



A publication of the Friends of the National Arboretum

ARBOR FRIENDS

FALL 2022



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FROM THE EXECUTIVE DIRECTOR



DEAR FRIENDS OF THE NATIONAL ARBORETUM:

Someone’s sitting in the shade today because someone planted a tree a long time ago. —Warren Buffett

Well, Mr. Buffett was probably speaking more in a metaphorical sense, but the idea is a reality at the National Arboretum. We all have benefitted from the work of those who came before us at the Arboretum, and lately at FONA, we have been thinking about the future to make sure we provide for those who come after us. The last two years have been about adapting and adjusting to the conditions of the present because the future was too unpredictable. As we enter this year’s planning cycle, we are looking to find opportunities for growth and provide an even stronger foundation of support for the Arboretum going forward.

One of the things we are focusing on is expanding our programming to teach more people about the value of connecting to the land, so they can experience the gardens and collections and learn about the great work of the Arboretum team. Our efforts include making improvements in our Washington Youth Garden to make it more welcoming to students and visitors. Plus, we are now in the midst of the final design and regulatory approval phase for building a tree canopy trail behind the garden so everyone can learn more about the value of trees and have some fun at the same time. We are also focusing on access to the Arboretum. The current entrances are difficult for our visitors and our neighbors alike. We are working with District and federal partners to make sure the long-planned Bladensburg Road entrance becomes a reality. The existing entrances no longer serve the best interests of the Arboretum and our visitors, so our voice needs to be strong as decisions are being made regarding the area around the Arboretum. This will ensure that the entrance is properly incorporated into plans and becomes an integral part of the community.

However, for our work to succeed, we will need the full support of our stakeholders. That includes our federal partners at the Arboretum who give us the opportunity to act on their behalf, our incredible Board that works tirelessly year around to ensure we’re headed in the right direction, and you, our FONA members, who give your time and money to ensure that we can continue to “plant those trees” so future generations can appreciate the Arboretum as much as you do! 🌳

Craven

Craven Rand, Executive Director
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ON THE COVER After a summer of bright white flowers, these magnolias develop seed pods from which bright red fruit will emerge (Magnolia grandiflora ‘Charles Dickens’).

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LETTER FROM THE ARBORETUM DIRECTOR

Autumn and Acorns



FULL DISCLOSURE: FALL IS MY FAVORITE SEASON. There are many signs that fall has arrived, from meteorological to soci-

etal, ranging from shorter days and cooler nights to hurricanes and football. For much of North America, there is a ubiquitous sign that autumn has arrived, and that is the annual acorn crop. Acorns, or oaknuts, are in fact true nuts and the tell-tale identifier for oaks (*Quercus* spp.).

With more than 90 species in North America, oaks can be found from coastal sand dunes to timberline and deserts to swamps. Eastern North America is home to nearly half the species, the American southwest and Texas next with a third, and the remainder on the West Coast. In eastern North America, oaks can be found in more than 64 types of forest—the most common historically are the oak-hickory and oak-pine forests—and increasingly, the anthropogenic urban forest. Many oaks are found in seasonally flooded bottomland forests or swamps, and these ecological adaptations serve them well in the oxygen-poor and fluctuating moisture regimes of urban soils.

Oaks have a long relationship with human society, but germane here is the renewed emphasis on native oaks for landscapes as a keystone component of ecosystem service functions. More than fifty species of animals and birds rely on annual acorn production for survival, from bears to the tiniest weevil. Not that we need bears in the cities, but certainly songbirds are com-



patible. Doug Tallamy’s *The Nature of Oaks* recounts more than any single text the value of oaks to our ecosystems, dropping the eye-popping statistic of 900-plus caterpillars that feed on oaks and thus provide food for our birds.

