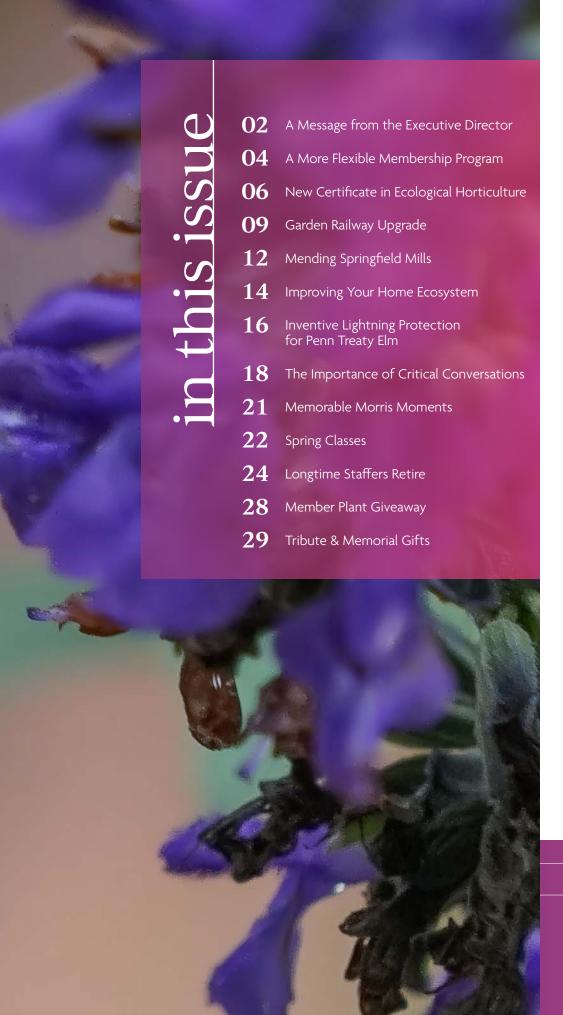




"We loved walking trails and exploring with our three-year-old daughter. We loved the rose garden, she loved walking along the train track and railroads decorated with some of her favorite characters like Mickey Mouse and Elmo. My favorite part was the beautiful trees and all the bees and butterflies around us. We had a lovely time and can't wait to come back."

-Morris visitor



# **SEAS**<a href="mailto:square;">SEAS</a> <a href="mailto:square;">SINS</a>

Morris Arboretum & Gardens of the University of Pennsylvania

Published two times a year as a benefit of membership. Inquiries concerning back issues, missing issues, or subscriptions should be addressed to the editor.

#### Mellany Armstrong

Communications Coordinator/Editor

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#### VISITOR ENTRANCE

100 E. Northwestern Avenue between Germantown and Stenton avenues in the Chestnut Hill section of Philadelphia

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#### **E-NEWSLETTER**

Would you like to receive our monthly e-newsletter and other Morris updates via email? It's a great way for you to stay up to date on upcoming events. Register online and help us save trees! Email members@morrisarboretum.org to be added. To address the problems of spam, many internet service providers (ISPs) and email systems now block or filter email that is not from a "safe sender." Please add info@morrisarboretum.org and members@morrisarboretum.org to your list of accepted senders or friends list if you wish to receive this information.

COVER PHOTO: Ken Tapp

INSIDE COVER PHOTO: Paul W. Meyer

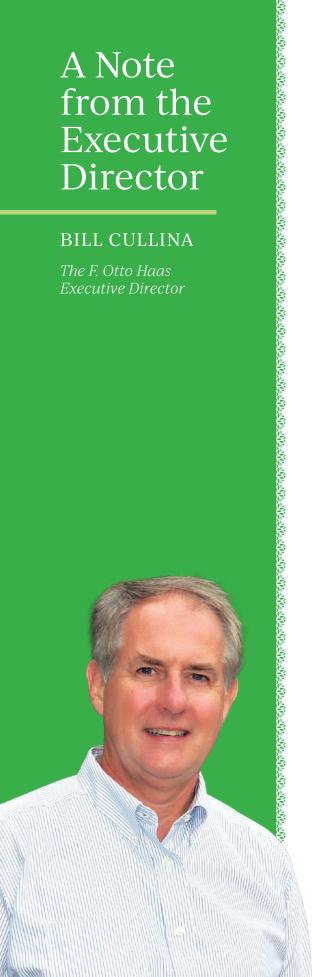
#### **MORRIS RENTALS**

Hold your special event in one of Philadelphia's most beautiful settings. The Widener Welcome Center and surrounding grounds are available for weddings, parties, and private and corporate meetings. For details contact the Rentals Team at rentals@morrisarboretum.org.

# A Note from the Executive Director

#### **BILL CULLINA**

The F. Otto Haas Executive Director



### The Importance of Pollinators

At the height of the dinosaur age, roughly 130 million years ago, the first flowering plants appeared. Whereas pinecones are suited for wind pollination, flowers are designed specifically to attract and accommodate insects, birds and, rarely, mammals.

Flowering plants arose as if from nowhere in the fossil record and rapidly increased in variety over the next 50 million years. Today, they account for about 94 percent of plants on earth—that is nearly 400,000 species! Compare that to the mere 20,000 ferns, clubmosses, cycads, and conifers alive today. What happened 130 million years ago to facilitate this remarkable explosion of flowers? In a letter to his friend Dr. Joseph Hooker, Charles Darwin wrote, famously,

"The rapid development as far as we can judge of all the higher plants within recent geological times is an abominable mystery."

While we may never know for sure, the answer to this mystery is likely bees. About the same time flowering plants began their rapid evolution, the first bees appeared in the fossil record. Sweat bees, bumble bees, leaf-cutter bees, miner bees, honeybees: Over 80 percent of modern flowering plants and about a third of our food plants depend on them for pollination. Bees, along with other pollinators such as moths, butterflies, and hummingbirds, are exponentially more efficient than wind at transporting pollen, and for several reasons are much more effective at driving evolution and variety, too.

Although the honeybee is not native to Pennsylvania, the Keystone State is home to more than 430 species of native bees, along with 125 kinds of butterflies, 350 types of pollinating moths, and one species of hummingbird! So far, we have documented almost 200 native bees, and, of course, plenty of ruby-throated hummingbirds on our grounds here at the Morris.

Please join us this season as we celebrate one of nature's most incredible partnerships. Bees, Butterflies & Blooms: A Pollinator Paradise will run from May 23 through September 30, 2025, and will feature a pollinator exhibit in the Garden Railway, floriferous wildflower meadows and gardens, giant butterfly sculptures and flowers painted by local artists, and a host of fun events for the whole family.

I look forward to seeing you!

# Bees Butterflies Blooms A Pollinator Paradise MAY 23 – SEPTEMBER 30, 2025

# Calling all pollinators & pollinator lovers!

Morris Arboretum & Gardens becomes a paradise for bees, butterflies, and other pollinators in its newest exhibition, Bees, Butterflies, & Blooms: A Pollinator Paradise, running May 23 through September 30, 2025.

