



Morris Arboretum & Gardens of the University of Pennsylvania

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Communications Coordinator/Editor

### **INFORMATION**

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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: Fabienne Adler, the Martha J. Wallace plant propagation apprentice, gently cradles a *Corydalis sempervirens*, commonly known as rock harlequin. Photo by Mellany Armstrong.

**INSIDE COVER PHOTO:** Aerial view of the 2025 exhibition *Exuberant Blooms*. Photo by Jordan Perkins.

# **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

# William Cullina

The F. Otto Haas Executive Director



# A New Season of Plant Science Takes Root

Greetings! I am thrilled to announce the completion of our new Plant Science Lab, ushering in an exciting era for Morris Arboretum & Gardens!

The Morris was founded in 1933 as a public garden and research center for the University of Pennsylvania's Botany department. Back then, the study of plants was limited by the tools of the day. The electron microscope was invented in the late 1930s but would not be widely available until the 1950s. Magnifying glasses and optical microscopes, as well as chemical analysis, were the primary tools for understanding how plants function (anatomy and physiology), how they are related (taxonomy and systematics), and how they interact with other species in their environment (ecology). Unfortunately, even the best microscopes only allow you to compare the physical details of a flower, leaf or cell as a crude proxy for determining underlying genetic identities and evolutionary relationships.

### **NEW TOOLS**

In the 1980s, something called the polymerase chain reaction (PCR) process was invented and the modern science of molecular taxonomy was born. PCR allows the researcher to take small samples of DNA and multiply them millions of times to obtain a large enough sample to study. This is the same technology that allowed the human genome project to succeed, and the same one used for lab-based COVID tests we probably all took early in the pandemic.

Through the early part of this century, this and other related technology—like DNA barcoding and gene sequencing—have allowed scientists to create gene libraries of plants, which, just like the human genome project, have facilitated incredible new discoveries. Molecular taxonomy has revolutionized how we understand plant species and plant evolution. This is not only important from a fundamental perspective: Molecular taxonomy also gives us tools for identifying and saving new and rare species and reveals population structures, migration patterns, and genetic diversity within species—information that is critically important when we look at helping our native plants navigate a rapidly changing climate.

PCR tools are not limited to animals and plants. We can use this same tech to unlock the secrets of the microscopic soil community. This is leading to tremendous advances in our understanding of how plants interact with soil bacteria and fungi, what functions these mysterious organisms have in nutrient cycling, removal of contaminants like microplastics and harmful chemicals, and in conveying better resilience to food and wild plants under climatic and disease stresses.

### IMPORTANT WORK

Gene sequencing can also help us identify new diseases such as beech leaf disease (BLD), which is rapidly decimating our native beeches. The process allowed scientists to rapidly discover the identity of a tiny nematode (roundworm) that was destroying the buds of infected trees. Litylenchus crenatae was first discovered in Japan in 2006. It is hypothesized that the roundworm was accidentally introduced on nursery or bonsai stock imported from Japan. Gene sequencing and mapping can also rapidly identify genes responsible for natural resistance to pests like BLD and emerald ash borer and screen for these genes in a population of trees. Genes for resistance can even be inserted into non-resistant trees to confer resistance to them, as well.

### **OPPOSITE PAGE**

Dr. Harlan H. York, Morris Arboretum's pathologist, in the lab located in the Compton mansion kitchen, 1933.

Science Lab at Morris Arboretum & Gardens. Get a look at what's inside on pages 4 and 5.

Our new lab is being outfitted with the latest technology for DNA and RNA extraction and analysis, including PCR and bioinformatics. Our botanical scientist, Dr. Cynthia Skema, will be joined this fall by our new John J. Willaman Director of Plant Science Dr. Morgan Gostel. Morgan specializes in molecular taxonomy and systematics. We are thrilled to welcome such an accomplished research scientist and leader as Morgan to our team! Soon, we plan to bring on additional staff who can use the lab for research on tree diseases and the development of native trees resistant to disease as well as others better adapted to our changing climate. We hope to also study soil microbiology and ecology as it relates to the plants of our region. Further, the lab allows us to support the research of graduate and post-doctoral students, Penn faculty, and local, state and federal partners. It is truly an exciting time for plant science at the Morris, and I am deeply grateful to all of you who continue to support this important work!

With thanks.

# THRIVING IN **A WARMING** WORLD

Last spring, Morris Arboretum & Gardens partnered with Penn Arts & Sciences for "Climate-Proofing for a Changing World," part of the People, Plants & Penn Discussion Series.

William Cullina, the F. Otto Haas Executive Director at the Morris Arboretum & Gardens, and Dr. Doris Wagner, DiMaura Professor of Biology at Penn Arts & Sciences, discussed her team's pioneering research on cellular precision editing and other innovative approaches to developing climate-resistant plants.

Dr. Wagner is 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. Watch her conversation with Bill on groundbreaking advances in breeding plants to thrive in a warming world.



hoto by Cynthia Schemme

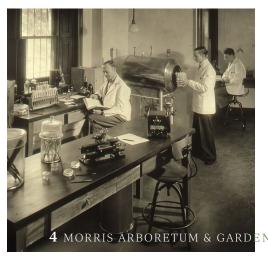


# THE FUTURE OF PLANT SCIENCE

A PEEK INSIDE THE NEW PLANT SCIENCE LAB

Lydia and John Morris's vision for the future of their Compton estate was to expand research and education.

The new Plant Science Lab at Morris Arboretum & Gardens will support current plant research efforts, including specimen-based research and field work on the plants of Pennsylvania. Today, as 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, best practices for environmental sustainability and preservation in landscape management and horticulture, and for its education and research programs.











# INSIDE OUR LAB

### **OPPOSITE PAGE**

University of Pennsylvania scientists using the Compton mansion kitchen as a lab in 1933; the new Plant Science Lab is located on Research Drive on the Bloomfield Farm side of the Morris.

### THIS PAGE, CLOCKWISE

Microscopy equipment, with imaging capabilities, on the lab bench; Dr. Lulu Korsak, technician in the Plant Science Department, with the flammable chemical storage beneath the fume hood; the Plant Science Lab space and fume hood room serve as a wet lab; the deep cold storage freezer for long-term plant sample storage; the fume hood room with chemical fume hood, lab bench space for DNA extraction work, an emergency eye-wash shower, and an ice maker; freezer control panel for plant samples that are stored at -80 degrees Celsius; Dr. Korsak in the new lab facilities.