We at the National Arboretum have gone to the birds. We’ve been quietly rebuilding our oak collection, which was once heavily focused on European and Asian species. Our commitment to native oaks has now been renewed. We currently have more than 100 accessions of oaks, from *Quercus acerifolia* to *Q. wutaishanica*, including species of conservation concern such as the maple-leaved oak (*Q. acerifolia*),

Oglethorpe oak (*Q. oglethorpen-sis*), and Boynton’s sandpost oak (*Q. boyntonii*). We are also adding local provenances of more widespread oaks, including overcup oak (*Q. lyrata*) from the mid-Atlantic, and we’re searching for expatriated populations of once common oaks, like bear oak (*Q. ilicifolia*), which gives rise to the name Odenton (a corruption of oaktown), a town in Maryland north of DC.

It goes without saying that the National Arboretum should be part of the national oak collection, or Plant Collections Network of the American Public Garden Association, and celebrate the national tree. This “Oaktober,” as the acorns drop and are collected, cached, or otherwise dispersed by animals and people alike, consider the connections oaks serve to the broader ecosystem and resilient urban forests. As the transcendentalist Ralph Waldo Emerson once wrote, “the creation of a thousand forests is in one acorn.” 🌳

All the best,
Richard T. Olsen, Director, USNA



During the past 10 years through the ongoing support of our loyal membership base, we have been able to hold our membership dues flat while strengthening the ways in which FONA supports the National Arboretum and our community through programs, events, and partnerships. With the rising costs we are all facing each day, we are at the point where we must increase our membership dues to cover these costs.

We are so grateful to you, our members, who make all of our work possible. Members enjoy exclusive benefits throughout the year, but more importantly, members champion FONA and the Arboretum. Join or renew today to lock in 2022 rates for another year.



BREEDING SUSTAINABLE TURFGRASS

To withstand and mitigate the effects of a changing climate

Dr. Jin Barnaby

Our changing climate requires more sustainable urban landscapes.

Compared to the pre-industrial period, current atmospheric carbon dioxide concentrations are almost 50% higher, and the 2020 global mean temperature was about 1.2°C higher. These climate changes are driving frequent extreme weather events such as increased drought and unpredictable seasonal precipitation. Furthermore, the climate changes force growing seasons to start earlier and become hotter. Maryland is in an area named "the transition zone" because it is too cool to maintain warm-season grasses in the winter and too warm and humid for cool-season grasses to survive in the summer. Therefore, it's an ideal location for doing research that is focused on sustainable urban landscapes and their potential to mitigate the impacts of climate change.



Above: Hybrid mapping population displaying phenotypic variance in yield in the turf field (Photo credit: Jin Barnaby) Background: Google satellite image of the turf field in Beltsville, MD.



Above: Sterile turf progeny; right: A stationary Raspberry Pi camera system (white circles) mounted above a plant bench at the USDA greenhouse facility. Next page, top: low-yield turf progeny; bottom: high-yield turf progeny. (Photo credits: Jin Barnaby and Scott Warnke)



DEFINITIONS

phenotype: the observable characteristics or traits of an organism that are produced by the interaction of the genotype and the environment; the physical expression of one or more genes

genotype: all or part of the genetic constitution of an individual or group

high-throughput technology: a machine or system that analyzes large amounts of data

multi-omics: a biological analysis approach in which the data sets are multiple “-omes,” such as genome, proteome, transcriptome, epigenome, metabolome, and microbiome. The use of multiple omics technologies to study life in a concerted way.

Why focus on turfgrass?

Turfgrasses cover 1.9% of the U.S. land area, which is three times more area than any irrigated crop. Turf is critical for human well-being, for its role in lawns and leisure and sports activities, and for roadside stabilization, urban cooling, carbon sequestration, weed management, and even water filtration. However, turfgrass production and management can also have negative impacts on the environment because of excessive use of water for irrigation and excessive use of pesticides and fertilizers, both of which have an impact on the environment because of run-off and greenhouse gas emissions. Therefore, development of resilient turf genotypes with reduced management inputs (i.e., using less fertilizer, irrigation, mowing, and fewer pesticides) is needed.

