

MSU IN BLOOM

MSU HORTICULTURE GARDEN NEWS



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GARDEN HAPPENINGS

BY AMY MCCAUSEY, WEDDING & EVENT COORDINATOR

CURIOUS GARDENER

Tending Your Tubors

Putting the garden to bed comes with many jobs. One of those being harvesting and storing your summer tubers. At this workshop you will learn how to store and harvest common non-hardy tubers like dahlias and cannas. We will also explore other ways to overwinter plants from your garden that you would like to keep for next year. Each participant will be able to dig and take home tubers and plants from the Demonstration gardens.

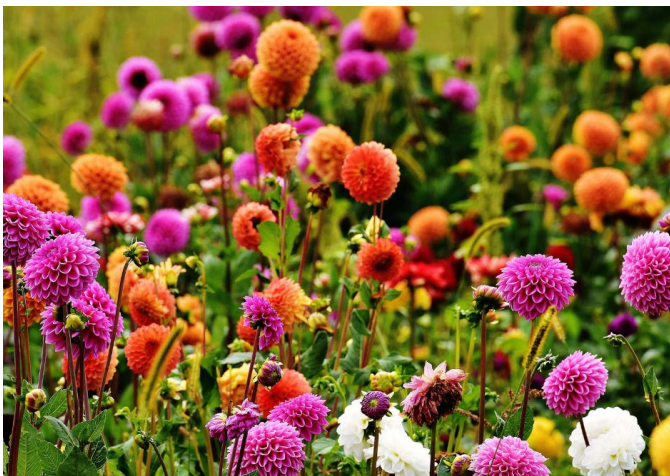
Wednesday, October 25, 1-3pm

Register early - only 20 spaces available!

\$10 for members (use the code on the back of your member card)

\$15 for non-members

Register [here](#)!



HOUSEPLANT & SUCCULENT SALE

The MSU Horticulture Gardens are mostly self-funded. Consider supporting these beautiful gardens to keep them running for many years to come.

Don't miss out on the 2023 Houseplant & Succulent Sale.

Friday, November 3, 8am-4pm

1066 Bogue St, East Lansing 48824

Limited pay-by-plate parking will be available in lot 54 (1066 Bogue St, East Lansing, MI 48824). Additional pay-by-plate parking will be available in the Wharton Center Parking Ramp (766 E Shaw Ln, East Lansing, MI 48824).

EARLY-BIRD SALE

Get your Early-Bird Pass [here](#) and shop on Thursday, November 2, 4-7pm.



Curious Gardener - Tending Your Tubors

Houseplant & Succulent Sale

Poinsettia Sale (online ordering)

