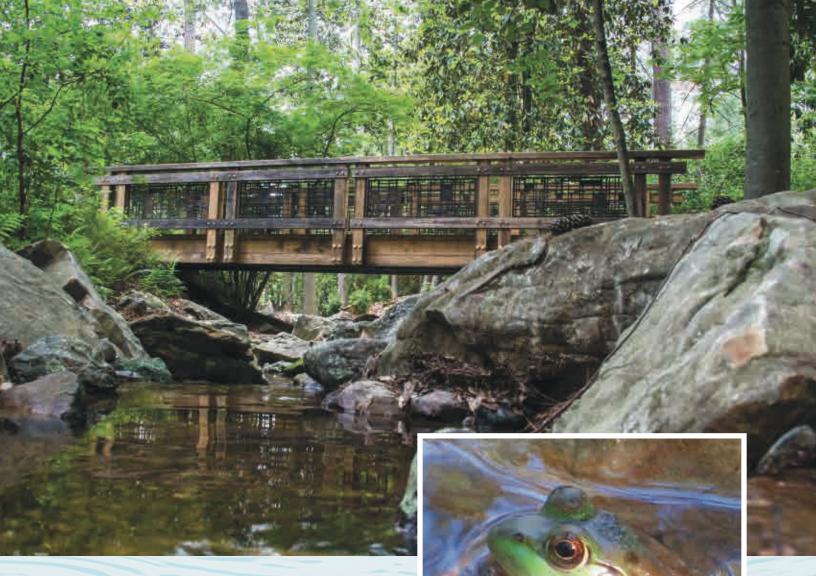
Fun facts: The new garden features about 180 tons of boulders selected and placed purposefully with guidance from Sadafumi Uchiyama, a Japanese landscape architect and curator of the Portland Japanese Garden.

The larger of the waterfalls is "protected" by a dragon. This dragon can be imagined if one looks upon the berm with some imagination—its head being a large stone at the north end of the berm, and the berm itself being the body, which arcs in a bit of a "cradling" or protecting position.

Curator Paul Jones' vision: "I would like visitors to experience a small but excellent example of a landscape garden in the Japanese style. I especially love the two very different water features—how they contrast and how they complement one another; how the one excites the senses, and the smaller is calming.

I love the fact that the pre-existing water features, the larger and smaller ponds in the arboretum, are also a part of the experience of these new streams. There are places from which all come into view, which contributes to the sense that all these features naturally occur at this site.

That the features are presented as believable (vs. obviously manmade) was always one of my most important considerations as we planned and built the garden."



McNabb Family Bridge and Stream

Completed in April 2015

Picture this: A 275-foot-long recreation of a piedmont woodland stream, using approximately 400 tons of boulders and other miscellaneous stone.

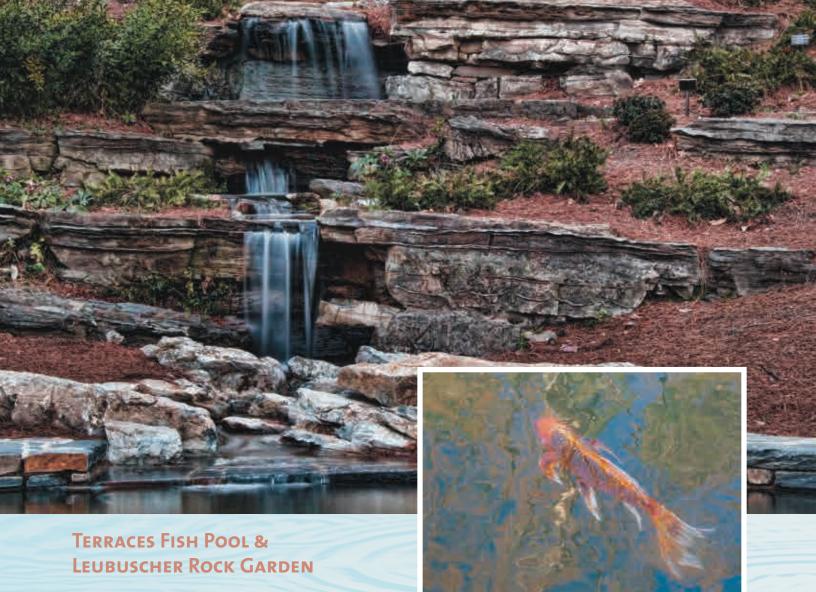
How the water flows: A 1-horsepower, low-RPM external pump pulls water from a pool at the terminus of the stream and pumps it to the head of the main stream and to outlets at the head of two small "tributary" streams.

Total water recirculating: Approximately 12,000 gallons per hour.

Fun fact: The 14-month project was constructed completely in-house by Blomquist Garden staff and volunteers.

The McNabb Family Bridge and Stream, and a bullfrog (*Lithobates catesbeianus*) living in the stream. Photos by Rick Fisher and Sue Lannon.

Curator Stefan Bloodworth's vision: "This is a transformative project, creating a core feature with movement and sound from which all features in that part of the Blomquist Garden now seem to emanate. The natural aesthetic blends seamlessly with the existing plantings, and the moving water creates a magnetic wildlife corridor where the numbers of bird, mammal and amphibian species have increased dramatically as a result. The overarching vision was to create a feature that looks as if it has always been there and the garden was simply built around it, thus creating an added sense of longevity and permanence to the Blomquist Garden."



Repair & redesign completed in 2011.

Picture this: A waterfall in the Leubuscher Rock Garden, restored to renowned rock garden designer Frederic Leubuscher's original vision, sends water cascading down into a totally rebuilt Fish Pool full of water plants and koi.

How the water flows: Two large pumps in the Duke stone pump house filter and recirculate the water, leaving it clean for the koi fish and for visitors to see the colorful fish clearly. The pumps also send water to and from the Terrace cherub fountains.

Total water recirculating: 65,000 gallons.

Fun facts: The Fish Pool currently contains about 40 large koi, some of which are nearly 20 inches long. The fish require a special diet to thrive, so visitors are asked not to feed them. A 26,000-gallon cistern constructed in the 1980s sits underneath the pumphouse. The cistern previously served the Fish Pool, in addition to garden watering, but now it is used solely for watering. The rebuilt Fish Pool also now has a 4-foot-wide safety shelf that sits 18 inches below the surface and runs along the perimeter. Algae is controlled with ultra-violet lights in the pump house.

Curator Mike Owens' vision: "The idea for a naturalistic rock garden with a gentle, cascading waterfall was part of the original vision of Terrace Gardens landscape designer Ellen Shipman. This feature, along with the Fish Pool, contrasts with the formality of the Italianate terraces on the facing hillside.

The flagstone terrace, located at the base of the terraces and the edge of the Fish Pool, provides a large gathering space for garden visitors. Here people congregate after traversing the gardens, and they often spend a long while enjoying the beauty of the fish and the restfulness of the floating water lilies.

The falls provide a delightful splashing sound that resonates all through this garden area, and it can be enjoyed close up by following a carefully placed path that takes people right over the cascading water in the rock garden. The flowing water and the colorful fish-viewing make this one of the most popular places for people to linger."

From top: Leubuscher Rock Garden, and a koi in the Fish Pool. Photos by Rick Fisher and Sue Lannon.

BEVERLY AND BERT WELCH WOODLAND GARDEN OVERLOOK AND STREAM

Expected completion: Late spring 2016

Picture this: Visitors will be able to gather in a semi-circular overlook and view a lively stream below, flanked by a ravine densely planted with ferns and other woodland shrubs that will erupt with color during spring.

How the water flows: The creek system will operate with an external pump in a small vault located close to the overlook. It will collect water through a skimmer at the side of the lower basin and pump about 130 gallons per minute 250 feet through a pipe leading to the head of the stream above the Bunting Bridge. At that point, water will flow from a boulder outcrop into the first of a series of small basins and peaceful cascades through the ravine, under the arched bridge and back toward the overlook.

Total water recirculating: 40,000 gallons.

Fun facts: Many of the ferns and woodland ephemerals have been rescued from sites across North Carolina. Some ducks from the Asiatic Arboretum pond consider the Spring Woodland Garden a second home. Historic Gardens curator Mike Owens and former horticulture director Greg Nace first envisioned this project in 2008.

Curator Jason Holmes' vision: "This woodland stream and overlook will complement and greatly enhance an existing ravine that for years has caught storm water runoff. The Duke stone overlook will echo many of the existing Duke stone features that already exist throughout Duke Gardens and serve as an area for respite with an awesome view up the ravine at the water coursing through.

Water will enter from beyond the Bunting Bridge and flow over a series of spills and into smaller pools until it makes its way to the small pond at the foot of the overlook. In the small pond, visitors will have an opportunity to walk down close to the water in order to observe dragonflies and bullfrogs and much of the other wildlife that visits this area.

Collectively, these features will enhance the walk from the Page-Rollins White Garden and Doris Duke Center to the Charlotte Brody Discovery Garden and Culberson Asiatic Arboretum, and it will provide a quiet and serene landscape."