# EACH MONTH BRINGS TOGETHER PEOPLE, PLANTS, AND POLLINATORS IN MEANINGFUL WAYS

Memorial Day Weekend sees the opening of *Garden Railway: Pollinators*, featuring charming miniature trains weaving through a landscape teeming with flowers and buzzing with life. Nearby, the 
Hummingbird Hut offers a chance to get a close-up view of these tiny, iridescent birds as they flit from bloom to bloom, showcasing their delicate grace.

On June 14-15, we celebrate the next 100 years of our Rose Garden with a special **Rose Garden Celebration Weekend** that focuses on the spectacular beauty of these beloved flowers.

Beginning June 28, visitors are invited to immerse themselves in **two new lush meadows** planted especially for this exhibition. Giant **pollinator-inspired art** adds a creative touch, with artists presenting works that capture the essence and importance of pollinators in our ecosystem.

And in July, returning floral display **Exuberant Blooms** bursts with a riot of colors and fragrances, celebrating the variety and splendor of flowering plants.

Throughout the entire season, visitors can enjoy a variety of fun events, from interactive workshops to engaging programs to specialty guided tours, making this exhibition a delightful and eye-opening experience for all ages.

Something <u>New</u> is Blooming at the Morris!

#### **BIG NEWS!**

We are thrilled to introduce our revamped Membership Program! With this relaunch, we're bringing you a treasure trove of benefits and opportunities to dive deeper into the Morris and our mission.

#### WHAT'S NEW?

Our new membership program is designed with you in mind, offering:

- Streamlined membership levels to fit your lifestyle
- Flexibility to add another adult and/or up to 4 children to your membership, regardless of relationship
- Instant access to digital cards for hassle-free entry
- 50% off general admission for as many guests as you wish to bring!

# WHAT'S STAYING THE SAME?

While we're enhancing our program, all Morris members will continue to enjoy these fantastic perks:

- FREE unlimited general admission for an entire year
- Exclusive invites to members-only events and programs
- 10% discount in The Shop
- Discounts on educational classes, field trips, and excursions

Your membership not only provides you with these amazing benefits but also supports our mission to inspire an understanding of the relationship between plants, people, and place, and to preserve the Morris for future generations to enjoy.

UNLOCK A
WORLD OF
ADVANTAGES
BY JOINING
MORRIS TODAY!

Membership Levels	Individual
Price	\$75
Number of Named Adults / Total Number of People Admitted for Free* (not including add-on youth):	1/1
Add-On Youth **Limit 4	\$12**
Free General Admission	Unlimited
50% off General Admission***	
Morris Arboretum & Gardens Shop and Educational Courses Discount	<b>Ø</b>
Member-Only Events	<b>Ø</b>
Free Plant at the Member Plant Giveaway Event	1
Child Caregiver Benefit (proof of membership must be presented at time of visit)	
Premier Member Holiday Garden Railway Night	
Admission Guest Passes (guest passes are mailed)	
Course Credit (up to \$25)	
Free Gift Membership to share with friends or family****	
Philanthropic Recognition in Annual Impact Report	
Value of Goods & Services	\$0

\*Named member must be present at visit. \*\*Add-On Youth number provides access for one additional person ages 3-17 f must be purchased onsite. Members must accompany guests at the time of their visit. Special events not included in disco

#### INFORMATION FOR CURRENT MEMBERS

Current Morris members received their first communication in January regarding how these changes will affect their membership. The most important thing to know is that you don't need to take any action; your membership will be updated automatically to the level that best corresponds with your current membership level for the remainder of this year.

If you have any questions, please email us at members@ morrisarboretum.org or call us at 215.247.5777 ext. 205. We can't wait to share this exciting new experience with you!

To opt out of digital cards and keep receiving a paper membership card, please contact 215-247-5777 ext. 205.







Friends & Family	Supporter	Patron	Benefactor
\$125	\$250	\$750	\$1,500
1 or 2/2	1 or 2/4	1 or 2/6	1 or 2/6
\$12**	\$12**	\$12**	\$12**
Unlimited	Unlimited	Unlimited	Unlimited
<b>⊘</b>	<b>Ø</b>	<b>Ø</b>	<b>Ø</b>
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	2	4	6
		<b>Ø</b>	<b>Ø</b>
			<b>Ø</b>
	<b>Ø</b>	<b>Ø</b>	<b>Ø</b>
\$0	\$34	\$93	\$300

or one year. Must be added to a membership at purchase, not available as a stand-alone product. unt. \*\*\*\*Free gift membership is a Friends & Family + 4 Youth



For more information about the program, visit our membership webpage, but here are a few of the most frequently asked questions:

#### Can I still apply paid admission to my membership?

Yes! The admission price paid by the persons included in the membership on-site or online may be applied on the same day of your visit.

#### Can I use my digital card right away?

Absolutely! Your digital membership card can be downloaded into your Apple or Android Wallet and scanned onsite for quick entry. If you choose to opt out of digital cards, simply show your ID to the gate attendant, and they will look up your name in the membership system.

#### What are the general guidelines for the different membership levels?

Our program offers flexibility in sharing your membership benefits. Memberships can be shared between people living in different households, and any named member can bring guests to Morris, as long as the number of adults and children doesn't exceed the daily admission limit based on your membership level.

#### How do I update my contact information?

Call the Membership Office at 215.247.5777 ext. 205 Monday through Friday, 9:30 am – 4:30 pm, or email members@ morrisarboretum.org.

NEW CERTIFICATE PROGRAM

# **ECOLOGICAL**



# **Morris Arboretum &** Gardens' Certificate in **Ecological Horticulture**

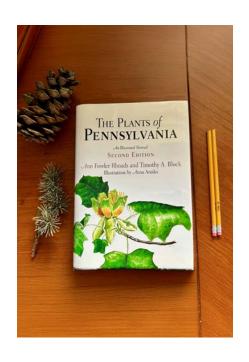
#### A Systems Approach to Sustainable Land Stewardship

We are excited to announce the launch of a new learning opportunity: The Morris Arboretum & Gardens' Certificate in Ecological Horticulture is offering the ability to gain proficiency in creating and maintaining landscapes that are grounded in ecological principles and practice. Geared toward avid home gardeners and landscape professionals looking to develop a deep understanding of sustainable landscape design and management, this classroom and field-based program is a series of 12 courses that are open to the public. The program is self-paced and can be completed in one year of intensive learning or up to several years at a slower pace. The first four courses in the series will be offered in fall 2025.

#### WHAT MAKES THIS CERTIFICATE PROGRAM UNIQUE?

The Morris Arboretum & Gardens' Certificate in Ecological Horticulture is unique in our ecological systems-based approach to landscape design and maintenance. Our program approaches each garden as a complex living system, where plants, soil, water, animals, climate, human activity, and other elements interact with and influence each other. In hands-on and classroom instruction, our program teaches design and stewardship strategies that address these relationships holistically rather than focus on individual components in isolation.