Photos by Mellany Armstrong











# NAMED NEW PLANT SCIENCE DIRECTOR

Coming to work at Morris Arboretum & Gardens is a return to his roots of sorts for Morgan Gostel.

"I spent the first 33 years of my life in the Mid-Atlantic," he said. "I've had the immense pleasure of growing up in this region and studying botany here, so making a home in Philadelphia and at Morris Arboretum & Gardens feels like a wonderful homecoming to me."

Gostel is the Morris's new John J. Willaman Director of Plant Science. He most recently served as a research botanist at the Fort Worth Botanic Garden and Botanical Research Institute of Texas (BRIT), where he pursued collections-based research on plant systematics and evolution. He also serves as director of the Global Genome Initiative for Gardens (GGI-Gardens), a partnership dedicated to preserving and understanding the genomic diversity of plant life of Earth.

# Tell us a bit about your research.

I consider myself a botanical sleuth who uses advanced scientific tools to compare and study information about plants, including information from their DNA, similar to how we use DNA to understand our own family tree; where they grow; and the detailed study of their anatomy and morphology (what features and structures help them grow and survive where other plants cannot).

# Why is it important that we study plants?

Species are vanishing before our eyes, more quickly than we are even able to document the extinction. How does this impact food security worldwide? How does



this affect the stability of ecosystems, perhaps leading to more significant natural disasters such as deadly flooding? And how many life-saving medicines are lost every single day? These are the questions that drive my research and that keep me awake at night.

# How will the new Plant Science Lab help?

The laboratory will be a centerpiece for research programs at Morris, allowing researchers and students alike to discover and explore the microscopic and molecular mysteries of plants. This facility will allow us to understand and describe species diversity among the nearly half a million species of plants on Earth as well as conserve and preserve plant life.

As the Morris Arboretum & Gardens approaches 100 years as a public garden, we are leading the way in how gardens and arboreta define a legacy. The new Plant Science Lab is just one part of the next chapter and with it will come many exciting new developments for research, education, and outreach. My advice is to stay tuned! As the Morris grows, so will its reputation—locally, nationally, and internationally!

\*This interview was edited for length and style.

# New Projects Taking



# **NURSERY RELOCATION**

We're currently in the early design and feasibility stage of relocating the nursery to the Bloomfield Farm side of the property. This process involves exploring what types of greenhouses and support facilities make the most sense, how they'll be arranged, and what infrastructure will be required. The new location will be adjacent to the new Plant Science Lab, creating exciting opportunities for future research, especially in plant breeding, and potential collaborations with Penn faculty. Relocating the nursery will also open valuable space near the Fernery, enhancing the visitor experience in that area.

### SEVEN ARCHES

Over the next few years, Seven Arches will be getting a historic makeover—complete with refreshed masonry, upgraded utilities, and a beautiful new bluestone plaza with seating for visitors. Work began this summer on the 114-foot-long, century-old structure with masonry pointing. Built in 1911 by Chestnut Hill stonework master Pringle Borthwick from design specifications by founder John Morris, it was made from in local rusticated Wissahickon schist.

Above is a rendering of the planned new space.

# **MORRIS TRAIN STATION**

The new Morris Train Station is a charming addition to the Garden Railway and the lovely porch gives visitors the opportunity to peruse the garden in shade or to find shelter in rainy weather. It also provides an airconditioned space for our train conductors! The bright yellow building with green and red trim pays homage to the iconic Chestnut Hill West newsstand at Germantown Avenue and Bethlehem Pike.

# A LEGACY OF DEDICATION

# Transforming the Hill & Cloud Garden



In a heartfelt demonstration of commitment and generosity, longtime volunteer and philanthropist Hiram Munger has made a generous commitment of \$150,000 in support of the renovation and enhancement of the Morris Arboretum & Gardens' historic Hill & Cloud Garden, located between the Swan Pond and the Garden Railway. Hiram's most ardent wish is for the full restoration of the garden's water feature, a cherished focal point that enhances the garden's tranquil atmosphere.

Hiram has been devoted to the Hill & Cloud Garden since he began volunteering at the Morris in 1998. He travels from his home in Allentown several times a week to lovingly tend to this exquisite Japanese-style garden. Unfortunately, the garden's water feature has not been restored since it was originally installed by the Morrises in 1905. The feature now maintains an inadequate supply of water because of clogs caused by flooding—with the most damage occurring after an especially bad storm in 2004. Hiram notes, "I've been volunteering at the Morris for more than 25 years. The Hill & Cloud Garden is a special place, and nothing would please me more than to see the water run again!"

More than a decade ago, Hiram established an endowment for the care and maintenance of the garden. This newest commitment not only highlights Hiram's ongoing generosity and admiration for the garden that he has tended for so many years, it also underscores the value of preserving legacy destinations at the Morris for the enjoyment of future generations.

"The Hill & Cloud Garden has always held a special place in my heart," Hiram shared. "It's not just about maintaining plants; it's about nurturing a beautiful space where people can find peace and inspiration in nature."

As the restoration project commences, the Morris team is excited to see the ways in which this generous support will breathe new life into the garden. With Hiram's longtime support—both financial and physical—the Hill & Cloud Garden is poised to flourish fully, inviting visitors to experience its serenity and beauty for years to come.

"I've been volunteering at the Morris for more than 25 years. The Hill & Cloud Garden is a special place, and nothing would please me more than to see the water run again!"

HIRAM MUNGER

# SUMMER EXHIBITION

Thousands immersed themselves in the world of pollinators in fun and beautiful ways during our summer exhibition, Bees, Butterflies & Blooms: A Pollinator Paradise.



# **↓** COOL CRITTERS

A gecko, a bat, a lemur, and other interesting creatures provided an enchanting way to learn about unusual pollinators in our Garden Railway: World Pollinators exhibition.









# **小 FUN FRIDAYS**

Pollinator Fridays brought people together to learn about the beauty and importance of butterflies, moths, and bees and how to help them survive and thrive.



Colorful, artist-designed giant butterflies dotted the Pop-Up Pollinator Meadow in our Wings & Wildflowers exhibit.











# ↑ WHAT'S THE BUZZ?

Exuberant Blooms and the Hummingbird Hut drew people and pollinators alike!





Bill Cullina, executive director of Morris Arboretum & Gardens, has won the Edgar T. Wherry Award from the North American Rock Garden Society. He received the award for outstanding contributions in the dissemination of information about native North American plants.