From top: Stone mason Brooks Burleson works on the Beverly and Bert Welch Spring Woodland Garden Overlook; a view of the overlook; and a hellebore (Helleborus 'Anna Red') growing in the garden. Photos by Ashley Wong, Bobby Mottern and Sue Lannon. Page 8: variegated century plant (Agave americana 'Medio-picta') by Bill Snead. Page 9: white foxgloves (Digitalis purpurea 'Alba') blooming in the Page-Rollins White Garden. Photo by Lindsey Fleetwood.







Conserving Water at Every Turn

Recirculating water features aren't the only way in which Duke Gardens strives to be water-conscious. As water becomes an increasingly overused and ever-dwindling resource on a local and global scale, it is vital that substantial measures be taken to ensure its conservation. Here are some additional ways that Duke Gardens practices responsible water use.

The Duke Gardens **rain cisterns** are monstrous facilities for water storage. A 26,000-gallon cistern beneath the Terrace Gardens Fish Pool and another in the Discovery Garden store large amounts of rainwater, which is used to irrigate areas such as the Terraces and South Lawn. The concept of a cistern, which harnesses rain and diverts it for productive purposes, is hardly a new one—but it is nevertheless significant, as cisterns can help manage stormwater runoff and serve as a backup water supply in case of drought conditions.

Another way Duke Gardens minimizes water use is by incorporating mulch in soil beds. This helps lock in soil moisture because mulch acts as an effective water absorbent. Mulch not only reduces evaporation, but it also cuts down on weed growth, moderates soil temperature, prevents erosion and improves soil fertility. Leaves, pine needles, pine bark and wood chips compose most of the mulch used in the Gardens.

Drip irrigation, known to save water and fertilizer, supplies water directly to the soil or roots of a plant. Duke Gardens relies increasingly on drip irrigation, as well as on **stream rotor heads** that rotate and eject water in solid streams rather than misting. This reduces loss due to evaporation, proving to be 25% more efficient than conventional sprinkler heads. Drip irrigation functions well with mulch use because it doesn't wash mulch away, unlike many other irrigation techniques.

Early morning hours (4 to 8 a.m.) are most optimal for watering. The Gardens' automated irrigation system aims to operate between those hours in order to minimize water loss due to evaporation.

Duke Gardens' curators are acutely aware of the water requirements of a plant before adding it to their collection, and drought-tolerant plants—agaves, yuccas, palms, cacti—are a plus. Plants endemic to the Southeastern U.S. are also smart choices because they are naturally tolerant of the fluctuations in soil moisture. We can harness their naturally built-in features to minimize water loss and maximize water uptake.

— Ashley Wong (T'16)





Page-Rollins White Garden: Dedicated in 2012

With generous support from Frances P. Rollins



"Of all the worthwhile causes I have supported, nothing has given me as much pleasure as watching the Page-Rollins White Garden develop from the seed of an idea that I had into this blossoming garden. • My thanks and appreciation go to the Duke Gardens staff and volunteers who have helped make it grow and flourish."



- Frances P. Rollins

Duke Gardens Volunteers

A force of nature for 25 years

Gardens need people to bring them into being, and then people need to care enough to pass a garden along into future hands. Duke Gardens volunteers are that promise to the future.

Any garden is more than the essential day-to-day tasks of planting, weeding, watering and pruning. It is a place for delight, for quiet and sharing, for work and challenge, more delight, wonder, amazement and charm, with a little mud mixed in for spice.

Gardeners build relationships with both the garden and other

people in a garden.

Duke Gardens volunteers bring the community to the Gardens; they help us knit the Gardens into the fabric of Duke and Durham life. Their contribution to the growth, purpose and beauty of the Gardens cannot be overstated.

As we celebrate the 25th anniversary of the volunteer program, we hope you enjoy these photos of some of our hundreds of volunteers and tributes from our staff.

-Jan Little

Director of Education & Public Programs

"Since my start at Duke Gardens, I have been completely blown away by the level of dedication of our volunteers. The greatest gift people can give is their time; we are so privileged that these wonderful people choose to spend it helping to make Duke Gardens as successful as it can be. We absolutely could not maintain or continue to grow the gardens without their unwavering support. My heartfelt appreciation goes out to all our volunteers. Thank you!!!"



Horticulturist. Historic Gardens





"Students are often taken by surprise during their visits to Duke Gardens—by the beauty that surrounds them here, by the variety of things they can learn from the natural world, and also by the fact that volunteer docents choose to spend their time transforming the Gardens into a classroom for them.

Volunteer children's docents add value to the students' experience. When children learn that adults are choosing to spend their time enthusiastically exploring the Gardens with them, it underscores the importance of caring for the outdoors and its many wonders. Children's docents are an integral part of the children's program at Duke Gardens. When they sing songs about insect life cycles and play games to explain predator-prey relationships, they are contributing more than their time and knowledge—they are helping to develop future generations of outdoor stewards.

'I didn't know learning could be so much fun,' surprised students frequently comment to docents at the end of their time together. 'I didn't know a garden could be so beautiful' is another reaction docents hear. The beauty of Duke Gardens is reflected by the many volunteers who help maintain it and who so skillfully share its wonders with visitors."

-Kavanah Anderson

Education Program Coordinator

"I enjoy working with volunteers because I get to work with an older and a younger group, from teenagers to people who are over 90, from all over the world and from all walks of life. I have one volunteer now who is from China. She's been trying to teach me Chinese, and I've been trying to teach her a little bit of English.

Around plant sale time, there's no better group to have than volunteers, because it is our biggest event of the year for me. If they weren't here, I don't know what I would do."

-Leola Smith

Terrace Shop Manager

celebrating 25 years

*

gardens connections:

Chuck Hemric

Director of Volunteer Services

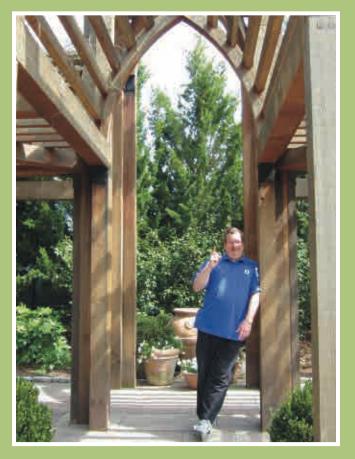
How have the roles of volunteers at Duke Gardens changed in the last 25 years? When the program began, the immediate need—one that continues today—was for help in horticulture. As more volunteers joined the ranks, the skills and talents that each one brought helped us quickly realize that volunteers could assume additional roles. The program expanded to provide tour guides for adults, followed shortly by volunteers to assist in children's education, and the creation of the adult education program, which now has its own full-time staff. Volunteers also helped launch Duke Gardens' plant sales, the Terrace Shop, the Terrace Café, the Garden Guild and the horticultural library. When the Doris Duke Center opened in 2001, the program doubled to support a fully operational visitor center. We later added outdoor Gardens ambassadors who help people have an enjoyable and informative visit to Duke Gardens.

Is there such a thing as a typical volunteer? There is not a typical volunteer at Duke Gardens anymore. We have multiple generations volunteering alongside each other, each with a different motivation. One development in recent years is an increase in volunteerism among those also seeking paid employment. They volunteer to stay connected with the community and show productive use of their time during a work gap. Each volunteer brings a unique skill set and background—some are attributes that they don't even consider a skill. Duke Gardens has many sides and can utilize each of these skills.

What experiences have prepared you for your role? My educational experiences in non-profit volunteer management have been quite varied. When the program at Duke Gardens began, I was already working here as an assistant horticulturist. I continued to oversee the budding volunteer program while simultaneously maintaining my horticultural responsibilities. When the volunteer program grew, I needed to devote full-time attention to shaping it. I immediately searched for organizations to help me attain the skills that I would need to grow and sustain a successful program.

I began attending the American Public Gardens Association's Volunteer Interaction conferences, an incredible educational resource for managers of volunteers in public gardens and nature centers. In addition to attending these biennial conferences, I have served as their volunteer management section chair, hosted a conference in 2007 and now serve on the program planning committee.

Would you like to join Duke Gardens' volunteer team? We'd love to hear from you! gardens.duke.edu/support/volunteer



Another resource was Duke University's Nonprofit Management Certificate program, which I completed in 2010. I still take courses in this program that can help me improve.

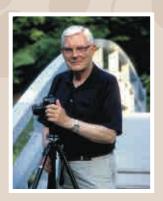
I have also served as president of the North Carolina Association of Volunteer Administration (NCAVA), which is a volunteerrun statewide network that provides support and educational workshops for managers of volunteers in various agencies. I have completed NCAVA's certification in volunteer management.

Do you volunteer for any organizations in your personal life? I volunteer in many roles at my church. I also help organize meals for the Ronald McDonald House. I served as a volunteer coach with various athletic activities when my kids were younger. I volunteer with Durham Public Schools, and I was very active in launching the Kids Voting program locally.

What do you think volunteers gain from their work at Duke Gardens? The volunteer experience is very rewarding. Individuals learn new skills or refine skills they haven't used in a while. The youths in our program are able to improve their communication skills, which enhance their self-confidence. One key element is the satisfaction that comes from teamwork and the realization that we all have a role in a beautiful place that is special to so many. As one volunteer told me, her motivation to volunteer at Duke Gardens is to leave a legacy for her grandchildren, who can grow up knowing that their grandparent had a small part, at one point in time, in making this a better place.