Poinsettia Pickup

October 25

November 3

Nov 13-Dec 14

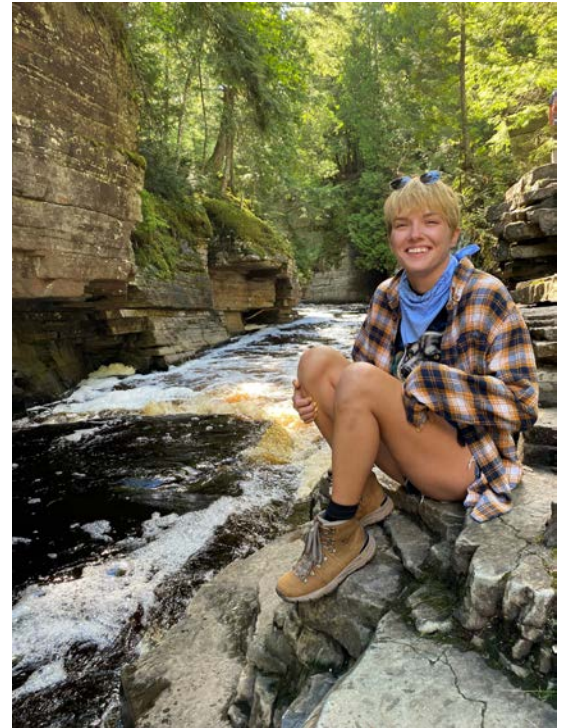
Dec 4-15

GET TO KNOW ABBY MAKOWSKI

BY ABBY MAKOWSKI, TRIAL GARDEN MANAGER

I graduated from the horticulture program at MSU in 2017, post-graduation I spent some time working at a florist in my hometown doing a little bit of everything. In 2018 I began working at Dow Gardens in Midland, MI. For five years I worked there as a horticulturist managing the area known as Stream Walk. I learned a lot about the day-to-day care and maintenance of all aspects of an intensive landscape. I also got the opportunity to do a lot of work with annuals for bedding plant displays and for container displays. In my work I've grown to really love the creativity that seasonal displays allow for. Unlike designing with perennials or with trees and shrubs you can change your mind about a design every year, you can get as crazy and creative as you want, and it only needs to last for a few months before you can start planning something completely new and different for the next year's display. I look forward to the work I will get to do with the annual displays here at MSU.

When not at work I enjoy spending time with my two adorable cats. I also enjoy hiking, camping, and any other activities that mean I can be outside enjoying nature.



Echinacea purpurea
Ocimum basilicum
Rudbeckia fulgida
Phlox paniculata
Callicarpa americana
Zamioculcas zamiifolia
Aloe vera
Crassula ovata
Tagetes erecta
Chlorophytum comosum
Ceris canadensis
Vernoniastrum virginianum
Zinnia elegans
SALVIA SPLENDENS
Chelone glabra
Salvia officinalis
petunia x hybrida
PRIMULA VULGARIS
Metasequoia glyptotroboides
Impatiens x hawkeri
liatris spicata
Hydrangea macrophylla
Acer rubrum
Hemerocallis sp.
THYMUS CITRIODORUS
Schizachyrium scoparium
pinus Strobus
Achillea millefolium
Gomphrena globosa
Parrotia persica

PLANT GEEK SERIES

LEARN YOUR LATIN

BY DAEDRE MCGRATH
TRIAL GARDEN MANAGER

Welcome to part three of four in this Plant Geek series, focusing on some niche horticultural topics that I think are fascinating. I hope you do to! This newsletter we're talking about the importance of Latin nomenclature. Our final installment will cover fasciation and reversion. Buckle up. We're about to get really geeky!

Let me get on my soapbox for a few minutes and explain why learning your Latin names is important, especially if you are a plant enthusiast. Except for yet to be discovered organisms, all living things have been assigned a two-part Latin name. This naming system is called binomial nomenclature (literally meaning "two names") and was created hundreds of years ago by the naturalist Carl Linnaeus. The beauty of binomial nomenclature is that it is unequivocally unambiguous. No two organisms share the same Latin name.

Latin names also help us understand relationships between organisms. The first part of the binomial is the genus. All organisms within the same genus share a common ancestor. For example, all members of the genus *Salvia* are related to each other, as are all members of *Hosta*, *Hemerocallis* (daylily), or *Petunia*. Members of the same genus also share many common characteristics such as flower structure, leaf shape, or even scent or flavor. There are two additional advantages of Latin names. First, they are spelled and pronounced phonetically (although, try to wrap your tongue around *Metasequoia glyptostroboides*). Second, they often (but not always) describe the plant they refer to. For example, *rubra* = red, *alba* = white, *maritima* = from the sea-side, *orientalis* = from East Asia, *prostrata* = prostrate/downward facing, etc. Another useful Latin term is “*officinalis*”, which almost always means that plant was at one point of pharmacological or culinary interest. Perhaps the final advantage of Latin names is that they make you sound super cool!

Clearly, Latin names are amazing and give us a lot of information about plants. But why do I pooh-pooh the use of common names? Well, common names vary regionally, change generationally, and they are highly ambiguous. Let’s break this down to better understand the issue.

Regional Variance: Let’s compare U.S. and U.K. terms for certain plants. I remember watching Jamie Oliver cooking shows growing up and being very confused! What the heck is a courgette (Photo 1) and where do I buy one? An aubergine? Rocket? Later, I learned that Jamie was just referring to zucchini, eggplant, and arugula, respectively. Obviously, it would be silly to put Latin names in a recipe (“okay folks, now let’s thinly slice our *Solanum melongena*”), but it illustrates my point. Plants are called different names all over the world.



Photo 1. Courgette or Zucchini?



