SEPTEMBER 2021 VOL. 4, NO. 9

Denton County Master Gardener Association

THE ROOT

Grow With Us

Buds From The Board

BY KATHRYN WELLS, PRESIDENT

Happy September, friends!

Autumn is my most favorite season, and many of you have shared that it's your favorite, too. While we were especially delighted to offer (for the very first time) an autumn Garden Tour, regretfully, the event has been canceled.

Each of the four lovingly cultivated and curated gardens that had been selected for the tour features a unique educational focus and a delightful point of view. As a small consolation for the canceled event, a brief (three-minute) highlight video of the gardens is available on our DCMGA YouTube channel.

Speaking of educational gardens, please plan to join us in cyberspace for our September 8th General Meeting and Program; Toni Moorehead will present "Shady Transformations," and she'll share the very best shade plants for North Texas ... as well as inspiring before and after photos of her own garden.

CONNECT WITH US ON THE WEB
https://dcmga.com

WHAT'S GROWING ON

Buds From The Board (Cont.)

As always, our monthly general meetings are free and open to the public. For these virtual meetings via Zoom videoconference, advance registration is required for both members and guests, and replays of all our recent virtual meetings and programs are available on our DCMGA YouTube channel.

And, if you're interested in becoming a Denton County Master Gardener, we are now accepting applications for our 2022 training class. You're also welcome to join us for an Informational Meeting on October 20th at 10 am at Global Spheres Center. Visit our website for detailed information.

Denton County Master Gardeners and Denton County residents—you are the cream of the crop. I hope your autumn is full to overflowing with happy harvests!

Kathryn

Due to the recent increase in COVID-19 infections and concerns for our members' and visitors' safety, we are canceling the 2021 Garden Tour.

We will notify ticket holders soon with options for their purchases.

Many thanks for continuing to support our organization.

We are already planning a fantastic tour in Spring 2022!

Please click on Upcoming Events on the DCMGA website for event news and information.

The DCMGA Intern Training Program
A Testament to Resilience and Excellence

BY CHERYL HUCKABEE

The objective of the Texas Master Gardener training program is to prepare Master Gardener volunteers "to educate and engage county residents in the implementation of research-based horticultural and environmental practices that create sustainable gardens, landscapes, and communities." In so-called 'normal' times, this is no small feat. Master Gardener candidates are carefully vetted; 70 hours of the training curriculum is planned; instructors, resources, and training venues lined up; training is delivered; assessments and evaluations completed; interns are paired with mentors for guidance; and, interns begin to volunteer in the community while still in training.

In March of 2020, a not so 'normal' time, the world shut down just a few short weeks into our 2020 intern training program.

A Lesson in Resilience

Gardeners are problem-solvers by nature. When the plants they're growing are not quite right, they try all the solutions in their arsenal – more or less water, fertilizer, pesticide, disease treatments, soil amendments, sun exposure, and even digging up the plant and moving it to a more favorable spot. The Intern Class Planning Team took their problem-solving skills to a new level in 2020 and 2021. They personified resilience and adaptability. Class delivery was converted to virtual venues, required hours of training were reduced, as were volunteer service requirements. They did whatever it took to deliver the highest quality horticultural training and to ensure the classes of 2020 and 2021 were prepared to meet the Texas Master Gardener mission upon graduation. Perseverance prevailed; Master Gardener certification was earned by 30 interns in 2020, and 32 interns are in training for 2021.

What It Takes to "Make" Master Gardeners

Preparing for the intern training program is a year-round endeavor by a team of about 60 Master Gardener volunteers. Planning for next year's program begins at the end of May. During the summer, curriculum updates are made, instructors and hands-on/lunch & learn activities are confirmed, and marketing begins to recruit interns. An information meeting for interested candidates is held in October. Applications are accepted August through October, vetted in November, and candidates are notified of acceptance in December. Tuition is due the first week in January, and the 14-week training program begins the last week in January through the end of April. Contingency plans are prepared, such as converting to virtual classes or planning a make-up class day.

The Texas Master Gardener Association textbook is the basis of the curriculum, which covers in-depth training on a broad spectrum of horticultural subjects. The curriculum evolves every

The DCMGA Intern Training Program (Cont.)

year based mainly on evaluations from the prior year's interns and changes in the trends in home gardening. For example, the community shows interest in native plants, gardening in small spaces, the physical and mental health benefits of gardening, and participating in community gardens. These topics are woven into the upcoming class curriculum.