The program will concentrate on our region here in Southeast Pennsylvania. Drawing from our deep expertise in this region's ecology, all instruction will speak to our local ecosystems. Here at the Morris we have a long history in the native plants of Pennsylvania—we have literally written THE book on this topic! Instructors in the certificate program will include Morris staff members as well as other local professionals that are regionally and nationally acclaimed in ecological horticulture.





#### WHAT WILL I GAIN IN COMPLETING THIS PROGRAM?

Students who complete all required coursework will earn a Certificate in Ecological Horticulture awarded by the Morris Arboretum & Gardens. This certificate will represent the knowledge you will have gained in your online, classroom, and hands-on learning. You will be able to highlight your completion of the program on your resume or with clients who are looking for a landscape professional with an understanding of ecological approaches to land care. The program will also offer opportunities to develop relationships with certificate program staff as well as with your peers in the program—relationships you can carry with you into the future.

### By the Numbers



The program includes 12 required courses (8-10 hours each) and two elective courses, with an anticipated 124 hours of learning in the classroom and in the field (about a 50/50 split).



Students can progress through the curriculum at their own pace, completing all requirements over one year or up to three-plus years.



Registration in the program involves a \$45 initial fee to sign up as a certificate seeker. Each course is priced depending on hours of instruction, averaging \$25 per hour. The anticipated total cost for completion of the entire course series is roughly \$3,000.

#### **INTERESTED** IN LEARNING MORE?



Join us at our Virtual Open House on May 8 at 7:00 pm, where you'll be able to meet some of our certificate program staff and instructors, ask questions, and get answers!



Visit the certificate program webpage on the Morris website for an introduction to our expert instructors, read course descriptions, and more.



#### CALENDAR OF EVENTS

#### April 22

**People, Plants & Penn** Climate-Proofing Plants for a Changing World

**May 23** 

Garden Railway
Pollinators

May 23

Hummingbird Hut

May 17-18

Member Plant Giveaway

Tuesdays beginning May 27

**Bubbles!** 

June 6

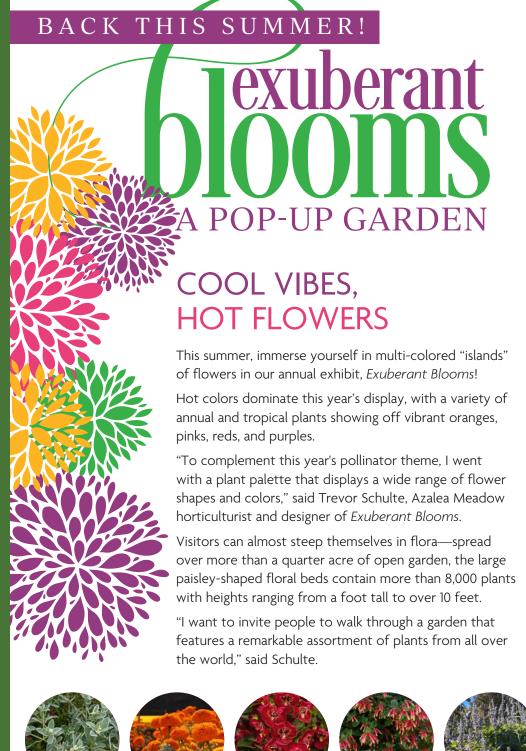
Moonlight & Roses

**June 14-15** 

Rose Garden Celebration Weekend

**Coming in July!** 

**Exuberant Blooms** 







# Choo-Choo-Charming

Historic Touch for New Garden Railway Train Station

WHEN THE GARDEN RAILWAY OPENS ON MAY 23, VISITORS WILL NOTICE A CHARMING NEW ADDITION—A TRAIN STATION INSPIRED BY THE LANDMARK CHESTNUT HILL WEST STATION NEWSSTAND ON GERMANTOWN AVENUE.

The old canvas tent was torn down in January and construction began immediately on the new structure. The new train station will provide more space, storage, and better shelter for the staff and volunteers who help

keep the trains running. While it's not a scale replica of the newsstand, it will have the same Victorian details—the green, tan, and red paint scheme, and the iconic crooked roofline. An enclosed space will be outfitted with benchtops, lighting, and shelving to store the extra trains and equipment. Visitors can rest and find shelter from the weather on the L-shaped 8-foot-deep porch.

The new station was made possible through a \$300,000 commitment by longtime Morris members Radclyffe "Mike" Thompson and his wife, Advisory Board member Maria Thompson. Their gift will also establish an endowment to ensure ongoing upkeep and maintenance for the new structure.





THE VISION STATEMENT DEVELOPED
BY THE ADVISORY BOARD
AND STAFF FOR THE MORRIS
ARBORETUM & GARDENS SAYS:

As an irreplaceable public garden, the Morris provides a place of respite, beauty, and learning, where the joy and wonder of the natural world inspire all who visit to be enthusiastic ambassadors for plants. A vital part of one of the great research universities in the world, the Morris is renowned for its science aimed at understanding and conserving plants and ecosystems.

Two new gifts have been received that reinforce this vision. The first is a gift to the Tree Care Endowment Fund from Dr. Andrea M. Baldeck in memory of Paul W. Meyer, the retired F. Otto Haas executive director. This fund provides essential resources for caring for the Morris Arboretum & Gardens' living collection of more than 11,000 curated woody plants that represent approximately 2,300 species. This new gift supports care for aging trees that date back to the time of the Morrises, as well as provides the funds for planting new trees that in one hundred years will be the next champion trees in our landscape.

The second gift is an extraordinary \$1 million from the estate of Louise Strauss in memory of her father, Hilary Strauss. This gift to endowment supports every aspect of the Morris's operations. Her generous estate planning will benefit Morris Arboretum & Gardens for generations.



# Moonlight EFROSES KRISTEN CASALENUOVO Manager, Moonlight & Roses

Be sure to save the date for our annual fundraising gala, Moonlight & Roses, which will be held on Friday, June 6, 2025.

INDIVIDUAL HONOREE

INSTITUTIONAL HONOREE HONORARY CHAIRS

CHAIR

Rob Cardillo



**Anna & Charles** Woodward

Margaret O'Neill

Moonlight & Roses begins with cocktails and hors d'oeuvres in the fragrant and colorful Rose Garden followed by themed food and drink in the elegant Pennock Garden and the whimsical Garden Railway. This not-to-be-missed party generates support for the Morris's renowned collections and beautiful garden features, as well as its research and education programs.

This year we are delighted to celebrate individual honoree **Rob Cardillo**. Rob has been photographing gardens, plants, and the people who love them for nearly three decades. He has more than 25 books to his credit, including Private Edens, The Private Gardens of South Florida, The Art of Gardening at Chanticleer, The Layered Garden, and his most recent book, Private Gardens of Philadelphia. He is a founding partner of Blue Root Media, which produces GROW, the award-winning magazine of the Pennsylvania Horticulture Society. His work is also frequently seen in major garden publications and news outlets. Winner of numerous photography awards, he is also a member of the GardenComm Hall of Fame.