The Arboretum's turfgrass research

Based in Beltsville, Maryland, the Floral and Nursery Plants Research Unit (FNPRU) of the U.S. National Arboretum has two turf geneticists who focus on reduced input management research. Dr. Scott Warnke and Dr. Jin Barnaby are

targeting reduced input turf management by developing new and novel low-input turfgrass selections with improved disease resistance (less pesticide) and tolerance to low soil fertility (needing less fertilizer) that can help cut greenhouse gas emissions and improve soil quality. In addition, they seek to identify genes associated with better rooting and tillering characteristics for improved drought tolerance and yield, respectively, in response to the changing climate. Breeding these climate-resilient turfgrasses will produce new types of turfgrass that could be used in areas that require either high or low maintenance for enhanced turf sustainability.

Danthonia, and dollar spot disease

One of the research projects that Dr. Warnke has been working on is a grass species called *Danthonia spicata*, which is commonly found in low-maintenance conditions. It has almost 8 to 10 times better tolerance to drought stress than other turfgrasses. To bring the capacities for low maintenance and enhanced drought tolerance of *Danthonia* into conventional turf cultivars, he developed

a mutant population of *Danthonia* that enabled him to identify the functional genes for traits of interest. Dr. Warnke also developed a hybrid population by crossing colonial and creeping bentgrass, which display contrasting phenotypes for drought and pathogen stress, respectively. These newly developed germplasm pools will help researchers identify the superior genes that are resilient under harsh environmental conditions such as dry conditions and infertile soil and against dollar spot, a major fungal disease in turf.

Dollar spot, caused by species of fungi in the genus *Clarireedia*, is the most destructive and economically important fungal disease of turfgrass species. Dollar spot occurs throughout the growing season, and calendar-based fungicide applications (i.e., every 2 weeks from May to October) are usually executed on highly managed turf such as golf courses or sport stadiums to control the disease. For example, an annual average of \$15,000 per golf course

MEET DR. JIN BARNABY

Dr. Barnaby is a turf geneticist recently hired at the USDA-Agricultural Research Service (ARS)-U.S. National Arboretum (USNA), Floral and Nursery Plants Research Unit (FNPRU). She was born in Berlin, Germany, and her family returned to South Korea when she was 10. Even after moving to South Korea, she often visited her father's laboratory which opened her eyes to the wonders of plant biology. She pursued her BS degree in biology at Chungbuk National University and her MS degree in biology at Seoul National University, after which she came to the United States to study at Duke University in North Carolina.

There she used genetic and functional genomic approaches to identify target genes and characterize plant defense mechanisms against abiotic and biotic stress, and she also received her PhD in Plant Biology. Next, she joined the USDA-ARS-Crop Systems and Global Change Laboratory in Beltsville, MD, as a post-doc and studied plant abiotic/biotic interactions in the face of climate change through omics-driven technologies. In 2016, she moved to the USDA-ARS-Dale Bumpers National Rice Research Center, Stuttgart, Arkansas, as a research plant physiologist. There she investigated genetics-by-environment-by-management (G×E×M) impacts on rice yield and quality by leveraging high-throughput genotyping and phenotyping technologies to develop superior rice varieties.

Last November, she joined USDA-ARS-USNA-FNPRU as a research geneticist and is working on genomics-based research to benefit turfgrass genetics that will lead to improved breeding and selection of turf genotypes for the mid-Atlantic transition zone. Outside of work, she enjoys playing tennis and camping and traveling with her family. 🌿