2022 Intern Training Subjects

- Plant Development
- Soil Management
- Tree Care
- Native Plants
- Entomology & Integrated Pest Management
- Rainwater Harvesting & Irrigation
- Firewise Landscaping
- Earth Kind Landscaping & Identification of Texas Native Shrubs & Flowers
- Turf Grass Culture
- Mycology: Fungi In the Garden
- Composting
- Growing Fruits
- Growing Vegetables & Herbs
- Worm Ranching

Hands-on learning activities include garden tools, tree identification, tree pruning, identifying plant diseases, bugs in your yard, working the help desk, growing super greens, and lasagna gardening.

Classes are taught by some of the best horticultural educators in Texas. Most are active instructors in the Texas A&M University System. Experienced, active Master Gardener mentors are paired with trainees to help guide them through a successful training and volunteer experience during their first year.

How to Become a Texas Master Gardener

Applications for the 2022 Intern Class are being accepted through October 22, 2021. Applicants must commit 70 hours of specialized training (Tuesdays, 9a-4p) and 70 hours of volunteer service in approved DCMGA projects and programs. A wide variety of projects are available, such as working with youth at area schools, assisting in gardens at senior centers, working on the Denton County Master Gardener Help Desk, speaking to groups interested in gaining gardening knowledge, or any one of our major community events we host each year. There are plenty of projects to choose from, and all are filled with great people invested in learning and sharing their gardening knowledge!

Participants become certified Texas Master Gardeners after completing the first year of required training and volunteer commitment. Texas Master Gardeners in Denton County maintain their certification by attending 12 hours of continuing education and providing a minimum of 12 hours of volunteer service each year after their initial training year.

The DCMGA Intern Training Program (Cont.)

Do you have a keen interest in gaining an ongoing education in the best practices of sustainable gardening and want to share that education with your community? The Denton County Master Gardener Program may be for you! Mark your calendar for the Informational Meeting on October 20, 10 a.m., at Global Spheres Center. We encourage you to check our Upcoming Events page on dcmga.com for our monthly General Meeting & Program dates and times to get a taste of our organization.

Learn more about becoming a Texas Master Gardener and find the application at this link: https://dcmga.com/become-a-master-gardener/

Join Denton County MGA in cyberspace for our August General Meeting & Program.

We're pleased to feature Toni Moorehead of Signature Gardens, who will present "Shady Transformations" featuring the best shade plants for North Texas.

Advance registration is required.

As always, our General Meeting programs are open to the public and free of charge.

We hope to resume in-person monthly meetings in October.

Denton County Master Gardener YouTube Channel

Click on "Videos" and check out our new presentations!
And don't forget to subscribe!

http://www.youtube.com/c/DentonCountyMasterGardener

Meet Cece Kenney

BY CHERYL HUCKABEE

Cece knows how to garden on the go. She frequently moved, growing up in an Air Force family and marrying a Marine at 18 years old.

Cece Kenney
DCMGA Class of 2017

Her father retired from the military when she was 11 years old, and they settled in Wichita Falls, Texas. He was the gardening inspiration for Cece. His lawn was beautiful; the landscape was sculptured and tidy. She and her siblings spent many hours pulling weeds and eating strawberries right off the plants in his vegetable garden. Her mother loved blooming plants, especially roses, moss roses, dusty miller, and crepe myrtles. She really enjoyed her neighbor's roses that grew between their homes. During the pandemic lockdown, Cece fondly reminisced about those days while pulling weeds in her own lawn.

Twenty-four years bouncing around the world during her husband's military career didn't dampen Cece's passion for gardening. She gardened everywhere they lived, mainly growing flowers. They settled in Denton County in 2000 and now live on 1 ¼ acres in central Denton County. Their property backs on Corp of Engineering land on Lewisville Lake with a path to the slough into the lake.

The Path To Cece's She Shed

Cece's home garden is made up of many rooms. She has a cardinal garden with red blooming plants, a total shade garden with hostas, a pollinator garden (her favorite), a fairy garden, and a "She Shed." Her front yard is where she tries new things. There she has a new bed prepared for sowing wildflower seeds this fall.

Cece is a member of the 2017 Master Gardener class. She joined DCMGA to be part of a community, something she missed from her military life. Spending time with people who enjoy what she enjoys and sharing their gardening knowledge played a big part in completing the Master Gardener training.

Cece Kenney (Cont.)