We are also delighted to pay tribute to our institutional honoree, the Philadelphia Eagles' **GoGreen**. This program is an internationally recognized multi-operational action plan that incorporates green energy production, recycling and composting, reforestation, ocean conservation, emission reduction, and energy efficiency. The Eagles wear the color green with pride and are committed to serving as proud environmental stewards for the community. Lincoln Financial Field has been certified as a LEED Platinum stadium and was the first NFL stadium to install reverse vending machines, designed for beverage container recycling. The Eagles offset 100 percent of their team travel carbon emissions and, at home, head up local community clean-up programs.

Advance ticket purchase is required, and space is limited. Invitations will be mailed in April to all premier members, as well as previous Moonlight & Roses attendees.

VIP tickets are available now online at MorrisArboretumGala.org. Opportunities are also available to become a corporate sponsor or to place an ad in the event program book. For more information or to request an invitation, please contact Kristen Casalenuovo at (215) 247-5777 ext. 418 or kcasal@upenn.edu.



# SPRINGFIELD MILLS GETS MODERN ENGINEERING UPDATE

BY CLAIRE SIBLEY, Administrative Coordinator for Mechanical Engineering and Applied Mechanics, University of Pennsylvania

A unique collaboration between the **Department** of Mechanical Engineering and Applied Mechanics (MEAM) at Penn Engineering and the Morris Arboretum & Gardens is harnessing innovation to resurrect a piece of Penn and Philadelphia history: **Springfield Mills**.

Dating back to 1761, the mill sits on the Wissahickon Creek—which originally powered the mill by water and offers a compelling glimpse into the agricultural and engineering landscape of the 18th, 19th and early 20th centuries.

Springfield Mills stands out as the most complete inventory of original gristmill works and related machinery in the area, with only four remaining mills in the Wissahickon. The three-and-a-half-story mill served multiple functions, including sawing timber, grinding corn into flour, and pumping water for field irrigation.

#### THE MILL'S LEGACY AND RESTORATION

In the early 2000s, the Run-of-the-Mill volunteers—a dedicated group including engineers and employees of the Morris—worked to restore the mill back to functionality.

The volunteers and staff developed a public tour and handled all necessary maintenance, allowing the Morris



to host demonstration days, giving visitors an immersive experience with the century-old machinery that allowed the millers to grind grain and corn to flour. When running, the mill hums with the steady sounds of shaking sieves, grain elevators, the rumbling of gears, and the grinding of millstones. "When you see it and what it captures, you're like, 'This is the most incredible thing ever," explains Bryan Thompson-Nowak, director of education at the Morris.

These demonstrations go beyond mere mechanical display. "Obviously, the physics of it is captivating, but the message we want to get across is that the flour you get doesn't magically appear," Thompson-Nowak says. "We try to make this a full experience." Visitors can feel and smell the final product.

#### THE CHALLENGE

The mill had relied on a 5-horsepower electric motor added approximately 20 years ago, which drove the machinery through a belt-drive system. This approach caused significant wear on the mill's wooden components, particularly the <u>lignum vitae</u> bearings—a super-dense wood used in the original construction. Two years ago, the volunteers noticed the belt shuddering and jumping and deemed it unsafe to run.

After reading an article on the Makerspaces at Penn, Thompson-Nowak emailed two technical staff in MEAM: Jason Pastor, senior coordinator of instructional labs. and Ari Bortman, educational laboratory coordinator, asking whether they would be interested in taking a look at the mill.

Once on-site, Pastor and Bortman could see the damage right away. "The belt was pulled so tight you could pluck it like a guitar string,"

says Pastor. The extensive tension ruined the bearings on the top and bottom, as they were not designed for such radial load

#### THE SOLUTION

Before the belt system was added, the mill ran using the great gear, a 6-foot diameter, 1-foot thick wooden gear that powers the smaller gears throughout the building. "One of the volunteers, Ted Bell, suggested we move the power back to the great gear," explains Pastor. To do this, Pastor and Bortman manufactured a twofoot diameter sprocket and chain, which will eliminate load on the auxiliary shaft that the rubber belt had driven. "The great gear is so wide because that gives it a big lever," Pastor explains. "It doesn't have to be super strong to turn these smaller gears because it has a big mechanical advantage."

This approach offers several benefits, as Bortman notes: "We don't need to put in a new motor or electrically rewire everything. This would require less tension to prevent slipping and would allow us to use the motor and gearbox already in place in the mill."

The solution requires sophisticated fabrication work, including:

- CNC mill and lathe work for precision components in MEAM's Precision Manufacturing Lab;
- waterjet cutting at Pennovation Works to reduce the sprocket weight by over 25 pounds;
- and a custom aluminum collar design to support the sprocket.

This split-component design facilitates installation around existing machinery.

"It's really cool to work on something at this big a scale,"







Top to bottom: Jason Pastor (left) and Ari Bortman used computer-aided design in their planning; Pastor and Bortman on the great gear; sprocket and chain above the great gear.

reflects Bortman. "A lot of stuff for researchers is small and precise, and this ended up being big and also very precise."

#### LOOKING FORWARD

When the project is complete, the Morris hopes to resume public demonstration days. In addition, Pastor, Bortman, and Thompson-Nowak highlight how great it has been to connect with each other and collaborate. "It's getting people thinking about working together and people know now that we're able to help," says Pastor.

Small Steps to Help Pump Up Your Home Ecosystem

#### BY ELOISE GAYER

Rosarian, Morris Arboretum & Gardens

With over 165 acres of garden spaces and natural areas, the Morris Arboretum & Gardens is certainly not wanting for wildlife habitat. Pollinators flourish in our native wildflower meadows, birds nest in our wetland and in every layer of our woodland canopies, and by the number of my tenderly planted perennials that lift freely from the ground in the spring, our formal gardens welcome an abundance of critters, not to mention the raptors that predate them.

But to the average homeowner, it can feel overwhelming. How can one small yard change the course of species extinction that development, invasive species, and widespread pesticide applications have charted for our planet? There are a few simple tools every gardener can use in spaces of any size to benefit their local ecosystems without sacrificing garden aesthetics

The first step is to introduce variety.







#### TOP

A red-tailed hawk hunts in the Rose Garden. Photo by Eloise Gayer.

#### CENTER

The Rose Garden in 1986.

#### BOTTOM

The Rose Garden in summer 2024. Photo by Rob Cardillo.

#### OPPOSITE PAGE

A dead wood spring container at Chanticleer garden in Wayne, Pa. Photo by Eloise Gayer.



#### Mix Up Plants

Compare these images of the Rose Garden in 1986 vs. today. The 1986 image shows approximately four species of plants within the garden: roses, a clipped boxwood hedge, turfgrass, and the agaves in containers. Today, we may observe four species per square yard. With a mixed planting, the benefit to our local wildlife is dramatically increased.

We can integrate native plants that may host specialist insects that feed on only one species of plant. We can extend the period of pollen and nectar availability with plants that bloom from early spring to late fall. We can provide herbaceous plant stems for overwintering insects and insect larvae. We can provide shrubs for nesting sites and cover for birds, insects, and reptiles. We can provide seed heads for winter forage. Our classic American landscape featuring lawn, a few non-native shrubs, and a shade tree or two is ecologically sterile. By offering an assortment of plant species and plant structure, we can welcome a wide range of non-human visitors at all different stages of life to our gardens.

