Shelby County Master Gardener

OHIO STATE UNIVERSITY EXTENSION

THE OHIO STATE UNIVERSITY

Volume 28, Issue 4—May 2023

President's comments--By Jim McCracken

Looking at the extended weather forecast it appears May 4 is going to be Shelby County's last frost of the spring. When planting any warm weather flower or vegetable please consider both air and soil temperatures. Both affect transplants as well as direct seeding success rates.

Moisture levels are also a major factor you should consider when planting this spring, Mid-May has several opportunities for rain. Transplants transition more easily if they have gone through a hardening off procedure. It's getting a seedlings use to outside living conditions by gradually exposing them to the weather conditions where they will grow. Another trick is to plant transplants in the evening or on a cloudy day. If you are direct seeding into the garden, wait for soil temperature to rise and plant with rain in the forecast to increase germination rates.

As always Happy Gardening!

Coordinator's comments
By Doug Benson

It would seem that spring has finally broken through and we are having weather that is more seasonal. If only we could have, a few more dry Fridays! I will be mowing my lawn for the ninth time this afternoon. I guess that is what I get for spreading a winterizing fertilizer Thanksgiving week. I'm still delaying the start of my raised bed vegetables – mainly because of laziness.

Shelby County Master Gardeners are moving forward. As you know, at the April meeting we decided by a 16-1 vote to close our private bank account and place the funds "under the umbrella" of OSU Extension. This will provide us access to university legal support, the ability to use Extension's tax-exempt status for both purchasing and potential fund raising, and better liability protection. The money will still belong to our organization and be used as we choose. The office will simply act as our banker with a separate sub-account for us in their books. They will receive deposits and write the checks. Our treasurer will work with the office to get monthly statements to present at our meetings. One big difference will be that when we make payments such as dues and banquet reservations, checks will be made out to OSU Extension not Shelby County Master Gardeners. See another article to learn more about the treasurer's new role.

Good news! We no longer have any trainees. We now have ten "interns" who, having passed their online final exams, are now working toward completion of the required 50 hours of volunteer service needed to become an active Master Gardener Volunteer. They are involved in a variety of activities, and I'm sure that they would appreciate any advice and support you can provide. This will be especially true with the hotline. Please continue to welcome them.

We have a number of youth activities happening. We will have an informational display with suggested summer activities at Emerson Primary School's "What to Do in the Summer" program Monday evening, May 15. Wednesday, June 7, we will be helping with the 4-H Cloverbuds day camp. Saturday, June 24, some of us will be at Tawawa Park's 75th Anniversary celebration. The very next week we will be presenting a program at Conservation Day Camp on Thursday, June 29. Other likely venues will be the Shelby County Fair and the Mercer County Fair in July and August respectively. Let us know if you are interested in helping.

The Memorial Garden will need some attention soon.
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May Membership Meeting
Wednesday, May 17, 2023 @ 2:00 p.m.
Extension Office

(Coordinator comments continued from page 1)
Look for a call for volunteers for a clean-up day in the next week or two. In talking with the county commissioners, Matt got a commitment for some funding to do renovations and improvements in the garden, but first we will need a detailed plan, much like we did several years ago. In preparation for that, as of this afternoon, May 10, the garden looks a little different – see the accompanying picture. Those viburnums and burning bushes that harbored poison ivy and wild vines are gone. Ann is working on some plans for possible changes and improvements.

To honor her late husband Bob, Sonni Bernardi donated funds for a plant in the Memorial Garden. Ann and I have selected a red reblooming azalea. Hopefully, we can all get together for the planting. See another article about a new planting we will be doing.

Please continue to report your volunteer and continuing education hours in HOC. If you are having trouble recording hours, let me know. While you are on HOC, take the time to sign up for a shift or two on the hotline. During our first three sessions, we've had a nice mix of veteran MGVs and interns. They haven't had much in the way of calls, but this has given them time to become acquainted and learn about the procedures and some of the resources. Don't forget about our next library program June 13 which will focus on dealing with wildlife in the landscape. Also, Mercer County will be continuing their programs the last Wednesday each month.