"This is a really thoughtful and appreciated award, given that Wherry was such an important scientist and botanist here for many years," Cullina said. Wherry (1885–1982) taught botany at the University of Pennsylvania from 1930 to 1955, and in 1932 he was appointed ecologist to the Morris Arboretum. He had a deep interest in ferns. Many of the botanical specimens Wherry collected are preserved at the Morris and at the Academy of Natural Sciences of Drexel University.

Below is an excerpt, edited for length, of the writeup about Cullina that was published in the summer issue of NARGS Quarterly.

Bill was previously CEO and before that director of horticulture/plant curator for The Coastal Maine Botanical Gardens in Boothbay, Maine. Prior to that he was the director of horticultural research for the New England Wild Flower Society (now Native Plant Trust) in Massachusetts.

Bill is the author of three books on native North American plants. While the native plant movement is currently in full swing, these three beautifully

written and photographed books, which reside in the collections of many of us, were particularly valued resources on native plants in the days when such resources were few and far between.

The Edgar T. Wherry Award

In addition to his writing, Bill shared his extensive knowledge of native plants through his many talks on these topics as well. He began his horticultural life at Garden in the Woods in Massachusetts, and gave many, many talks to the New England chapter, each packed with his careful observations of plants, and beautifully illustrated with slides. His talk on fern propagation was particularly memorable: He was showing a fertile fern frond under a microscope and projecting it for the audience to see when suddenly the spores were released from the sori under the heat of the microscope lamp. To say that everyone in the audience jumped is an understatement.

Through his writing, his stewardship of native plants at the Coastal Maine Botanical Gardens and the New England Wildflower Society, and his lectures on native plants, Bill has provided information on native North American plants to a wide and appreciative audience. Bill fully deserves the Edgar T. Wherry Award.

# LONGTIME MORRIS MEMBER

# Stephanie Cohen

Honored by American Horticultural Society

BY MELLANY ARMSTRONG, Communications Coordinator

She once handily took care of two acres of plants at her former home, but now author and teacher Stephanie Cohen says caring for houseplants on a small apartment balcony is not easy.

"It's a difficult situation—where space is really limited, what do you put?" she said. "I'm thinking about writing one last article that applies to people with small patios and houses."

Cohen, a longtime Morris member and lecturer who loves talking and writing about plants, has won a national award from the American Horticultural Society.

Cohen was given the B.Y. Morrison Communication Award as part of the 2025 Great American Gardeners Awards. The honor recognizes effective and inspirational communication through media that advances public interest and participation in horticulture.

The award description notes that Cohen's "engaging communication style has

elevated the field, providing valuable resources for both beginners and professionals."

Known as the "Perennial Diva"—a nickname given to her by plant-loving

friends—Cohen, who will turn 88 in November, has written several books and is a sought-after speaker. She taught horticulture classes at Temple University for 21 years, and some of her students have worked for or are working at Morris Arboretum & Gardens.

# **Plant Crazy**

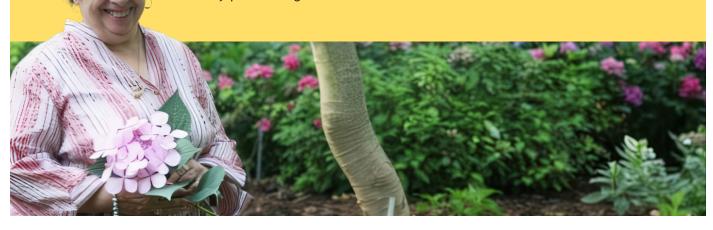
Cohen said she was a bored housewife with three young children when the houseplant craze hit in the 1960s.

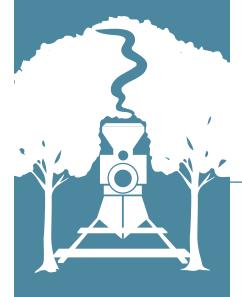
"I had 200 houseplants in a tiny little ranch house," she recalled. "My husband declared a moratorium—no more houseplants." She said every time they moved and got a bigger piece of property, she would fill it. "Most people don't understand, unless they are plant junkies."

While her living space now is much smaller, Cohen still fills her outdoor balcony with succulents and herbs, and she has more plants inside her Collegeville, Pa., apartment, that she shares with her husband, Dr. Richard Cohen.

She calls her most recent award "really special."

"It is a legacy more than anything else," she said. "The teaching is fine, but what you write, and then you meet the people and you have some effect on them, I think that's the real legacy."





# Friends for Years

Now Volunteers at Garden Railway

BY MELLANY ARMSTRONG, Communications Coordinator



What started with a nudge from Perlman's wife has turned into a weekly routine for the two retirees, who now spend one morning a week maintaining the tracks, organizing equipment, and enjoying each other's company.

Two years ago, Bette Perlman, a volunteer of nearly three decades at Morris Arboretum & Gardens, saw a notice about a tour of the Morris's beloved Garden Railway.

"And she says, 'Jon, you might be interested in that," he said. Why did she think he'd be interested?

"Because we've been married for long enough, so she knows," he said.

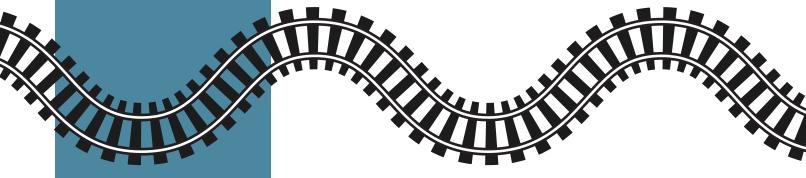
This year, Perlman invited his newly retired friend, Howard Greenberg, to join him.

"I was looking for something to do," Greenberg said. "I retired December 31. I've been a lawyer for 51 years, and decided I need to get out of the house. So I did."

"Actually, he didn't decide to get out of the house," Perlman retorted. "His wife decided he should get out of the house."

When longtime friends
Jon Perlman and
Howard Greenberg
put on their matching
engineer hats and red
bandannas to tend to
the miniature marvels
of the Garden Railway,
it's more than just
volunteer work—it's
a joyful extension of
decades of friendship,
shared hobbies, and
gentle ribbing.

Photos by Mellany Armstrong



# "The rolling stock is engines, cars, everything, and there was no really formal system for keeping track of them, so I wrote some software."

# JON PERLMAN

Bette and Howard's wife, Emily, were college roommates, and their husbands have been friends for many years.

