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.

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Volunteer
Pilar Rivera and Alexandra Correia, Editors

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

Photos: Alexandra Correia, unless otherwise stated

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Cover photo: One of our horticulture volunteers working hard on a Wednesday morning in the Rose Garden.

Papaver somniferum
Lauren’s Grape

Hypericum frondosum ‘Sunburst’
Sunburst St.-John’s-wort
Letter from the Editor

I am so grateful for the opportunity to work and learn at Morris Arboretum this coming year! So far, my experience with the volunteers has been wonderful and I am excited to get to know “one of the best volunteer groups at any arboretum,” as Jody said to me. Having received the warmest of welcomes from everyone here, I can tell that this is a great community to be a part of.

Looking forward to a great year!

Alex Correia

The McLean Contributionship Endowed Education Intern
Hello Everyone,

A few months ago, one of my articles dealt with nomenclature. Several of you kind people mentioned how much you enjoyed it. It doesn’t take much to encourage me to revisit the topic again.

First, a quick review. Each species has one correct scientific name: It is made up of two parts: the generic name (a noun) and the specific epithet (generally an adjective). The scientific name is always written in italics. The genus always begins with a capital letter, while the specific epithet is lower case, as in *Galanthus plicatus*. This system (thank you Dr. Linnaeus) works for all plant species. Of course, varieties in form and shape of plants are of particular interest to the gardener. When particular stable attributes of a plant species are selected for in cultivation, the resulting entity can be named as a cultivated variety – or “cultivar” for short. The cultivar name may or may not describe the plant.

Last time we looked at prefixes, but this time I would like to cover what Michael Streeter calls, “The Good, the Bad and the Ugly,”1 in *The Enthusiast’s Book of Gardening Latin*. If nothing else, it is a catchy title. Gardeners, being people, may have a tendency to exaggerate a bit when naming a plant. Following are some species’ names that might lean toward a more personal opinion.

- *adulterinus* – not pure, not genuine
- *anomalous* – unusual
- *benefictus* – blessed
- *callianthus* – beautiful flowers
- *communis* – grows in a group
- *dubius* – uncertain, dubious
- *floridus* – free-flowering
- *hypochondriacus* – melancholy
- *inodorus* – scentless
- *mirandus* – remarkable
- *obscurus* – obscure, gloomy
- *perfectus* – complete
- *regalis* – royal
- * simplex* – simple
- *tristis* – sad, bitter
- *venenatus* – poisonous
- *amabilis* – beautiful, lovely
- *bellidifolius* – beautiful leaves
- *blandus* – mild, charming
- *callicarpus* – beautiful fruit
- *debilis* – weak, feeble
- *elegans* – elegant
- *generalis* – normal
- *illustris* – bright
- *insanus* – insane
- *mutabilis* – variable, fickle
- *occultus* – hidden
- *plenus* – double, full
- *robustus* – robust
- *sparus* – few
- *trivialis* – common
- *verus* – true, standard
- *amoenus* – charming
- *bellus* – handsome
- *bonus* – good
- *callistus* – beautiful
- *decorus* – elegant
- *fallax* – deceptive, false
- *gracilis* – graceful
- *imperialis* – showy
- *magnificus* – magnificent
- *nudus* – naked, bare
- *paradoxus* – strange
- *pulcellus* – pretty
- *sanctus* – holy
- *spurious* – false
- *urens* – singing
- *vulgaris* – common

Some of these seem a little arbitrary to me but still a lot of fun. Thank you for indulging me again.

Happy Gardening,
Jody Sprague

Volunteer Opportunities

Visit to Mt. Cuba Center

You will not want to miss our visit to Mt. Cuba Center in Hockessin, DE. From 10 a.m. to noon, an experienced docent will lead us on a garden tour that will include Mt. Cuba history, an introduction to ecological gardening, plant information and seasonal highlights. After enjoying our walk through shady wooded paths and sunny meadows with native plants and tranquil ponds, we will eat a catered box lunch ($15) in Mt Cuba’s picnic area. RSVP by June 29 via the Team Up calendar at http://teamup.com/ks5bfc51e6e0901b9f/, or call Lisa Bailey to reserve space in a van. We should arrive back at the arboretum by 2:30 p.m.

