Volunteer
Morris Arboretum of the University of Pennsylvania

Volunteer is a newsletter published monthly for Arboretum volunteers.

The Morris Arboretum of the University of Pennsylvania is an historic public garden and educational institution. It promotes an understanding of the relationship between plants, people, and place through programs that integrate science, art, and the humanities. The Arboretum conducts four major activities: education, research, outreach, and horticultural display. As the official Arboretum of the Commonwealth of Pennsylvania, the Morris Arboretum of the University of Pennsylvania provides research and outreach services to state agencies, community institutions and to citizens of Pennsylvania and beyond.

Education: Liza Hawley, efhawley@upenn.edu or (215) 247-5777 ext 128
Garden Railway: Pam Morris Olshefski, pamela@upenn.edu or (215) 247-5777 ext 107
Grist Mill: Tom Wilson, wilsonth@upenn.edu or (215) 247-5777 ext 108
Horticulture: Pam Morris Olshefski, pamela@upenn.edu or (215) 247-5777 ext 107
Archives & History: Bryan Thompson-Nowak, bryan-tho@upenn.edu or (215) 247-5777 ext 281
Physical Facilities: Tom Wilson, wilsonth@upenn.edu or (215) 247-5777 ext 108

Information:
(215) 247-5777
www.morrisarboretum.org
100 E. Northwestern Avenue
Philadelphia, PA 19118

Volunteer
Lynn Weaver, Editor
Contributors: Deitra Arena, Joan Kober, and Joyce Munro.

Questions, comments, and submissions can be directed to the editor at edintern@morrisarboretum.org or mailed to the Arboretum Attn: Education Intern.

Photos: Lynn Weaver, unless otherwise stated
Cover: Gossypium herbaceum 'Nigra' (Rachel Browne)

Contents

Letter from the Editor 1
Notes from the Guides Chair 2
Volunteer Workshops and Opportunities 3
Continuing Education 4
From the Archives 5
Intern Project Proposals 6
Nature Art Gallery 9
Garden Highlights 10

Hamamelis Mollis - Chinese witchhazel fruits

Acer palmatum ‘Garnet’
Letter from the Editor

As we spend more time outside than ever before, I’ve gotten in touch with the parts of nature I used to largely ignore. I find myself watching the clouds like a hawk and reading whole novels into the breezes. Sometimes I’ll stare at a patch of ground and let the insects come into focus around me.

In that constant vigilance, I’ve seen the afternoon thunderstorms give way to cooler mornings. Leaves, too, have started changing. Even the most durable broadleaf is way past its prime now, and leaf spot and powdery mildew have climbed whole trees. Our green canopy has lost its vibrancy and flexibility in preparation for fall.

I have a lot to be grateful for, but this new sense for seemingly unimportant things (like how the sun chases shadows off the field in the park), is unexpected and entirely welcome. This summer wasn’t what I had anticipated, but it is the first summer I really noticed. I guess it’s time to put on a sweater and buy a pumpkin.

Discussion Questions:
1. What changes have you noticed in your neighborhood?
2. Do you have your fall sweaters ready?
3. Why or why not?

Lynn Weaver
The McLean Contributionship
Endowed Education Intern

October 2020
Is That Cotton Candy I Smell?

October is here – a chance to appreciate the beautiful fall foliage in our area. According to a very interesting article sent to me by fellow guide, Jane Alavi, (thanks, Jane) it is also the perfect time to smell the gorgeous leaves of our katsura trees.

“I can barely smell it, but as people walk through my garden, they shriek, cotton candy,” said Ken Druse, an avid gardener and author of The Scentual Garden, a book about how humans smell and process scented plants. Right about now the leaves of the katsura are just beginning to turn. In Germany they call this tree “kuchenbaum” or “cake tree.”

The katsura-tree, *Cercidiphyllum japonicum*, is native to Japan and China. Fossil records show that it once grew widely in North America and Europe before going extinct in the Pleistocene epoch. It appeared again in the United States around 1865 when an American diplomat in Japan shipped seeds home to his brother in Manhattan. This brother, who owned a family nursery, planted the seeds on the Upper East Side, but these seeds also made their way to Queens.