"When I brought the grandkids here years ago, I thought it was amazing," Greenberg said.

"And now you're working on it," I teased.

"I'm working on the railroad."

"Not all the live-long day, just in the morning," Perlman joked, riffing on the old American folk song.

# **Keeping Busy**

Both men grew up with train sets in their homes. Greenberg inherited his older brother's electric train set, and some pieces are sitting on a bookshelf at his home in Cheltenham. Though their banter might suggest otherwise, the two friends take their volunteer roles seriously.

On a typical volunteer day, the friends, dressed in matching blueand-white-striped railroad engineer hats and red bandannas around their necks, will remove leaves from the tracks, cut back encroaching vegetation, and set overturned cars upright.

When the weather isn't ideal or when the Garden Railway is closed for the season, the men work on keeping track of what's on the tracks. Perlman, who taught computer software and management development before he retired, created a system for cataloging the nearly 900 pieces of rolling stock of the railway.

"The rolling stock is engines, cars, everything, and there was no really formal system for keeping track of them, so I wrote some software," he said. "Howard and I are going to be putting stickers on all of the different pieces, and they're going to have little bar codes. And now we'll be able to organize the railroad."

"That'll keep us busy for another 20 years," said Greenberg.



Above: Jon Perlman gently places a train car on the track at the Garden Railway, one of the many jobs of a volunteer.

Below: Howard Greenberg looks down the track as a train passes by.



# **FROM** SAPLING TO **STEWARD**



Below: Former Martha S. Miller & Rusty Miller Urban Forestry fellow Matt Walker remediates a mulch volcano at the base of a tree, which involves removing mulch or soil that has been piled up against the base of the tree and cutting any girdling or adventitious roots that are buried. Keeping the tree's root flare exposed keeps the trunk of the tree dry and prevents fungal infections.

# **GROWING A CAREER** THROUGH THE URBAN FORESTRY FELLOWSHIP

BY MATT WALKER

former Martha S. Miller & Rusty Miller Urban Forestry Fellow

THE URBAN FORESTRY FELLOWSHIP WAS SUPPOSED TO LAST JUST ONE YEAR, BUT TWO YEARS AND A FEW MONTHS LATER IT'S TIME TO REFLECT ON MY EXPERIENCE HERE AT THE MORRIS ARBORETUM & GARDENS.

I'm in awe of the vast wealth of knowledge that was shared with me. Not only am I able to identify trees around me, but I also know how to plant them, how to care for them, and how to manage them in landscapes. I learned how to use mapping and design software, how to use arboricultural equipment like resistance drills, and how to write reports for clients. I attended many educational tree-related conferences and was able to take master-level courses at the University of Pennsylvania in soil science and environmental planning.

The encouragement I received from those around me nurtured my passion for trees and the environment. That support came to life through my achievement of becoming an ISA Certified Arborist—an accomplishment made possible by this fellowship. With the expertise I gained at Morris, I developed the foundational skill set for the rest of my career caring for trees.



One of the unique things about this fellowship is that it took me to amazing places outside the arboretum gates. As a lifelong resident of the Philadelphia area, I had the opportunity to see parts of my region I had never seen before from a perspective that not many people get to experience. Some highlights include finding the state champion southern red oak in a city park, teaching students about trees at W.B. Saul High School, and peering down George Washington's outhouse while assessing trees at his historic Germantown residence. Working here has brought me closer to my hometown, and everywhere I look I see trees that we have been able to help.

I have also been able to connect with so many people who are just as passionate about trees

as I am. I attended the International Society of Arboriculture conference in Albuquerque, New Mexico: the World Forum on Urban Forests in Washington, D.C.; and I was a youth delegate at the Sustainable Forestry Initiative conference in Atlanta, Georgia. The people I have met inspire me to continue working to protect and preserve trees and ultimately led me to the next steps in my career.

I will be attending the University of Delaware to complete a master's degree in plant and soil science, researching the forests growing within our cities and towns. With everything I have learned, and knowing I have the support of the people I have met, I am confident that my career in trees will be meaningful both to trees and the people who care about them.

# HIGH SCHOOL HIGHLIGHTS

# **Cultivating the Climate Leaders of Tomorrow**

Today's young people are growing up acutely aware of the climate crisis. From melting ice caps and rising sea levels to vanishing pollinators and water scarcity, they're inheriting a planet in urgent need of care. While our generation has uncovered the extent of our environmental impact, theirs will be defined by how they respond to it.

So how do we nurture the next generation of environmental problem-solvers? How do we turn climate anxiety into climate action?

At Morris Arboretum & Gardens, one way we plant the seeds of hope is through our high school internship program. In collaboration with the Lankenau Environmental Science Magnet High School (Lankenau), we offer students hands-on experience in environmental careers—empowering them to envision a future where they can lead change and restore balance to our world.

### TWICE A WEEK DURING THE SCHOOL YEAR,

and for six to eight weeks each summer, students from Lankenau join us at Morris Arboretum & Gardens for a unique internship experience. Earning school credit or a small stipend, these students dive into the science, business, and education behind running a nonprofit public garden.

Thanks to the collaboration of every department, our interns gain hands-on experience across a wide range of roles. They've propagated plants, maintained facilities, created social media content, tagged trees, welcomed visitors, and even led art activities at our summer camps. They've worked alongside teams in Development, Horticulture, Marketing, and Membership—getting a true taste of what it takes to steward a public green space.

This internship is more than just a learning opportunity. It's a direct expression of our mission: to deepen understanding of the vital connections between plants, people, and place.

Sometimes the impact is subtle. Kevin, for example, once told me he only ended up at Lankenau because the school lottery didn't place him elsewhere. He was set on studying mechanical engineering, and nothing was going to change that. But after completing his internship, he called me during his first semester of college—not to talk about engineering, but to ask what major he should choose to work in horticulture.

Other times, the impact ripples outward. Anaya, inspired by her love of tea and our champion katsura tree, co-created a public program called Tea Under the Tree with her fellow intern Joselynne. Together, they researched herbs, fruits, and flowers to craft a workshop where visitors sampled custom iced teas and blended their own tea bags to take home.



Now in college, Anaya is majoring in environmental science and has founded a tea and plant lovers club—continuing to blend her passions in creative, community-focused ways.

These stories remind us that when we invest in young people, we're not just teaching them. We're cultivating curiosity, confidence and a sense of belonging in the natural world. We're helping them discover that they have the power not only to imagine a better future, but to build it.

