

SEASONS

FALL/WINTER 2023 | VOLUME 52 NUMBER 2



Morris Arboretum
& Gardens

UNIVERSITY OF PENNSYLVANIA



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SEASONS

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.

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VISITOR ENTRANCE

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COVER PHOTO: Propagator Kyra Matin, Plant Collections Manager Pam Morris Olshefski, and Director of Horticulture Vince Marrocco assess plants in hoop house 3 at the Morris’s greenhouse. Photo by Mellany Armstrong.

INSIDE COVER PHOTO: Families enjoy the Tree Canopy Walk, part of the *Out on a Limb: A Tree Adventure* exhibit, which turns 15 next summer. Photo by Paul Meyer.

A Note from the Executive Director

BILL CULLINA

*The F. Otto Haas
Executive Director*



In Lydia Morris's will, she desired that the University maintain a laboratory of scientists "for the purpose of botanical research and disseminating that knowledge to the world." Soon after the University took ownership of the Arboretum in 1933, its botany department established offices and laboratories in the former mansion. Here, University scientists conducted groundbreaking research on plant micronutrients, mycorrhizal structure and relationships, as well as forest pathology. Dr. Edgar Wherry, still regarded as one of the preeminent experts on the North American flora, spearheaded floristics (field botany) work.

During World War II, the Arboretum focused on research supporting the war effort, most notably, alternative plant sources of natural latex for rubber and its extraction. After the war, the Arboretum formed an important partnership with the Allegheny Forest Experiment Station to establish a forest tree genetics research lab at Bloomfield Farm in 1946. During this period, Henry F. Skinner began extensively collecting and breeding southeastern native azaleas. Professor of botany Dr. John Fogg became Arboretum director in 1954, and during his tenure he undertook extensive field research within Pennsylvania and the mid-Atlantic for what would eventually become our first published state flora, *The Atlas of the Flora of Pennsylvania*. Dr. Fogg also encouraged the rapid expansion of the Arboretum's living plant collection, with an eye toward species of potential garden merit such as magnolia, rhododendron, and holly.

In the mid-1960s, Dr. Frank S. Santamour Jr. began work in biochemical taxonomy. Also during this time, famed Chinese botanist Dr Hui-Lin Li was researching his massive six-volume *Flora of Taiwan*.

By the 1980s our focus centered on floristics, pathology, and plant exploration and collections development. Paul Meyer began collection trips to Asia, Europe, and the near East, while Dr. Ann Rhoads started compiling our seminal *Plants of Pennsylvania*, coauthored with our current director of Plant Science, Dr. Tim Block. Taxonomist Dr. Cindy Skema joined our staff in 2013. Dr. Skema uses DNA analysis to answer critical questions about rare species that help us best conserve them.

To facilitate Dr. Skema's and Dr. Block's work, we are building a new research lab building adjacent to our Horticulture Center. The lab will have space for three researchers and two assistants. Once construction is underway next year, we plan to hire a third PhD with training in plant breeding and genetics to develop trees resistant to diseases such as hemlock woolly adelgid and emerald ash borer. It is our hope that eventually we can also hire a new generation of researchers in the fields of forest pathology, ecology, and plant mycorrhizae.

Our forests are under existential threat from climate change, invasive pests and diseases, and habitat loss. As we celebrate our 90th birthday, I am proud of all we have accomplished and tremendously excited about the future of conservation research at the Morris. With your support, we can save our trees.

Thank you,

A handwritten signature in black ink that reads "Bill Cullina". The signature is written in a cursive, flowing style.

THE RICH HISTORY OF RESEARCH AT MORRIS ARBORETUM & GARDENS

BY MELLANY ARMSTRONG, Communications Coordinator

A FOCUS ON NEW RESEARCH

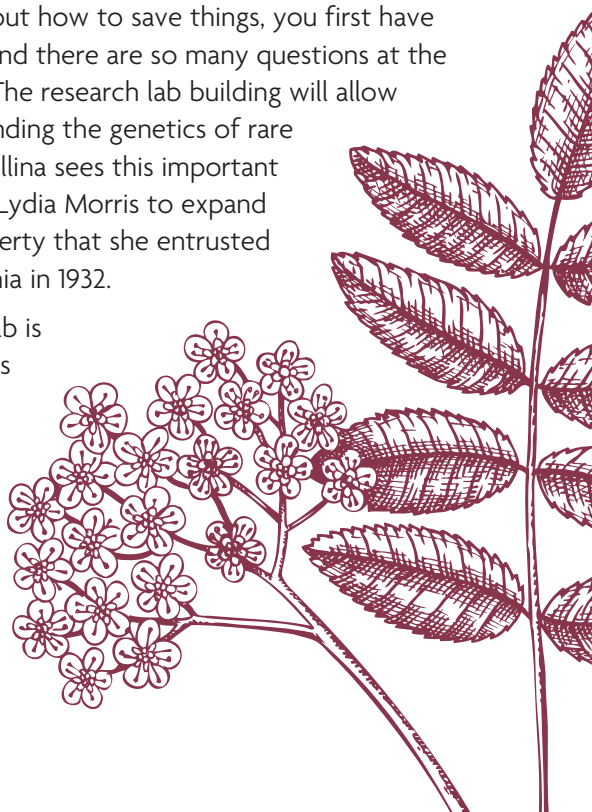
There is trouble with the trees.

Climate change, invasive species, and loss of habitat are killing native species in our eastern forests. Bill Cullina, the F. Otto Haas executive director of Morris Arboretum & Gardens, believes we are at a tipping point, and he wants the Morris to help figure out how to save them.

The first step, he says, is to build a molecular plant research lab. Construction is scheduled to begin next year on the grounds of the Morris.

“When you’re trying to figure out how to save things, you first have to understand what they are, and there are so many questions at the taxonomic level,” Cullina said. The research lab building will allow scientists to work on understanding the genetics of rare as well as abundant species. Cullina sees this important step as honoring the intent of Lydia Morris to expand botanical research on the property that she entrusted to the University of Pennsylvania in 1932.

The molecular plant research lab is just one example of how Morris Arboretum & Gardens is contributing to the research begun at the Arboretum in its earliest years when Penn scientists established labs in John and Lydia Morris’s mansion called Compton.



People who live in cities sometimes have a hard time keeping in touch with Nature. They must leave home or go to the limited areas preserved as parks. An attempt to maintain a slender connection is seen in the trees planted along the streets.

Rodney H. True

First director of Morris Arboretum, speaking on the conservation of trees, part of a speech delivered Wednesday, October 16, 1935, over radio station WFIL for the Council for Preservation of Natural Beauty in Pennsylvania.

CLIMATE CHANGE

Other work being done at the Morris puts into practice what scientists around the world are studying—which plants can thrive in a warming climate.

Earlier this year, a Compton oak was planted near Gates Hall to replace a 100-year-old bur oak that had succumbed to a fungus. The *Quercus x comptoniae*, a hybrid between live oak (*Q. virginiana*) and overcup oak (*Q. lyrata*), had been collected as an acorn on a trip to southeast Virginia by the Morris Arboretum and Arnold Arboretum in October 2012.

The hybrid may have greater adaptability than its parent trees. Most current climate models show our area having a similar climate to present day Richmond, VA, Charleston, SC, or even further south, where live oaks grow naturally.

Live oak acorns collected on that trip were grown to seedlings and three eventually were planted at the intersection of Northwestern and Stenton avenues. Some live oaks were also planted on Penn's campus. Urban Forestry Associate Director Jason Lubar said this experiment will help determine how these southern plants survive in an urban setting.

“We’re working with Penn, Philadelphia Parks & Recreation, and the Pennsylvania Horticultural Society to determine which tree species would be good for planting now for the future,” he said. “We want to see what southern tree species survive our winters at Morris in a more suburban setting, and in Philadelphia’s generally warmer, more urbanized landscape.”

Lubar said the live oaks seem “biologically happy,” meaning they are growing as well as they would in their native range. But some trees considered to be native in our area aren’t doing as well.

“Some trees around here, like our older sugar maples and chestnut oaks, are starting to show signs that it may be too hot,” said Lubar. “We believe this is because of the changing environment.”

Lubar likens himself to the Lorax, the Dr. Seuss character that warned of the consequences of not protecting our natural resources.

“We’re the ones advocating for the trees because they don’t have a voice,” he said. “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.”