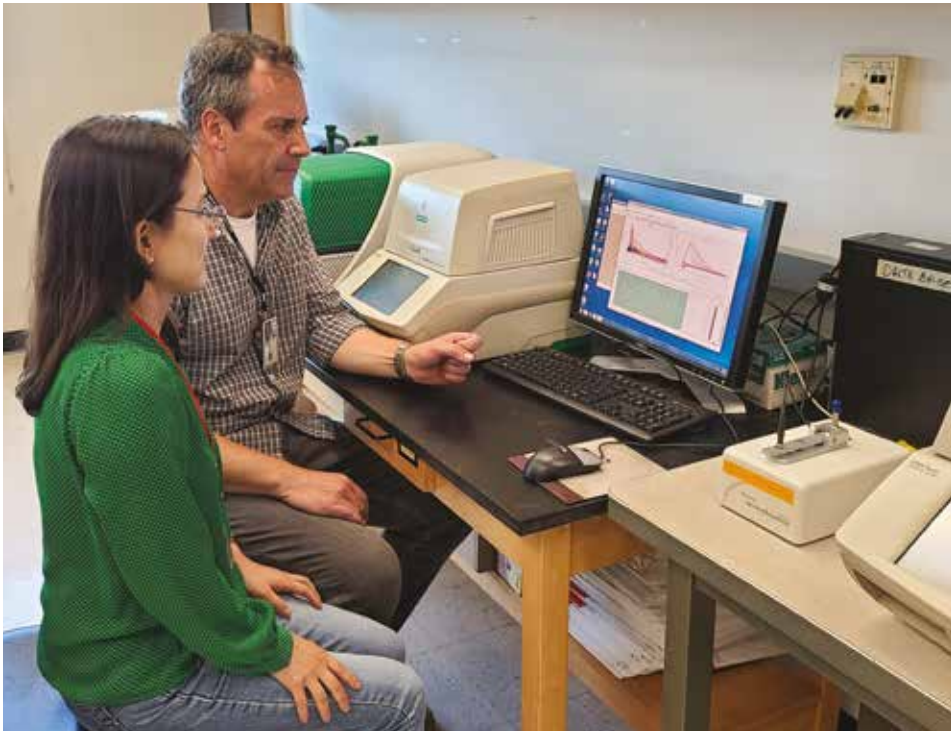
is spent to control foliar diseases (on leaves). Therefore, developing resistant cultivars would be a promising method for controlling dollar spot while reducing fungicide applications.

Using high-throughput technologies

Dr. Barnaby is a geneticist with more than 15 years of research experience in high-throughput phenotyping and genotyping technologies. The most efficient means of identifying target genes associated with traits of interest is through sequencing (genotyping) and phenotyping of mapping population (hybrid cultivar) progenies derived from two parents that display contrasting phenotypes of target traits. However, evaluating phenotypes of several hundreds or thousands of mapping progenies is very laborious and time-consuming. Furthermore, phenotyping results tend to be variable and very subjective depending on who is doing the scoring. Dr. Barnaby has brought to the research unit high-throughput imaging technologies such as automated Raspberry Pi RGB imaging and a hyperspectral imaging system that can examine not only visible stress symptoms of plants but also symptoms invisible to the eye in an accurate and precise manner. With these high-throughput imaging systems, more objective phenotyping can be accomplished effectively with large numbers of samples.

Using technology to find the best plants to breed new, more sustainable cultivars

Currently, Barnaby and Warnke are integrating technologies (high-throughput genotyping and phenotyping and multi-omics-driven technologies) to investigate phenotypic variations in temporal and spatial dynamics of stress progression (e.g., disease and drought) and genomic variations among mapping population progenies and within diversity panels. This will allow them to identify target genes that control traits that could be exploited to breed turfgrasses needing less irrigation, fungicide, mowing, and fertilizer.



Ultimately, researchers will develop turf varieties with reduced management inputs to help the United States and USDA achieve net zero carbon emissions by 2050 while fulfilling customer demands and maximizing sustainable turfgrass systems.

DR. BARNABY is a turf geneticist recently hired at the USDA-Agricultural Research Service (ARS)-U.S. National Arboretum (USNA), Floral and Nursery Plants Research Unit (FNPRU).

Top: Two ARS scientists (Barnaby and Warnke) examine genotyping results by using simple-sequence repeat (SSR) markers; bottom: Barnaby and Warnke, along with two interns (Joshua Lewis and Angie Chang), explain turfgrass research to the USNA interns during the 2022 USNA internship lab tour. (Photo credit: Jin Barnaby)



Thank you to all who joined us in September for our 26th annual Dinner Under the Stars. More than 300 guests enjoyed cocktails in the National Herb Garden and dinner in the meadow below the Capitol Columns.

This event is our biggest fundraiser of the year and supports mission-critical work. FONA preserves and enhances the National Arboretum and facilitates experiential programs that instill a love of plants, nature, and the outdoors in all who visit the Arboretum.



Thank you to our Sponsors!