# ELEGY FOR THE LEBANON CEDAR

For the last several decades, our majestic cedar of Lebanon trees (Cedrus libani) have struggled to survive our changing weather.



Cedar of Lebanon (Cedrus libani) that was once located in between Exuberant Blooms and the Springhouse in the Azalea Meadow.

This evergreen conifer is native to the mountainous regions of Lebanon, Syria, and Turkey. Young trees grow as strong, upright sentinels. As they age, they develop massive trunks, broad spreading crowns, and distinctive horizontal branching, making them magnificent specimens for parks and arboreta. In 1887, when John and Lydia Morris created their Compton estate, Lebanon cedar was considered a welladapted plant for the Philadelphia region and was often planted as a featured specimen. We have had several Lebanon cedars in our collection, but only two remain from the original garden.

Lebanon cedars, like many higher elevation conifers, have evolved a survival strategy of markedly slowing their growth and respiration rates during cool nights. This ability allows them to make maximum use of warm daylight temperatures to produce sugars and essentially go dormant during cool nights to conserve energy. This mechanism allows the trees to build up a surplus of stored energy over time. This energy, in the form of sugars, is then used to produce vigorous growth in what would normally be inhospitable environments.

# TOO HOT

This strategy works in a high elevation environment where there are reliable cold nights, but it also predisposes this species to heat stress. When nighttime temperatures are too warm, the trees don't slow down enough and essentially use up all the sugars produced during the daytime. A slight increase in average nighttime temperatures can significantly impact the tree's physiology and growth. These warm nighttime temperatures can lead to an energy deficit where, instead of









Left to right: Paul W. Meyer Chief Arborist Peter Fixler sets the slings before making the cut. The ground crew of arborists chips the branch wood after it was cut with a chainsaw. Compton Horticulturist Jen Monico stands next to a cross section of the cedar of Lebanon trunk. The Cedrus libani that were taken down were replaced with a cultivar of deodar cedar, Cedrus deodara "Sanders Blue." This species was not winter hardy here in the past but does well now and is much more tolerant of high night temperatures. Photos by Vince Marrocco, Jen Monico, and Bill Cullina.

creating a surplus of energy, trees tap into stored energy reserves just to survive. Prolonged heat waves can lead to chronic stress, reduced photosynthesis, reduction in stored sugars, and potential dieback.

Our Lebanon cedars have endured a relentless series of scorching summers over the past few decades. In their natural habitat, summer daytime temperatures can soar into the upper 90-degree range, but nighttime temperatures often drop to the 50-degree range. While they can withstand daytime heat, it is the prolonged periods of nighttime warmth that have been problematic. Last summer was particularly devastating to our Lebanon cedars. The excessive heat, coupled with a recordbreaking drought, set up a perfect storm of stress. Despite our best efforts at keeping these trees irrigated and mulched, we were unable to mitigate the effects of extreme heat and unprecedented drought. As a result, our already struggling trees have reached their breaking point, and we have made the difficult decision to remove these venerable old specimens from the collection. However, their legacy will live on in other forms.

# LIVING LEGACY

The wood of Lebanon cedar is a prized building material. The dense, aromatic, decay-resistant wood has been a choice building material for millennia. It has been used for temples, palaces, and shipbuilding. The cedar of Lebanon is steeped in history and legend. It is mentioned in the Epic of Gilgamesh, where it was said to be protected by Mesopotamian gods. The Phoenicians used its wood to

build their renowned ships, and the Egyptians crafted paper from it. The Bible recounts how King Solomon used cedar wood to construct the Temple in Jerusalem. Even during the Roman Empire, Emperor Hadrian declared the cedar forests as royal domains to protect them from destruction. Despite these efforts, the trees faced exploitation over the centuries, including significant deforestation during World War I for railroad construction. Today, with the ravages of changing weather and the threat of overuse, the remaining cedar forests in Lebanon are protected as UNESCO World Heritage sites. We are fortunate to have such large specimens that we can salvage for future use in Morris projects.

As our summers continue getting hotter, the changing weather may spell the end for Lebanon cedar as a suitable tree for Philadelphia. However, it is not quite the end for Lebanon cedar in our garden. Several specimens remain, including a notable one on the small lawn above Seven Arches. Seeds for this plant were wild-collected in the Taurus Mountains in southern Turkey. These mountains separate the Mediterranean coast from the Anatolian plateau and rise upward of 12,000 feet above sea level. The seeds for our plant were collected in 1992 by colleagues from the Nový Dvůr Arboretum in the Czech Republic. The parent plants were growing 4,100 feet above sea level on the north slope of mountains near the town of Pozanti. As a relatively young tree, our specimen stands tall and vigorous, a hopeful sentinel for the future. Only time will tell if it will age gracefully or succumb to the challenges of our future Philadelphia summers.

### ▶ POPS OF PINK

The Morris's cherry trees put on a show in April, and so did Director of Horticulture Vince Marrocco for Fox 29 and NBC10.





# ▲ PERENNIAL WISDOM

Morris Rosarian Eloise Gayer, who makes sure the Rose Garden always looks beautiful, educated people about low-maintenance perennials on Fox 29's Good Day Philadelphia in March.



### **▲ FLUTTER FUN**

6abc covered Pollinator Friday in June, as the young and young-at-heart learned about the importance of butterflies in pollination.

### **▼** BUZZWORTHY

In June, <u>CBS Philadelphia</u> focused its series Summer Beat on the Morris's summer exhibition, Bees, Blooms & Butterflies: A Pollinator Paradise, and spotlighted the Garden Railway: World Pollinators exhibit and the Hummingbird Hut!



# **▼** ON TRACK

The new Morris Train Station, which was inspired by the iconic Chestnut Hill West newsstand on Germantown Avenue, was featured in the Chestnut Hill Local in May.



# LEADERSHIP AT THE MORRIS

# Welcoming our Newest Advisory Board Member, Steven Gendler

THE MORRIS ARBORETUM & GARDENS IS HONORED TO INTRODUCE ITS NEWEST BOARD MEMBER, WHOSE FIRST THREE-YEAR TERMS BEGAN IN JULY 2025.

Steven Gendler is the founding principal of MIS Capital LLC, a social impact real estate development firm. He is responsible for project conception, financing and transaction structuring, overall project development and budget. MIS Capital's Whittier School Project for KIPP Philadelphia Charter School is featured in the spring 2025 edition of *Preservation*, the National Trust for Historic Preservation's quarterly magazine. Steve is also senior director at KW Commercial in Philadelphia and president of Marathon Realty Corporation in Omaha, Nebraska.