1. Dr. Cindy Skema is studying the plants of the cotton family (Malvaceae).
2. The planting of a Compton oak.
3. Dr. Lulu Korsak preparing a plant specimen for the Herbarium.
4. Propagator Kyra Matin (left) and Plant Collections Manager Pam Morris Olshefski using GPS technology to mark the location of a tree.

collections



Once the Morris became part of the University of Pennsylvania, the focus shifted from that of an aesthetic landscape garden to more of a research and collections-based Arboretum. The first director, botanist Dr. Rodney H. True, hired specialists in plant diseases, ecology, and physiology. True organized annual summer bus trips starting in 1934 “to make an intensive study of the flora of a section of Pennsylvania, not previously explored by botanists from the University.”

Similar collection trips continued throughout the years, locally and globally. Several staff members have made research trips this year to Kentucky, Alabama, Georgia, and Pennsylvania to collect plants and seeds. You can read more about this on [page 6](#).

Some of what is collected on these trips is preserved and housed in the Morris’s Herbarium. The repository of more than 25,000 botanical specimens provides a rich trove for plant scientists from all over the world. Learn more about this fascinating plant library on [page 8](#).

Morris Arboretum & Gardens’ living collection of more than 11,000 woody plants is also valuable to scientists. Plant Collections Manager Pam Morris Olshefski provides leaf samples, cuttings, scion wood, and photographs for researchers. The living collection is being mapped with satellite technology that will facilitate research. Learn more about it on [page 11](#).

Looking deeper into tropical mallows, their DNA, and evolution is botanist Dr. Cindy Skema. Read about her research into the Dombeyoideae on [page 7](#).

LOOKING AHEAD

The mission of the Morris Arboretum & Gardens is to inspire an understanding of the relationship between plants, people, and place through education, research, and horticultural display. In addition to being a beautiful public garden, Cullina wants the Morris to be renowned for its science. He plans to advertise for a new PhD plant geneticist/breeder position next summer and looks forward to expanded research greenhouse and field nurseries in the second phase of the master plan, with a larger lab building and herbarium coming in the third phase.

“What I’d love to see is that we’re kind of the New Bolton Center for organismic biology at Penn, focusing on forest ecology, botany, conservation, pathology—all the threats that are impacting our forests,” Cullina said. “We’re part of one of the great research universities in the world, and we have resources at our disposal that most public gardens don’t have, and we certainly have a long tradition. We really want to take it to the next phase and be seen as a center for forest research in the eastern US.”



GOING Wild

Staff members take research and collection trips

Trevor Schulte

Azalea Meadow Horticulturalist

Schulte searched the Opelika, Alabama, region for a week in early August for *Rhododendron prunifolium* (plumleaf azalea). He joined a small group led by Connor Ryan of [Holden Forests and Gardens](#) on the scouting trip to observe the plant in the wild and in curated collections. *R. prunifolium* is a rare native endemic to a very small region along the southern half of the Alabama/Georgia border. The group combed small streams that fed into the Walter F. George Reservoir. They saw plenty of other fun plants along the way and had time to visit the Splinter Hill Bog filled with white pitcher plants (*Sarracenia leucophylla*). Schulte observed the flower diversity, worked with knowledgeable professionals, and noted the surrounding ecosystem to learn how to best care for and garden around the Morris's collection of *R. prunifolium*.

Pam Morris Olshefski

Plant Collections Manager

Morris Olshefski traveled to Kentucky in the first half of September. She worked with colleagues from the [University of Kentucky Arboretum](#) and the [US National Arboretum](#) to wild-collect plants in eastern and central Kentucky. Her group had a target list of plants to collect from several different habitat types. These collections will both increase the genetic diversity of the Morris's collection as well as add native plants that the Arboretum does not yet have.



Native Woody Plant Collecting Project

The accessioned living collection of the Morris Arboretum & Gardens includes less than half of the species of woody plants native to the Mid-Atlantic region, and while some of those missing species are not appropriate for local environmental conditions, most are. The goal is to increase the diversity of native woody flora at Morris by undertaking a multi-year project to locate, collect, and propagate plants, first from the local area, then expanding efforts to include all of EPA's Ecoregion III. This ecoregion extends from Pennsylvania south to Maryland and Virginia. This project is a collaborative effort of the Horticulture and Plant Science departments.

Top: John J. Willaman Director of Plant Science
Tim Block (left) is participating in the multi-year
Native Woody Plant Collecting Project. Left: Plant
Collections Manager Pam Morris Olshefski (on
right).

Millions of Years of Movement

New data shows tropical mallow plants hopping over oceans

BY EMILY HUMPHREYS, the Eli Kirk Price Plant Science Fellow

Dombeya rotteroides, a member of Dombeyoideae. Photo by C. Skema



How do plants travel the globe? A new paper in *Molecular Phylogenetics and Evolution* takes a deep look at patterns of plant dispersal.

Co-first authors Cynthia Skema, a botanical scientist at Morris Arboretum & Gardens, and Timothée Le Péchon, a research scientist at Meise Botanic Garden in Belgium, along with Lucile Jourdain-Fievet and Jean-Yves Dubuisson, both of Sorbonne University in Paris, studied the evolutionary and biogeographic history of the Dombeyoideae, a group of tropical plants that are part of the cotton family (Malvaceae). The researchers found that Dombeyoideae dispersed from Madagascar to Africa five times more than from Africa to Madagascar.

Skema explains the significance of their finding.

“It’s that newness of the idea that more things are moving from Madagascar to Africa than vice versa,” she said. “It goes against the grain of what we’ve seen in the majority of the papers so far.”

For the project, Skema and Le Péchon sequenced DNA from members of Dombeyoideae and then generated hypotheses about how the members of Dombeyoideae are related to each other. They represented these hypotheses as phylogenies, which are tree-like depictions of evolutionary relationships. The phylogeny they created has the most complete sampling of Dombeyoideae to date.

Still, opportunities for inquiry remained. “Can you actually understand evolutionary change without understanding evolutionary movement?” asks Skema. In response to this question, the team used their newly built tree in conjunction with software programs to model how the ancestors of modern dombeyoids

spread from place to place. Such long-distance dispersal can happen when seeds get lodged in a bird’s feathers or carried across oceans by a storm. In total, the analyses showed that Madagascar served as the source for nearly 70 percent of the dispersal events in dombeyoids, comparatively a very high percentage.

“This paper completely underlines this sort of percolating idea that Madagascar is really a source [for plant dispersal] too, and a source for [plant dispersal to] continents, which is really interesting,” Skema explained.