Catch & Release

Volunteer photographers capture the Gardens' beauty



Duke Gardens' publications would not be nearly as beautiful to behold were it not for the talented team of volunteer photographers who share their time and artistry with us

The late **Edward Albrecht** began it all, devoting countless hours to documenting the Gardens' developments beginning in the early 1990s. Albrecht launched

the Duke Gardens wall calendar, later working with volunteer Theo Roddy to inspire a devoted team of photographers who would take over after Albrecht grew too old to lug heavy camera equipment around in hot pursuit of seasonal vistas.

Almost every beautiful plant or scene you see in our calendars, annual reports and other publications comes from one of these generous volunteer photographers. They shoot in the snow, the ice, the rain, the heat and the cold, their eyes ever watchful for a new design development or an interesting angle or perspective. We are immeasurably grateful for their commitment, talent and passion. And we look forward to what their vision will bring us in the decades to come.

— Orla Swift



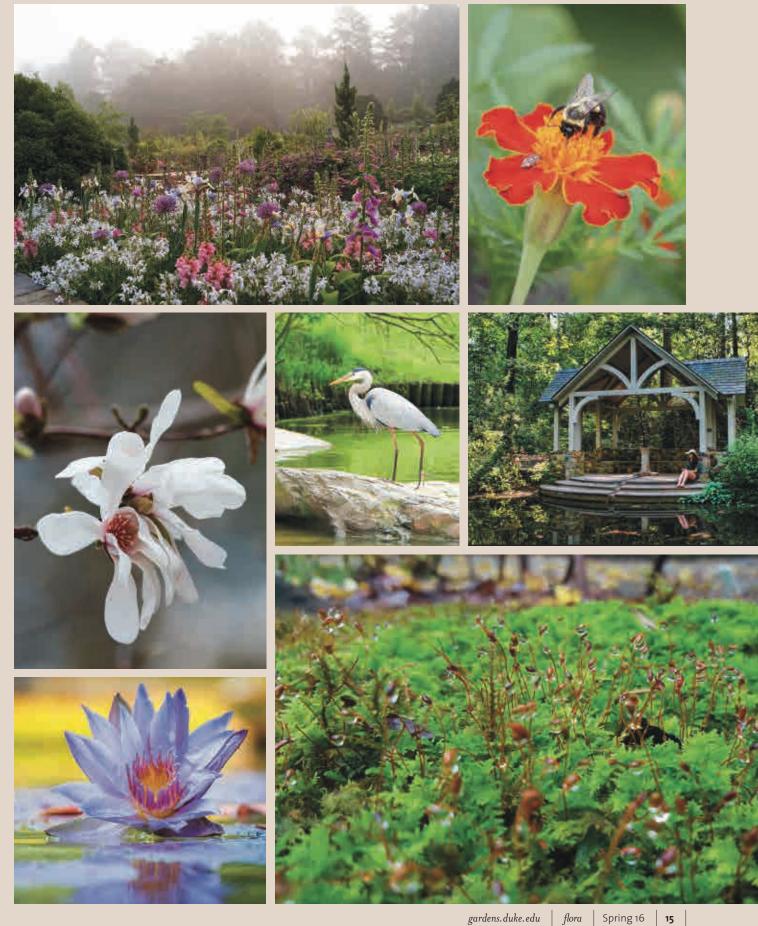








Photo credits: (below, clockwise from top left) Wendell Hull, Kathy Julian, Ed Eastman, Flora O'Brien, Reagan Lunn, Brian Wells. Center: Sarah Reuning. Facing page (clockwise from top): Robert Ayers, Charles Twine, Rick Fisher, Karen Webbink, Lori Sullivan.





gardens connections: Tom Harman (T'79)

Duke Gardens Board of Advisors

What inspired you to join the Duke Gardens Board of Advisors? The opportunity to reconnect with Duke and a part of the university that has always been a special place to me.

Are there particular projects that you've been especially passionate about as a board member? The recent additions to Duke Gardens have been tremendous, particularly the Charlotte Brody Discovery Garden and Pine Clouds Mountain Stream. Because all of the projects in my tenure on the board have been thoughtfully designed and implemented, the list probably should include them all.

What has been most gratifying about your service to Duke Gardens and the Board of Advisors? The opportunity to be involved in the conversation about how to grow and maintain the Gardens, and to be associated with a well-run organization.

Did you spend much time in the Gardens as a Duke student? I spent some time just hanging out, and I probably attempted to do some reading for class.



What are your hopes for the future of Duke Gardens? I would like to see it continue its upward trajectory. It is performing a real service to the university, the Durham and Triangle community and the larger world.

The Magic of Water A gala celebration Friday, May 6, at 6 p.m. Join us for a sunset stroll through the Culberson Asiatic Arboretum while enjoying cocktails and hors d'oeuvres before al fresco dining and dancing at the Doris Duke Center. Celebrate with others like you, who share a passion for Duke Gardens and are excited about its future. RSVP: \$175 per person. Sponsorship opportunities are available. More information: gardens.duke.edu/gala-2016 or call Caroline Flinn at 919-668-3870.

Expanding Perspectives through "Double Exposure"

By Kati Henderson, Duke Gardens work-study assistant

"Is this the same leaf we saw this morning?" I had been talking about texture with the kids in my group, but something about the maple leaf reminded this second-grader of a painting he had seen during his visit to the Nasher Museum of Art earlier that day. In some situations his question might have been a disruptive tangent, but I was excited to hear it. He was making detailed observations and comparing them across contexts, trying to learn something wholly new.

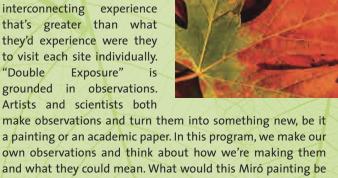
"How could we figure out if it's the same leaf?" I asked. Why don't we ask the artist, the children suggested, or read her notes, or draw the leaf ourselves and compare it to the painting?

I joined Duke's Graduate Liberal Studies program in 2014. I wanted to transition into museum work, which could combine all of my interests: learning and discussing, science and art, following contemporary developments and making new connections. I had practical interests in mind for graduate school and wanted to learn from the real world, not just the academic world, so before arriving on campus I asked the Nasher and Duke Gardens whether I could work with them to complement my classes.

Working at both places for these two years, I've gotten a great view of one program that they collaborate on: "Double



Exposure." In it, second-grade students come to the Nasher and the Gardens back to back. They explore and learn from art and nature, getting an interconnecting experience that's greater than what they'd experience were they to visit each site individually. "Double Exposure" grounded in observations. Artists and scientists both



a painting or an academic paper. In this program, we make our own observations and think about how we're making them and what they could mean. What would this Miró painting be like as a habitat? What artistic design went into creating this garden? Why do we think that?

It's a valuable program that shows students that things aren't as cut and dried as their school curricula might make it seem. Art and science come out of the same impulse: wanting to discover more and share what you learn. Anyone can learn from and participate in art and science; you can devote your life to one or the other (or both!), but you can also understand them without formal training through your powers of observation and analysis. That all might seem a little conceptual for secondgraders, but they experience it in "Double Exposure."

I've learned a lot from working at Duke Gardens. I came into my job with an open mind but well aware that it was a trial run for my career. I ended up liking children's education, and my work-study experience here has been just as much a part of my graduate program as my formal classes have. I'll be sad to leave, but I'll continue to spread what I've learned here, through "Double Exposure" and beyond, wherever I end up next.

Want to keep up with the latest Duke Gardens happenings all year? Check out our blog at gardens.duke.edu/about/publications and sign up for email updates at gardens.duke.edu/subscribe.

Left: Kati teaches a "Double Exposure" class in the Charlotte Brody Discovery Garden. Page 16: Discovery Garden (top) by Lindsey Fleetwood. Roney Fountain by Rick Fisher, and inset of Duke Gardens 75th anniversary celebration by Jon Gardiner.



Enhancing Duke Life:

Tyler Coe (T'17)

Board of Advisors student representative & work-study horticulture assistant

"If you say that Duke has been a whirlwind for me so far, then Duke Gardens has been the calm eye of that storm." Being a student at Duke inevitably means having a calendar nearly entirely booked from dawn to dusk with extracurricular, social and, most commonly, academic commitments. I enjoy my time at Duke and the challenging nature of life here, but it is always helpful to be able to get away from it all—that is where Duke Gardens comes into my life.

To me, coming to the Gardens is more than just admiring the beautiful scenery around me. My time in the Gardens is equally important for the experience it provides, a blocked-off period of time in my day that is truly tranquil. Every semester I find myself halfway through and wondering where the time has gone, because somewhere along the way I become so focused on the demands of the day-to-day that I stop taking time to reflect on everything that is going on in my life. Walking through the Gardens provides a refuge to just think—sometimes about important parts of my life, sometimes about an especially impressive view at some spot in the Gardens, and often about nothing of any significance.

Regardless of what I am thinking about, I always enjoy the ability to be there in an amazing display of nature right in the center of campus. If you say that Duke has been a whirlwind for me so far, then Duke Gardens has been the calm eye of that storm.