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A Second Life for Dead Plants

Harlan T. Svoboda, PhD

THE U.S. NATIONAL ARBORETUM is known for its stately gardens, serene greenspaces, diverse living collections, and iconic landmarks. But beyond these well-known attractions, it houses another treasure: the United States National Arboretum Herbarium. This repository of 700,000 pressed, dried, and preserved plant specimens is one of the USDA's designated mission-critical collections, which represents more than 200 years of botanical exploration and accumulation of knowledge. The collection serves to permanently document research undertaken by USDA scientists, to provide authenticated material for scientific study, and to educate the public about plant diversity.

Within the herbarium are specimens of rare plants from remote corners of the globe, important plant introductions, and even new species waiting to be described. One element that sets the National Arboretum Herbarium apart from the 3,500+ other herbaria around the world is its emphasis on ornamental plants, crops, and other cultivated (human-grown) plant specimens.

To make these important botanical resources more easily accessible, the herbarium underwent a complete digital transformation in 2021. Starting that January, Arboretum staff and interns began preparing the collection for digitization: they barcoded every single specimen and folder within the herbarium. Imaging began soon after by using a specially built conveyor system that was installed and operated on-site. The project was no small task—having to carefully handle and process 700,000 specimens meant that an army of staff, interns, and contractors worked tirelessly to see the project to completion in just 11 months. All of this effort was rewarded though, because we now have the distinction of being the first federal natural history collection to be 100% imaged and inventoried.

After the imaging process was complete, our attention turned to data entry (transcription) of the specimen labels. This important text, most of it handwritten, needed to be captured and digitized so that we have a digital copy of it to accompany the image. Using an online crowdsourcing platform, 141 volunteers and staff helped us convert information from the specimen images into digital records that can now be used to easily query the collection. The images and related data will ultimately be made available on a virtual herbarium website for the whole world to enjoy.

Through this monumental effort, the dead plants in the National Arboretum's Herbarium are getting a second life. 🌿

HARLAN T. SVOBODA, PHD, is the Curator of the USNA Herbarium



Top: A view inside the U.S. National Arboretum Herbarium. This long stretch of shelves shows how the collection's 700,000 plant specimens are stored and preserved. (Photo credit: H.T. Svoboda); **bottom:** Specimens being imaged on the conveyor system. On average, about 5,000 specimens were imaged every day. (Photo credit: Stephen Ausmus). **Opposite page:** A specimen of *Rhododendron* 'Progress', one of the National Arboretum's Glenn Dale Azalea hybrids. (Photo credit: U.S. National Arboretum Herbarium)

What’s Buzzing in the Pollinator Garden?

THE POLLINATOR GARDEN, which is located outside the east side of the demonstration garden, is blooming with native flowers and attracting lots of visitors, both pollinators and people. As you walk through the space, you can see tall, bright yellow goldenrod and purple bee balm which provide pops of color and a sweet scent while native bees buzz about. These and other native perennials were planted this past spring with the help of our volunteers and DC Natives. Annuals too, like zinnias and sunflowers, are displaying waves of bright colors in the garden, and they have lots of swallowtail butterfly and bumblebee visitors.

We intentionally added more native perennial plants to the space to support natural habitats and biodiversity. These perennials provide additional benefits



to the garden and the environment: better resistance to pests and weather fluctuations, saving water and other resources and needing less maintenance. Plus, they are beautiful! Native plants have evolved over time to be resistant to disease and are important to the animals and insects in their environment.

This past year, the FONA team has been working on creating a more welcoming space for human visitors to enjoy as well. New signage and seating has been created for the space, including a lovely butterfly-shaped interactive sign for the pollinator garden. The design was created by WYG alumni and friend Thea Klein-Mayer, and the sign itself was fabricated by OpenWorks (based in Baltimore). We send a huge thank you to these folks and to the Perennial Garden Club for their support. Look to the garden signs for updates and fun prompts!

This summer we welcomed 15 high school and college interns into our Green Ambassador Program (GAP), where they worked

in the demonstration garden as well as on team building activities and projects such as constructing new benches for the Pollinator Garden. They learned how to read a schematic plan, measure and cut wood, assemble and buff using power tools, and paint—and the finished products are spectacular! They painted beautiful murals on the backs of two benches which are now sitting under an American redbud tree and a mulberry tree, providing nice, shady spots to relax.