Steve serves on the Design Philadelphia board of directors and the land use planning committee for the Chestnut Hill Community Association. He has a B.A. in economics and architecture from Columbia University, and a master's degree in architecture from Rice University. He is an associate real estate broker and architect.

Locally, Steve has designed modern interpretive renovations to an 1849 vintage rowhouse in Center City, enjoys living in a 1926 stone house in Chestnut Hill, tending to orchids, and participating in several outdoor sports, including tennis, running and biking. He also keeps a vintage Jaguar roadster running!



S FALL/WINTER 2025 19

# Hoonlight Roses June 6, 2025

Moonlight & Roses took place on Friday, June 6, with more than 475 guests in attendance. This year our esteemed honorees included garden photographer Rob Cardillo and Philadelphia Eagles Go Green. Chairing the gala committee was Margaret O'Neill with Anna and Charles Woodward as honorary chairs.

The twilight hours were the perfect backdrop for guests to explore our stunning Rose Garden, the Pennock Flower Walk, and the whimsical Garden Railway. Total revenue raised from this year's event was \$321,000, with all net proceeds supporting the Morris's operations. Thank you to everyone who attended and supported the event, especially our lead sponsor, Independence Blue Cross.

Save the date for next year's Moonlight & Roses, June 5, 2026!



From left to right: Moonlight & Roses Honorary Chairs Charles and Anna Woodward, Norman Vossshulte from Eagles Go Green, Individual Honoree Rob Cardillo, Morris Executive Director Bill Cullina, Moonlight & Roses Chair Margaret O'Neill













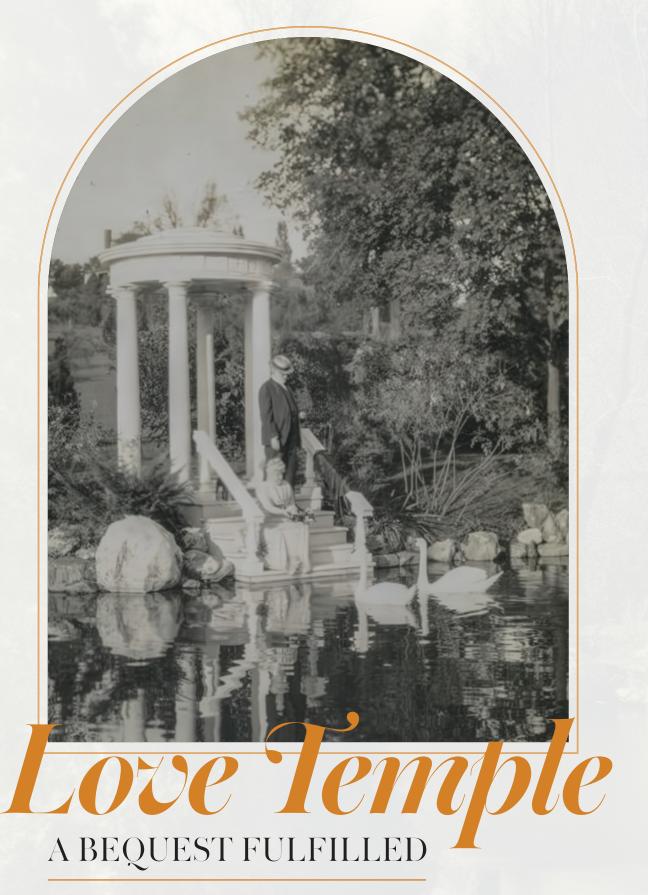












BY JOYCE H. MUNRO, Archives Volunteer

Above, John and Lydia Morris at Love Temple, circa 1909

Sometime after the University of Pennsylvania inherited the Morris estate, the diminutive marble temple by Swan Pond became known as Love Temple. It's unclear how the name came about. But while contemplating possible scenarios, consider the story of John and Lydia Morris's Aunt Sarah. Regardless of what this beloved garden feature is called, Aunt Sarah is the reason it exists. First, some background.

Sarah Paschall Morris was the youngest child of Isaac Wistar Morris and Sarah Paschall; the baby sister of I.P. Morris, John and Lydia's father. She grew up spending winters in Center City and summers at Cedar Grove. Sarah had great respect for historical objects and artifacts, particularly those of her family. As a student of Scripture and history, she recognized the powerful connections of relics to ancestors. And like her eight siblings, she held onto significant family belongings.

Take, for example, the clock of Sarah's grandfather Isaac Paschall. This family heirloom stood in a place of honor at 144 South Fourth Street, the house where she was born and where her parents died. When Sarah was elderly, she gave the clock to John with a note explaining the family connection and ending with: "It is a great comfort to offer this precious relic to my dearest nephew." She would have done the same for belongings she gave to the other fourteen nieces and nephews, although she had only one "dearest" nephew.

Through the years, John and Lydia remained close to Sarah, so she was aware of their travels around the world. Imagine the two of them going over to her house on their return from Italy or Egypt or Japan and regaling her with stories of magnificent palaces, ancient ruins, accommodations in roadside houses and grand hotels, rugged treks on horseback, exotic plants and the distinctive cuisine of each country.

Sarah knew that when John and Lydia traveled anywhere, they were always on the lookout for artifacts and antiquities to purchase for Philadelphia's museums and teaching institutions (whose collections were rather skimpy compared to places like Boston and New York City). In her own way, Sarah was committed to improving educational experiences for Philadelphians through regular donations to humanitarian organizations and teaching the Scripture to members of her staff.

In 1906, the year after Sarah died, John and Lydia traveled to Italy once again. This time they were intent on purchasing an item for their own estate an item to commemorate Aunt Sarah. Quite literally, they were following her directive. She left them money with one request—spend it on something to remember her by.

At a sculpture studio in Rome, John and Lydia met with the owner, Ernesto Gazzeri, to discuss plans for a tangible memento of their aunt. But John and Lydia didn't want one of his many statues on display. They had something else in mind. They wanted a "little marble temple" to adorn their new pond.

It is unlikely that Aunt Sarah ever went to Chestnut Hill to tour John and Lydia's gardens and examine the fine collections that filled Compton mansion. And it's even less likely that she traveled to Italy to revel in ancient relics and stay in a classy hotel and taste interesting foods. You see, Sarah Paschall Morris was in poor health all her life, confined to her home.