Growing with the Gardens

Volunteers Jeff and Cheryl Prather's commitment to Duke Gardens is immeasurable. For almost 18 years, they have helped the Blomquist Garden of Native Plants grow and thrive. Both participate in native plant rescues statewide, and they also helped create the new Piedmont Prairie. Jeff toiled alongside curator Stefan Bloodworth to build the McNabb Family Bridge and Stream, and he also served on the Gardens' Board of Advisors. Cheryl makes crafts with the Garden Guild. And both serve in countless other ways. Below, they share some thoughts about how they began at Duke Gardens and what keeps them motivated to share their time and talents.

Cheryl: The reason I started in the native garden was just by chance, because the gal we were working with to develop a master plan for our back yard said that you need to find out what's in your back yard, and the best way to do that is to volunteer in somebody else's space. I was looking for a way, being a proud Duke graduate, class of '70, of perhaps giving back. But it was soon apparent to me that I was going to receive a lot more than I could give back, in terms of all that I would learn here.

Jeff: Her first day, she walked up to (curator) Ed Steffek with a fiddlehead fern and said, "Ed, there's something wrong with this plant. It's diseased." And he just calmly patted her on the shoulder and said, "No Cheryl, those are spores. That's how they propagate."

Cheryl: When you're starting from zero, the only thing you're starting with is a desire to learn. As far as I'm concerned, this is the best garden to learn in—not only about native plants but about the world that surrounds us. It's a museum of sorts, but it's a living museum where the exhibits are constantly rotating.

The new Piedmont Prairie was a tremendous undertaking, and I think it's going to be such a teaching tool because the number of visitors that come to the Gardens is phenomenal. They come from all over, and maybe they've heard the name "Piedmont,"

Blomquist curator Stefan Bloodworth;
photo by Annabel Renwick. Page 18:
Photos by Orla Swift. Page 20: photo by
Rick Fisher. Page 21: Drone photography
(by special arrangement) by R. Fisher. Inset of
Shakespeare performance; photo by O. Swift.

Above and left: Cheryl Prather;

photo by Orla Swift. Jeff Prather with

but they don't really understand the difference between a prairie and a meadow—and they're very, very different. This gives us an educational opportunity to explain the difference, and from a historical perspective they get a feel for what it would've been like when the Indians and the buffalo were here. You can't do that in every garden, because most gardens aren't large enough to allow you to undertake something like this.

Jeff: Duke Gardens continues to get better without exception. I think it's one of the most beautifully maintained gardens that we've ever visited, and we've visited quite a few.

When I was ready to retire, Cheryl asked me, "Well, am I still going to be able to volunteer at Duke?" And my response was, "I know better than to make you choose between volunteering at Duke and me." Being here has become part of our married lives, and it has enabled us to be part of a community.

I think with the enthusiasm of the volunteers and just the desire to learn when we all get together as a group, it's obvious that people have a special feeling for the Gardens. It's kind of a sacred place, and a place that we know is going to continue to change, but I think it's always going to change for the better.

*

gardens connections:

Beth Hall

Paul J. Kramer Plant Collections Manager

What does being plant collections manager entail? I keep records of all plants in the gardens. This includes: nomenclature (the naming of plants is an ever changing science); adding plants to our plants records database as they are planted; making plant labels; and mapping the gardens' trees, shrubs, benches, paths and garden elements. I keep track of phenology, the timing of plants flowering, and I publish a weekly "What's in Bloom" that is distributed to staff, volunteers and visitors and shared on our website. I also help manage plant sales, from propagating the plants and growing them to setting up for the sale. It's a little bit of everything, which is what keeps coming into work each day interesting!



How many plants are there in Duke Gardens? There are a couple of different ways to answer that. Many gardens give a taxa count, or a count of named taxonomic units the garden has. This is the number of different species or cultivars in the collection. Duke Gardens has 4,344 taxa and 11,437 plants accessioned. We do not include annuals, so for example the many thousands of bulbs in the Terraces aren't reflected in those numbers.

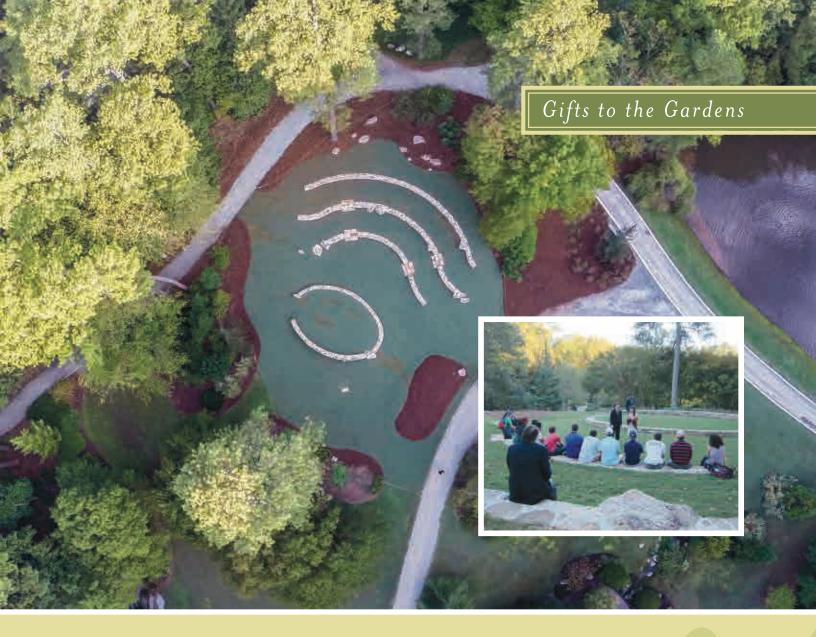
What's an accession? An accession is a catalogue number assigned to a plant when it becomes part of a garden's collection. It links the plant's name, location and source information together.

Why is it important for a botanical garden to maintain accurate records? Record-keeping is one factor that distinguishes a botanical garden from a park. By maintaining accurate records and plant labels, we are able to serve as a resource to researchers and educate the public.

What are some challenges in your role here? Duke Gardens has plant records dating back to 1934, when the original iris beds were planted in what is now the South Lawn. However, none of those records had been digitized. We worked with Duke University Archives to catalogue and scan all the old plant lists and accession cards. It has been challenging and interesting to go through this handwritten card catalogue of plants and begin linking them to our current plant records system. It's very satisfying to link a plant to its original source information and understand the story behind it.

What past experience prepared you for this position? Growing up, I was always digging in the dirt and loved to make streams and landscapes in my parents' back yard. By my freshman year of high school, I had my own small garden that I designed and maintained. When it came time to pick a major, it was easy to choose horticulture. I studied at Cal Poly San Luis Obispo, where I also minored in biology and plant protection science. Basically I took every botany and pest control class I could. Then I did internships at gardens on both sides of the country, which taught me a lot about how plants are grown in different places. I learned curatorial skills at a yearlong internship at Longwood Gardens.

If you could travel anywhere, where would you go? I would visit the five Mediterranean climate regions of the world: southwestern Australia, California, central Chile, the Western Cape of South Africa, and the Mediterranean Basin. Warm, dry summers and cool, wet winters are characteristic of the climate, and while they occupy only 2 percent of the earth's land surface, they are a biodiversity hotspot containing 16 percent of the world's plant species. I grew up in California, where we grow many plants from these highly diverse floras. I would love to see protea in the wild in South Africa, eucalyptus groves in Australia, or the matorral shrubland in Chile.



Fisher Amphitheater: Completed in fall 2015

With generous support from Rick and Beth Fisher



"I would rather give a more significant amount to fewer organizations than contribute to a whole lot of organizations in small amounts. Being on the board of advisors and the executive committee of Duke Gardens, you see all the amazing things happening in the Gardens, and it's easy to want to be a part of that. • An amphitheater seemed like a good project with lots of potential uses, and a way for us to help Duke Gardens take another step in the progress it has made in the last decade. • Beth and I also thought it would be nice to help create something that would be associated with our family, so when my grandkids get older they will see it and think, 'Grandma and grandpa made this possible.'" - Rick Fisher



flora

Prairie Life

By Stefan Bloodworth

Curator, Blomquist Garden of Native Plants

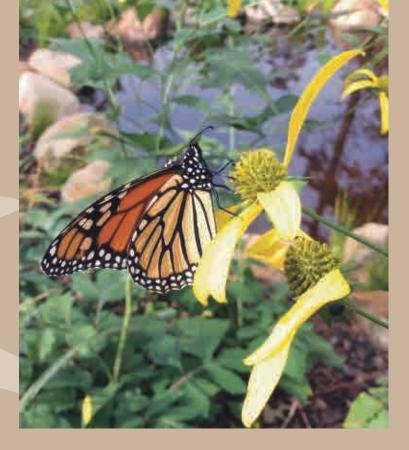
Childhood memories seem to fade by degrees, until often all we are left with is a signature smell or sound that signifies an experience that, without that sensory stimulus, might be all but lost to us. The din of insects in a fallow field full of tall grasses serves that purpose for me. Driving down a country road, I can pass by a meadow tall and golden, and for a fleeting few moments I'm bombarded by the calls of a thousand bugs, and then they are gone, replaced by the silence of passing fescue lawns. In those seconds, I can see again the hide-and-seek tunnels of my childhood burrowed beneath the towering stems of purpletop and dog fennel, the din of the grasshoppers and katydids masking my surreptitious rustling crawl as I nestled deeper into the thatch. Hidden amidst the stems and lying stock-still to avoid discovery, I would watch as the hidden world of the six-legged arthropods came to life before my eyes.