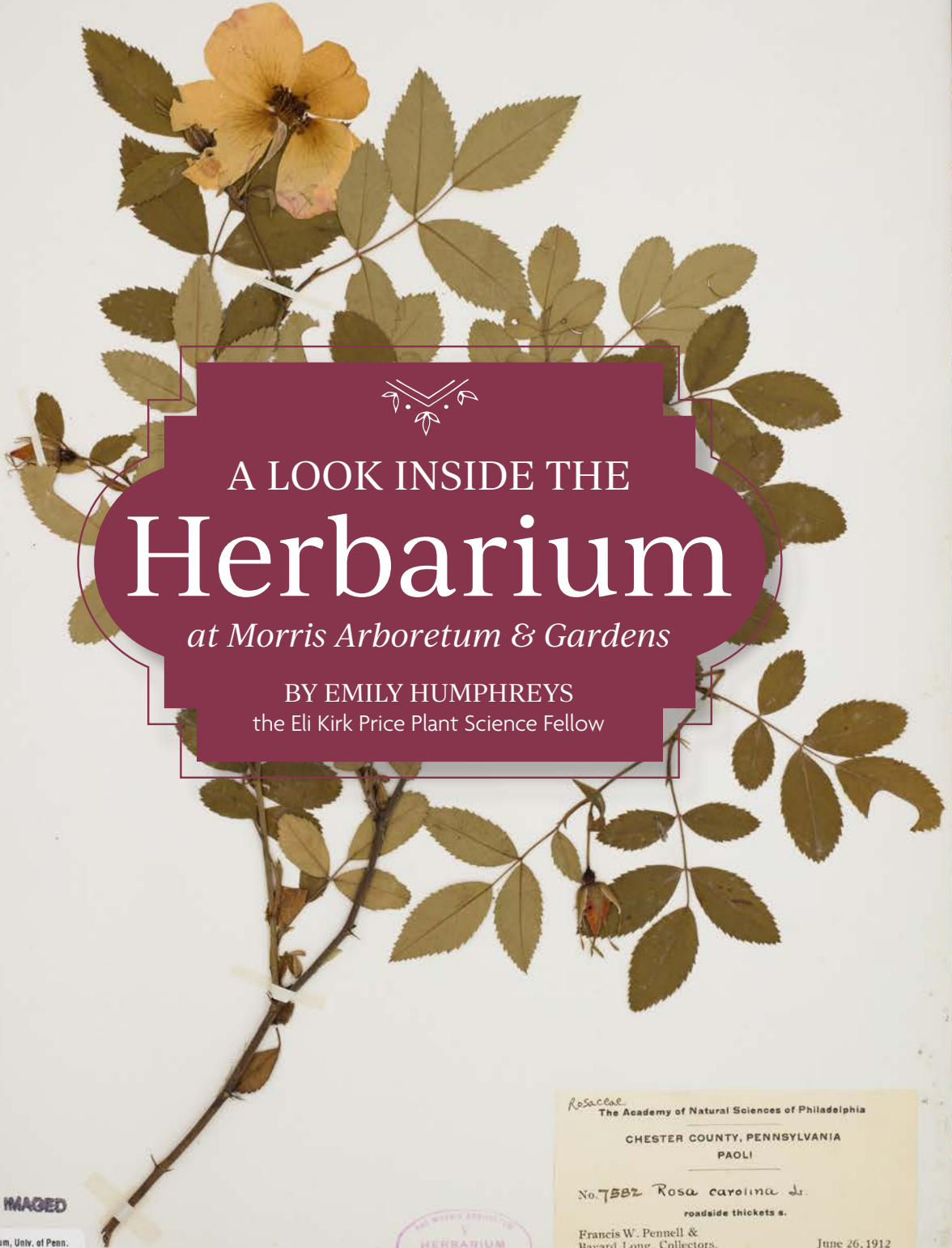
In addition to identifying patterns of dispersal, Skema and Le Péchon also found that most of the species diversity of dombeyoids in Madagascar evolved on the island in sympatric speciation. “Sympatry is when you have species diverging from one another in a shared area,” Skema noted. “It’s not that something comes in from somewhere else and you get a new species. [They’re] actually there living together on the island and diversifying.”

She adds that future research could look at geographic patterns in Dombeyoideae on a much smaller scale, for example, within Madagascar. By looking at how Dombeyoideae has evolved across the diverse habitats on the island, researchers may be able to uncover the drivers of sympatric speciation in the group.

Thinking about the impact of their work, Skema stresses that understanding the evolutionary and geographic history of one group of plants helps botanists understand and steward plants all around the world. “Everything is interrelated. ... If we want to understand how to conserve diversity, we also have to understand the processes of diversification.”



New research, just published in the journal *Ecology & Evolution*, by Morris Arboretum & Gardens’ Emily Humphreys and Cindy Skema, reveals that the anthers of the rare, native Virginia mallow close and change color after rainfall.



A LOOK INSIDE THE
Herbarium
at Morris Arboretum & Gardens

BY EMILY HUMPHREYS
 the Eli Kirk Price Plant Science Fellow

M.A.M. IMAGED
 Morris Arboretum, Univ. of Penn.

 HCAR0068596



Rosaceae.
 The Academy of Natural Sciences of Philadelphia
 CHESTER COUNTY, PENNSYLVANIA
 PAOLI
 No. 7582 *Rosa carolina* L.
 roadside thickets s.
 Francis W. Pennell & Bayard Long, Collectors. June 26, 1912

RECORDED IN FLORA OF PA. DATABASE



At Morris Arboretum & Gardens, every specimen has a story.

This one begins during September 1994 in China's Hubei province. A party of botanists from across the US and China traversed a set of steep cliffs searching for lacebark pine (*Pinus bungeana*). While the botanists found several trees, they all grew on slopes too steep and treacherous to navigate. Finally, Dr. Riming Hao of Nanjing Botanic Garden, in a great show of bravery, climbed one of the trees that stretched over the cliffside, collecting seeds and a cutting that were brought back to the Arboretum. Today, that cutting resides in the Morris's Herbarium.*



What's an herbarium?

An herbarium is a lot like a library, except it holds botanical specimens instead of books. Each specimen features a pressed and dried plant, which can include anything from a tiny clover, roots and all, to a dense tuft of moss, to a cutting of a pine branch like the one Dr. Hao collected. This plant is glued onto a special piece of herbarium paper. While the glue and paper are specially formulated to preserve the plants, the general process of mounting a specimen is not too different from a craft project. In addition to the plant itself, the specimen also carries information about that plant in the form of a label. The information on these labels varies widely, but most feature an identification for the plant, the location and date it was collected, and the name of the collector. Finally, some specimens have a little folded packet that is meant to hold any bits or pieces that fall off of the dried plant in its long tenure as a scientific asset.

How do scientists use herbaria?

With collecting, drying, mounting, preserving, and curating, maintaining an herbarium is a resource-intensive process. Over the years, many institutions have noticed the amount of work it takes and wondered: Why go to all the trouble? Still, though it may not seem intuitive, herbaria are the foundation of much of what we know about plants today.

For centuries, herbaria have allowed scientists to see plants they would never have access to otherwise. Many new species have been described because experts noticed specimens that didn't match any previously documented plant. Having specimens with associated locations allows scientists to compare plants across regions, and having specimens with associated dates allows them to compare plants across centuries and seasons. With all this data, researchers are asking complicated questions: As the Earth warms with climate change, have plants started flowering earlier? How closely related are different populations of the same species? Do specimens with more defensive chemicals have less insect damage?

Technological breakthroughs have amplified the power of herbaria. Many specimens are centuries old. When people were collecting many of these specimens, the structure of DNA was still unknown. Today, herbarium specimens are a widely used source of DNA for sequencing, allowing researchers to better understand plant evolution. This history begs the question: What information do these specimens contain that we can't even begin to fathom today?

Technology has also allowed specimen data to be accessed far more easily than ever before. Across the world, efforts are underway to digitize herbarium specimens. Digitization typically involves taking a high-resolution image of the specimen and transcribing all the information on the specimen's label. In the past, if a researcher was interested in viewing a specimen, they would either have had to travel to the herbarium where it was housed or have the specimen shipped to them on loan. Now researchers can go online, search for specimens across herbaria, and download images and data in seconds. This has allowed for comparative research across the tree of life on a scale that was never possible before.



The collection contains more than 25,000 specimens, all of which have been digitized. From pressed orchids to parasitic mistletoe, the Herbarium hosts a diverse array of plants.

Meet the Morris Arboretum & Gardens Herbarium

In a bright room in the attic of the Widener Welcome Center lives Morris's Herbarium. The collection contains more than 25,000 specimens, all of which have been digitized. From pressed orchids to parasitic mistletoe to oak branches with acorns, the Herbarium hosts a diverse array of plants.

Some of these specimens were brought back from collecting trips like the one to China in 1994. Morris botanists and horticulturalists, along with collaborators from other institutions, would collect interesting plants from the wild to add to the living collection of the Arboretum. In addition to seeds for propagation, they would collect specimens to dry and add to the Herbarium. Because of this history, many of the plants thriving in the Arboretum today have corresponding wild-collected specimens in the Herbarium.

In addition to plants from around the globe, the Morris's Herbarium has particularly strong representation of the Pennsylvanian flora. Many Morris botanists, including current John J. Willaman Director of Plant Science Dr. Timothy Block, have specialized in studying and collecting our state flora. That legacy is evident today; roughly 78 percent of the Herbarium's specimens were collected in Pennsylvania.

The Herbarium is open by appointment and serves as an active research collection, sending out loans and welcoming researchers who come to look at specimens. Still, this isn't the only way that specimens can be accessed. Digitized versions of our Herbarium specimens can be found [online](#). Next time you come to Morris Arboretum & Gardens, try searching for some of the species you see. You might just stumble across the story of a dedicated botanist who went out on a limb to collect seeds from a pine tree.

***Thank you to Dr. Lulu Korsak for uncovering the story of the *Pinus bungeana* specimen.**

Top: Glue is applied by hand to a specimen leaf. Center: Newly glued specimens dry after mounting. Bottom: Lady slipper specimens (*Cypripedium*) sit on top of cabinets that house specimens.



SATELLITE

Technology Will Make Identifying Plants Easier

One day, in the not-too-distant future, you'll be able to use your cell phone to get information about each woody plant at the Morris Arboretum & Gardens.