I am pleased to announce that I have nominated our fearless secretary, Nancy Russell, for consideration as a "2023 Outstanding Master Gardener Volunteer." Winners will be announced at the state MGV conference in October.

Finally, our May 17 meeting will again be at 2:00 at the Extension office. It will also be on Zoom. As in past years, we will have a plant exchange. Bring your divisions, extra plants, and extra seeds to share with your fellow MGVs. It helps if you identify what you bring. You do not have to bring anything to participate. There are also always extra plants. See you Wednesday.

Updating our constitution
By Doug Benson

In response to the change in our financial procedures, some of us thought it important to reexamine our organization's constitution – yes, we have one, but it was last revised in 2016. A committee of Jim McCracken, Nancy Russell, Dave Slagle, Carol Strayer, and myself spent several hours going over the document literally line by line. We realized that in some cases we have informally adopted some practices that are in variance with the original wording but seem more practical and workable. One goal was to bring the wording and what we are doing into alignment. We also wanted to clarify and tighten up the language. Carol incorporated the changes we made at the meeting and sent out a draft. After a few back-and-forth emails and additional changes, we reached consensus on a new revision. Included with this newsletter are copies of the 2016 version and the 2023 revision for your consideration. We plan to present it to you for adoption at the May 17 meeting. Please examine it and be prepared to discuss it next week.

Gardening by the numbers
By Doug Benson

We will be adding another demonstration planting area at the Extension office. Matt has signed us up to receive free plants for three six-by-ten "Plant by Numbers" gardens that focus on using native plants to support pollinators. The gardens will focus on bumblebees, specialist bees, and butterflies & moths. You can read more about the plans at https://u.osu.edu/plantbynumbers/ (Note: antivirus software sometimes stops hyperlinks from working, just copy the URL and paste in your browser to get to that site.)

The three plots will be set up side by side by the oak tree at the end of the parking lot. The space had been occupied by a series of taxus shrubs that were the home to uncontrollable thistles and trash. We will be recruiting two or three volunteers to care for each of the three beds. This will entail planting about 30 plants according to the plans. Then the volunteers will need to do regular watering, weeding, and deadheading. With two or three people, you can rotate care schedules. I hope, we will get some willing volunteers.

Book Report: The Hidden Life of Trees:
What They Feel, How They Communicate –
Discoveries from a Secret World
By Peter Wohlleben, translated by Jane Billinghurst – 2016

Submitted by Ann Heeley

I read this book last year and thought it presented a fascinating, new perspective on the possibility of trees knowingly communicating with each other, just like people or animals. The German author had 20 years of experience as a forester in Germany working mainly with beech trees and researching old-growth forests. He also spent time doing research in the US, Canada, and parts of Africa and has written several books dealing with forest ecology and management.


American Beech Tree

In this book, Wohlleben writes that trees send messages to each other via a network of roots and fungi, thereby forming relationships to increase their chances of survival. "Mother" trees protect their youngsters by sharing nutrients, providing water during periods of drought, regulating their growth by shading them from too much sunlight, and protecting them from fierce storms.

The author explained how acacia trees; for example, send out signals via filaments of fungi in their root systems to other trees when giraffes begin to eat their leaves. Trees who heed the warning are able to pump toxic substances to their leaves within seconds causing giraffes to dine elsewhere. Beech trees send out similar signals, both by scent and underground electrical means, when beetles threaten to attack. The author claims that these signals attract woodpeckers and other beneficial insects to feast on the pests.

Trees that have spent their lives in old forests, those minimally affected by man, are the strongest, healthiest, and most likely to live hundreds of years longer than trees in parks and urban developments.

But then the author goes on to attribute human emotions to trees, suggesting that they experience stress and sadness caused by environmental factors such as drought or a lightning strike…or contentment when they are able to reproduce more productively during lengthy periods of abundant rain followed by sunshine. "When trees are really thirsty, he tells us, they begin to "scream," citing a study from the Swiss Federal Institute for Forest, Snow, and Landscape Research, which recorded ultrasonic vibrations in tree trunks when the flow of water from the roots to the leaves was interrupted." They feel pain and respond negatively when large swaths of their offspring and relatives are removed haphazardly by the timber industry. They show love by mutually agreeing not to bloom every year and thereby tricking nut-eaters not to count on their bounty. They have memories which enable them to respond quickly when attacked by pests that have attacked before. These findings are supported by many plant biologists who present longitudinal studies with similar results.