Thursday, July 14th | 9:00 a.m. Departure | Meadow Parking

Hort Volunteer 1st Wednesday Schedule 2016

Join us the first Wednesday of every month for exciting workshops, talks, and tours. Meet at 12:30 p.m. at the terrace in front of the Visitors Center, unless otherwise noted.

July 6th       TBA
August 3rd     Louise Clarke, Horticulture Section Leader, Bloomfield Farm Social Media
September 7th  Paul Meyer, The F. Otto Haas Executive Director Garden walk with the Executive Director

photo courtesy Pilar Rivera
Volunteer Workshops

Meet our new Education Intern!

What actually goes in to growing the vegetables you buy? Join our new Education Intern, Alex Correia, as she draws on past farming experience to talk about concepts of sustainable agriculture, local food systems, and a day in the life of a small farmer.

**Wednesday, August 3rd | 10:00 am | Widener Upper Gallery**
Meet the New Interns

Anna Giesmann
The John J. Willaman & Martha Haas Valentine Endowed Plant Protection Intern

Anna grew up in rural West Virginia, where she became fascinated by plant-insect interactions in her garden and in the woods. She participated in several conservation internships during summer breaks, and in 2015 graduated from Grove City College with a bachelor’s in biology. For the last year Anna worked with integrated pest management at Longwood Gardens. She is excited to be at Morris Arboretum, helping to monitor plant health and coordinate the Plant Clinic! When she's not at work, Anna loves to read, hike, play Frisbee, and visit friends.

Bess Trout
The Hay Honey Farm Endowed Natural Lands Intern

Bess graduated from Washington College in the spring of 2009 with a degree in environmental studies and minors in both creative writing and anthropology. Born and raised in the Philadelphia area, Bess moved home from Chicago in November of 2015 to be nearer to her family. While in Chicago she worked at the Chicago Botanic Garden, assisting in the maintenance of their 4.5 miles of Living Shoreline. While working there, she helped with invasive pest management and native species planting, including planting her favorite Illinois native, *Filipendula rubra*, The Queen-of-the-Prairie. In her spare time, Bess enjoys hiking, reading, writing, gardening, and playing with her two cats.

Tess Adgie
The Charles S. Holman Endowed Rose & Flower Garden Intern

Tess is a Philadelphia area native who graduated from Albright College in 2015 with a degree in biology. She has a particular interest in sustainable farming and land management practices, and wrote an undergraduate thesis on the effectiveness of sustainable farming techniques. After graduation, she moved to Illinois to work in agriculture, and also spent time working in an entomology lab. She is so excited to be back in the Philadelphia area to learn and work at the Morris Arboretum. When she’s not outside, Tess can be found making art, writing music, reading, or cooking.
Meet the New Interns

Erin Holiman
The Alice & J. Liddon Pennock, Jr. Endowed Horticulture Intern

Erin is a native Floridian and is currently a horticultural sciences senior at the University of Florida, has completed a minor in Japanese, and will complete a minor in teaching English as a second language. Upon graduation, she plans to combine her horticultural and TESL skills into overseas work through the Peace Corps or similar opportunities. While working in a moss genetics lab, Erin realized she enjoyed being outside rather than working in a lab all day and sees her Morris Arboretum internship as the perfect opportunity to work outdoors with the wonders of nature. Already stunned by the differences from her home state of Florida (like the groundhogs!), Erin is excited for all the new experiences the Morris Arboretum and the Philly area will provide.

Kevin Brown
The Walter W. Root Endowed Arborist Intern

Kevin is from a small town in central New York called Davenport. However, he has been in the Philadelphia area for a few years, having graduated from Eastern University in St. David's, PA with a B.S in environmental science. For the summers of 2014 and 2015, he was a nutrient management intern at the New York City Watershed Agricultural Council, which monitors water quality in central New York to help keep New York City’s water clean.

Alex Correia
The McLean Contributionship Endowed Education Intern

Alex is originally from Massachusetts and graduated from Messiah College in Harrisburg area last year with a degree in sustainable community and urban development and a minor in environmental science. Her focus in her education and career has been learning methods of organic agriculture by working on and managing small vegetable farms throughout PA for the past four growing seasons. However she is excited to shift her focus to horticulture and soak up as much knowledge as she can at the Arboretum. She now lives in Brewerytown and enjoys cooking (using local products of course), hiking, beer brewing, traveling, and gardening.
Meet the New Interns

Emma Brown is a recent graduate of the University of Delaware’s B.S. programs in plant science and landscape horticulture and design, with a minor in Spanish language. A proud fraternity brother in Alpha Zeta Co-Educational Honors Agricultural Professional Fraternity, alumna member and former officer of UD Horticulture Club, and a former Ag Ambassador, Emma finds it strange to have her time redirected out of extracurricular activities and into the adult world. A plant geek and lover of linguistics, she spends her time gardening at home, botanizing in the local woodlands, writing the occasional poem and parody song, drawing, arts-n’-crafting, and listening and dancing to international music.