But without a doubt she would have loved the little temple by Swan Pond with its timeless classical elegance. Though not a relic, it is nonetheless a tribute to antiquity, a most fitting reminder of Aunt Sarah.



# **Upcoming Programs**

Our fall course offerings are rich and varied! Visit **morrisarb.org/courses** and learn about our exciting lineup of programs for all ages, including:

# Wine, Cheese, and Trees

September 11 // 5:30 pm

This annual event has become a tradition! Join us for an after-hours wander into the treetops and through the garden at your leisure. Three sites will feature staff-favorite wines and cheese plates to enjoy as you explore.

# **Visible Mending Workshop**

October 8 // 4:00 pm

Learn techniques for giving your favorite clothes a new life! We'll walk through a few different stitches and provide materials and guidance.

# **Houseplant 101**

October 11 // 10:30 am

Equip yourself with the knowledge necessary to make your houseplants thrive, even in the trickiest indoor conditions. We will discuss light, humidity, pest control, watering, potting, and basic propagation to help your collection grow.

# Sunset Sunday Yoga on the Lawn

October 26 // 5:00 pm

Welcome the week ahead with a moment of grounded connection as the sun sets over the meadow.

# **Community Song Circle**

November 6 // 2:00 pm

All voices welcome! We will learn songs from the community singing movement and all lift our voices in song together outdoors.

# Botanical Clay Ornaments for the Holidays

November 8 // 1:00 pm (Ages 6 – 11)

Explore how different materials leave their marks on clay, and then paint with colorful paints to create clay ornaments just in time to celebrate the winter season!

# **Tree Care for Homeowners**

November 13 // 9:00 am

Learn how to properly care for the trees in your yard. This class is helpful for any homeowner with trees in their care!









# authorseries

Two programs we're especially excited by will give us the opportunity to learn from authors we admire in their areas of expertise. Learn more and register at morrisarb.org/courses.

# The Essential Guide to Bulbs: Book Talk & Signing

JENNY ROSE CAREY Renowned Gardener, Educator, Historian, and Author

Join us for a special opportunity to meet and learn from Jenny Rose Carey, who will share with us from her newest book, The Essential Guide to Bulbs. For any gardener who wants to grow bulbs in the garden or containers, Jenny shares her insights through her gorgeously photographed, comprehensive, and inviting resource.

You will learn that, while many gardeners may be familiar with the early show of spring bulbs like daffodils and tulips or the late show of gladiolus, there are so many more to choose from that provide three-season color, drama, and spontaneity in the garden.

Jenny Rose has been lecturing nationally and internationally for many years. She previously worked at Temple University for over a decade, first as an adjunct professor in the Department of Landscape Architecture and Horticulture and then as director of the Ambler Arboretum. Most recently, she served as Senior Director of Pennsylvania Horticultural Society's Meadowbrook Farm. She is an avid hands-on gardener who has gardened in both England and the United States. Her Victorian property, Northview, in Ambler, PA contains diverse garden spaces, including a cutting garden, an herb garden, a dry garden, and various mixed flower beds. Jenny Rose and her gardens have been featured on the PBS series The Victory Garden, in the Wall Street Journal, the Philadelphia Inquirer, GROW magazine, and The Pennsylvania Gardener. She is co-author with Mary Anne Fry of A Century of Cultivation, the author and photographer for Glorious Shade (Timber Press 2017), and The Ultimate Flower Gardener's Guide (Timber Press 2022).

A limited number of books will be available for purchase. Participants who want to ensure they can purchase a book are encouraged to pre-order a copy of the book with the "Book add-on."

Wednesday, October 29 // 4:00 – 5:30 pm

Members: \$30 Non-members: \$35 Book add-on: \$30

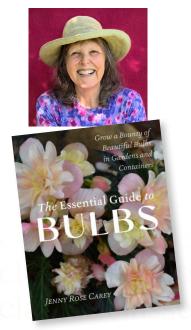
# Forest Ecology for Arborists

ETHAN TAPPER Forester, Digital Creator, Author

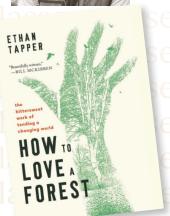
How can principles of forest ecology inform arboriculture? Join Ethan Tapper—a forester, digital creator, and the bestselling author of How to Love a Forest: The Bittersweet Work of Tending a Changing World—for a workshop about forest ecology. We will walk in the woods and talk about wildlife habitat, natural history, forest ecology and forest stewardship, and discuss how to incorporate these principles into our work.

For more than a decade, Ethan Tapper has been recognized as a thought leader and a disruptor in the worlds of forestry, conservation, and ecosystem stewardship, winning multiple regional and national awards for his work. His message of relationship, responsibility, and hope reaches millions of people each year through his writing, his social media channels (@HowToLoveAForest) with tens of thousands of followers, and the dozens of walks, talks, and keynotes that he delivers across North America each year.

Monday, November 3 // 12:30 – 4:30 pm







# October is ArBOOretum Month

We're getting into the Halloween spirit this October at Morris ArBOOretum & Gardens! For the 18th annual Scarecrow Design Contest, our theme is CARTOONS! Scarecrows will be on display from October 1 through October 31. The top three entries, as selected through on-site voting by our visitors, will win prizes of \$300, \$200, and \$100. Scarecrow frames are generously provided by Tague Lumber.









# Stories of Resistance

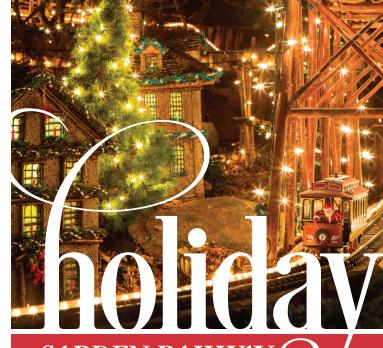
An Evening of Storytelling with the Lenape Nation of PA

A Partnership with Lenape Nation of Pennsylvania, Woodmere, and the Morris Arboretum & Gardens

In honor of Native American Heritage Month, you are invited to join the Morris Arboretum & Gardens and Woodmere Art Museum as we welcome Indigenous voices in an evening of storytelling with Chief Adam Waterbear DePaul, storykeeper of the Lenape Nation of Pennsylvania, along with other voices from the Lenape Nation of PA. We will hear stories of Lenape history, language, and culture, and will be treated to drumming and singing by the Stone Dog Drum. The program will take place at the Woodmere, 9201 Germantown Avenue, Philadelphia, PA 19118. To register, go to morrisarb.org/lectures.