#### **Change Up Habitat**

In addition to a variety of plant species, an array of habitat types will benefit the ecology of any garden space.

While plants are of the utmost importance, they are not the only important factor. Water of any description is enormously beneficial, from bird baths to ponds. For small spaces, all one needs is a simple lined container or a dish bin that's regularly refilled. Many insects rely on consistent water access to complete their life cycle, and many of these insects will prey upon unwanted visitors like mosquitos and aphids. Bare soil can provide habitat for groundnesting bees—solitary native pollinators that are naturally docile, responsible for pollinating many flowering plants in early spring, and many of which are facing some degree of extinction risk. Cavity-nesting insects can use porous material like decaying wood, fenceposts or thatched roofs to complete their life cycles. And all these materials can be incorporated attractively and creatively, like these dead wood spring containers at Chanticleer garden.

There are endless possibilities for the home gardener who wants to contribute to their local ecosystem. All it takes is knowledge and creativity. For more resources to learn about ecological horticulture techniques, read more about this spring's exciting lecture series, , Bringing Nature Home, on page 22, and about the Morris's Certificate in Ecological Horticulture program on page 6.



# Photo by Eric Sucar

# Penn Treaty Elm's Lightning Protection System Gets an Upgrade

#### BY MATT WALKER

Martha S. Miller and Rusty Miller Endowed Urban Forestry Fellow

Morris Arboretum & Gardens' Urban Forestry Consulting team helps manage the approximately 6,500 trees on the University of Pennsylvania campus in the heart of West Philadelphia. While there are many great trees on campus, the Treaty Elm is undoubtedly the biggest. For this large, mature tree with a wealth of cultural and historical significance, we employ a plethora of strategies to protect and maintain its biological health and structural stability.

One feature of its defensive gauntlet is a lightning protection system. As per American National Standards Institute (ANSI) A300 Tree Care and industry best-management practices, the Treaty Elm lightning protection system consists of a conducting copper wire that begins in the upper tree canopy and is attached to the trunk/scaffold limbs all the way down to where it is grounded in the soil below.

Because of the Treaty Elm's prominent location, accessibility to people, and rightful popularity, the staples that attached the lightning protection conductor to its trunk were frequently being pulled out, even after they were hammered back in. These detachments could potentially disconnect the copper wire conductor from the ground, compromising its effectiveness. Also, these staples are not adjustable, so the tree will eventually overgrow and subsume the staples and copper conductor. The standard staples are used by virtually everyone in the arboricultural community and, with no

existing alternatives, we had to come up with a more secure solution.

Initially, we developed a system that enclosed the lightning conductor within a 3/4-inch diameter gray schedule 40 PVC conduit, which was secured to the tree by a stainless-steel conduit holder and screw that could be backed out as the trunk radially expanded and grew. However, even after we camouflaged

the conduit's color with spray paint, this system's aesthetics was not approved by Penn's decision-makers.

After many months of discussion and trial and error, Jason Lubar, associate director of Urban Forestry, developed a sturdier, adjustable, more sustainable replacement to the usual brass lightning conductor staples that had been problematic. This new system, dubbed the Morris Lightning Protection Attachment, consists of three parts: a

stainless-steel screw, insulated rubber clamp, and small diameter PVC separator.

The gray conduit blends in enough so as not to be conspicuous, the rubber clamp secures and insulates the copper conducting wire, and the stainless-steel screw can be backed out periodically as the tree grows. The adjustability aligns nicely with the need for arborists to periodically inspect lightning protection systems. So far, this small but innovative contraption has ensured a more resilient lightning protection for the Treaty Elm and the trees at the Morris's Out on a Limb exhibit.





# MAKING SPACE FOR REAL DIALOGUE ABOUT THE BENEFITS AND RISKS OF NATIVE AND EXOTIC PLANTS

BY STEPHANIE BRUNEAU
Assistant Director of Adult Education

#### It's hard to ignore that we are in a time of national division, where, in so many issues, we seem farther apart in our opinions than ever before.

How do we find our way forward? How can we have real conversations that acknowledge different opinions while maintaining mutual respect and searching for common ground? At the Morris Arboretum & Gardens, we wondered if it was possible to model engaging in difficult conversations and finding areas of agreement while talking about big issues facing horticulture today.

Our first Critical Conversation, held in early December 2024, was an overwhelming success. We came up with the idea for the program after the Woody Plant Conference in July 2024, an annual event held at Swarthmore's Scott Arboretum, where two presenters gave wildly different talks on the benefits and risks of native and exotic plants in our landscape.



"We are we are facing a...crisis of catastrophic proportions...we must incorporate habitat everywhere immediately."

REBECCA McMACKIN

### **OPPOSING OPINIONS**

Rebecca McMackin, a selfdescribed "ecologically obsessed horticulturist," gave a presentation arguing for the importance of native plants, saying, "We are facing a...crisis of catastrophic proportions...we must incorporate habitat everywhere immediately." In a separate presentation, Mark Weathington, the director of the JC Raulston Arboretum in North Carolina, argued that opposition to non-native plants is overblown, stating his opinion that "life is too short for boring plants."

With no opportunity for questions from the audience or conversation between these two presenters, we left the program hungry for more. Whose presentation was "right?" Is there a firm "right" in this issue? How would each presenter respond to the other's thoughts and opinions? With these thoughts in mind, we invited Rebecca and Mark

to come together for a followup conversation, with ample time for questions and discussion, and they both accepted the invitation immediately. Moderated by author and garden writer Nicole Juday, we held the program via Zoom on December 12, 2024. More than 150 individuals registered to be a part of the conversation!

#### **COMMON GROUND**

With so many issues facing our society, we discuss our differing perspectives in black and white, as if one perspective is completely good or completely bad. In reality, many of the issues of today are complex situations with nuances and multiple perspectives.

In a meaty discussion that moved beyond extremist sound bites, the two horticulturists engaged in a lengthy and illuminating conversation. They discussed how and when the plants we choose influence the health and/or function of our ecological environments. With audience engagement, they thought about whether any one particular plant could be "good" or "bad," and they worked together to find points of common ground. They agreed that it is critical that more native plants be sold in local nurseries, and that we all need to work together toward a sustainable future using sciencebased approaches. They discussed the importance of reducing the use of the most widely planted exotic plant (turfgrass!), and that nonnative plants that are not invasive are not the main cause for concern. In sum. Mark and Rebecca were able to move beyond the "black and white" and move together into the various shades of gray in between.

In preparing for the program, Mark Weathington wrote to our team his hope for the event, a hope that mirrored our own: "When you get everybody in the same room and they listen to the challenges and realities both sides are experiencing, a real change can start." Well stated, Mark! We were thrilled to host this program both for the deep thinking on the topic of native and exotic plants in our landscape, and as an example of a successful and productive conversation between individuals who hold differing opinions on an important topic—a model that we all could use right now. We are looking forward to having more Critical Conversations in 2025, and we are soliciting ideas for topics to tackle and speakers to approach. If you have an idea, reach out to us via email at education@ morrisarboretum.org.