Emma Brown
The Martha S. Miller Endowed Urban Forestry Intern

Trista Crook
The Eli Kirk Price Endowed Flora of PA Intern

Trista, originally from Colorado, received her master’s degree in ecology from the University of Nottingham, UK. Her master’s work involved analyzing physiological differences between nitrogen-tolerant and nitrogen-sensitive lichens. Prior to attending graduate school, she assisted with plant ecology field studies from the deserts and semi-arid regions of the west (including Death Valley) to the temperate forests of Wisconsin. Most recently, Trista worked on the digitization of lichen herbarium specimens, and helped populate an online interactive key for Arctic lichen species for the University of Wisconsin-Madison. In her spare time, Trista enjoys singing, watching BBC programming, identifying plants and lichens, practicing yoga, and contemplating questions of linguistics and etymology.

Jehane Samaha
The Martha J. Wallace Endowed Plant Propagation Intern

Jehane Samaha graduated from Brown University with a degree in environmental science. With a background in ecology research, she has conducted field work in the Colorado Rockies, the suburbs of Massachusetts, and in forests across the Northeast. Most recently, she served as a research technician at the Arnold Arboretum, where she propagated plants for a common garden experiment, studied the effect of climate change on wine grapes, and piloted a citizen science program. She has interests in environmental communication and plant conservation, and enjoys making art, gardening, and hiking.

Portraits courtesy of Jan McFarlan
Continuing Education

Volunteers who have given over 30 hours of service during the past year may take classes at a discounted price. Please refer to the Volunteer Price Spreadsheet in the Education Office for a complete list of volunteer class pricing. To sign up for a class please call 215-247-5777 ext. 125.

Morris Moth Night: Celebrating National Moth Week
Tuesday, July 26, 8:00-9:30 p.m.

Learn about the fascinating world of moths with naturalist, Kris Soffa, as we spend an evening observing them from our Out on a Limb exhibit.
Volunteer price: $12.50

Stargazing at the Morris Arboretum
Thursday, July 28, 8:30 p.m.-10:00 p.m.

Ben Buono, one of our local backyard astronomers, will provide a guided tour of Orion and nearby constellations and a general discussion about observing, astronomy, and cosmology with time for questions and answers.
Volunteer Price: $10

- Education Volunteer Workshop Hours -
We offer a variety of classes that are eligible for Education volunteer workshop hours.
To register, call (215) 247-5777 ext. 125.
Variety versus Cultivar?

by Dr. C. Skema, Botanist

“What is the difference between a variety and a cultivar?” is a question often asked by gardeners. In either instance, these entities are used to describe some consistent aspect of plant diversity we observe below the species level. As such, a variety and a cultivar are each a subcategory of a plant species that defines a group of individuals all possessing one or more characteristics that differentiate them from the other individuals within that species. Varieties are plant entities that can be found in the wild (regardless of whether or not they are also grown in gardens). In contrast, a cultivar is a plant entity in cultivation that was bred or selected for its stable, distinct trait(s), or, as Liberty Hyde Bailey put it, “those [plants] that arise in some way under the hand of man.” It is the intentional act of selecting some desirable trait(s) from the wild or creating them by breeding or mutation, then naming and maintaining that distinct variant through propagation, that separates the cultivar from the variety. Bailey, one of our greatest thinkers in the field of Horticulture, recognized a need for an accurate way to discuss cultivated plant names and coined the term “cultivar” in 1923 as a logical continuation of his concept of cultivated plant species as “cultigens.”