The earthy scent typical of autumn is due to fungi and bacteria that decompose plant matter in the soil. However, a different chemical reaction in katsura leaves creates a scent of fall spice, caramel and brown sugar. “We were wondering, every autumn, about the pleasant Madeira cake-like smell emanating from a tree nearby,” Ralf Berger, a flavor researcher in Germany recalled in an email. With a lab full of instruments for flavor analysis he and his staff decided to investigate.

In the 1990’s they collected and analyzed katsura leaves throughout the year. The chemical compound they found was maltol, which is used in flavor enhancers, perfume and incense. It is also found in breads, milk, cocoa and coffee. In young katsura leaves Dr. Berger found that maltol concentrations were lower in spring and summer, but as leaves began fading in the fall, the compound partnered with a sugar molecule and the scent revealed itself.

“Many plants store these sugar-bound molecules,” said Dr. Berger, “but only when they’re released into the air can humans perceive their scent”. For some people the message never gets delivered as a person’s sense of smell is a very individual thing – we each have our own array of receptors, each receptor attuned to certain scents and when these receptors are damaged, too few or totally absent, the scent may be lost.

If a scent is detected, additional signals travel to the cortex, which determines what to do with these signals, and on to the limbic system, which generates emotions and recollects or makes memories. The emotions and memories that are attached to scents along their journeys through the brain is part of what makes them so subjective.

However, trees do not make maltol so that humans can enjoy a pleasant scent. Rather they use odors to communicate with other plants and attract pollinators or deter predators. The reason why katsuras send out maltol is still a mystery!

Enjoy yourself at the Arboretum during this beautiful time of year and maybe, just maybe, you will smell cotton candy!

Joan Kober
Chair of the Guides

Source: New York Times, It’s One of Autumn’s Best Scents, but Not Everyone Smells It by JoAnna Klein, October 26, 2019
Volunteer Workshops and Opportunities

November Book Club

**American Eden** by Victoria Johnson

November 6 | 1:00 PM | Zoom

The untold story of Hamilton’s personal physician, whose dream to build America’s first botanical garden inspired the young Republic. American Eden unearths David Hosack, who was lauded in his lifetime but largely forgotten since. Hosack’s Columbia lectures were, as one student said, “as good as the theater,” and so is Johnson’s storytelling. She weaves his biography with threads of history—political, medical and scientific—and the tale of an up-and-coming New York City. Johnson’s lyrical prose breathes life into the New York City of 200 years ago. In her ambitious and entertaining book Johnson connects past to present. David Hosack’s garden may have been short-lived, but in our parks, gardens, medical practices and pharmacology, his efforts continue to bear fruit.

The Book Club is open to all Arboretum volunteers and staff. All are welcome to attend any session and you do not have to attend every month.

*If you would like to participate, please contact Deitra Arena in advance at deitraarena@gmail.com*

The Tradition of Great Stories and Legacy

Friday, November 20 | 10:00 - 11:30 am | Zoom

Have you ever wondered why some stories are so memorable? Join the Morris Arboretum and Lynn Malzone Ierardi, JD, Director of Gift Planning, University of Pennsylvania, for an exploration of storytelling and its crossover into estate planning. Lynn will share key takeaways from her book, *Storytelling: The Secret Sauce of Fundraising Success*, along with short stories of recent gifts to the Arboretum. Great stories have the power to raise awareness, inspire generosity, change behavior, and even trigger a physical response. There is an incredible appetite for stories; during her talk, Lynn will explain which essential ingredients can make a story great.

To register, contact Chelsea Melvin at melvinc@upenn.edu by November 16th

*This program is in support of Morris Arboretum’s Lydia Morris Legacy Society. To learn more about planned giving and becoming a Legacy Society member, contact Alison Thornton, Senior Associate Director of Development, at alisonth@upenn.edu.*
Learn from Home

Celebrate the start of fall with a horticulture and design class!

All courses will remain online through the fall. Register for these or check out the rest of our new September offerings at morrisarb.org/onlineclasses.

From the Garden to the Laboratory: Philadelphia’s Botanical Past
Chantel White, Teaching Specialist, University of Pennsylvania Museum
Friday, October 9 | 1:00 - 2:00 pm

This class provides a behind-the-scenes look into the Penn Museum’s Archaeobotany Lab, where 200-year-old plant evidence is being analyzed. Learn how preserved seeds are identified, and how this research can provide information about the horticultural history of Philadelphia!

members: $10 | non-members: $15

Fruits to Nuts: Collecting, Cleaning, and Sowing Your Own Seeds
Bill Cullina, F. Otto Haas Executive Director, Morris Arboretum
Wednesday, October 14 | 10:00 - 11:30 a.m.