"When you get everybody in the same room and they listen to the challenges and realities both sides are experiencing, a real change can start."

MARK WEATHINGTON



#### YOUTH LEADERSHIP AT MORRIS ARBORETUM SYMPOSIUM

On October 9, 2024, Morris Arboretum & Gardens hosted its 13th annual Outdoor Career Symposium: Leadership in a Changing Climate.

Michael Varlotta, an FAO fellow at the Food Trust who recently graduated from Oberlin College and now works as a farm to school educator and youth leadership facilitator, attended and wrote about the event.



The Outdoor Career Symposium brought together 60 students from three Philadelphia Career & Technical Education high schools: Walter B. Saul High School, Lankenau Environmental Science Magnet High School, and the U School.

All of the participants were student leaders invested in environmental sustainability and were given the opportunity to talk with eight community organizations in this field.

In attendance were Farm Philly, The Food Trust, PA Sea Grant, PA Outdoor Corps, Philadelphia Food Advisory Council/FNC Farms, Sunrise Movement Philadelphia, Penn Sustainability and Philadelphia Outward Bound School.



The organizations were set up in the Morris's beautiful outdoor space, and engaged in discussions about the work they do, the students' interests, and resources and opportunities for them to get involved. Each student was very passionate, curious, and comfortable in these conversations, and it was amazing to hear about what they were involved with.

For example, students at Saul talked about the horticulture, natural resource management, and animal science programs offered at their school of Agricultural Science. The following is from their website, which shares more on this: In addition to traditional college-prep classes, students at Saul get involved throughout the 55-acre campus—including a working dairy barn, greenhouses, pastures, small animal facilities and a seasonal farm stand—exploring agriculture through hands-on experiences.



It was clear that these programs had a powerful impact on these students. We heard from individuals who wanted to start their own greenhouses, work their own farms, and pursue marine biology and ecotherapy, just to name a few.

This was a day of much more than just networking—it was a celebration of youth leadership and the bright future of environmental sustainability. Events like these underscore the importance of providing young leaders with opportunities to explore their passions, ask questions, and envision the impact they can have on the world around them. It is a reminder that we must actively work to center their voices, experiences, and accomplishments.



#### ▲ GROUNDBREAKING

The Morris got great coverage from 6abc, NBC 10, and several local newspapers of the groundbreaking for the new Plant Science Lab on October 1, 2024.

#### FALL FOLIAGE

In October, CBS Philadelphia interviewed Plant Collections Manager Pam Morris Olshefski, and Executive Director Bill Cullina talked with Fox 29's Good Day Philadelphia about peak fall leaf-peeping.



#### **▼** BEAT THE FROST

Rosarian Eloise Gayer talked with CBS Philadelphia reporter Wakisha Bailey and photographer Scott Hezlep about how to overwinter plants that have been sitting outside.





#### PUMPKINS GALORE

Director of Horticulture Vince Marrocco talked with CBS Philadelphia on October 15 about the Morris Pumpkin Cottage, our Villainous Scarecrow Contest, and the best time to see the colorful leaves at the Morris.



#### **■ LANDSCAPE DESIGN**

Landscape, Ecology and Culture, our annual Design Symposium, was held January 9 and 10, 2025, at Temple Ambler Arboretum. This annual event is produced by Morris Arboretum & Gardens in collaboration with New Directions in the American Landscape and Connecticut College Arboretum.



# **Bringing Nature Home Course Series**

Moving past the WHY, many of the programs we've planned as part of our spring 2025 course offerings will explore **HOW** you can transform your garden, yard, or outdoor space into a thriving ecosystem that nurtures and supports a range of plants, animals, and insects.

Join us for one or more programs and gain tools for creating a resilient home landscape that not only enhances your property's beauty but also contributes to the broader health of the environment.

# Life After Death The Importance of Dead and Dying Trees

#### SAMANTHA NESTORY

Naturalist, Stoneleigh: a natural garden

This program takes place at Stoneleigh: a natural garden, in Villanova, PA.

Tuesday, April 8 // 1:00 – 3:30 pm

#### Native Bees at Morris

#### RYAN DRAKE

Natural Areas Manager, Morris Arboretum & Gardens

Saturday, May 3 // 1:00 - 3:00 pm

#### Oaks in the Landscape Our Native Quercus Species

#### **ANDREW CONBOY**

Certified Arborist & Founder, Community Canopy Project

Friday, May 9 // 1:00 – 3:00 pm

#### Wings of Wonder Creating a Hummingbird Haven

#### MICHELLE DETWEILER

Wild About Native Plants

Saturday, May 10 // 1:00 - 2:30 pm



# Eat the Weeds!

Are you curious about nature's pantry? Spring is the time when people are tired of winter root vegetables, but it is still too cold for most farmed vegetables. Instead of flying your produce to your plate from Mexico, come to the Morris and learn about safe and ethical ways of foraging and cooking the delicious "weeds" that are packed with nutritional benefits right at our feet in the Mid-Atlantic region. Whether you're looking to deepen your connection to the plants all around you, supplement your diet, or simply enjoy the thrill of wild food exploration, we are offering several courses this spring to help you gain the knowledge and skills to forage confidently and sustainably.

# Eat the Weeds! Foraging and Cooking with Tama Wong

TAMA MATSUOKA WONG
Forager, Meadow Doctor, Lawyer, Author,
and Owner of Meadows + More

EARLY SPRING: Saturday, April 5 // 10:30 am – 12:30 pm LATE SPRING: Saturday, May 10 // 10:30 am – 12:30 pm

#### Foraging Fun on Cresheim Trail

**ALLISON HOUGHTON** 

Garden Educator; Owner, The Sparrow Underground

Friday, April 11 // 9:00 am - 12:00 pm

Off the Beaten Path Mushroom Walk with the Philadelphia Mycology Club

SAM BUCCIARELLI

President of the Philadelphia Mycology Club

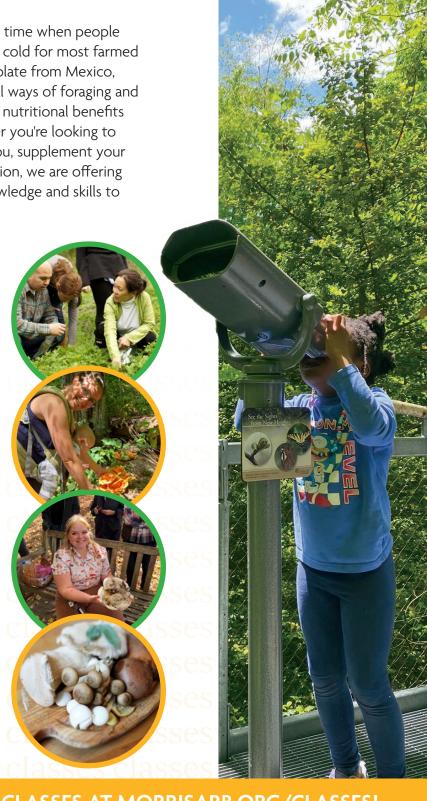
Saturday, April 19 // 1:00 - 3:00 pm

Foraging Exploration along the Woodland Trails at the Morris

**ALLISON HOUGHTON** 

Garden Educator; Owner, The Sparrow Underground

Friday, May 2 // 9:00 am – 12:00 pm



SEE OUR COMPLETE OFFERING OF CLASSES AT MORRISARB.ORG/CLASSES!