Photo 2

Generational Variance: This is a less common issue, but there are sometimes generational differences in plant names. The best example I can think of is *Tradescantia zebrina* (Photo 2) being called Wandering Jew. My generation, and all generations before me learned this plant as Wandering Jew. However, this name is based on antisemitic folk lore and is no longer deemed acceptable. The kids these days (I am now old enough to say this) have started calling this plant Wandering Dude. Inch Plant and Variegated Spiderwort are also used, but sticking to the Latin name prevents all possibility of a snafu.



Photo 4

Ambiguity: There are many plants that share the exact same common name. For example, *Epipremnum aureum* (Photo 3), *Pilea peperomioides* (Photo 4), *Pachira aquatica*, and *Crassula ovata* (Photo 5) are all called Money Plant. Additionally, there are many plants with four, five, or even more common names. Which one do you pick? You might use option 1, while your neighbor uses option 4. You could be talking about the same plant and not even realize it! I would compare this to making a grocery shopping list and just writing “cheese.” Well, what type of cheese? Gouda? Cheddar? Sharp or mild cheddar? Shredded or block? Regular or low-fat? I take my cheese seriously, so ambiguous names just leave too much to chance!



Photo 4

I hope I've convinced you why Latin names are the way to go. Intimidated? Take an inventory of your garden and start learning just one Latin name each week. Before long, you'll be spouting off Latin just like Linnaeus himself!



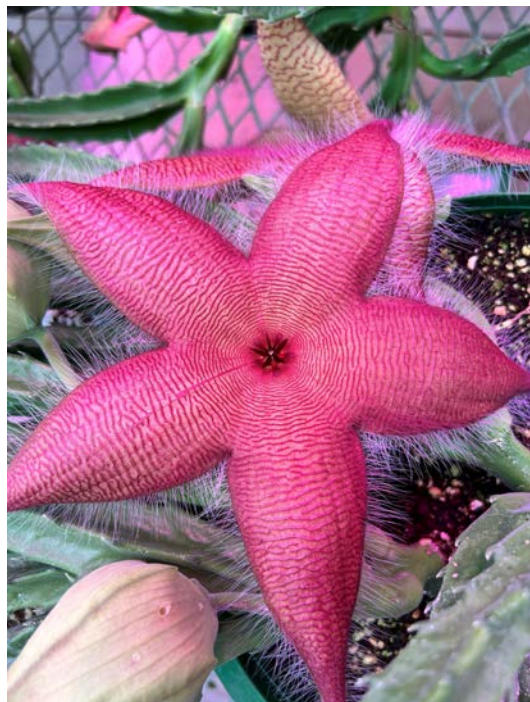
Photo 5

HOUSEPLANT & SUCCULENT SALE STAFF PICKS

BY AMY MCCAUSEY, WEDDING & EVENT COORDINATOR

Bethany's pick

This year, we have some *Dolichothele* (*Mammillaria*) species of cacti that we have been growing in the gardens for over six years. They are impressive, and bloom profusely when happy. While they still need as much sunlight as possible in a house or apartment, they grow naturally under shrubs in the desert and don't require quite as much light as other cacti do. As a result, they make a wonderful houseplant! We would love to see these beloved cacti find a home. Pick one up at our houseplant and succulent sale – there are a limited number of these!



Abby's pick for the sale is *Stapelia grandiflora*. Commonly called carrion plant, it is a succulent, flowering plant resembling a cactus. When in bloom the large, fuzzy, reddish flowers smell of rotting flesh.

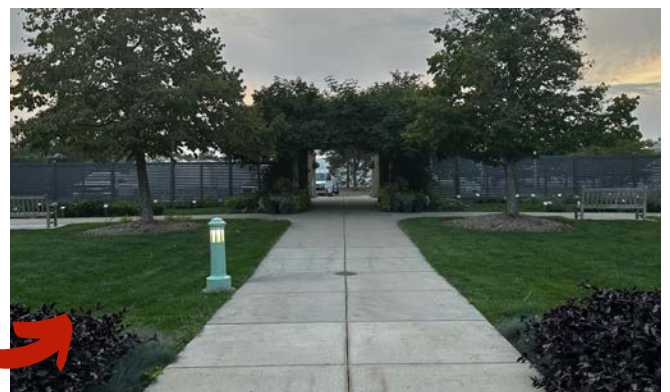
NEW FENCE

BY AMY MCCAUSEY, WEDDING & EVENT COORDINATOR

As the wedding and event coordinator for the Gardens, I am super-excited about our new privacy screen in the lower lawn installed in September.