Volunteer service has always been important to Cece. She volunteered with the American Red Cross, the Navy-Marine Corps Relief Society, The Wives' Club, and thrift shops during her military life. Cece describes herself as "the best volunteer you ever had." Her volunteer service with DCMGA certainly supports that description. Her service includes SWAt (Science With Attitude); Junior Master Gardener program; Fall Garden Festival; Garden Tour; Plant Sales; DCMGA celebrations; Herb Society; Fruit, Vegetable, Herb and Flower Show; and a judge at the Denton County Youth Fair. With all this, she manages to squeeze in time to volunteer for Ruth's Room, a thrift store benefiting Habitat for Humanity.

Expanding her knowledge of native plants, pollinator gardens, and better management of natural resources and natural areas through the Texas Master Naturalist™ program is on her wish list. Cece references these books frequently in her quest for gardening knowledge:

- The *Container Gardening Series* by Pam Crawford
- *Neil Sperry's Complete Guide to Texas Gardening* by Neil Sperry
- *The New Southern Living Garden Book: The Ultimate Guide to Gardening* by The Editors of Southern Living

Much like her life, Cece describes gardening as "very personal, fluid, and ever-changing." We're so happy she's brought her resilience, passion for gardening, and volunteer spirit to Denton County and the Master Gardener Association.

Zumi Bear the Corgi
loves to help garden. He picks tomatoes with his nose and hunts lizards.

Stumpman is Adorned
with Virginia creeper, mosaic tiles, wood, and glow in the dark eyes.

What Not To Plant - Redtip Photinia

Redtip photinia issues could make you see red

BY MICHELE RAWLEIGH

Have you ever planted something that you thought was perfect only to regret it later? In this space where we usually feature recommended plants, we are highlighting a popular shrub that can be problematic and should be avoided.

Redtip photinia (*Photinia x fraseri*) can be a showstopper in early spring with its bright red new growth, followed by clusters of white flowers. As a result, it's very tempting to want to create a hedge of these fast growing and commonly available evergreen shrubs. Many homeowners have done so – too many actually – and that's part of the problem. The ubiquitous redtip photinia hedges have allowed a fungal disease known as Entomosporium leafspot to proliferate. Once the disease has taken hold, it is difficult and time consuming to eradicate. You will lose the shrubs in your hedge one by one and there is perhaps nothing sadder or more frustrating in your landscape than a once beautiful evergreen privacy fence slowly dying and leaving gaps for everyone to see and see through!

Redtip photinias are native to Asia, hardy to Zone 7, and prefer full sun or some shade. The shrubs can grow quite large, 10-12 ft tall by 8-10 ft wide. They can be sheared easily to create the dense growth that many homeowners want for privacy. However, maintaining these types of intensive, monoculture plantings can exacerbate Entomosporium leafspot when shrubs are planted close together and trimmed frequently to keep them in bounds.

This Photinia Hedge is Struggling.

Plants are too close together and need frequent trimming to be kept at a quarter(!) of their mature size to fit in this narrow space

Redtip Photinia (Cont.)

Entomosporium Leafspot Symptoms

The symptoms of Entomosporium leafspot infection are most prevalent during cooler, moist conditions. It typically starts as tiny red spots on newly emerging leaves, usually at the bottom of the plant first. As the disease progresses, the discolored spots grow and merge into large purple splotches. A gray center appears at maturity and may contain black spots, the fruiting bodies containing the fungal spores that cause reinfections. The leaves die and fall off but still harbor the spores that are spread by wind and splashing water from rain or irrigation. Repeated leaf loss disfigures and weakens the plant and eventually kills it without treatment.

This Photinia Privacy Hedge
is dying a slow death from Entomosporium leafspot disease.

Controlling Entomosporium Leafspot

It's probably easier to prevent Entomosporium leafspot than it is to treat it. The disease is most active during spring and fall. The spores overwinter in leaf litter or on late season new growth stimulated by trimming. Here are some tips to help minimize an outbreak of this fungal disease:

- **Note the mature size of the shrub and allow enough space for good air circulation.**
- **Plant in full sun since shade allows excess moisture to be retained.**
- **Avoid watering the foliage directly and don't water at night.**
- **Consider mixed hedge plantings rather than all of one species.**

If symptoms of the disease appear:

- **Remove and destroy infected leaves and stems. Remove the entire plant for recurring, serious infections.**
- **Prune when dormant in winter and avoid repeated trimmings that promote new growth.**
- **Apply new mulch in late winter to cover potential over-wintering spores.**
- **Use a fungicide labeled for Entomosporium leafspot beginning in late winter through spring and then again in the fall. Follow the product's instructions but note that treatments may need to be as frequent as every week or two to gain the upper hand.**

Redtip Photinia (Cont.)