I recently revisited that world here at Duke Gardens via the newly planted Piedmont Prairie in the Blomquist Garden of Native Plants. Smartphone in hand (I don't remember those in 1978), I spent last September and October periodically making a morning photographic pilgrimage to a place where only months before the botanical diversity could be summed up by numbering plant species on the fingers of two hands, with a few fingers to spare.

After a month-long planting period last July, it is now possible to witness 12,000 plants representing more than 50 species of native grasses and wildflowers covering the half-acre site. Like iron filings to a magnet, the insects have come in all their shapes, sizes and sounds to take up residence and live their lives of eating and being eaten. They are the fuel that fosters ecological diversity, the fat bottom of a healthy food pyramid that ensures those above them will succeed (we are in there somewhere—toward the tip-top). These photos represent a tiny fraction of the creeping, buzzing, hopping and flying tenants to be found happily residing in our new Piedmont Prairie. Enjoy!

Clockwise from top: Monarch butterfly (*Danaus plexippus*), syrphid fly (*Toxomerus geminatus*) and large milkweed bug (*Oncopeltus fasciatus*). Photos by Stefan Bloodworth.





Clockwise from top right: Thread-waisted wasp (*Ammophila procera*), marbled orb weaver (*Araneus marmoreus*), Horace's duskywing (*Erynnis horatius*), and goldenrod soldier beetle (*Chauliognathus pensylvanicus*). Photos by Stefan Bloodworth.









gardens.duke.edu



Enhancing Duke Life: Ashley Wong (T'16)

Work-study marketing assistant

"On my treks through the Gardens, I've begun to recognize and put a name to plant species that I've learned about in my biology and environmental science classes."

As a flora enthusiast, I welcome any opportunity to become more familiar with the plants I'm surrounded by on Duke's campus. Working at Duke Gardens has made it infinitely easier for me to attain that goal. And just as the nostalgia from being a second-semester senior begins to set in, I have come to truly appreciate the wealth of biodiversity within Duke Gardens.

This year in particular, I at last learned the name of the flower that produces the delightful fragrance that envelops Duke Gardens in the summer and fall (it's tea olive!), as well as the structurally bizarre and colorfully vibrant specimen that is the passion flower.

On my treks through the Gardens, I've begun to recognize and put a name to plant species that I've learned about in my biology and environmental science classes. When I first saw the carnivorous plants near the new Piedmont Prairie and could identify them, I felt an immense rush of excitement from seeing my academic studies and daily experiences intertwine. That is why I am thrilled by the Piedmont Prairie—because it is ultimately an homage to the Southern Piedmont terrain on which North Carolina lies, which has been a frequent topic of my ecology classes.

I always encourage my fellow Duke students to take advantage of our proximity to an institution like Duke Gardens. It is a great privilege to be able to reap the unique educational and personal rewards that come with this pristine space. Being able to see the connection between my coursework and real-world settings has been immensely gratifying—and only one of the numerous reasons why Duke Gardens has been an invaluable part of my Duke experience.

Celebrating a Bountiful Legacy

Descendants of Charlotte Brody gathered at Duke Gardens last summer to celebrate the 100th anniversary of Brody's birth. The Charlotte Brody Discovery Garden has developed so beautifully since the Brody family's last big gathering here—for the garden's dedication in 2012—it was a double delight for all who attended to see all the progress that has been made.

"My grandmother would be so proud to have her name associated with the children's garden," grandson and Duke Gardens Advisory Board member Dan Shiff said, "especially the impact the garden has had and will have on the many children who participate in its programs."

Brody was a master gardener and columnist from Kinston, who spent the last 40 years of her life educating people about the importance of organic foods and gardening for a healthier lifestyle. Her dream was to establish a safe place where all children could learn and experience the joys of gardening.

Duke Gardens uses a portion of the Discovery Garden's produce for hands-on educational programs. We donate the rest to local food relief organizations, which have included the Inter-Faith Food Shuttle, Agape Corner and currently Healthy Families Durham. So far, we have donated more than 3 tons of nutritious organic food.



"I feel this collaboration is important because together we are bringing healthy, fresh food to families who truly need it," says horticulturist Lindsey Fleetwood.

Duke Gardens would like to thank the Brody family and The Burpee Foundation for generously helping us create this important garden that provides such value and beauty to Duke, Durham and all who visit.

Above: Brody family celebration; photo by Megan Mendenhall. Below: Mary Duke Biddle Rose Garden; photo by Sarah Reuning. Page 24: Piedmont Prairie; photo by Annabel Renwick. Portrait photo by Orla Swift.



Shaping Duke Gardens for 25 Years

Just as a thriving backyard garden requires a balance of consistency and change, ambition and patience, so does the administration of a successful public garden. For the last quarter century, Duke Gardens has benefited from the expertise, commitment and devotion of its Board of Advisors, a group that didn't form until more than a half century after the Gardens opened but has had an enormous impact since.

When the board formed in 1991, Duke Gardens needed help in reshaping public perception of its value to the community and its needs, recalls Alice K. Horton, one of several current board members who were on the original board and have frequently served in the ensuing 25 years.

"I do remember that at the very beginning we decided our emphasis was going to need to be in making the public aware that despite the 'Duke' in the name Sarah P. Duke Gardens, we were not fully funded by the university, and that the Gardens had many needs just to meet daily operating expenses that were not budgeted by the university," said Horton. "So our whole effort in the beginning was marketing: how to make Duke Gardens better known in Triangle and not just to Duke and Durham folks, and then how to raise money to support those initial things that we had to do in the gardens."

Among the other charter board members were Faye Wickersham, of Virginia, and Duke physics professor Horst Meyer, both of whom are current board members.

"The creation of the board was the beginning of a vigorous growth period and fundraising for the Gardens," Dr. Meyer



Standing, L-R: Nancy S. Goodwin, Faye Wickersham, Robert F. Durden, Horst Meyer, Alice K. Horton and Cynthia Reynolds Farris, with Gardens director William Louis Culberson at far right. Seated, L-R: Allen Lacy, Pamela Freeman, Harvey B. Hamrick (chair), Nan Schiebel and Merel H. Harmel. Not pictured: W. Burke Davis Jr.

recalled of the early years, "and its existence also enhanced the importance of the Gardens to the Duke administration, at least so I think."

Horton agrees. "I think sometimes in the early years, yes, the university wrote a check for the Gardens, but I'm not sure that there was a great deal of interest in what the Gardens could do for the university within the Triangle," she said. "It was more the other way around."

Having the spouses of Duke presidents—from Brenda Brodie to current board chair Cynthia Brodhead—serve on the board helped change that perception, she said, as did the board's commitment to reshaping the public's understanding of Duke Gardens' value and support structure.

The board also had to reshape some staff perceptions, Wickersham recalls. "In spite of obvious admiration shown to the horticulturists, we were a bit suspect," she said. "They felt protective of their Gardens and weren't sure whether we were to be trusted. In time, we won their respect and friendship, and the time together in the Gardens was pure joy."

The board's greatest accomplishment was garnering the administrative and financial support to build the Doris Duke Center, which opened in 2000. The center enabled Duke Gardens to take its educational programs and visitor services to a new level, and to begin offering venue rentals, which last year earned almost \$350,000. The horticultural complex also increased the staff's ability to create world-class botanical design.

The board was also proud to have played a role in hiring the Gardens' first development director, Jean Carr, these board veterans said, as well as successors Kay Bunting and Teresa Dark. These directors inspired board members and the public to donate to Duke Gardens, and to form the Friends of Duke Gardens membership support program.

As Duke Gardens continues to evolve and grow, with new garden features, ever expanding programs and a world-class reputation, the Board of Advisors has grown, too. The board now has 30 members, almost three times its original 11. Horton praised executive director Bill LeFevre's ability to build a board with the wide expertise that can steer Duke Gardens in ambitious new directions

"Bill has expanded the board's horizon and vision by bringing in people with very different perspectives," she said. "I give him credit—he really upped the ante with board expectations when he became director."

arts in the gardens

ART & NATURE

Duke Gardens' annual Art & Nature exhibits are proving to be a big hit with the public and local artists alike. The March 2016 exhibit ran for five days in the Doris Duke Center and featured works inspired by the Culberson Asiatic Arboretum.

This third annual exhibit attracted more than 20 artists working in a variety of media, from Chinese brush painting to oils, pastels, watercolors and ceramics.

Artists, clockwise from top right: Gibby Waitzkin (1st runner up), Andrew Lonon (2nd runner up), Angela Burr, Barbara McKenzie, Sally Sutton, Beth Craddock Smith, Linda Koffenberger (Best in Show).