Another GAP activity from this summer was our annual honey harvest. The Green Ambassadors learned how to pull frames from our four onsite hives, uncap wax combs and extract the honey from the frames, and then filter and jar it. We harvested approximately 100 pounds of honey in July! This is only about 15% of the honey stored in the hives because it is very important that the honey bees have enough food to get through the winter in order to come back strong next spring. Thank you to Toni Burnham from the DC Beekeepers Alliance for always providing informative bee-loving support! This honey is used for our in-person programming and events so everyone can get a taste and learn about the process.

Please come visit the peaceful pollinator garden at the Washington Youth Garden to check out our new additions. Use all your senses to enjoy the blooms and buzzes of the surrounding beauty.

EMILIA KAWASHIMA is FONA's Garden Coordinator



Summer Institute

EVERY SUMMER, the Washington Youth Garden, in collaboration with the Office of the State Superintendent of Education (OSSE), hosts its annual professional development for school garden teams. This past July marks the 5th annual Summer Institute for Garden-based Teaching. During this 4-day training, teachers explored key elements of successful school gardens, learned classroom management strategies for the garden, developed their own standards-based garden curriculum, and jump-started their planning for the upcoming school year.

This summer, we hosted 32 participants from 13 different schools, and 11 of those schools brought multiple team members. To build capacity at their schools, participants were encouraged to bring a team of educators, school staff, and volunteers. By bringing a diverse mix of team members from their schools, they created a stronger support network within each school and made running school gardens more sustainable. WYG continues to support school garden teams throughout the school year with seasonal trainings as well as our Educator Coaching Program (ECP). Summer Institute alumni teams are eligible for the ECP where we offer more targeted support during the school year. We hope that school garden teams are more confident about bringing their students into the garden for hands-on outdoor learning through our trainings.

ASHLEY RATTANAWAN is FONA's School Garden Educational Coach

New signage in the Pollinator Garden prompts visitors to look closely.



4 Ways to Make a Bigger Impact

Thank you for being a FONA member! Your annual membership gifts support FONA's mission-critical work, including our educational programs in the Washington Youth Garden.

Here are four ways you can have a bigger impact and further connect to the Arboretum:



1 VOLUNTEER FOR FONA OR THE WASHINGTON YOUTH GARDEN

We have opportunities for individual and group volunteering throughout the year. In the garden and at events, volunteers increase what our small team can accomplish.



2 JOIN FONA'S HERITAGE SOCIETY

Making a planned gift through your will is a wonderful way to show your support and appreciation for Friends of the National Arboretum and its mission while achieving your own personal, financial, estate-planning, and philanthropic goals.



3 DEDICATE A COMMEMORATIVE BENCH

Honor a loved one or your own love of the Arboretum. Benches provide a beautiful spot for respite and relaxation for visitors, and your donation directly supports the National Arboretum's public gardens and scientific work.



4 JOIN THE DAVID FAIRCHILD SOCIETY

The David Fairchild Society is our highest level membership group and is a community of supporters who are passionate about the National Arboretum's gardens, plant research, education, and community engagement efforts.

MAKE AN ADDITIONAL YEAR-END GIFT TO FONA!

There are many ways to make a donation to FONA:

- **Check** (be sure it's postmarked by Dec 31 so it counts toward your 2022 charitable giving)
- **Online donation** at [FONA.org/donate](https://fona.org/donate) or [FONA.org/support](https://fona.org/support)
- **ACH or wire transfer**
- **Stock or securities**
- **IRA distribution or Qualified Charitable Distributions**
- **Employer matching gifts**
- **Combined Federal Campaign**—federal employees can designate which charities they want to support. The CFC number for FONA is 81610

Thank you for your generous support! However you choose to give, you help ensure the long-term success of the National Arboretum for generations to come.

To learn more and make your contribution today, please contact:

Claire Alrich, FONA's Development Officer at 202.918.1868 or calrich@fona.org



Nancy and Pierre Moitrier

Honey, I Shrank the Lawn!