By sowing your own seeds, they’re like old friends by the time they find a place in your garden. This workshop will cover the basics of seed collection and cleaning followed by seed sowing and overcoming dormancy. Put these practices to work with a livestreamed demonstration using a dozen or so representative garden species!

members: $10 | non-members: $15

Houseplant Care and Propagation
Eloise Gayer, Horticulturist, Chanticleer
Friday, October 16 | 10:00 - 11:00 a.m.

Put your outdoor garden to bed and give your houseplants the care they’ve been craving! This class covers cultural requirements for a variety of houseplants, plus tricks to keep them healthy and pest free during winter months. Bring any unwell houseplants to the class and ask for advice at the end!

members: $10 | non-members: $15

How to Create Winter Interest in your Garden
Kathy Salisbury, Director, Ambler Arboretum at Temple University
Friday, October 16 | 1:00 - 2:00 pm

Make winter an exciting time in your garden! Learn about your frosty flower options (and who pollinates them) from Ambler Arboretum Director, Kathy Salisbury, and see examples of how her staff creates a true winter wonderland.

members: $10 | non-members: $15
A Picture Worth 300 Words
by Joyce H. Munro

The chrysanthemum, that ubiquitous flower of autumn, was once exhibited by the thousands at the annual Philadelphia Chrysanthemum Show. Every November, people strolled through Horticultural Hall in Fairmount Park, oohing and aahing over flowers as large as plates or as small as buttons and opining on hundreds of award winners. The show reached its zenith in 1921 with an unprecedented extravaganza, marked by flowers raining down from an airplane flying over Center City to announce the opening.

One of the frequent award winners was Robert Gilling Carey, an estate gardener and champion mum grower in Chestnut Hill. He bred both the reflexed variety, with petals curving away from the center, and incurved, naming them for family (Alice F. Carey), for employers (Mrs. Edward H. Trotter), and estates where he worked (Spotswood and Oakshade). In 1896, Carey exhibited a record number of mums at the show, garnering such praise that the Philadelphia Florists Club asked him to present a paper at their next meeting on twenty-five of his favorite mums and why. He prefaced his remarks by acknowledging he was currently growing 70 varieties, but all were too new to include in the top 25.

About the same time John and Lydia Morris purchased property to build Compton, Carey bought a couple of acres in Flourtown and set about breeding new mums in earnest. A few years later, Carey was elected Secretary and John Morris, President of the newly established Chestnut Hill Horticultural Society. Not long after John died, Carey capped his successful career by working with Lydia’s head gardener, Frank Gould.

We don’t know if Carey named any chrysanthemums for the Morrises but we do know his reputation endured—in 1922, he was recognized as a leading mum breeder by the Pennsylvania Horticultural Society.

Chrysanthemums at Compton greenhouse
Volunteer Intern Project Proposals

Improving Soil Health and the Aesthetics of Unpaved Pathways

This project aims to establish sustainable methods for maintaining unpaved pathways at the Arboretum. These methods would alleviate soil compaction and prevent further soil erosion. Julia will evaluate high-traffic areas of the Arboretum that have potential for pathway improvement and design a new pathway surface or mowing method to fit that site with the goal of increasing visitor’s visibility and attention to low traffic areas of the Arboretum.

Autumn Edge

The Martha J. Wallace Endowed Plant Propagation Intern

Ilex Gap Analysis

The project’s goal is to continue the effort to expand the diversity of the deciduous Ilex collection at the Morris Arboretum. Autumn will assess the current Ilex collection, research newer cultivars, compare the Morris Arboretum’s collection with other collections, recommend cultivars and hybrids to be added, and conduct propagation trials on selected cultivars and hybrids.

Regeneration of the Rose Garden’s Sunset Quadrant

The west quadrant of the Rose Garden lacks cohesion and needs to be refreshed to reinforce an intentional theme. This project will result in an arrangement of beds featuring vigorous, attractive roses and flowers that unite the quadrant in the colors of a spectacular sunset. Sarah will evaluate the roses and perennials in this quadrant as a starting point for determining the next steps for improvement, and then research and design new bed configurations and plant arrangement.