So do trees actually experience these human emotions? Not according to other scientists and researchers who found that Wohlleben's research mainly appeals to "tree-hugging" environmentalists and PETA types. One scientist wrote "the book indirectly suggests that plant science has been lacking, has been slow to develop, and can only be stimulated if we believe that plants are like animals, and hence like us." Another forest ecology professor wrote, "Some of the anthropomorphizing was just over the top. Even I was, like, 'Ugh, I can't read this.' "

Even after reading many other harsh critiques, I still enjoyed the book for its basic premise: Trees can live in harmony with people and can enhance our lives if we can learn to properly care for and sustain them in return.

STARTING EUCALYPTUS PLANTS FROM SEED – MY EXPERIMENT – PART II - May 2023

By Jill Dickman, **jilldjed@gmail.com**
Master Gardener Volunteer Intern 2023

In my first article published in the April newsletter, I talked about starting two different varieties of eucalyptus seeds under grow lights and warming mats. This is my first attempt at using grow lights/warming mats, and I made a rookie mistake. While I was out of town for a week, my husband was tasked with caring for my seedlings. He noticed that the grow lights were facing upward! I had removed them from their packaging and placed them the way they were bent – not realizing that the lights were facing upward. Now I know.

Attempting to learn more about growing eucalyptus, I listened to a YouTube episode of The Gardeners Workshop featuring Dave Dowling. Dave Dowling is a long-time eucalyptus grower and provides product for wholesalers, nurseries, and flower shops. Eucalyptus is used as a filler in mixed flower containers, providing the greenery. A special thanks to Karen Seger for forwarding the YouTube episode to me. The episode can be found at The Gardeners Workshop featuring Dave Dowling (thegardenersworkshop.com).

When starting from seed, Dave acknowledged that eucalyptus is very slow to grow and doesn't really take off until July and August when summer is at its warmest. He is right about the seed being slow growing! The Silver Dollar variety has barely grown since my first article in the April newsletter and is still less than 3 inches tall at most. The whimsical 'Lemon Bush' is approximately 4 inches tall now! The roots of both varieties appear healthy and growing.

Silver Dollar seedlings

Lemon Bush seedlings

After the danger of frost has passed, Dave recommends twelve-inch spacing in the garden. There is no need to support the plant with stakes or use netting as first year plants will lay down as they grow. However, second year and beyond plants grow horizontally if they can be overwintered.

While eucalyptus is not hardy in our Zone 6, Dave noted that, with care, we might be able to overwinter it here. Dave said the benefits of overwintering are that the plant is much larger the second year and can be harvested as early as the end of June. First-year harvest usually begins in mid-August, and ends in mid-September when the plant stops growing. Over-wintering in Zone 6 is accomplished by cutting the plants to a 12-inch or knee-high height after last harvest, covering the plants in a bed of deep straw or leaves, and then covering with a double layer of a medium-lite weight row cover. In Zones 9 and 10, eucalyptus plants grow into trees!

Interestingly, Dave noted that eucalyptus seeds are wild-gathered in Australia, which is why the wildfires of 2019 were so devastating to the crop. Because the seeds are wild-gathered, 'rouge seedlings' are often gathered – usually a different variety of eucalyptus.

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Plant by Numbers

Plants, growing steps, and sample designs to support Specialist Bees, Bumble Bees, and Butterflies & Moths

Specialist Bees

- Native solitary bees that depend on a very narrow range of plants to provide pollen for their young.
- Adults emerge when their host plants bloom.
- These are very docile bees that usually nest in individual tunnels in the ground.