There are practical differences between the names of these two plant entities as well. The rules and recommendations for naming varieties is set out in the International Code of algae, fungi and plants (ICBN; formerly the International Code of Botanical Nomenclature), while the names of cultivars are governed by The International Code of Nomenclature for Cultivated Plants (ICNCP). The scientific name of a variety is in Latin or latinicized (and thus italicized) and has three parts, Genus species var. variety. The “var.” marks it as a variety, and not a different subcategory of species, such as a subspecies. The name of a cultivar is written as a cultivar epithet (or the cultivar portion of the name) appended to the scientific name to which it is assigned, with the cultivar epithet always capitalized and in single quotes. Possibilities include Genus species ‘Cultivar,’ Genus ‘Cultivar,’ Genus × species ‘Cultivar,’ and Genus species var. variety ‘Cultivar.’ Also, the cultivar epithet can not be in Latin (since 1959).

One example is that of the nectarine. The nectarine is a “fuzzless” peach (or, botanically speaking, a peach plant that develops drupes which are lacking trichomes) and occurs sporadically in the wild. The nectarine has been named as a variety of the peach species, Prunus persica var. nucipersica. Not surprisingly for an economically important fruit crop, hundreds of cultivars of nectarines exist, originating as direct selections from wild mutants which subsequently likely underwent artificial selection or specific breeding. Some examples include Prunus persica var. nucipersica ‘Stark Sunglo,’ or Prunus persica var. nucipersica ‘Lord Napier.’

Both the ICBN and ICNCP strive to create stable rules and recommendations for naming plants, both in the wild and in cultivation, that will allow for a global and accurate means of communication about plants, and thus forward the advancement of scientific understanding in Botany, Horticulture, and other related fields.

## Quiz from the Archives

Nothing impresses people on a tour like a guide who can spiel off the numbers. Go for 100% on this quiz.

<table>
<thead>
<tr>
<th>Quiz Question</th>
<th>Answer</th>
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<tbody>
<tr>
<td>1. John Morris purchased Bloomfield Farm</td>
<td>A. 2009</td>
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<td>2. First class of interns at the Arboretum</td>
<td>B. 1888</td>
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<td>3. University of Pennsylvania takes over the Arboretum after Lydia Morris's death</td>
<td>C. 1902</td>
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<td>4. First year of the Garden Railway</td>
<td>D. 1973</td>
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<td>5. Size of the first parcel of Arboretum land purchased by John and Lydia</td>
<td>E. 1933</td>
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<td>7. Katsura tree was planted</td>
<td>G. 2008</td>
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<td>8. Size of the non-public Bloomfield Farm</td>
<td>H. 1915</td>
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<td>9. Out on a Limb opened</td>
<td>I. 1913</td>
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<td>10. Morris Arboretum became the official Arboretum of the Commonwealth of PA</td>
<td>J. 92 acres</td>
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<td>11. John and Lydia move to Compton from the Frankford section of Philadelphia</td>
<td>K. 1980</td>
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<td>12. Arboretum was opened to the public</td>
<td>L. 26 acres</td>
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<td>13. The guide program was started by Susie Walker and others</td>
<td>M. 1998</td>
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<td>14. Death of John Morris</td>
<td>N. 74 acres</td>
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<td>15. Ground is broken for new Horticultural Center at Bloomfield Farm</td>
<td>O. 1932</td>
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</table>

**Answers:** 1 = I, 2 = K, 3 = O, 4 = M, 5 = L, 6 = J, 7 = C, 8 = N, 9 = A, 10 = F, 11 = B, 12 = E, 13 = D, 14 = H, 15 = G
Garden Highlights

Hydrangea quercifolia ‘Snow Queen’
Snow Queen oakleaf hydrangea

Aesculus parvifolia
bottlebrush buckeye
near ‘Out on a Limb’

Sarracenia hybrid
pitcher plant
outside Fernery

Koelreuteria paniculata
panicled golden-rain-tree
near Swan Pond

Asclepias syriaca
common milkweed
wetland/arboretum entrance

Hemerocallis
daylily
## Upcoming Events

### July 2016

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<td>12</td>
<td>‘Meet the New Interns’ for Hort Volunteers 10:00am</td>
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<td>Volunteer Trip to Mt. Cuba 9:00am</td>
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<td>Mill Demonstration Day</td>
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### Weekly Volunteer Events

- **Wednesdays:** Horticulture Volunteers 8:30 am - 12 pm
- **Saturdays and Sundays:** Regular Tour 2 pm - 3 pm
- **Saturdays and Sundays:** Welcome Cart 11 am - 3 pm
- **2nd Saturday of the Month:** Mill Volunteer Workday 9 am
Weekly Volunteer Events

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