Exhibit winners: Linda Koffenberger's painting "Here Today" won Best in Show. Gibby Waitzkin's natural fiber sculpture "Fiber Magnolia: Judy Zuk" won first runner-up, and Andrew Lonon's bas relief "Chelydra Serpentim" won second runner-up. Duke Gardens is grateful to all the artists who shared their creativity and inspiration with us.













arts in the gardens



MUSIC IN THE GARDENS

Duke Gardens and Duke Performances will present an exciting lineup this summer in the popular outdoor music series Music in the Gardens. The series will take place on Wednesday evenings on the lawn behind the Doris Duke Center. It will include folk, roots and Americana music. The series will also include a special performance by Savion Glover and Jack DeJohnette at Page Auditorium June 20 and 21. in collaboration with American Dance Festival.

June 1: No BS! Brass Band June 8: Leyla McCalla June 15: Skylar Gudasz

June 20 & 21 (at Page Auditorium): Savion Glover &

Jack DeJohnette June 29: Mount Moriah July 6: Sierra Hull

July 13: William Tyler & Jake Xerxes Fussell July 20: Jonathan Byrd & the Pickup Cowboys

July 27: Black Twig Pickers

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.

Tickets will be \$10 general, \$5 Duke students & employees, free for ages 12 and younger. They generally go on sale in May at tickets.duke.edu or 919-684-4444.

Keep an eye out for an announcement of on-sale dates at dukeperformances.duke.edu and gardens.duke.edu.

CIOMPI QUARTET PRESENTS

Duke Gardens will once 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 in Kirby Horton Hall in the Doris Duke Center. The concerts typically feature one or more members of the Ciompi Quartet with guest artists.

Stay tuned at ciompi.org for a series announcement. Tickets will be available in advance at tickets.duke.edu or by calling 919-684-4444. Parking is free after 5 p.m. Once tickets go on sale, we recommend that you reserve early, because the series usually sells out in advance.

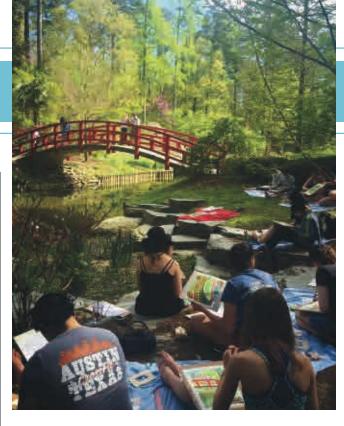
STUDENT IMPRESSIONISTS

On a sunny April day, a group of students sprawled out by the Japanese-style arched bridge with paintbrushes and canvases in hand. They were there for a watercolor workshop organized by the Duke student committee VisArts in an effort to provide students with a pleasant and inspiring activity before the stress of finals week began.

VisArts member Livia Greene (T'17) said they approached Duke Gardens for this special gathering because of its beauty, and because it would enable students to paint en plein air, or outdoors, an approach championed by many French Impressionists in the mid-19th century.

Given the similarity of the Asiatic Arboretum's Japanesestyle arched bridge to Monet's Japanese bridge at his garden in Giverny, in addition to the popularity of Impressionism among Duke students, Greene and fellow VisArts members anticipated a large turnout. They capped it officially at 25 students and provided art supplies and instruction by Durham's HappymessART Studios. But other students were free to bring their own supplies and join in.

After two hours of lessons and painting, students departed in high spirits with their artwork, while others lingered to apply the finishing touches to their pieces and to admire each other's paintings.



"I believe this speaks to the fact that students truly enjoyed painting with VisArts and were able to come together as an artistic community," said Rebecca Brenner (T'16), VisArts' director of programming. She said she appreciated that Duke Gardens enthusiastically provided space for students to explore their creativity and connect with each other, with local artists and with the Durham community.

No doubt the session left students feeling refreshed and ready to take on finals week!

- Ashley Wong

FISHER AMPHITHEATER DEBUTS

The new Fisher Amphitheater made its premiere in October as an ideal site both for theatrical performances and for classes, and we're already planning more.

Students in Duke's undergraduate economics class "Shakespeare in the Financial Markets" gathered to watch a scene from "The Winter's Tale" performed by members of Duke assistant professor Jaybird O'Berski's student-led theater company Antic Shakespeare (see photo on pg. 21). Afterward, the students and actors remained for a Q&A of "cross-cultural inquiry."

"The class is focused on the biases and heuristics that impair decision-making across cultural, political and economic boundaries," says instructor John Forlines III, Duke Economics executive in residence. "We wrap this inquiry around seven Shakespeare plays, which affords our predominately social science-oriented students an opportunity to think about economics, markets and public policy issues through the lens

of a writer who had extraordinary insights into the human condition."

Forlines praised the Fisher Amphitheater for its beauty, its utility for a range of university activities, and its proximity to West Campus. He's already contemplating its use for his spring behavioral finance course.

In related Shakespeare news, Duke Gardens is working with the Castle Theatre Company, a student company from Durham, England, for a performance of "Much Ado About Nothing" in the Fisher Amphitheatre in mid-September. Castle Theatre Company is based at University College, which has hosted Duke Engage students for the past three years. This Durham is a sister city to Durham, N.C. Duke University and Duke Gardens are pleased to return University College's hospitality and present this prestigious troupe on the N.C. stop of its national tour. Stay tuned at gardens.duke.edu for updates.

news Enotes

NEW STAFF

KATE SENNER (director of development) grew up in Western New York and received her bachelor's degree in sociology from the College of William and Mary. Kate has lived in Durham for 11 years and worked in the Duke Central Development office as an advancement officer for the last two years. Before coming to Duke, Kate co-owned the



florist and bridal boutique Tre Bella Inc. with her sisters. On weekends, she enjoys walking with her husband and their daughter to visit the Gardens.

SARAH LEACH SMITH (visitor services coordinator) grew up in Durham, N.C. She received her bachelor's degree in journalism and mass communication from UNC-Chapel Hill and worked as a customer service specialist in the publishing industry. Deciding to follow a lifelong passion, Sarah returned to school to earn her bachelor's degree



in horticultural science from N.C. State University. Following experiences in retail horticulture, plant breeding and greenhouse management, it was an internship at Longwood Gardens in Kennett Square, Penn., that led her to the world of public gardens. Most recently, Sarah received her master's in public horticulture from the Longwood Graduate Program in Public Horticulture at the University of Delaware. She is thrilled to be back home and working at Duke Gardens, a place she visited often as a child.

RICK SCHWAB (assistant horticulturist) grew up in Durham. He graduated from N.C. State University in 2012 with a bachelor's degree in horticultural science with minors in both turfgrass science and agricultural business management. He was also a Duke Gardens summer intern in 2011. After graduating, Nick worked as a landscaper with SAS Inc.,



but once a position opened up at Duke Gardens, he jumped at the opportunity to go where he had dreamed of working since starting his horticultural education. His favorite part of horticulture is transforming a landscape from nothing to something beautiful for people to enjoy.

MOVING ON

We said a sad farewell in March to **Teresa Dark**, who retired after 20 years in Duke Gardens' development office, most recently as director of development.

Teresa came to Duke in 1982 and worked in the sociology department for four years, followed by 10 years in the medical center alumni affairs office planning special events for medical school alumni. From there, she was recruited to Duke Gardens by then-development director Jean Carr and former Duke Gardens director Bill Culberson.

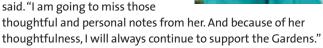
"Teresa Dark has been the face in front of and the force behind fundraising at Duke Gardens," said Bill LeFevre, Duke Gardens' executive director. "Her professionalism, knowledge, dedication and, above all, kindness—and the deep relationships she cultivated and nurtured—have been a key component of our growth. She has been a most valued colleague, collaborator and counsel to me, and I will miss her terribly."

Duke Gardens board members praised Teresa for her professionalism and sweetness, and for her thoughtful interactions with them, which always left them feeling appreciated for their contributions to the Gardens' growth.

"Her always cheerful manner and calm explanations of the needs of the Gardens made her an ideal development staff member," said Lois Pounds Oliver. "Teresa never seemed to forget anyone. She was never aggressive in her approach to donors, but her tact and warmth made wanting to please her seem natural."

Sterly Wilder, a board member and Duke's associate vice president of alumni affairs, said she was always touched by Teresa's handwritten thank-you notes whenever Wilder made a donation to the Gardens.

"That small but important step is so thoughtful and makes me really think about my giving and that it has an impact," Wilder said "Lam going to miss those



EMERALD ASH BORER UPDATE

Last summer, Duke Gardens worked with the U.S. Department of Agriculture's Animal and Plant Health Inspection Agency to monitor for emerald ash borer, an invasive pest that has killed millions of ash trees across North America. We set four pheromone lure traps across the gardens, and they generated great interest from visitors. No beetles were found in the traps, although our staff continues to monitor for signs and symptoms of these bugs on the 134 ash trees in our collection.

In September 2015, following the discovery of the beetle in locations across North Carolina, a statewide emerald ash borer quarantine went into effect. This means that any part of an ash tree, the insect itself and all hardwood firewood cannot be moved from a quarantined area. Duke Gardens plans to protect select trees that have been chosen for their value to the collection.

More information for homeowners can be found at the North Carolina Forest Service website (ncforestservice.gov) or by contacting your local agricultural extension agent.

- Beth Hall



MOVING ON

Assistant horticulturist **MICHAEL PATRICK** will retire in May, after 22 years working mostly in the Culberson Asiatic Arboretum and Blomquist Garden of Native Plants.