Hibiscus turret bee (*Ptilothrix bombiformis*) on crimsoneyed rosemallow (*Hibiscus moscheutos*)

Drury's long-horned bee (*Melissodes druriellus*) on aster (*Symphyotrichum*)

Aster cellophane bee (*Colletes compactus*) on brown-eyed Susan (*Rudbeckia triloba*)

Hairy-banded mining bee (*Andrena hirticincta*) on goldenrod (*Solidago*)

Golden-Alexanders mining bee (*Andrena zizíae*) on golden zizia (*Zizia aurea*)

Denticulate long-horned bee (*Melissodes denticulatus*) on ironweed (*Vernonia*)

Bumble Bees

- These native social bees visit many different plants for nectar and pollen.
- The bumble bee colony nests in the ground or on the ground.
- Only the newly emerged mated queen survives the winter. She starts a new colony in spring.

Common eastern bumble bee (*Bombus impatiens*) on goldenrod (*Solidago* sp.)

Brown-belted bumble bee (*Bombus griseocollis*) on mountainmint (*Pycnanthemum muticum*)

Two-spotted bumble bee (*Bombus bimaculatus*) on wild bergamot (*Monarda fistulosa*)

Black and gold bumble bee (*Bombus auricomus*) on wild bergamot (*Monarda fistulosa*)

Golden northern bumble bee (*Bombus fervidus*) on blue wild indigo (*Baptisia australis*)

Butterflies and Moths

- Most adult butterflies and some moths visit flowers for nectar.
- Adult female butterflies and moths will seek out specific plants to lay their eggs. These "host plants" provide food for developing caterpillars.
- Many bird species collect caterpillars and other insects as food for developing chicks.

Monarch (*Danaus plexippus*)

Monarch caterpillar

Host plant: swamp milkweed (*Asclepias incarnata*)

Great spangled fritillary (*Speyeria cybele*)

Great spangled fritillary caterpillar

Host plant: prairie violet (*Viola pedatifida*)

Two of the many Ohio-nesting birds that depend on caterpillars to feed their young:

Black-capped Chickadee

Northern Cardinal

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Plant by Numbers is funded by USDA NIFA 20217000635562.

Learn more at: http://u.osu.edu/plantbynumbers

CFAES

Plant by Numbers for Specialist Bees, Bumble Bees and Butterflies & Moths

Planting for Specialist Bees

Native Perennials for Specialist Bees

Trees and Shrubs for Specialist Bees

Consider growing any of these native plants to invite even more specialist bees to the garden:

- Blueberry, Vaccinium spp.
- Dogwood trees or shrubs, Cornus spp.
- Willow trees or shrubs, Salix spp.

Blueberry flowers | Native dogwood in bloom | Willow flower with mining bee

Native Perennials for Bumble Bees

Trees and Shrubs for Bumble Bees

Consider growing any of these native plants to invite even more bumble bees to the garden:

- Blueberry, Vaccinium spp.
- Cherry (native and introduced edible and ornamental), Prunus spp.
- Eastern redbud, Cercis canadensis
- Rhododendron and azaleas (Rhododendron spp.)
- Willows, Salix spp.

Black and gold bumble bee on blueberry (Vaccinium corymbosum) | Two-spotted bumble bee on American plum (Prunus americana) | Two-spotted bumble bee on redbud (Cercis canadensis) | Bumble bee on early azalea (Rhododendron periclymenoides) | Two-spotted bumble bee on pussy willow (Salix discolor)

Planting for Bumble Bees

Planting for Butterflies and Moths

Native Perennials for Butterflies & Moths

Trees and Shrubs for Butterflies and Moths

Apple (Malus spp.) 237 species	Maple (Acer spp.) 230 species
Birch (Betula spp.) 284 species	Oak (Quercus spp.) 430 species
Blueberry (Vaccinium spp.) 217 species	Poplar (Populus spp.) 249 species
Cherry (Prunus spp.) 543 species	Willow (Salix spp.) 269 species

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Find plant lists, handouts and more:

Plant by Numbers is funded by USDA NIFA 20217000635562. With appreciation to the city of Lexington, Kentucky, for their inspiring Plant by Numbers program.