We are using GPS technology to map each of the more than 11,000 accessioned plants of the living collection within the Morris's 166 acres. The project is a bit laborious, as staff members use a Global Navigation Satellite System (GNSS) receiver/antenna and UHF radio-assisted corrections to do the mapping. The range pole is placed next to the base of a tree, and satellite technology pinpoints the location to within a centimeter. So far, staff have geolocated about a thousand plants.

The project, known as the Morris Arboretum Plant Collection and Management Project, is funded by a three-year grant from the Institute of Museum and Library Services (IMLS). An outcome of this project will be an application that visitors can use to identify the plants in the collection and learn more about them.

"This new application will be very user-friendly," said Plant Collections Manager Pam Morris Olshefski, who is leading the project. "The plant locations will be displayed on a high-resolution aerial photograph of the Morris landscape, enabling the visitor to see exactly where they are on the grounds."

The system will also provide the staff with a precise way to locate specific plants in the living collection, facilitating research, plant health management, and curatorial activities.

"You'll be able to walk through the garden and know exactly what you're looking at," Morris Olshefski said. "It will give you information about the plant, a photo, whether it's wild-collected or what its native range is. It will be very interactive and people who want to learn more about our plants will be able to do so."

Top: Global Navigation Satellite System receiver/antenna. Center: The team maps a tree by placing the range pole at the base. Bottom: The team checks the information on the range pole.





SAVING THE

American Chestnut

BY BILL CULLINA, *the F. Otto Haas Executive Director*

The Chestnut Hill neighborhood in which Morris Arboretum & Gardens resides is named after the magnificent American chestnut (*Castanea dentata*) that once forested its knolls and slopes. We have photographs of several wizened old trees that graced our grounds prior to 1915, the year the last of our local trees succumbed to chestnut blight.

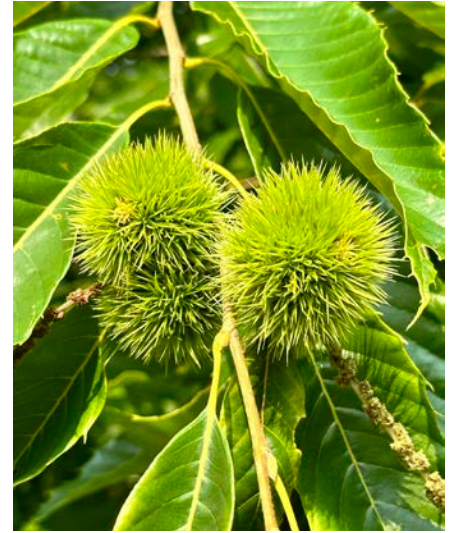
In fact, tradition has it that Lydia Morris located our Step Fountain near a huge old chestnut as a memorial to her brother John because it was his favorite tree. Sadly, it died a year later. This virulent parasitic fungus (*Cryphonectria parasitica*) was accidentally imported on Asian chestnuts brought into New York City in 1904 and began to spread like wildfire through native stands. The trees had virtually no immunity to the disease, and by 1940, there were practically no trees left through its native range from Maine to Mississippi. American chestnut was a remarkable tree, and the introduction of this disease was, in my opinion, the worst ecological disaster that has befallen our eastern forests since the arrival of European colonists.

IMPORTANT STAPLE

Chestnut is unusual for several reasons. It is both shade-tolerant and fast-growing, so it could become the dominant tree in both regenerating and old-growth forests. Early summer flowers produce copious quantities of pollen favored by bees and beetles. It produces large crops of highly nutritious nuts every year, unlike oaks, beeches, hickories and pines that might have a large crop only every third or four season. For this reason, it was an important staple for Indigenous peoples as well as myriad mammals and birds. Chestnut wood is very strong and highly decay-resistant, so it was a preferred species for timber framing, siding and fence posts.



AMERICAN CHESTNUT
(*Castanea dentata*)



Above left: View of American chestnut tree in English Park, spring 1911. Above right: Closeup of the hybrid chestnut tree's spiky seed balls.

I worked for a time at the Connecticut Agricultural Experiment Station, where work was underway on virus-infected (hypovirulent) strains of *Cryphonectria*. A particular species of mycovirus has become widely established in Europe and has largely controlled the disease in European chestnut (*C. sativa*). Unfortunately, this approach has not been successful in the US, as a combination of high genetic variability among strains of *Cryphonectria* and high susceptibility of American chestnut to the disease has made the virus ineffective.

Crossbreeding the American species with blight-resistant Asian chestnuts does confer immunity, but first-generation hybrids are small, spreading trees like their Japanese or Chinese parents. We have several of the original crosses of these growing behind the Horticulture Center, and they are great nut trees but a poor substitute for true American chestnut in other respects. The [American Chestnut Foundation](#) has been working on backcrossing these hybrids and is now crossing these resistant seedlings onto American chestnuts. It takes between seven and 10 years for seedlings to flower, but we have a fine example of a sixth-generation seedling growing on the slope above the Dorrance Hamilton Fernery as you exit the Widener Woods (photo at

left). This tree is now 16 years old, 18 feet tall and has begun to flower well. It is visually indistinguishable from American chestnut and has not shown any blight susceptibility to date.

PROMISING RESEARCH

Another promising line of research was pioneered at the State University of New York College of Environmental Science and Forestry in collaboration with the American Chestnut Foundation. In 1990, a gene from wheat was inserted into an American chestnut seedling. This gene produces an enzyme that quickly breaks down oxalic acid—the chemical the fungus uses to kill the tree. This first genetically modified tree—Darling 58—has been making its way through the evaluation and testing process with USDA for 25 years, and it is hoped that the tree will be deregulated, or approved, for release very soon. The Morris is on the list to receive some of the first Darling 58 offspring when they become available so we can test its performance and use it as an educational tool. Should we receive seedlings, we plan to plant one near the Step Fountain in homage to both John Morris and his favorite tree.

It takes between seven and 10 years for seedlings to flower, but we have a fine example of a sixth-generation seedling growing on the slope above the Dorrance Hamilton Fernery as you exit the Widener Woods.

KEEPING AN EYE ON BEES

Monitoring Program Studies Diversity

BY RYAN DRAKE, McCausland Natural Areas Manager

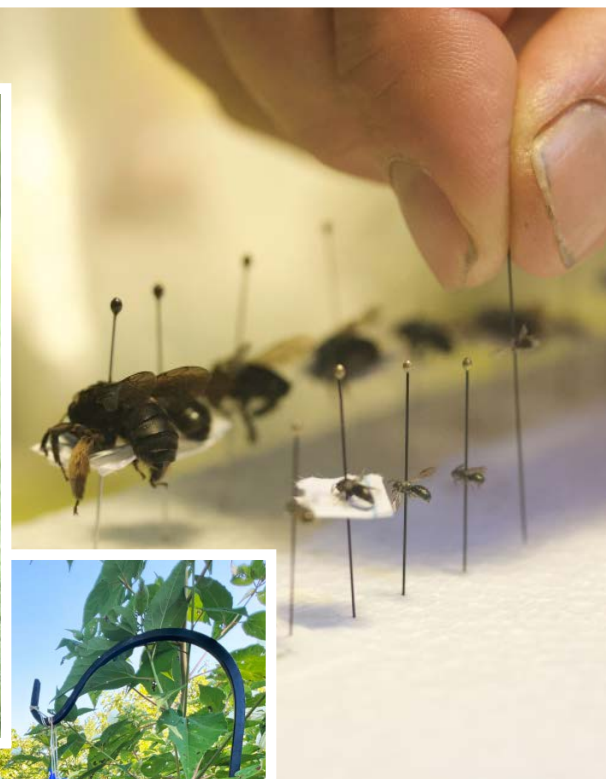
Have you noticed a blue vane trap hanging around the Morris Arboretum & Gardens? It's part of the [Pennsylvania Bee Monitoring Program](#), which studies wild bee diversity across the state. The decline in populations worldwide has called attention to better understanding the diversity, distribution, and abundance of wild bee populations.

Pennsylvania hosts more than 437 species of bees. Of these, 23 are not native to North America, including the honey bee, *Apis mellifera*. Just as there is a seasonality of blooms in the landscape, so too is there a seasonality of bee species. Most bees come out for a brief period, then disappear until the following year. There is a variety of nesting habits, flower visitation, and social behaviors. To capture this diversity, we monitor our bees throughout the year.