# Two Longtime Morris Staff Members Retire

The John J. Willaman Director of Plant Science Dr. Timothy A. Block and Jason Lubar, associate director of Urban Forestry, have retired after serving for decades at Morris Arboretum & Gardens.

#### THE MAGIC OF PLANTS

Dr. Block was hired at the Morris as a post-doctoral candidate to help write the first edition of The Plants of Pennsylvania: An Illustrated Manual, along with botanist Dr. Ann Fowler Rhoads. He



is a co-founder with Rhoads of the Pennsylvania Flora Project of Morris Arboretum. He became director of botany in 2002.

Block's interest in plants was cultivated as a child growing up in Ohio.

"I didn't know what everything was that I was looking at, but there was sort of a magic to being out in the woods and communing with nature," he said.

At the Morris, Block focused on floristic botany, the study and the science of how vegetation and species are distributed across landscapes and through time. He also taught field botany and other classes at the University of Pennsylvania.

"I love teaching," he said. "I always have. It's the most rewarding piece of my career. I think I've touched a lot of people's lives in a positive way."

Block said there are botanical projects he will continue to work on because he likes to do them. He's learning more about the slender rock-brake (Crytogramma stelleri) and he'll continue the vegetation inventory and plant community mapping of Nescopeck State Park in Luzerne County, PA.

"I've been really fortunate to be able to get paid to do something that I would have happily done for free," he said. "I'm not retiring so that I don't have to be a botanist anymore. It's not a job. It's what my life has become And I wouldn't have it any other way."

#### **SPEAKING FOR TREES**

Lubar's affiliation with the Morris began when he very young.

"I came here as a kid with my parents," he said, "and I remember playing on the porch of the old Compton mansion." He ended up



working at the Morris every summer during college mowing, staffing the entrance gate, feeding the swans, and taking people on tours.

Eventually he got a job working with former Arboricultural Consultant and Educator A. William Graham Jr. and calls him a great mentor. "He taught me everything he knew. And he was very, very patient in teaching me how to write professional reports. And he motivated me to join the ISA (International Society of Arboriculture) and then to join the American Society of Consulting Arborists, get my certification and develop my skills, and make this into a career." Lubar assumed Graham's role in 2006.

"Urban forestry is becoming very important," Lubar said. "Thirty years ago, no one really knew what it was." Lubar likes to call himself the Lorax, the Dr. Seuss character that warned of the consequences of not protecting our natural resources. "Trees provide so many benefits. They need to be considered in construction, in planting at your house. People and municipalities should be planting more trees of the right species in the right place in the right way."

Lubar said he'll still be working with trees in some capacity in retirement. He reflects fondly on his many years at the Morris.

"It's amazing to see the evolution of the arboretum, and I'm very happy to have worked here."







# PENN CLASS OF 2028 **Puts Down Roots**

A beautiful Carolina silverbell (Halesia carolina) now stands in front of the University of Pennsylvania's Van Pelt Library, selected by the Class of 2028 as its class tree. The silverbell tree was planted during Homecoming weekend last November.

The tradition of planting a class tree began in 2011, with students voting for their selection with the help of Morris Arboretum & Gardens. Bill Hohns (W'74) and his wife, Kathie, longtime supporters of the Morris, have financially sustained the tree-planting tradition from its inception. In 2018, Hohns endowed the program so it would become a permanent fixture at Penn.

This initiative helps to beautify the campus and instill a deeper sense of belonging for first-year students as they grow along with their class tree at Penn.

#### 2025 APPRENTICES ON BOARD!

A new cohort of apprentices will spend the next nine months at the Morris, learning about horticulture, educational programming, propagation, and more.

Front row, left to right: Alexandra Molyneaux, the Charles S. Holman Jr. Rose & Flower Garden apprentice; Charlotte Spence, the Alice & J. Liddon Pennock Jr. Horticulture apprentice; Ale Gonzales Montoya, the McClean Contributionship Adult Education apprentice; Cailin Barrett, the Hay, Honey Farm Natural Areas apprentice; Harley Cech, Charles S. Holman Jr. Rose & Flower Garden apprentice.

Back row, left to right: **Anna Morrill**, the Walter W. Root Arboriculture apprentice; Antoine Smith, the Alice & J. Liddon Pennock Jr. Horticulture apprentice; Josh Bruce, the Walter W. Root Arboriculture apprentice; Oliver Buzzard, the McClean Contributionship Youth & Visitor Education apprentice.

Not pictured: Fabienne Alder, the Martha J. Wallace Plant Propagation apprentice.







THE INSPIRING IMPACT VIRTUAL SERIES AND THE PEOPLE PLANTS & PENN DISCUSSION SERIES PRESENT:

# Climate-Proofing Plants for a Changing World

A virtual event hosted by the Morris Arboretum & Gardens and Penn's Development & Alumni Relations

#### Tuesday, April 22, 2025 12:00 – 1:15 pm

Join us for a virtual armchair conversation on groundbreaking advances in breeding plants to thrive in a warming world.

This event features William Cullina, the F. Otto Haas Executive Director at the Morris Arboretum & Garden, and Dr. Doris Wagner, DiMaura Professor of Biology at Penn Arts & Sciences. Dr. Wagner is also the inaugural director of the Penn Plant Adaptability and Resilience Center (PennARC), a new initiative dedicated to sustainable, plant-based solutions for addressing climate change. Bill will lead a captivating discussion with Dr. Wagner about her team's pioneering research on cellular precision editing and other innovative approaches to developing climate-resistant plants.

The event is free, but please register.





contact Alison Thornton, senior associate director of Development at (215) 247-5777 ext. 105 or alisonth@upenn.edu.

# Vancouver & Victoria

JULY 21 - 28, 2025

Situated in the Canadian province of British Columbia and nestled between the North Shore Mountains and the Strait of Georgia, the vibrant city of Vancouver is filled with glass skyscrapers, parks, and forests that reflect the city's blend of cosmopolitanism and natural beauty. Across the water, Victoria—the capital of British Columbia, full of Edwardian architecture—is a charming city and popular tourist destination, known as "The Garden City."

Explore both cities and learn about their British, European and Asian traditions, their First Nations heritage, and their natural beauty. Your tour will be hosted by Vince Marrocco, the Gayle E. Maloney Director of Horticulture of the Morris Arboretum & Gardens and designed and led by Destinations And Tours LLC. Highlights include visits to Van Dusen Botanical Garden, Butchart Gardens, and whale watching in the Salish Sea.