Alternatives to Redtip Photinia

Fortunately, there are several Texas native plants that are suitable substitutes for redtip photinia in the Denton County area. Using natives helps increase your landscape's success because they are adapted to our soils and climate and are supportive of our native insects and critters. The Native Plants of North America database has additional information about each of these shrubs (see the Reference section):

- Yaupon Holly (*Ilex vomitoria*)
- Southern Wax Myrtle (*Morella cerifera*)
- Carolina Laurel Cherry (*Prunus caroliniana*)
- Evergreen Sumac (*Rhus virens*)
- Inkberry (*Ilex glabra*)
- Blackhaw Viburnum (*Viburnum prunifolium*)
- Agarita (*Mahonia trifoliolata*)


Photo Courtesy DCMGA Member Mary Morrow

References and More Information

Texas A&M Agrilife Extension
"Entomosporium Leafspot of Photinia and Indian Hawthorn"
https://agrilifeextension.tamu.edu/library/landscaping/entomosporium-leafspot-of-photinia-and-indian-hawthorn/

Clemson University – Clemson Cooperative Extension, Home & Garden Information Center
"Photinia (Red Tip)"
https://hgic.clemson.edu/factsheet/photinia-red-tip/

University of Arkansas – Division of Agriculture, Research & Extension
"Leaf Spot of Redtip Photinia"
https://www.uaex.edu/publications/pdf/FSA-6112.pdf

Lady Bird Johnson Wildflower Center - Native Plants of North America database
"Plant Lists"
https://www.wildflower.org/plants-main

IT'S 2022 MEMBERSHIP RENEWAL TIME!

Dues paid by January 31, 2022, $15; $25 after

The Fine Print

- Enter VS & CE hours in VMS by January 31, 2022
- Veterans need 12 hours VS & 12 hours CE in 2021
- Interns need 70 hours VS & 50 hours training in 2021
- On March 31, 2022 members not in good standing will be inactivated unless granted an exception by the CEA-Hort.

Email Tammie Gurley with questions tmgurley@msn.com

Scan or go to Annual DCMGA Membership Renewal on dcmga.com to submit your renewal and payment

TEXAS MASTER GARDENER
TEXAS A&M AGRILIFE EXTENSION
Denton County

What's Growing in Members' Gardens

Gryphon Begonia
Begonia "Gryphon'

Cleome
Polanisia dodecandra

Joe Pye Weed
Eutrochium spp.

Luffa
Luffa spp.

Raingardens For North Texas Landscapes

LYNDA HARVEY

Do you have a periodic or recurring wet area in your yard? Have you noticed an erosion problem? It could be around the downspouts from your house. Maybe a soggy wet patch happens each spring or after a heavy downpour. Your home and yard itself may be causing or contributing to the problem. The roof of your home, driveway, and sidewalk create a "hardscape" that water cannot penetrate, so it collects and runs off. Rainwater is welcome in Texas, but stormwater can be too much of a good thing. Rain is not the only source of water. Sprinkler system water may collect in that gully between your house and your neighbor's. Residential watering of lawns and gardens, though well intentioned, often ends in excess runoff. Corral that water for gardening and help the environment at the same time. Create a raingarden!

What is a raingarden?

A raingarden is a landscaped area dug into a basin to capture water for use by plants or to soak deep into the ground where it is naturally filtered. Raingardens are designed to absorb stormwater and excess water runoff, particularly from impervious surfaces such as compacted ground, roofs, and paved areas. A raingarden stores and naturally filters pollutants from the water, protecting streams and waterways. Raingardens control erosion, too, by slowing runoff.

A raingarden is a working ecosystem that makes a lovely accent. Most raingardens contain native perennial plants that can adapt to the extreme moisture conditions. The plants absorb the water and transpire it into the air. Water evaporates more readily because it is spread over a larger surface area. The rest percolates into the ground over time. A raingarden is shallow. It is not a pond, since surface water should not remain more than 4 days. Surface water remaining longer than 96 hours could breed mosquitoes and other harmful insects.