The bee monitoring program uses three different trapping techniques to catch the widest variety of bee species. The blue vane trap hangs two to three feet from the ground, and plastic bowls painted either white, blue, or yellow are laid on the ground in a transect, attracting bees with bright colors. The final trapping technique is netting, where volunteer monitors use butterfly nets to catch any other unique bees they can find in the area.



Caroline Mertz, the Hay, Honey Farm Natural Areas intern, uses a butterfly net to catch unique bees.



Above: Pinned bee specimens. Left: A blue vane trap attracts bees with its bright color.

These techniques allow monitors to observe the fullest range of wild bee species in an area so they can track changes in population distributions and diversity in Pennsylvania.

Last year at the Morris Arboretum & Gardens, we found a total of 56 different species of bees on the property. Eighteen of those collections were county records, bees that were previously unseen in the two counties that make up the Morris. As we continue to

monitor wild bees this year, we are particularly looking for specialist bee species—ones that consume pollen from one plant family, genus, or even species. We are also looking for kleptoparasitic bees, often called cuckoo bees, which lay their eggs in other bees' nests and do not visit flowers to collect their own pollen. As these bees are harder to find, we expect that the total number of bees we have at the Morris is much higher.

DONOR PROFILE

Garden Railway Gift to Establish a New “Chestnut Hill Station”

When referring to the Morris Arboretum & Gardens’ Garden Railway, Radclyffe “Mike” Thompson says, “It is very, very cleverly done.” Longtime Morris members Mike and his wife Maria have recently made a \$300,000 commitment to build a new train station at the Garden Railway that will serve as the hub for the staff and volunteers who keep the trains running. Their gift will also establish an endowment to ensure ongoing upkeep and maintenance for the new structure that will replace the tent where visitors often find the trainmaster answering visitors’ questions or replacing parts on trains to keep them running.

The 2023 season marked the 25th anniversary of the Garden Railway. What was originally envisioned as a temporary exhibit has turned into one of the most-visited areas of the garden. With the popularity of the Holiday Garden Railway and HGR: Nighttime Express, December is the month with the greatest number of visitors. Having a new building to support this exhibit and the people who make it possible is intended to ensure another quarter-century of delight for visitors of all ages.

Maria, who is an architectural historian, remarked on the Morris Arboretum & Gardens’ engagement of multiple generations. She mentioned the *Out on a Limb* tree canopy walk and the Garden Railway as key opportunities for two—often three—generations to equally enjoy the experience. Mike names a key ingredient for this effect. “The buildings (in the exhibit) were designed and made to be accurate but only accurate to a point—a point of whimsy.” The couple agrees that the new train station that will be human-scale (not G-scale like the Garden Railway display) will add to the whimsy with a playful design that is inspired by the landmark Chestnut Hill West Station newsstand on Germantown Avenue.

The Thompsons have been friends of Morris Arboretum & Gardens since the late 1970s. Maria was first to become involved through her garden club, The Weeders, and through her service as treasurer for the Herb Society. Mike enjoyed sharing walks with Maria early on, and his affiliation grew over the years by taking courses at Morris, including Rose Pruning and Lawn Maintenance. In more recent years, the two have traveled to Scotland and New Zealand on Morris-sponsored trips. Both are current members of the Directors’ Guild and Mike serves on the Development Committee and Maria serves on the Horticulture Committee.

Visitors of all ages will find great joy in this new feature that will take the Garden Railway operations to a new level. Thank you, Mike and Maria!



Longtime Morris members Mike and his wife Maria have recently made a \$300,000 commitment to build a new train station at the Garden Railway that will serve as the hub for the staff and volunteers who keep the trains running.



The new Garden Railway train station's playful design is inspired by the landmark Chestnut Hill West Station.

A MILLER'S TALE

Springfield Mills Volunteer Tells of Lessons Learned as the Grandson, Son of a Miller

BY MELLANY ARMSTRONG, *Communications Coordinator*

Gino Caporizzo's large, tanned hand pats a wood beam inside the historic Springfield Mills at Bloomfield Farm. The tour group he's leading learns very quickly why he touches it so lovingly.

"My father and grandfather were millers," he says proudly, his accent hinting at his heritage in southern Italy.

Caporizzo has been a volunteer guide and maintenance worker at Springfield Mills at Morris Arboretum & Gardens for about five years. But his kinship with mills goes back to before World War I with his grandfather, Luigi Caporizzo, who in his mid-20s became an apprentice at one of two grist mills in his hometown of Paternopoli in the province of Avellino, Campania.

"When the war broke out, he went into the service, and when he came back he became a partner in the grist mill," said Caporizzo. Powered by water from the nearby river, the mill ground wheat and corn for local residents. Once electricity became available, the mill was moved close to the center of

“

When the war broke out, he went into the service, and when he came back he became a partner in the grist mill.”

GINO CAPORIZZO





Above: Gino Caporizzo as a child, with his father Mario in Paternopoli in the late 1950s. Right: Luigi Caporizzo, Gino's grandfather, in 1964. Below: Gino Caporizzo leads a tour of the mill.



town, but the millstone technology was still used to grind grains and corn as well as acorns for animal feed. Luigi Caporizzo's typical workday started early in the morning. He labored at the mill until midday, then worked alongside his family on one of two farms they owned.

As Gino Caporizzo takes visitors through the 1761 mill situated along the Wissahickon Creek, his thoughts aren't far from his father and grandfather and their vocation that taught him so much.

NEXT GENERATION

"My dad, Mario, became an apprentice and a helper for his dad," said Gino. "As a teenager, he would help his dad at the mill after school." Caporizzo remembers both men as being close to 6 feet tall and able to lift burlap sacks of grains weighing more than 100 pounds with ease.

During World War II, Mario Caporizzo fulfilled his military duties by working as a miller while stationed in Verona and Caserta. When he returned to Paternopoli, he took on the daily operation of the mill, allowing his father to pull back from the business. Mario oversaw the construction of a new mill that incorporated a steel roller mill along with the two millstones bays.

Mario did all of the maintenance work himself, including sharpening the millstones, known as "dressing." It was a dangerous process with flying shards of stone and metal, and Mario wore safety glasses and no gloves, Gino recalled.

"Both my father and grandfather could point out the shards embedded in their hands," Gino said. "My father would often say it was the price that one would pay for being a miller."

Gino was introduced to the job of milling in his early teens. His father would hand him the keys and send him to help customers who showed up after hours.

"My father had very specific instructions. You had to weigh the grains. Write in the ledger the amount of wheat and also the date," he said. "On normal business days, most customers would wait as their grain was milled."





“Growing up, I respected and valued my father’s work ethic, patience, and persistence, and they quickly became the foundations of my aspirations. Today, everything that I have been able to accomplish is due to being the son of a miller.”

GINO CAPORIZZO

CREATING A NEW LIFE

Eventually, milling could not sustain Mario Caporizzo’s growing family, so he brought them to the US in 1963, when Gino, the oldest of four children, was 13. Gino tears up as he tells this part of the story.

“You know, the struggle that he was faced with, and at times I would put myself in his own shoes,” he said. “You come here at 42 years old, without having specialized type of work, but as a miller, right? Where are you going to go, what are you going to do? You had nothing and you start from scratch. It’s a subject that is very dear to me.”

Mario became a construction worker and then a stonemason. He made it clear to his children that they needed to do their best in school.

“For me, high school was a little bit tough, but I stuck to the guns and pursued my dream,” he said. “I will always carry this famous loving quote from him. When he talked to all four kids, he would say, ‘Remember, we did not come here for a change of air.’ That line has been with me and the rest of the family since that day.”

Gino earned an electrical engineering degree from Drexel University and has worked in the telecommunications industry for more than 35 years. His siblings all have college degrees as well, something Mario was very proud of.

“At times during a family dinner, he would often share his thoughts,” said Gino, “and he would quietly say, ‘Looks like we made it.’”

FEELING AT HOME

The time he spent as a miller was never far from Mario’s mind.

“Any place that we went, he always looked for mills,” said Gino. A favorite spot was Nolt’s Mill in Bird-in-Hand in Lancaster County, Pa. “We always think of the time that my dad went inside and said he felt at home.”

Gino Caporizzo has expanded his knowledge of mills in this area and enjoys being a member of both the [Society for the Preservation of Old Mills](#) (SPOOM), and of TIMS—[The International Molinological Society](#), the only organization dedicated to mills on a worldwide scale. Molinology is the study of mills and other devices that use energy for mechanical purposes such as grinding or sawing. Gino met Morris mill volunteers at a local SPOOM event.