"Michael's contributions have helped shape both of those spaces into the extraordinary gardens they have become,"

said Bobby Mottern, director of horticulture. "We will certainly miss his commitment, attention to detail, and the good-natured spirit he exhibited while working here."

Michael is also an accomplished photographer, whose artistic photos have enlivened Duke Gardens publications such as the wall calendar and Flora. We wish him well with his new adventures.



NATIONAL RECOGNITION

Duke Gardens continues to rack up accolades far and wide. Condé Nast Traveler praised Duke and Duke Gardens in an article on the nation's 20 most beautiful college campuses. Esquire magazine included a stop at Duke Gardens in its "What Makes a Good Summer" roundup.

Durham Magazine readers once again voted Duke Gardens and the Doris Duke Center as #1 best event space, as well as best outdoor family outing location. Duke Gardens was honored in "don't miss" lists online at threebestrated.com and vacationidea. com. And our 56-page souvenir photo book won first place for print quality in Printing Industry of the Carolinas' awards.

The Landscape Architecture Foundation has published the Charlotte Brody Discovery Garden case study in its award-winning "Landscape Performance Series." This database includes more than 100 exemplary projects with quantified environmental, economic and social benefits. You can read it at landscapeperformance.org.

More honors: gardens.duke.edu/about/awards-and-honors.

news Enotes

In Memoriam

YUKIO AND TOSHIKO NAKAYAMA

Yukio Nakayama was born in the State of Washington in 1919, attended Duke University on a scholarship, and graduated in 1941 with a B.A. in economics. Following graduation, he returned home to his family in Seattle. In 1942, Yukio, along with his parents, Nui and Yuichi, and his aunt and uncle, Hana and Hidezo, were relocated away from the Pacific coast to the Mindoka internment camp in Jerome, Idaho, where they remained until 1945. On his release from internment,



Yukio was given a train ticket home and \$25. When Duke Gardens executive director Bill LeFevre met the Nakayamas in 2009, Yukio noted that one invaluable thing came from his internment: it was there that he met his wife, Toshiko, whom he was married to until his death in 2010 at the age of 90.

When Toshiko Nakayama passed in 2013 at age 93, the remainder of their estate came to Duke in the form of a scholarship endowment at Trinity Arts & Sciences, an endowment for the Nasher Museum of Art, and the Nui Kono Nakayama Endowment Fund at Duke Gardens in memory of Yukio's mother. The Gardens endowment provides perpetual support split between the Asiatic Arboretum and the Gardens' education program.

Both Yukio and Toshiko had their ashes interred in the Memorial Garden at Duke Gardens, and all of us here are grateful for their decades of friendship, their life-long support and their generous bequest to Duke University that will provide ongoing support for scholarships, the Art Museum and the Gardens in perpetuity.

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.



ELIZABETH HATCHER CONNER

Elizabeth Hatcher Conner, who was present for the birth of Duke Gardens, died in January 2016 at age 97, and she will be greatly missed.

Conner, known to friends as Lib, was born in High Point, N.C. She graduated from Duke University with a degree in zoology in 1939 and received her master's degree from the University of Missouri. While at Duke she met the love of her life, Robert Conner. They were married at Duke on August 24, 1940. Also while at Duke, Conner excitedly witnessed the blooming of the first iris beds planted in Sarah P. Duke Gardens, in what is now known as the South Lawn. And she was present at the dedication of Duke Gardens in 1939, during the university's centennial celebration.

Conner was a life-long learner and she loved to teach. She taught biology at Smith College and at High Point College, and anatomy and physiology at the High Point Memorial Hospital School of Nursing and also the Allied Health Programs of Bowman Gray School of Medicine.

She and her husband also shared a love of the environment, and she worked tirelessly on behalf of numerous environmental causes. She was a founder of the Conservation Council of North Carolina and Friends of State Parks, and she lobbied vigorously in the North Carolina General Assembly for the creation of North Carolina State Parks. She and her husband traveled to Raleigh often to lobby for the protection of natural areas, and their activism helped preserve many acres of the state's natural beauty for the enjoyment of everyone and for wildlife to thrive. She was a member most recently of the Rich Fork Preserve Committee, working toward the development of a trail stewardship plan and a local open space preserve in High Point, her home for her entire life.

Conner attended Duke Gardens' 75th anniversary celebration in 2014, where she shared her fond memories of the Gardens' beginnings and her delight at how dramatically and stunningly Duke Gardens has blossomed. See Conner recalling the Gardens' early days on youtube at bit.ly/1ORfOuw.

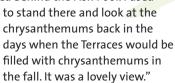
ROBERT F. DURDEN

Historian, author and retired Duke American history professor Robert Durden passed away March 4 at age 90. Durden wrote the book "Duke Gardens Through the Years," documenting the Gardens' early history, and he also wrote the definitive study of the Duke family and the founding of Duke University.

"He was a true southern gentleman and a scholar who leaves behind a rich legacy," said Bill LeFevre, Duke Gardens' executive director.

Durden was a founding member of the Gardens' board of advisors, and he was an early proponent of establishing an endowment for Duke Gardens, LeFevre said. He helped make the Walker Dillard Kirby Perennial Alleé into the gem that it is today. He greeted and assisted visitors as a front desk volunteer for many years.

"When my daughters were children, we used to go to the little covered pavilion in the Blomquist Garden, and they liked to play around there," Durden said in a 2012 interview for Flora. "I took my granddaughters there, too. I love that lookout view over the Terraces, the area behind the Fish Pool. I used



Durden received Duke's prestigious University Medal in 2000 for his service to Duke.

"His scholarship helped illuminate the history of Duke University from its founding to the present, while his books on the American South informed a

generation of American historians," William Chafe, Alice Mary Baldwin Professor Emeritus of History, told Duke Today. "He had a grace, a charm and a dedication to Duke and its history that enhanced all of us."

Durden will be interred in the Memorial Garden at Duke Gardens this spring, next to his wife, Anne.



Jenn Van-Brunt – Jenn enlisted as a volunteer early in the life of the program. She was instrumental in helping launch the Terrace Shop in its original Terrace Gardens location. She was faithful to her weekly shift and helped recruit other volunteers for the gift shop.

Aspasia Knoerr – Aspasia was volunteering long before the volunteer program was formalized. She initiated what is now the semi-annual plant sale at Duke Gardens by organizing her garden club to sell excess chrysanthemums on the Duke Quad during Oktoberfest each year to raise funds for the Gardens. She remained loyal to the Gardens in many volunteer roles until the end of her life.

Alice Zawadzki – A true stalwart volunteer and tour guide, Alice gave a tour the day before she passed. Her laughter could be heard throughout the Gardens along with the sight of her leading tours with her shepherd's staff. She also served as a roaming ambassador, greeting everyone she met in the Gardens with a heartfelt and jovial, "Welcome, Darlin'."

- Chuck Hemric

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

news Enotes

SUMMER INTERNS

The following students joined the Duke Gardens team as summer interns in 2015, sharing their skills with us and leaving with valuable experience toward what we hope will be successful horticulture careers.

TYNE TYSON was a rising sophomore at Tufts University in Medford, Mass., but a native of Chapel Hill, with a childhood full of memories of Duke Gardens. She is double majoring in biology and environmental studies, since Tufts does not offer a horticulture degree. Tyne plans to pursue an environmental career after graduation.

EVAN BAKER is currently a senior at N.C. State University, majoring in horticulture, and he is president of the university's Horticulture Club. He is passionate about local botanic gardens and succulent plants. Evan has an interest in plant propagation and maybe someday owning his own African succulent plants nursery.

BRITTNEY BELL is from Youngsville, N.C., and is studying horticulture at N.C. State University. She was an intern at Fox Greenhouses at N.C. State and at Homewood Nursery and Garden Center in Raleigh. She is treasurer of N.C. State's Horticulture Club and a university CALS Ambassador.

TARA ALLENTUCK is a senior at Virginia Tech, majoring in landscape architecture. She was raised in the industry, since her family owns and operates Allentuck Landscaping Company in Clarksburg, Md. She was also an intern at Wollam Gardens Cut Flower Farm. She hopes to pursue a career that combines her love for design and horticulture.

- Michelle Rawlins





Above: mute swans; photo by John Geneczko Jr. Left: photo by Beth Hall. Page 35: photos by Ashley Wong.

POND POPULATION GROWS

Duke Gardens welcomed more than a dozen new residents to the Asiatic Arboretum pond in March, including a beautiful pair of female mute swans.

The swans, which horticulturist Michelle Rawlins has named Cinderella and Snow White, came from Sylvan Heights Bird Park in Scotland Neck, N.C., as did the other waterfowl. This swan species doesn't like to leave the water, which makes it perfect for Duke Gardens. And as a female pair, they won't be inclined toward the aggressive behavior that protecting a nest of little cygnets can cause.

In addition to the swans, we also added: three new male red-crested pochards to join the existing female; three male redheads; three male and one female wood ducks; a male and a female paradise shelduck; and a male and a female European wigeon.

We offer nutritious and inexpensive food for the waterfowl in the Terrace Shop, and we ask visitors not to feed them bread or other foods, as they can be harmful to their digestive systems. We hope you'll come see these new waterfowl soon!