Thursday, November 20 // 6:30 – 8:30 pm Members: \$20 // Non-members: \$25





# GARDEN RAILWAY & HGR: Nighttime Express

Make your holiday even more magical with a visit to the Holiday Garden Railway, as it is transformed for the season with thousands of twinkling lights! See the enchanting rail cars in a festive wonderland of lights and sounds, a marvelous experience for visitors of all ages. The Holiday Garden Railway will be open daily beginning Saturday, November 22, through Tuesday, December 30, and it's free with general admission.

See the Holiday Garden Railway at night for an even more spectacular experience! With laser lights in the trees and sparkling lights along the railway, HGR: Nighttime Express is a must-see. Available only with advance tickets.

### **SAVE THE DATE:**

Premier Member Nights are December 4 and 5!

# HGR: Nighttime Express Dates 4:30 – 8:00 pm

Thursday	Friday	Saturday	Sunday
		Nov 29	Nov 30
		Dec 6	Dec 7
Dec 11	Dec 12	Dec 13	Dec 14
Dec 18	Dec 19	Dec 20	Dec 21

# **HGR: Nighttime Express Pricing**

Member Adult: \$17Adult: \$22Member Youth (3-17): \$10Youth (3-17): \$12Member Child: FREEChild: FREE

The Morris will be closed December 24, 25, 31 and January 1.



12TH ANNUAL CONFERENCE // OCTOBER 17, 2025

# Stories of Resilience

The Tree Canopy Conference is an annual symposium that brings together a variety of green-industry professionals and others who work with, and care about, our region's urban forest.

Conference participants will further their knowledge, connect with peers and mentors in the industry, and gain continuing education units (CEUs) toward their credentials.

This year's conference will include six presentations exploring stories of resilience in our urban forest. Our speakers will dive into topics such as climate-resilient trees, the restoration of ecological function in degraded waterways, local efforts to address tree canopy disparities, resilience in the face of shifting political and economic landscapes, and much more.

Attendees may also enjoy a behind-the-scenes tour of Haverford College Arboretum's extensive tree collection and a walking tour from the Philadelphia Mycology Club. The day's program has been submitted to carry 5 CEUs with ISA, LA CES, and the New Jersey **Board of Tree Experts.** 

The conference will be held on Friday, October 17, 2025, from 9:00 am -4:30 pm at Haverford College in the Stokes Hall Auditorium and is a partnership between the Morris Arboretum & Gardens and the Haverford College Arboretum.







# TRIBUTE & MEMORIAL GIFTS

The Morris Arboretum & Gardens is grateful to the following donors who made tribute and memorial gifts between March 1, 2025, and July 31, 2025.

### In memory of Emilie Brégy

Gail Harp Louise M. Lisi Liandra Lloyd JoAnn Rivinus Vorih & Family Martha Slayman Robert G. Stewart

# In honor of Ruth & Tai Chang

Alison & Brad Thornton

# In honor of Bill Cullina

Anonymous

# In honor of Diana & Stuart Donaldson

Mary Jane Raymond

# In memory of Linda Drury

Carmen & Thomas Johnson Whitehouse Post and Carbon

# In memory of Kenneth J. Gartner Sr.

Jeffrey Needleman

# In memory of Sally Jane Gendler

Linda Chisholm & Keith Schneck
Laurie & Sam Marshall

# In honor of Kyra Matin

Nancy Deibert

# In memory of Paul Meyer

Maria & Radclyffe Thompson

# In honor of Rev. John K. Norrie Jr.

Phyllis & Kent Norrie

# In memory of Todd Polk

June A. Klipper

# In memory of Georg U. Simon

Diana & Stuart Donaldson

# In honor of Sydney Taylor

Anonymous



# CALENDAR OF

# September

**Trees Around** the World Tour Saturday, September 13 11:00 am

Storytime

Wednesday, September 17 10:30 am

Shrubs for All Seasons Saturday, September 27 11:00 am

# October

**Morris Pumpkin** Cottage Display October 1 – 31

Scarecrow Walk -Cartoons! October 1 – 31

Oaks of the Mid-Atlantic Tour Saturday, October 11 11:00 am

**Tree Canopy Conference** Friday, October 14 9:00 am

More Hidden Gems Tour Saturday, October 25 11:00 am

# November

Garden hours 10:00 am - 4:00 pm; Garden will be closed Thanksgiving Day

**Trees Around** the World Tour Saturday, November 8 11:00 am

Holly Highlights & Winter Greenery Tour Saturday, November 22 11:00 am

Holiday Garden Railway Saturday, November 22 through Tuesday, December 30

**HGR: Nighttime Express** Select dates November 29 through December 21

# December

Garden hours:

10:00 am – 4:00 pm; Garden will be closed December 24, 25, 31, and January 1

Winter Wellness Walks Weekends through March 10:30 am

**Conifer Tour** Saturday, December 13 11:00 am



# SAVE THE DATE

# Member Plant Giveaway

Member Plant Giveaway Weekend for all Members:

Saturday, May 16, 2026 9:00 am - 1:00 pm

Sunday, May 17, 2026 9:00 am - 1:00 pm

**Premier Members** First Access Night:

Friday, May 15, 2026 4:00 - 6:00 pm

Pollinator lovers were thrilled by the beauty of this year's offerings at our Member Plant Giveaway in May. For three days, members were welcomed to Bloomfield Farm to select from pollinator favorites and exciting native plants while enjoying the company of fellow Morris members at this family-friendly event. If you're not already a member, consider joining at morrisarb.org/membership to receive this fun and unique benefit!



# A Gift of All Seasons

Giving the gift of a Morris Arboretum & Gardens membership as a holiday gift is an easy choice. Your recipients receive an entire year of unlimited garden admission, it is zero-waste, and it enhances wellness by getting your loved ones outdoors in a beautiful natural setting.

# THERE ARE TWO EASY WAYS TO PURCHASE A GIFT OF MEMBERSHIP:



Visit our website morrisarb.org/membership to purchase anytime. Customizable gift certificates are available to download and present to your gift recipient while their membership is being processed.



Reach the membership office directly at 215.247.5777 ext. 205, Monday–Friday.

To ensure your gift is postmarked by December 20, orders must be received by December 17.



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.