“Whenever we do work at the Springfield Mills, I always keep thinking to myself if my father was here, he would have enjoyed this,” he said.

Gino Caporizzo looks to his roots for his successes today.

“Growing up, I respected and valued my father’s work ethic, patience, and persistence, and they quickly became the foundations of my aspirations,” he said. “Today, everything that I have been able to accomplish is due to being the son of a miller.”

In Color Birding

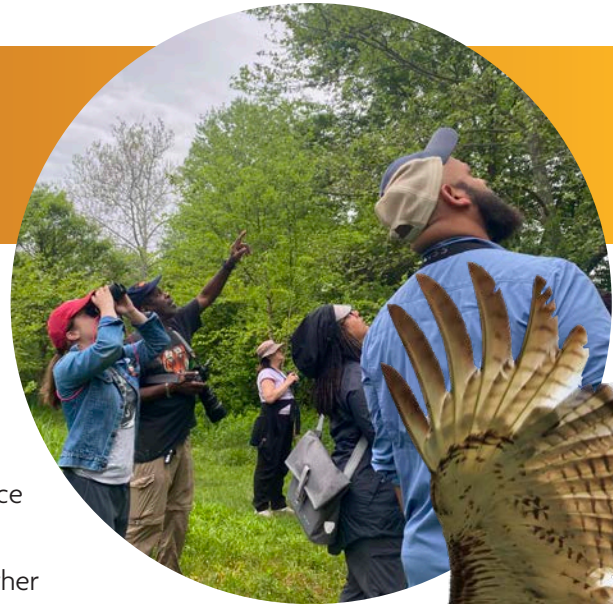
AT THE MORRIS ARBORETUM & GARDENS

On Memorial Day in 2020, a black man named Christian Cooper was birdwatching in New York City’s Central Park when a white woman called the police on him. This incident—which occurred just a few hours before George Floyd was killed in Minneapolis—highlighted the perceptions that many of us hold about which activities are appropriate for which racial groups, as well as the challenges that people of color face in accessing and feeling safe in public natural spaces.

In solidarity for Christian Cooper, birders across the country came together to create [Black Birders Week](#), from May 31 – June 5, 2020.

Ever since, the movement to promote and support people of color who appreciate birds has spread. Here in Philadelphia, the [In Color Birding Club](#) was founded in 2021. The Morris Arboretum & Gardens stands in support of the In Color Birding Club and their mission to make the birding experience a positive one for BIPOC folks and their allies. We were so pleased to welcome the group for a birding trip at the Wetland during peak bird migration this past May, and we hope to partner again in the future as we work toward inclusivity and equity here at the Morris.

To learn more about In Color Birding and to support their important work in underserved communities of color, visit incolorbirding.org.



Above: The In Color Birding Club at Morris Arboretum & Gardens.



WELCOME, INTERNS AND FELLOWS!

We are excited to introduce this year’s crop of interns and fellows who have a passion for plants. Interns and fellows spend nine to 12 months working alongside professionals in their areas of interest, taking part in full-day monthly trainings, and gaining experience in a premier horticultural institution. The 10 early career professionals pictured attended the Regional Intern Outreach Day this summer at Haverford College’s Arboretum.

Left to right: Millie Arevalo, The Walter W. Root Arboriculture intern; Natalie West, The Alice & J. Liddon Pennock Jr. Horticulture intern; Ian Daly, The Martha J. Wallace Plant Propagation fellow; Clara Roth, The McLean Contributionship Youth & Visitor Education intern; Kass Combs, The Hay, Honey Farm Natural Areas intern; Carly Moyer, The Alice & J. Liddon Pennock Jr. Horticulture intern; Olivia Harner, Charles S. Holman Jr. Rose & Flower Garden intern; Colin Battis, The McLean Contributionship Adult Education intern; Matt Walker, The Martha S. Miller and Rusty Miller Urban Forestry fellow; Aidan McGookin, The Walter W. Root Arboriculture intern



Moonlight & Roses

JUNE 2, 2023

Moonlight & Roses took place on Friday, June 2, with more than 525 guests in attendance. This year we honored Nelly Jimenez-Arevalo, executive director and CEO of [ACLAMO](#), along with the [Make the World Better Foundation](#). The evening began with a VIP reception with remarks from University of Pennsylvania President Liz Magill, followed by cocktails in the newly renovated Rose Garden. The gala concluded with dessert and dancing, featuring a live band in our signature clear-top tent. Total revenue raised from this year's event was \$313,875, with all net proceeds supporting the Morris's operations. Thank you to everyone who attended and supported the event, especially top sponsors Independence Blue Cross; Johnson, Kendall & Johnson; Penn Human Resources; and Penn Medicine.

Save the date for next year's Moonlight & Roses, June 7, 2024.





1. A little rain didn't stop the festivities. 2. Voltaire and Danielle Blain. 3. Kyle and Elizabeth Salata, Wilfreta Baugh, Gabrielle Baugh. 4. Rhonda Cates and Tom Clifford. 5. Jeff Rowland and Tracy Wood. 6. Maria and Mike Thompson, Laura and Kenneth Mitchell, James and Pam Hill. 7. Bill Cullina with members of honoree organization Make the World Better – Branden Grove, Jeffrey Tubbs, Connor Barwin, and Jesse Rendell. 8. Jeffrey Tubbs and Jesse Rendell from honoree organization Make the World Better, University of Pennsylvania President Liz Magill, honoree Nelly Jimenez-Arevalo. 9. Moonlight & Roses honoree Nelly Jimenez-Arevalo with her family. 10. Fiona Lapham, Sarah and Chris Merrick. 11. Guests dancing to the live band.

Photos by Eddy Marengo.



A young child with light brown hair, wearing a green and white striped shirt and grey shorts, is walking through a living willow tunnel. The tunnel is constructed from numerous thin, green willow branches that arch over a path of brown mulch. The background shows a lush green lawn and more trees.

The Willow Wander

Patrick Dougherty's popular, though temporary, willow structure *Loop de Loop* had to be taken down because of age in November 2022, so the Morris staff decided to install a new willow exhibit in its place. Unlike the Dougherty sculpture that used dried willow stems, the Morris team adapted an ancient method used to make living fences to create a serpentine live willow tunnel and dome.

About 300 willow stems 10- to 18-feet long were used to construct the 35-foot tunnel and 18-foot diameter dome. We cut the largest stems that form the frame of the dome from a flame willow (*Salix* x 'Flame') across from the Swan Pond. The remaining willow was purchased from the [Vermont Willow Nursery](#), a small nursery in northern Vermont that specializes in living willow fences and structures.

The willows were planted in late March to early April 2023 and were kept damp using a soaker hose while the stems rooted. The willow will be lightly sheared during the growing season to encourage a thick, verdant canopy that retains the original shape.

A large pond filled with many colorful koi fish. The fish are in various colors including orange, white, yellow, and black. They are swimming in clear water.

koi

AT MORRIS ARBORETUM & GARDENS

We decided to bring back koi to the Morris this spring to provide enjoyment for our guests. We worked with Hanover Koi Farm of Hanover, Pennsylvania—one of the largest koi breeders in the US—to select individuals for release into the Swan Pond. Modifications to the pond's outflow were completed in late April so the koi would remain in the pond, and in May, fourteen 7- to 9-inch, one-year-old fish were introduced.

Koi are colorful, selectively bred carp developed in Japan over the past 200 years. The name koi means love or affection in Japanese, and the more formal name for them, *Nishikigoi*, means living or swimming jewel. Koi became very popular in the US during the late Victorian era, and John and Lydia Morris kept koi at Compton for many years.

The koi eat special pellets once a day, although they primarily feed on plants and small insects they find in the mud at the pond's bottom. They can grow up to 3 feet, and can live 25 to 40 years or more.

NEW FACES IN EDUCATION

Clara A. Reyes

Assistant Director of Youth and Visitor Education



Clara's professional background is in direct youth service in arts and arts administration, so a venture into environmental sciences and horticulture is a change for her. However, her guiding principle is that educational opportunities for children should help them be good human beings and global citizens first.

“With this philosophy, I hope that the youth who come here can have foundational experiences that they will remember forever, as they become the next generation of leaders,” she said.

Clara is most excited for the opportunity to expand access to the Morris Arboretum & Gardens—specifically to Black and Brown communities in Philadelphia and across the commonwealth who may not be familiar with the Morris.