- Orla Swift



Enhancing Duke Life: Olivia Anderson

Duke Cross Country and Track and Field team

"I feel particularly proud to take our high school recruits through the Gardens, showing a unique and key piece of Duke's identity." Being on Duke's Cross Country and Track and Field team has offered many opportunities and unique experiences. One of the true highlights of being a Duke runner is the chance to explore Duke Gardens as we train. Every Tuesday and Friday when we face the challenge of a hard workout, we have the opportunity to first escape to the sanctity of the Gardens for our 2-mile warm-up. The quiet and peaceful landscape provides an inevitable calm to our nerves, enabling us to refocus on the sheer beauty that North Carolina has to offer.

Whether surrounded by the oranges and yellows of the fall, embracing the chilly snow that blankets the grounds in winter, or celebrating the first rose's bloom of the spring, our team looks forward to our weekly exploration of the Gardens. The garden paths offer many different routes, paralleling our own experiences here at Duke. Yet wherever we choose to go on a given day, the flowers, water and wildlife are stunning.

I feel particularly proud to take our high school recruits through the Gardens, showing a unique and key piece of Duke's identity. We value more than simply academics and athletics. We value a celebration of life. As we run by a bamboo grove, or the aromatic rose garden, nothing could be more apparent.

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







MELLIODENDRON XYLOCARPUM

Generally speaking, landscapers and homeowners tend to rely heavily upon a limited few trees, shrubs and herbs with which to garden—limited at least when compared to the potential floral palette, which consists of tens of thousands of interesting plants. One of the many roles of a botanical garden is to provide our constituency an opportunity to learn about and experience in person the lesser-knowns of the earth's diverse flora—and, when appropriate, to popularize and work for the dissemination of good new landscape plants. *Melliodendron xylocarpum* is one such plant that warrants endorsing.

Melliodendron is a small tree endemic to south central China—a region that boasts among its native forest denizens scores of species, woody and herbaceous, that are extensively used in landscapes throughout the world. *M. xylocarpum* is monotypic, meaning it's the sole representative of the genus. It belongs to the plant family Styracaceae, which includes our native Carolina silverbell (*Halesia Carolina*) and the many native and Asian snowbells, among them the frequently seen Japanese snowbell (*Styrax japonica*).

The genus Melliodendron [mell•ee•oh•DEN•dron] honors Austrian Rudolf Mell (b. 1878), an entomologist and teacher with ties to southern China. *Xylocarpum* [zy•lo•CAR•pum], in botanical Latin, describes the woody (xylo) nature of the fruit (carpa), from which the species can be easily propagated. Though the footprint of its native range is subtropical, *M. xylocarpum* is perfectly hardy in piedmont North Carolina. Once established, it reliably produces an annual spring display of beautiful starshaped white flowers, suffused with pastel pink and bearing a slight sweet fragrance when aroused by the warmth of the sun.

– Paul D. Jones, curator, W.L. Culberson Asiatic Arboretum



BRASSICA OLEACEA VAR. ACEPHALA

Kale is one of my all-time favorite plants for the winter garden. Botanically known as *Brassica oleracea* var. *acephala*, this member of the cabbage family is grown for its large, upright leaves, not its inconspicuous flowers. Kale is a winter annual and best grown from seed. However, small starter plants are available for purchase beginning mid-fall. The wonderful thing about kale is that it serves a gardener in two ways: as a vitamin-packed vegetable, and as an often unexpected design element.

Used as a vegetable, kale tastes best after the first frost. Use its leaves throughout the winter in soups, salads and garnishes. It is rich in iron and vitamins A and C, and it has been dubbed a "super-food" for its exceptional nutritional attributes. Consider planting kale with onions and garlic to maximize space in your garden, or grow it with herbs such as cilantro and parsley.

Aesthetically, kale provides a big-leafed texture that's uncommon among winter annuals. It keeps its attractive foliage all winter long, and Duke Gardens has used different varieties of kale in annual beds with fantastic results. Plant kale in your flower beds next to pansies, dianthus and snapdragons or grow it in a container for an interesting winter display.

Among my favorite varieties are: 'Nero Di Toscana' (also known as "Dinosaur" or "Lacinato"), for its large puckered, powder blue leaves; 'Blue Curled Scotch' for its bluish curled edge leaves; and 'Redbor' for its frilly deep purple-red foliage.

In your soup or in your flower bed, kale is a must for any winter garden.

Jason Holmes, curator, Doris Duke Center Gardens









The term "poster child" is used when an individual is emblematic of an issue or movement. Botanically speaking, a particular plant species can be referred to as the "poster child" for concerns surrounding vanishing ecosystems across the globe.

A regional example of such a disappearing landscape would be the Piedmont prairie of the southeastern U.S. Once a widespread habitat marked by widely spaced trees surrounded by grasses and wildflowers, today's Piedmont prairies exist only in tiny pockets within their former range.

The species perhaps most emblematic of this declining habitat is the smooth coneflower (Echinacea laevigata). Found in these shrinking grasslands amongst prairie dock (Silphium terebinthinaceum), New Jersey tea (Ceonothus americanus) and southern blazing star (Liatris squarrulosa), smooth coneflower adapted to survive periodic fires like many of its prairie neighbors. Pendulous pink petals widely spaced and often hanging parallel to the stem help to distinguish this Echinacea from others in its genus. Another unfortunate distinction is the fact that, since 1992, smooth coneflower has been listed as a federally endangered plant species due primarily to habitat loss and fire suppression in its native range. A small number of these rare coneflowers can be seen in the Blomquist Garden's newly constructed Piedmont Prairie, a project designed to highlight the plight of all plant and animal species that rely on these open, grass-dominated habitats for their survival.

-Stefan Bloodworth, curator, Blomquist Garden of Native Plants



Bamboo muhly (Muhlenbergia dumosa) is a beautiful, wispy grass that has become one of my favorites for containers and annual beds. This 4- to 6-foot-high Southwest U.S. native has only recently gained in popularity over the last few years. Muhlenbergia dumosa is not actually a bamboo but a grass that has stem nodes that resembles thin bamboo stalks.

A zone 8 plant, it can live through milder winters in our area if planted in a well-drained, sunny location. In the past, it has lasted three or four years in the Gardens before being killed by a really cold winter. To ensure their survival through winter, we normally dig them up each fall, put them in pots and move them to a greenhouse or cold frame. Those in large containers are either repotted or the whole pot is brought inside.

Bamboo muhly should be planted outside in the spring after the last frost. It has a fast growth rate and will form neat clumps of upright stems with gentle arches at the top. This grass has very fine, textured foliage that gives it a frothy, cloudlike appearance from a distance. Its soft green, feathery and light habit complements every plant around it. It contrasts wonderfully with bold textured plants such as agaves, yuccas, elephant ears and cactus.

Once established, bamboo muhly is quite drought tolerant and persists late into fall and early winter. The flowers are not significant and they blend in with the foliage. Before spring growth comes on, cut dead stems back to the ground and green stems no lower than 8 inches if you'd like a neater appearance.

- Michael Owens, curator, Historic Gardens



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



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Duke Gardens is enjoyed free of charge by more than 300,000 people annually. More than half of our operating budget comes from people like you, who value all that this world-class botanic garden has to offer.

Your membership dollars support every aspect of Duke Gardens, from inspired horticultural design to classes and free events for the community, children's programs and many resources that provide the best experience possible for visitors.

All Friends memberships are part of the Duke Annual Fund and are used entirely for the benefit of Duke Gardens. Duke alumni also receive reunion class gift credit. More membership information is available at gardens.duke.edu or by calling 919-684-5579. Thank you.

MEMBERSHIP LEVELS

Duke students \$ 25 Individual \$ 50 Dual (spouses/partners) \$ 75 Family (includes children under age 18) \$ 100

ALL MEMBERSHIP LEVELS INCLUDE:

- Education program discounts at Duke Gardens, including free admission to select programs/events
- 10% discount on Terrace Shop purchases
- Reciprocal admission benefits to 300 gardens in N. America
- · Online access to Duke Gardens publications
- Free subscription to Better Homes & Gardens magazine

Terraces Society \$ 250

Includes membership benefits above plus:

- · Duke Gardens calendar
- 20% discount on Gothic Bookshop purchases (valid membership card required)
- 2 complimentary dual gift memberships
- Annual report
- · Flora magazine
- Invitations to special Friends events

Membership makes a great gift! Iris Society \$ 500

Terraces Society benefits plus:

- Duke Gardens note cards
- 2 complimentary registrations for the Gardens' education program

Pergola Society \$ 1,000

Iris Society benefits plus:

Complimentary Gardens parking

Directors Society \$ 2,500

Pergola Society benefits plus:

• Invitation to reception/dinner with a featured guest speaker

Mary Duke Biddle Society \$ 5,000

Directors Society benefits plus:

• Invitation to behind the scenes tour with director of horticulture

Mary D. B. T. Semans Society

\$10,000

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Mary Duke Biddle Society benefits plus:
• 1 complimentary trolley tour with director, schedule permitting

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(Excludes matching program gifts)

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- Annual report
- 1 free space rental in the Doris Duke Center (Mon.-Thurs.) per availability within membership year