Julia Callahan
The Alice & J. Liddon Pennock, Jr. Endowed Horticulture Intern

Sarah Evantash
The Charles S. Holman Endowed Rose & Flower Garden Intern
**Intern Project Proposals**

**Julia Hart**  
*The John J. Willaman & Martha Haas Valentine Endowed Plant Protection Intern*

### Mycological Diversity of the Morris Arboretum

This project will monitor and record the Morris Arboretum’s fungal diversity. Throughout the fall, weekly surveys will be conducted, with fungal material documented, GPS locations recorded, and samples collected for further lab-work. Fresh samples will be photographed, spore printed, and dried for future verification. This study will focus on natural areas in the Arboretum that have less intrusive management.

---

**Shannon Kingsley**  
*The Eli Kirk Price Endowed Flora of Pennsylvania Intern*

### Standardizing and Analyzing Herbarium Specimen Data from the Mid-Atlantic United States

This project continues the work of the Mid-Atlantic Megalopolis (MAM) project by standardizing and analyzing the herbarium specimens digitized and transcribed from the Academy of Natural Sciences (PH) and the University of Pennsylvania (MOAR). The standardizations of collector name, date, and locality will then be implemented into the Mid-Atlantic Herbaria Consortium, an online database providing herbaria data to the public. Then, Shannon will perform this method of standardization on the remaining herbaria data included in the MAM project.

---

**Liam McTigue**  
*The Walter W. Root Endowed Arborist Intern*

### Woodland Restoration on the Banks of the Wissahickon Creek

This project will assess and restore a patch of woodland on the Wissahickon Creek immediately north of the Sculpture Garden. This project will identify and tag all non-accessioned trees in the project area, assess all trees for form, nativity, and hazards while performing necessary maintenance, and research appropriate trees to plant.
**Intern Project Proposals**

**Defining and Mapping the Penn Campus Arboretum and Streamlining Tree Planting and Care**

This project will visually represent the Penn Campus Arboretum and streamline the tree planting and care process. Adi will create a map of the Penn Campus Arboretum, and an organizational chart of landscape-related decision makers for all non-Facilities and Real Estate Services jurisdictions regarding tree planting and care. An MOU will be created with the person in charge of each non-FRES area, which will streamline tree-related decisions and help coordinate tree and arboretum activities.

**Lynn Weaver**

*The McLean Contributionship Endowed Education Intern*

**Digital Education: Reaching Students During COVID-19**

This project aims to find gaps in school curriculums that are normally filled by experiential field trips to the Arboretum, and then create engaging, digital content to help teachers address those gaps while schools are closed or operating virtually. Lynn will identify curriculum standards, create a library of 8-10-minute videos that use the Arboretum to explore these concepts, and distribute them to teachers in the area.

**Comparing Meadows of Varying Plant Diversity Using Insect Population**

This project will survey insect populations to determine if meadows that are maintained to keep and increase plant diversity are more beneficial to the ecosystem because they support more insect life. If true, this conclusion will support restoration of meadows that have been let go, have low diversity, few flowering plants, and therefore provide fewer habitats for animal populations.

**Delainey Williams**

*The Hay Honey Farm Endowed Natural Lands Intern*

**Adi Shiloh**

*The Martha S. Miller Endowed Urban Forestry Intern*
Volunteer

---

**Virtual Art Gallery**

Showcasing art *by* volunteers *for* volunteers

---

**My Favorite Path**
Joan Asprakis
Oil on canvas

---

**October Surprises!**
Joan Asprakis
Oil on canvas

---

**Pressed Leaves**
Anonymous

---

**Plarning (Plastic Yarn Weaving)**
Sue Dure

Sue crochets hand bags and mats with strips cut from plastic grocery bags for Project Home, which provides materials to the homeless and reduces the amount of plastic bags that end up in landfills.
Keeping you connected from home

Garden Highlights

Adenophora paniculata
Ladybells
Widener Woods

*Rosa Marchesa Boccella*
Marchesa Boccella rose
Rose Garden

*Rosa ‘POULey019’*
TIABANERA rose
Rose Garden

*Cedrus atlantica ‘Aurea’*
Golden Atlas Cedar
Azalea Meadow

Picea sitchensis
Sitka spruce
Greenhouse plaza