“These gardens are a jewel in Philadelphia’s crown, and I hope that people from all walks of life can feel included in this space,” she said

Megan Nguyen

Education Administrative Assistant



Megan is responsible for scheduling and coordinating tours, school groups, and working with our garden educators.

“I am thrilled to be a part of the team and I look forward to learning all about the amazing work that’s being done here,” she said.

Megan comes to Morris Arboretum & Gardens from Weavers Way Co-op, specifically Weavers Way Farms (also known as Henry Got Crops) in Roxborough. She worked in the Farm Market selling beautiful, locally grown produce while also working in the fields cultivating and harvesting chemical-free fruits and vegetables. Before that, she was a rock-climbing instructor, bus operator, and student programs coordinator. Her academic background is in biology, and she is an enthusiastic birder.

EVEN MORE ACCESSIBLE

The Morris is proud to increase accessibility with the addition of three complimentary mobility scooters. The scooters in this pilot program are designed to bring the joys of the gardens closer to those who need a little help getting around. The scooters are available on a first-come, first-served basis at the Widener Welcome Center.



▼ CAR SHOW

The Morris Motor Show revved up summer in the gardens with more than a dozen vehicles wowing visitors in the Azalea Meadow. The cool cars on display included a 2008 Ferrari 612 Scaglietti OTO, a 1954 Chevrolet Corvette, and a 1938 Jaguar SS Drophead Coupe.



▲ PENN GLEE CLUB

The celebration of Morris Arboretum & Gardens' 90th anniversary as a public garden began on a high note as the Penn Glee Club entertained guests on a cool day in April with songs from previous decades.

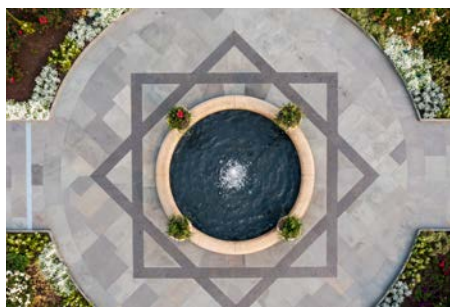
► EXUBERANT BLOOMS

Exuberant Blooms: A Pop-Up Garden jazzed up the Morris with gorgeous annuals and tropicals blossoming throughout the summer and fall. The seven large paisley-shaped "islands" showcased more than 11,000 colorful plants that attracted butterflies, hummingbirds, and other pollinators. The display was sponsored in part by Ball Horticultural Company and Powder Mill Foundation.



► NEW LOOK FOR ROSE GARDEN

Thanks to generous donors, permeable bluestone hardscaping was added to the historic Rose Garden to greatly enhance the appearance and accessibility of this favorite spot for all visitors to enjoy well into the future. The new look was celebrated with a ribbon cutting on June 20.



Photos by Rob Cardillo



◀ NOW STREAMING!

See the Morris in all of its glory in a new way—on TV! [Morris Arboretum & Gardens' episode](#) (Season 1 Episode 6) of *The Green Chronicles* is now available on Discovery+. The show can be accessed as part of the Discovery+ subscription service, and you can also view the episode if you have a subscription to Magnolia Network or Max.

OCTOBER IS

ARBORETUM MONTH!

October is full of fun at Morris Arboretum & Gardens! The annual **Scarecrow Design Contest** is back for its 16th year with the theme “The 1990s” in celebration of our 90th anniversary as a public garden. Scarecrows will be on display throughout the Morris from October 1 through Halloween! The most popular entry, as selected in online voting by our visitors, wins the top prize of \$250. Scarecrow frames are generously provided by Tague Lumber. Also, join us for a costume and candy parade **Saturday, October 28, 1 to 3 pm**—show us your costumes and walk among the trees for treats. The parade is free with Morris admission.



Photos by Cynthia Schemmer

SAVE THE DATE

Member Plant Giveaway

Member Plant Giveaway Weekend for all Members:

Saturday, May 18, 2024 • 9:00 am – 1:00 pm

Sunday, May 19, 2024 • 9:00 am – 1:00 pm

Premier Members First Access Night:

Friday, May 17, 2024 • 4:00 – 7:00 pm

Pennsylvania native perennials and exotic shrubs were among this year’s offerings at our Member Plant Giveaway in May. For three days, members were welcomed to Bloomfield Farm to select their plants and celebrate the love of gardening. If you’re not already a member, consider joining at morrisarb.org/membership to receive this fun and unique benefit!



Photos by Eddy Marengo

morris arboretum & gardens

Courses

Less Lawn

Did you know that an area the size of Washington state is presently mowed turf in the United States? This makes lawns the largest irrigated “crop” in the country and the impact of their ecological footprint is truly staggering.

For well over 100 years, an evenly trimmed lawn has been the commonly accepted ideal for defining outdoor spaces in public and home landscapes. But these days, we know that we can ask for more from lawns and gardens. Our front and back yards don't have to be predominantly lawn—they can be beautiful and functional ecological communities that feed pollinators, help manage water, filter pollutants, and more.

Open to home gardeners and aspiring or established landscape professionals, the Morris Arboretum & Gardens **Less Lawn Lecture Series** goes far beyond the “why” and well into the “how,” providing practical information for transforming part or all of your lawn into a beautiful space of ecological value. From meadow to woodland to native perennial shade garden (and more), when taken as a whole, this series will provide participants with a thorough understanding of the required steps toward tangible alternatives to lawn that embrace natural processes and that will work both for you and for nature.

Participants can sign up for each class separately or join for the whole series at a discounted price. All **Less Lawn** lectures have been submitted to carry LA CES CEUs for landscape architects and ISA CEUs for registered arborists.

The Morris Arboretum & Gardens Lecture Series is supported in part by the William Klein Lectureship Endowment, the Laura L. Barnes Horticultural Lecture Fund of The Philadelphia Foundation, and the Byron & Elizabeth Lukens Lecture Endowment.

EACH SESSION: Members: \$35 | Non-members: \$40

SERIES PRICE: Members: \$225 | Non-members: \$260

Our front and back yards don't have to be predominantly lawn—they can be beautiful and functional ecological communities that feed pollinators, help manage water, filter pollutants, and more.



Breaking Bad Habits

JEFF LORENZ

Founder, Refugia Design

Tuesday, November 7 | 7:00–8:30 pm

Lawns into Meadows

OWEN WORMSER

Owner, Abound Design; Author, Lawns into Meadows

Tuesday, November 14 | 7:00–8:30 pm

Referencing Wild Plant Communities

RYAN DRAKE

McCausland Natural Areas Manager, Morris Arboretum & Gardens

Tuesday, November 21 | 7:00–8:30 pm

Case Studies & Next Steps

LUCY DINSMORE

Owner, Plant Lady Lucy LLC

Tuesday November 28 | 7:00–8:30 pm



Making Woodland Restoration Possible

ANDREW CONBOY

Founder, Colonial Canopy Trees

Saturday, December 2 | 10:30 am–12:30 pm

Living in the Liberated Landscape

LARRY WEANER

Founder & Principal, Larry Weaner Landscape Associates

Tuesday, December 5 | 6:00–8:00 pm



Creating Connections *Design-Centered Conservation*

ANDREW KIRKPATRICK

Director of Stewardship, Willistown Conservation Trust

Monday, December 11 | 6:00–7:30 pm

NEW ADVISORY BOARD MEMBERS

The Morris Arboretum & Gardens is pleased to introduce the newest members of its Advisory Board, appointed in July 2023.



Lydia Allen Berry is assistant vice president, privacy counsel at Lincoln Financial Group. She earned her JD from Georgetown University Law Center and her undergraduate degree in psychology from Harvard University. An avid gardener and floral exhibitor, she serves in an advisory role on committees of the Philadelphia Horticultural Society. She is also active with the Penn Towne Links, Our Garden Club of Philadelphia and Vicinity, and served on the committee for the Barnes Art Ball. Lydia is a longtime resident of Chestnut Hill, where she resides with her husband and daughter.



Pamela Gagne has been a member of the Morris Arboretum & Gardens for nearly three decades and served for many years on the Moonlight & Roses Committee as well as being a member of the Directors Guild. As an attorney, she worked primarily in the appellate area, but limits her practice now to mainly pro bono matters. She is a graduate of Vanderbilt University and the Penn State Dickinson School of Law. She is a devoted volunteer to many causes, including William Penn Charter School, St Paul's Church, and the Random Garden Club. Pam and her family reside in Wyndmoor.