This Dry Riverbed, built to address control of excess runoff, provides a pathway for rainwater into the raingarden.

Building a Raingarden

Each raingarden is unique because of different conditions and desired results. Take the time to plan. The three planning areas are inventory of physical conditions, garden design, and plant selection.

Raingardens For North Tx Landscapes (Cont.)

Inventory

Inventory the physical conditions of your yard by creating diagrams and taking notes. Take a look at your yard with a new perspective. A "level" yard is not completely level! Note the slope and area of the roof, driveway, and hardscapes that collect water and deposit it in volume elsewhere. Mark the location of trees, shrubbery, and existing raised beds. Indicate hills and valleys (or "mounds and dips"). Look at subtleties in topology, such as slope around walkways and driveways. Take neighboring properties into consideration where water may be a source or a downstream destination. Consider yard size and how much area should be allocated to the raingarden. Also note what materials are naturally available, such as rocks, excess soil, and of course plants that may need dividing.

Literally, gauge the water. Track the frequency, volume, and velocity of water flow. A rain gauge may help determine how much water comes from clouds or sprinkler systems, but runoff is the criteria to measure. Dig a hole in the analysis area and insert a long cylinder can (like a juice can) with the lip just below ground level. After rain/watering events, insert a ruler to measure. Downspouts and sloped areas indicate velocity and possible erosion factors. The area where water is currently ponding may not be the optimal place to build the raingarden since the water is not able to be absorbed. If the raingarden will be in a current ponding area, plan on excavating to augment the bottom with gravel and sand for drainage, or decide on an alternate location that is more desirable for drainage, function, or aesthetic reasons.

Lynda's Raingarden is a Series of Basins

because of water volume and location restrictions. It starts with a triangular form in a shaded area. A dry creek bed bordering two sides joins together and carries excess water to a second oval basin in the sun.

When deciding on where to place a raingarden, examine how the water will get into the catch basin area. Soil permeability is important. Water should collect in an area and percolate through porous soil. Heavy clay (common in Texas) does not absorb well. Test a site's soaking

Raingardens For North Tx Landscapes (Cont.)

ability by digging a hole 6 inches deep and about 12 inches square. Fill with hose water. If water is still in the hole after 24 hours, pick another location or plan on augmenting the bottom.

Design

The garden design aspects are unlimited regarding the style, shape, and materials. The physical constraints such as topography help to determine the location and size of your rain-garden. The volume of water and soil drainage capacity help to decide the size, shape, and complementary features. In addition to the raingarden basin, a swale (a trench with plants or grasses) may be necessary to direct the water into the collection area. A dry creek bed (a trench filled with rocks) or underground drain pipes can send the water to the raingarden. These are particularly useful to move downspout water away from the house. Rocks in a dry creek bed can slow the water flow, preventing erosion, and aid the absorption area. A rain-garden on a slope will need a berm on the downhill side to hold back water during a storm.

Decide on a shape that is aesthetically appealing and fits the selected area. Popular shapes are crescent, kidney, and teardrop forms. Raingardens are generally longer than wide, usually with the longer side perpendicular to the water source. Select an area that is at least 10 feet away from the house for flood avoidance. Also, stay away from tree roots; avoid digging in a tree drip line (under the canopy). The drainage volume tests will influence the site selection. If too much volume, plan on more than one raingarden, which can be separate or connected in a chain with swales, dry creek beds, or underground piping. Use a hose or string to mark off the area or sprinkle flour or cornmeal to outline the shape.

Call the utility company to make sure no utilities are below ground. Dig. Raingardens average 4 – 8 inches deep with a level bottom. High water volume and sloped areas would require more depth. If the water draining test was poor, dig deeper and partially fill with gravel and a layer of sand. Or, if soil is poor, dig deeper to allow for adding top soil. If the raingarden is on a slope, create a terrace effect by moving the soil from the steepest point to the downhill side. Use removed soil to level areas and to make a berm (dam area to retain water) at the lowest side. Berms are around 6 inches high. Rocks or landscape bricks can reinforce the berm and create a decorative accent. Amend the garden base with top soil and compost, as necessary, to provide a good bed for plants.