Before



After

MEMBERSHIP HAS ITS BENEFITS

Do you love the Gardens or know someone who does? Why not become a member? Or give a membership as a gift! Membership has many benefits!

- Early access to our Plant Sales
- Discounts on your Plant Sale purchases
- Discounts on our garden programming
- Free admission to 200+ American Horticulture Society reciprocal gardens across the country
- And more!

You can renew or join online here: www.hrt.msu.edu/join. If you would like a brochure mailed to you, please contact hgardens@msu.edu or, 517-353-0443, or download one [here](#).



SUPPORT THE GARDENS



Did you know that you can commemorate a loved one or special event in the Gardens? Consider purchasing a brick in memory of a special memory or event. The Gardens offers commemorative bricks in two sizes that can be engraved and permanently installed in one of several locations. Remember a loved one or special event each and every time you visit the Gardens. Find more information [here](#). If you would like a brick brochure mailed to you, please contact hgardens@msu.edu or, 517-353-0443. Purchases can be made [here](#).

Other ways to support the Gardens can be found [here](#)!

VOLUNTEER TRIP

BY BETHANY TROY, PERENNIAL GARDEN MANAGER

In August, our volunteers along with our staff and students visited our friends at Matthaei Botanic Garden and Nichols Arboretum at University of Michigan. A mixture of gardens, trails, and tree collections made for an extra fun day to celebrate the end of a fun summer with our crew! Thank you to everyone who contributes to making the magic happen here at the gardens – and stay tuned for future trips together!



COMMUNITY OUTREACH

BY BETHANY TROY, PERENNIAL GARDEN MANAGER

Due to an excessive coffee addiction amongst our staff, we have collaborated with our friends at Strange Matter Coffee, a Lansing-based coffee shop featuring hand crafted drinks and donuts. Strange Matter has opened a new location in the Union Building on campus – and we have some interior plants on display to help set the mood as you sip on coffee and eat delicious pastries. Make sure you stop by to support Strange Matter and grab a flyer for our upcoming Houseplant and Succulent Sale on November 3rd!



MSU Horticulture Gardens

**POINSETTIA
SALE**

NOV 13-DEC 15, 2023

ONLINE ONLY

SHOPMSUGARDENS.COM

GREAT HOLIDAY GIFTS!

- MSU GROWN POINSETTIAS
- HOUSEPLANTS
- SUCCULENTS
- GARDEN T-SHIRTS AND MERCHANDISE



COME ONE, COME ALL
to the MSU Horticulture Gardens
POINSETTA TREE



LOCATED IN THE CONSERVATORY OF THE TEACHING GREENHOUSES
OPEN DURING BUILDING HOURS
NOVEMBER 30 - JANUARY 5

MAWBY FRUIT COLLECTION MODERNIZES APPLE PRODUCTION SYSTEM

RON PERRY, EMERITUS PROFESSOR OF HORTICULTURE

BRIAN GAYHEART, C.E. LEWIS LANDSCAPE ARBORETUM MANAGER

The C.E. Lewis Landscape Arboretum established the Mawby Fruit Collection with the financial support of the Mawby family, long time Michigan fruit growers. Russ Mawby was a member of the MSU Board of Trustees. The 140 year old fruit industries in Michigan helped make the state second only to California in diversity of crop species. Plantings in the collection included an array of tree and small fruit species. The ever-evolving apple industry in Michigan is still strong. Commercial apple production orchards in Michigan have gone through a fifty-year transition of large trees spaced some 30-40 feet apart and 20-25 feet tall to today's most popular system, the "Tall Spindle" system. Approximately, eighty to ninety per cent of Michigan and most northeastern apple industries today have adopted the Tall Spindle system (Figure 1).



Fig. 1 Newly planted apple trees in the C.E. Lewis Landscape Arboretum

In the late 1990s we established a small planting of high density apple trees, which reflected the current growing systems; the Slender Spindle and the Vertical Axe. The planting was removed in 2022 and replanted in the most popular system used in Michigan today; the "Tall Spindle".

The Orchard Evolution.