With respect for the widespread ecological changes in weather patterns, it's time to reconsider the plants we are growing. Fall is a great time to begin transforming your landscape into a more sustainable garden that requires less work. Start with the neediest plant on your property: the lawn.

WHY IS AN ABUNDANCE OF TURF UNFAVORABLE?

- Turf requires mowing on a weekly basis, which results in exorbitant amounts of CO₂ emissions.
- A fescue lawn requires a minimum of 1 inch of water per week.
- Traditional lawns require the application of chemicals for optimal performance.
- Pure turf is a monoculture that provides few ecological benefits.
- Trees and turf are not compatible. They compete for water, light, and nutrients.

WHAT ARE THE AESTHETIC AND CULTURAL BENEFITS OF MINIMIZING TURF AREAS?

- Defining your turf boundaries with a clean and discernible shape will cause the lawn to become a contrasting negative space and will elegantly set off adjacent plantings.
- The process of reducing the lawn provides the opportunity to "sculpt" the land by creating planting berms that can direct water flow on or around your property. Fall is the perfect time to correct drainage issues.
- Diversity of flora invites a diversity of fauna into the garden, creating a more balanced ecosystem.

FROM MINIMAL CHANGES TO GRANDIOSE PROJECTS, FOLLOW THESE SUGGESTIONS TO MINIMIZE TURF AREAS:

- Expand your foundation bed. From a design standpoint, the bed should extend outward as far as the house is tall.
- Connect floating islands of shrubs or trees to create one contiguous bed with grand, sweeping curves.
- Enlarge existing beds as plants grow as opposed to pruning shrubs to stay within turf boundaries.
- Plant steep, difficult-to-mow areas. Create visual continuity by planting like plants in large drifts.
- Transform excessively wet areas of your turf into rain gardens and plant moisture-loving plants.
- Replace lawn on the periphery of the property with garden beds which will be more attractive from inside your home looking out.
- Create a meadow and attract beneficial insects to your property. Meadows add excitement with their dynamic growth and constant bloom; they also provide food for our feathered friends.
- Plant native trees and shrubs—create a forest.
- Plant no-mow grass alternatives. Replace your current lawn with no-mow turf types such as common wood sedge (*Carex blanda*), white-tinged sedge (*Carex albicans*), or Pennsylvania sedge (*Carex pennsylvanica*), among others.



NANCY AND PIERRE MOITRIER operate *Designs for Greener Gardens*, a boutique gardening company that specializes in designing, creating, developing, and maintaining distinctive gardens of all styles. Pierre hails from France and brings the charm of the Old World to their garden creations. Nancy's 40 years of gardening experience combined with her design knowledge and innate artistic eye add a superior dimension to their garden projects. Follow *Designs for Greener Gardens* on Facebook.

FRIENDS OF THE NATIONAL ARBORETUM

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The Friends of the National Arboretum is an independent, nonprofit organization established to enhance, through public and private sector resources, support for the U.S. National Arboretum.

HAPPENINGS *For more information, visit usna.usda.gov or fona.org*

The calendar of events is updated regularly at FONA.org.

FALL 5K

Saturday, November 12, 9am

Run or walk through stunning fall foliage. FONA Members, use your discount code! Registration is required.

TREE SALE PRE-SALE

Saturday, December 3, 10am–4pm

Buy Christmas trees, wreaths, and garlands a week before our Winter Festival. Trees available for pre-order and delivery.

WINTER FESTIVAL

Saturday, December 10, 10am–4pm

Shop from local vendors, buy Christmas trees and holiday greenery, and enjoy free holiday-themed family activities. Trees available for pre-order and delivery.

FOREST BATHING

Meditative forest bathing sessions are offered several times a month on a pay-what-you-can pricing model. Register online.

GET UPDATES BY EMAIL AND ONLINE

Sign up for the FONA Field Notes email newsletters at FONA.org to get regular updates from the Washington Youth Garden, behind-the-scenes stories, pictures of the Arboretum, and a list of the latest events!