# Gardens, Wine, and Wilderness

A Tour of New Zealand

JANUARY 10 - 28, 2026

Morris Arboretum & Gardens is proud to partner for a tenth time with Garden Adventures Ltd. to offer a travel opportunity in January 2026. With New Zealand native and local landscape architect Richard Lyon and tour host Alison Thornton of Morris Arboretum & Gardens, you are invited to escape winter while you explore, learn, and relax in the gardens and natural wonders of this extraordinary destination.





#### SAVE THE DATE

## **Member Plant Giveaway**

SATURDAY, MAY 17 AND SUNDAY, MAY 18 AT BLOOMFIELD FARM\*

Advance registration is required. Registration opens to all members on April 3, 2025. \*Bloomfield Farm is opposite our main entrance on Northwestern Avenue.

Look out for the Member Plant Giveaway this spring! Pollinator lovers will be thrilled by the beauty of this year's plant selection. Many of this year's giveaway plants are not only pollinator favorites—they are also exciting native plants with eye-catching colors. Whether you are a seasoned gardener or are planning to dig in for the first time, our experienced staff will be on-site with suggestions across the board.

Collectors Circle, Benefactor, Patron, and Supporter members see it first on Early Access Friday, May 16, from 4:00 – 6:00 pm! Advance registration is required. Not an upper-level member? Consider upgrading today and strengthen the Morris Arboretum & Gardens with a philanthropic membership.

All members are welcome on Saturday, May 17 and Sunday, May 18 from 9:00 am – 1:00 pm. Registration is required. This a rain or shine weekend event.





#### Did you know

Did you know that the legacy of Morris Arboretum & Gardens' plant distribution tradition started nearly 100 years ago in the will of Lydia Morris? In addition to distributing plants to other public gardens, the Morris has maintained Lydia's wish of sharing plants with members, continuing again this May with you!



#### A MESSAGE FROM THE **GREENHOUSE**

As is the buzzzz around town... our theme this year is pollinators! Be on the lookout for regionally appropriate plants with long bloom times. Our goal is to offer plants suitable for a variety of members and pollinators. We will have plants pollinated by bees, beetles, birds, wasps, moths, and beyond! We are especially excited to offer two different types of native passionflower vines! The first, maypop (Passiflora incarnata), is beloved by large bumble bees. It blooms into the fall and is a great forage source for bumble bees before they hibernate in the winter. The flowers look otherworldly. The other is yellow passionflower, with a much daintier yet equally charming—yellow flower. Both are great additions to the garden!

**KYRA MATIN**, propagator at Morris Arboretum & Gardens

# TRIBUTE & MEMORIAL GIFTS

The Morris Arboretum & Gardens is grateful to the following donors who made tribute and memorial gifts between August 1, 2024, and February 28, 2025.

### **In memory of Martin Albaum**Jan Albaum & Harry Cerino

#### In honor of Roberta Berg Toba & Larry Kerson Alison Thornton

#### **In memory of Emilie Brégy** Evamarie Malsch Anna Toogood

#### In honor of Connie Broderick Leigh & Neil Clark Pamela Morris Joan & Jim Wood

#### In honor of Maureen Conway Clara R. Munley & Robert L. Wilson

# **In memory of Karen Detwiler** Lori & Peter Vogdes

# In memory of Sally Jane Gendler Anonymous Gretchen Carey Robert S. Davis Charles Forer Corinne Heyes & Rachel Rivin Amanda & Charles Marion Anne & Baird Standish

#### **In honor of Ellen Nalle Hass** Christine & Michael Bamberger Perry Benson Jr.

### **In memory of Kathryn Hodgkiss** Willows Park Preserve

### In honor of Diana Jones Thomas Jones & Robert Curtis

#### In memory of Ilsa Katz Judy Katz-Muhlberg

#### In memory of Jane & Leonard Korman Carol Borgmann

#### **In memory of Carol Lourea-Black** Madelyn Ladner & Robert Gutowski Fran Schwartz

# **In memory of Joan F. McCracken** James McCracken

#### In memory of Paul Meyer Andrea M. Baldeck Meghan & Stephen Bramlage Jr. Maryann Franklin Deborah Glass Aileen K. & Brian L. Roberts

### **In memory of John B. Rees**Susan Rees

#### In memory of Jo Richardson Cynthia & Mike Bowman

#### **In memory of Lucille Roland** Sharon & J. Christopher Miller

## **In memory of Eleanor Sayre** Sissy & Tommy Friedman

# In memory of Georg Simon Jasen Andersen Mary Bachman Antonio, Walter, & John Bohlander Andrea Collis & Chris Monk Patti DeBow Patti Escatel & Sean O'Donnell

Hermann Haffner Jan\* & Bill Lutz Linda MacFarland Ann McGraw Hildegard Meier Bonnie & Bill Miller Homa Mojtabai **Brooke Rogers** Martin & Karla Schmid Janet Simon & Linda Simon Jeanne Simon & Justin Binder Ashley Smith Carol & Joseph Snyder Carolyn Stokes **Evelyn Strong** Mary & Richard Thomas Gail Warburton Grace Whealan Anna & Laura Wiater

#### In honor of Anne & Baird Standish Peggy Standish

#### In honor of Josh Torrisi Dana & Robert Iommazzo

#### In memory of Clarence Wurts Wendy & Laurent Chaix The Garden Club of Philadelphia Cindy & Martin Heckscher Carol Jones Mary I. Smith Sally & Jim Studdiford

#### **In honor of Mira Zergani** Larry Dubinski

\*Deceased



World class gardens, excellent service, an unforgettable evening.

Make memories at Morris.

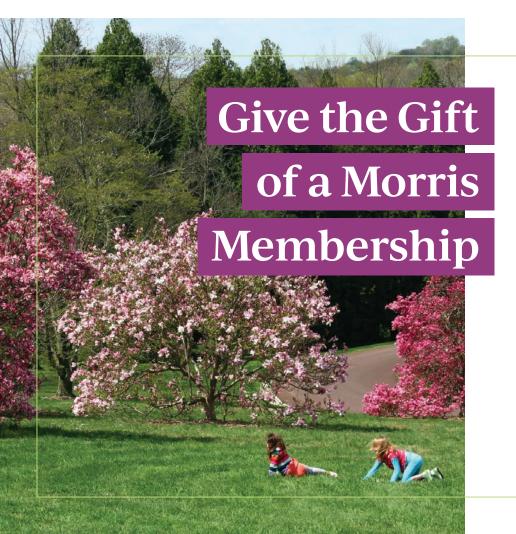
#### CONTACT

For more information and to book a tour, contact the Rentals Team at rentals@morrisarboretum.org.









### A MORRIS ARBORETUM & GARDENS MEMBERSHIP IS A GIFT THAT KEEPS ON GIVING!

Treat your family, friends or colleagues to a full year of access to our spectacular gardens as well as invites to events, discounts on educational courses taught by Morris experts.

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Reach the Membership Office directly at 215.247.5777 ext. 205 Monday through Friday 9:00 am - 5:00 pm.