Planting

Before planting anything, test! Wait for rain or other water event. Determine if water is contained and drains/evaporates at an acceptable rate. It is easier to modify the size and shape of the raingarden basin before plantings. The test also reveals how moist the soil will be, which determines plant selection. Raingarden plant selection is very similar to regular plant criteria,

Raingardens For North Tx Landscapes (Cont.)

except for extra attention to water tolerance. Plant selection depends on garden zone, moisture or water requirements, sun/shade, size of the area and plants, and desired effect for function and appearance. Native plants are preferred because many native plants are tolerant of flooding and drought. Natives do not need fertilizer and often self-replicate. Many natives have deep plant roots that create additional channels for stormwater to filter into the ground. Divide existing perennials that will appreciate the new conditions!

Raingardens can be themed or designed with a special purpose such as a bird or butterfly garden. Trees, shrubs, flowering and foliage plants should all be considered. A good source for suggested plants can be found at http://rainwaterharvesting.tamu.edu/raingardens/.

A raingarden can have its own zones of moisture. Very wet areas may require bog plants. Perimeter areas may use different "marginal plantings" just like plants that grow along creek beds and lakes. Some research or trial and error may be necessary for your unique raingarden.

My Denton County raingarden is a series of basins because of water volume and location restrictions. It starts with a triangular form in a shaded area. A dry creek bed bordering two sides joins together and carries excess water to a second oval basin in the sun. The water volume required a larger basin area, but other garden features prevented digging any bigger. Tree roots, a vegetable garden, and a garden path with gate necessitated a third basin connected by underground piping.

The plants are different in the three basins. The shaded area stays damp, while the other two basins go dry in the sun. The shaded raingarden has Japanese water irises, anemones, corkscrew rush, papyrus, lemon balm, Mexican petunia, Turks cap, and Joe-pye weed.

The sun basin has canna lilies, daylilies, lizards tail, water spider lilies, frog fruit, and corkscrew

This Bog Garden is located at the bottom of a retaining wall. This area gets a lot of water, has poor drainage, and is one of the hottest spots of the yard. Henry Duelberg salvia does well here, which the bumblebees appreciate, as does the bog sage blooming with bright blue blossoms.

Raingardens For North Tx Landscapes (Cont.)

rush. The other sun basin has monarda (bee balm), canna lilies, blue mist flower, and phlox. I divided and transplanted my existing plants to test what would be successful. Plants that did not work were coneflowers—the wet periods were too wet for them. Coneflowers did flourish along the border of the dry creek bed, along with sedums, bearded irises, and sages, which require less water.

Maintenance

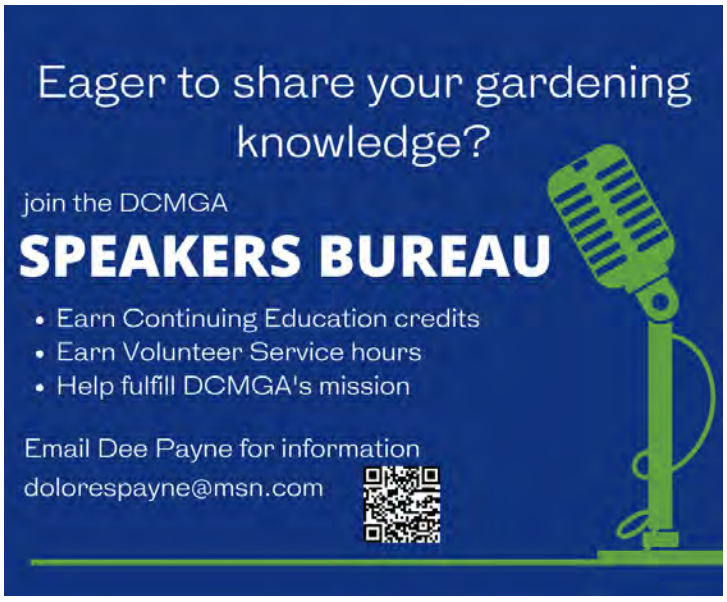
The first year, plants should be watered during dry spells to get established. Weeding may be needed the first two years before the perennials are established enough to dominate the area. The basin can be mulched. Plants may need some spring cleanup and occasional sprucing. The raingarden concept is to naturalize and self-maintain, which makes the ongoing maintenance simple.

Resources

DCMGA (Denton County Master Gardener Association)
"Raingardens for North Texas Landscapes"
https://dcmga.com/files/2019/09/Raingardens.pdf

***The Root*, DCMGA's monthly Newsletter, June 2019**
"Water-wise Plants"
https://dcmga.com/files/2019/05/The-Root-June-2019-Newsletter.pdf

Texas A&M AgriLife Extension
"Raingardens"
https://rainwaterharvesting.tamu.edu/raingardens/



Book
"*The Soil Will Save Us: How Scientists, Farmers, and Foodies Are Healing the Soil to Save the Planet*". (2014). Kristin Ohlson. Rodale Books. It is loaded with information about soil building, soil conservation, sustainable farming practices, and the physical/chemical interactions between animals, plants, and soil, all told in engaging prose.