The older orchards remind us of days of "yester-year" where farmers and their families picnicked under the shade of old apple trees. However, these older orchards took 6-8 years to come into production and required people to get up on tall ladders to prune and harvest the 25-foot-tall trees. Trees were planted at a density of 50 trees per acre and planted 30-40 feet apart. Then came the dwarf tree revolution, led by Michigan State University rootstock researcher, Dr. Bob Carlson, (Perry's predecessor) who by way of the International Dwarf Fruit Tree Association, encouraged growers to begin using dwarfing rootstocks developed in Europe. The growers abandoned the use of seedling rootstocks and the search for trees that were more manageable, bore fruit sooner and yielded more per acre.

The new trees became smaller and came into production by the 2nd or 3rd growing season. The current most popular commercial apple production, “Tall Spindle” system, is a spin-off of the “Slender Spindle” training system developed and encouraged by Dutch researchers and the “Vertical Axe” system promoted by the French. Experimental systems included orchards planted at densities of over 2000 trees per acre.

The transition to the newer high density planting systems required growers to learn new management strategies where trees are planted 3-4 feet apart in-row spacing and 11 to 14 feet “alleyway” (across-row) spacing (1200 trees per acre). The newly planted Tall Spindle trees in The Mawby Fruit Collection are planted 4 feet by 19 feet to accommodate maintenance needs in the Arboretum (Fig. 2).



Fig. 2 Established Tall Spindle system in C.E. Lewis Landscape Arboretum, Mawby Fruit Collection, summer 2023 (Sophia Tessmer, Horticulture intern with Perry).



Fig. 3 Black Locust posts in the C.E. Lewis Landscape Arboretum.

We constructed a trellis support system using Black Locust wood (Fig. 3), donated by Flore Orchards, instead of the commercially used copper-treated round pine posts. Black locust (*Robinia pseudoacacia*), excels in hardness and durability, so pioneers cut it for fence posts. Historians found remains of buildings and black locust posts established by Jamestown colonists still standing after a few hundred years. Black locust wood was commonly used by shipbuilders, especially for constructing masts. Locust trunks contains mostly sapwood (xylem wood) making lumber strong. In drying, locust hardly shrinks and is stiffer than hickory and outlasts white oak. Rather than using the commonly used 12-gauge high tensile wire, we used a highly malleable nylon covered cable (1/16”) to support developing trees.

Trees on dwarfing rootstocks must be supported by a trellis system. Trees mature at 10 feet in height, trunks are small and there are no scaffold (permanent) branches commonly found in Slender Spindle and traditional Central Leader (older system of growing apple trees). Tall Spindle trees are supported by a three or four-wire trellis with other trees, on an M.9 or similar dwarfing rootstock (Fig. 1). Trees begin bearing as many as 15-20 fruit in the second growing season. Some of our research at Michigan State University demonstrated yields as high as 1000 bushels harvested per acre in the fourth or fifth growing season compared to the 250-300 bushels per acre not reached until the tenth growing season in the traditional older orchards. Most of the dwarfing rootstocks have brittle roots and they are poorly anchored on their own. Secondly, by virtue of gravity, heavy fruits bring small branches down, discouraging limb extension unlike the scaffolds on the large older traditional trees. Much of our current high density apple orchard systems derive from centuries old gardens in Europe using dwarfing rootstocks (Perry and Getter, 2021). The practice, known as Espalier can be seen in our current annuals gardens. Another benefit to the new high density planting systems is that not only do they begin production sooner, trees and orchards have a shorter life span than comparably large tree systems that last some 50-70 years. A shorter orchard life might appear a negative, but for the modern apple grower, it affords the enterprise the flexibility to change to contemporary varieties currently popular in the market. An example of this are the very popular apple varieties such as Honeycrisp and organically approved disease resistant varieties. Additionally, the narrow smaller canopy trees are more accommodating to mechanical equipment used to help prune and harvest trees.

Perry, Ron and Kristin Getter. 2021. Espalier Fruit Plantings for Northern Gardens; Creating Fruit Trees as Art. Amazon Kindle Books, ISBN 9780578870861, Electronic Book, P. 65. https://www.canr.msu.edu/hrt/our_gardens/Donate-to-the-Gardens/espalier-book.

Robinson, T.L. et. al. 2006. The Tall Spindle Apple Production System, New York Fruit Quarterly, Vol 14(2); 21-28.