Theodore A. McKee is highly accomplished member of the judiciary, and a sought-after advisor and volunteer for an array of nonprofit educational and arts institutions, as well as for national think tanks and other initiatives. He was sworn in as a judge of the US Court of Appeals for the Third Circuit on June 20, 1994, and became chief judge of that court in 2010. He graduated magna cum laude from Syracuse University College of Law. Most recently, among many other accomplishments, Judge McKee was appointed to serve as a member of the National Academy of Science Committee on Law and Justice. He and his wife reside in Mt. Airy.



Susan Putnam Peck has been a devoted member, friend, donor, and volunteer of the Morris Arboretum & Gardens for many years. She served on the Morris's Advisory Board from 2003-2012, and again from 2013-2022. She served as vice chair from 2009-2012 and also served as chair of the Plant Science Committee. Susan received her doctor of science degree from the Harvard School of Public Health, and she remained at Harvard for the next eight years working at the Center for Risk Analysis. Since 1999, Susan has resided in Chestnut Hill with her husband and three children.



Lewis "Lew" Heafitz joins the Morris's Board as its newest global advisor. He is a graduate of Penn's Wharton School, having earned his BS in Economics in 1958. Shortly thereafter, he joined the US National Guard and then joined Citicorp's overseas division in South America. Lew started his own industrial development firm in the 1970s, and in the late 1990s he became the principal and co-founder of Equity Industrial Partners (EIP) Corporation based in Needham, MA. EIP is privately held and is currently involved in more than 30 million square feet of property throughout the United States. Lew and his wife are residents of Fort Lauderdale and Boston, and they summer in Edgecomb, ME. He is one of the early founders of the Zell Lurie Real Estate Center at Wharton, where he currently serves on the executive committee.

IN MEMORIAM

Remembering Longtime Horticulturalist Iana Turner

BY KARMIN FAIZ, *Marketing Intern*

A 25-year-long chapter of dedication and growth came to a close on July 18, as the Morris Arboretum & Gardens family said farewell to a dear friend and retired horticulture staff member, Iana Turner. She passed away after a 12-year battle with multiple sclerosis. Her remarkable contributions and dedication left an indelible mark on the Morris's history.

Iana's journey began at Temple University, where she grew her passion for horticulture. Her connection with the Morris started in 1990, and her profound impact was soon evident as she climbed the ranks to become the Azalea Meadow's horticulture section leader in 1994. She was a driving force behind the Oak Allee, and she oversaw the creation and operation of the captivating Garden Railway, a beloved attraction that continues to draw thousands of visitors.

Her influence extended beyond the Morris's grounds. She assisted in establishing similar enchanting railways at prestigious institutions like the New York Botanical Gardens and the United States Botanic Garden in Washington, DC.

"Iana was an icon here at the Morris Arboretum and she will be sorely missed," said Vince Marrocco, the Gayle E. Maloney director of horticulture.

As the longtime leader of the horticulture volunteer group, she became a maternal figure to interns and volunteers. "Iana was always the mother hen to interns and volunteers," said one docent. "She watched over us, fed us and watered us, just like she did with her plants."

After retiring in 2015, Iana said, "The journey has been laden with challenges, yet deeply rewarding. While stepping away from my formal role, my desire to stay engaged remains unwavering. Volunteering and contributing in any way possible will be my continued path. From the inception of the Garden Railway, my heart has been intertwined with its existence, a connection that holds a special place in my heart." She continued to volunteer for the next couple of years, never fully leaving her second home.

A memorial service for Iana was held August 26 at the Morris. Her family suggests donations be made to the Arboretum in her memory.



“From the inception of the Garden Railway, my heart has been intertwined with its existence, a connection that holds a special place in my heart.”

IANA TURNER

Gardens, Wine, and Wilderness

A Tour of New Zealand

JANUARY 6-28, 2024

Morris Arboretum & Gardens is proud to partner for a ninth time with Garden Adventures Ltd. to offer a travel opportunity in January 2024 to experience the mystery, beauty, and hospitality of New Zealand. With New Zealand native and local landscape architect Richard Lyon and Bill Cullina, F. Otto Haas executive director of the Morris, you are invited to escape winter while you explore, learn, and relax in the gardens and natural wonders of this extraordinary destination. For further information, click [here](#) or contact Alison Thornton, Senior Associate Director of Development, at (215) 247-5777 x105 or alisonth@upenn.edu.



holiday

GARDEN RAILWAY

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 November 25. There is no surcharge for this experience during the Morris's regular business hours.

How can the Holiday Garden Railway be even more spectacular? See it at night! With laser lights in the trees and sparkling lights along the railway, HGR: Nighttime Express is a must-see.

SAVE THE DATE: Premiere Member Nights are November 30 and December 1!

HGR: Nighttime Express Dates

Thursday 5–6 pm	Friday 5–6 pm	Saturday 4:30–8 pm	Sunday 4:30–8 pm
		Nov 25	Nov 26
		Dec 2	Dec 3
Dec 7	Dec 8	Dec 9	Dec 10
Dec 14	Dec 15	Dec 16	Dec 17
Dec 21	Dec 22	Dec 23	

HGR: Nighttime Express Pricing

Member Adult: \$17

Member Youth (3-17): \$10

Member Child: \$0

Adult: \$22

Youth (3-17): \$12

Child: \$0



MORRIS ARBORETUM MEMBERSHIP



A Gift of All Seasons

Giving the gift of a Morris Arboretum 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, 9 am–5 pm.

To ensure your gift is postmarked by December 22, orders must be received by December 16.

Plan a Charitable Bequest

Throughout the Morris Arboretum & Gardens' 90-year history as a public garden, bequeathed gifts have proven to be an important source of individual support—the first being that from Lydia Thompson Morris. These gifts help to preserve and enhance the Morris's vast living collection, expand research, and increase educational outreach—strengthening our organizational commitment to the understanding of the environment and its changes.

When planning a gift, consider a charitable bequest. A gift from your will can be structured in a variety of ways. It can be in the form of cash or property, or a percentage of the remainder of your estate. Including the Morris Arboretum & Gardens in your will could be an advantageous component of your plans, reducing your taxable estate while furthering your philanthropic goals. Individuals who name Morris Arboretum & Gardens as a beneficiary in their will are recognized as members of the Lydia Morris Legacy Society and the Charles Custis Harrison Society for their generous support.



FOR INFORMATION, INCLUDING CUSTOMIZED LANGUAGE SPECIFIC TO YOUR GIVING, CONTACT:

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TRIBUTE & MEMORIAL GIFTS

The Morris Arboretum & Gardens is grateful to the following donors who made tribute and memorial gifts between March 1, 2023, and July 31, 2023.

In memory of Gail Beer

Michelle & Bruce Golden

In honor of Robert Clapham

Leigh-Ann, Steve, and KK Spokane

In honor of Sandra Clapham

Leigh-Ann, Steve, and KK Spokane

In honor of Melissa & Bill Cullina

Ann Poole

In honor of Edmund

Field Jr's Birthday

Jane, Peter, Matt, & Michele Elkes

In memory of Joanne B. Ford

Kenneth W. Ford

In memory of Johanna (Janet) Fulvio

Barbara Dibeler

In memory of Sally Gendler

Leslie Morris-Smith & Howard Smith

In memory of Paul Good

Patti Seave Adler

Craig Asche

David Holman

David O'Neil

Ava Seave

Allen Stayman

Franklin Tugwell

Nancy & Matthew Williamson

Jill & Merritt Willits

In honor of Irwin "Irv" Leventhal

Denise Maggetti Nowak

In memory of Sharon Church McNabb

James Fulton & Eric Rymshaw

Lisa & Mark Hastings

Dianne & Richard Hricko

Carol Isard

Sallie & Tom Jackal

Jeanne Jaffe

Lindsay & Steve Janes

Becky & Larry Johnson

Sara MacDonald

Debra Malinics

Linn Perkins Syz

In honor of Margaret O'Neill

Adrien & Chad Bernstein

In memory of Carol Pollock

Annie & Brian Nalence

In memory of John Rees

Susan Rees

In honor of Debbie

Rodgers & Paul Meyer

Anonymous (3)

Mark Delestadius

In memory of Mary Coyle Siller

Richard Siller

In memory of Iana Turner

Madelyn Ladner & Bob Gutowski