Book
"*Garden Paths & Stepping Stones*". (2007). Tara Dillard. Sterling. An excellent reference book with beautiful photos and inspiration to create garden paths.

Podcast
"The Gardenangelists". (2021). Carol Michel, Dee Nash. An upbeat and very helpful gardening duo with great gardening advice, links, and quotes. Weblink: https://www.buzzsprout.com/225480?fbclid=IwAR3ef9U6GRmdYfrgsCsHJ59P7X4Ol2ClD6sxZITquHq22Pmr-VhfN13WiRk

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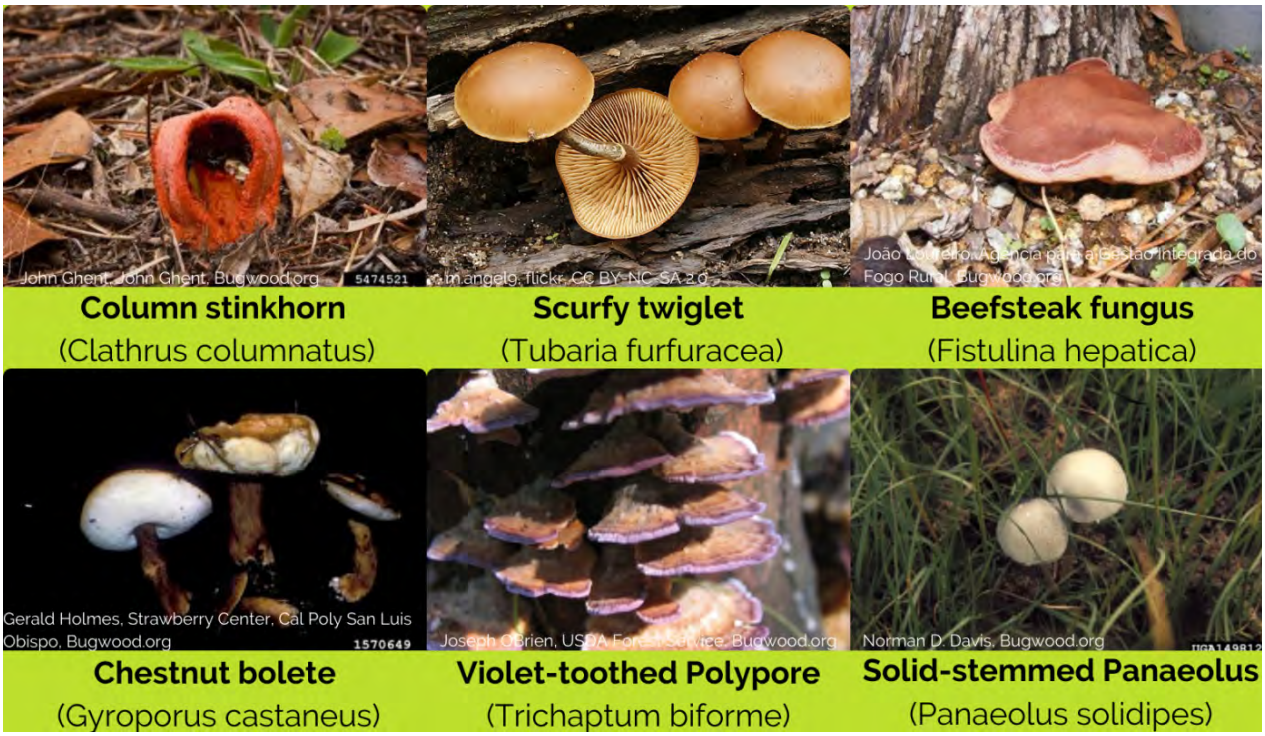
Love the Fungus Among Us!

BY KELLI BIXLER

North Texas received an abundance of rain during the spring of 2021. The volumes of rain flooded gardens, washed away seeds and yellowed leaves on plants. Something else was happening in our gardens and lawns that we may not have noticed. It was happening within the soil.

There is a world of biology going on in fertile soil. Some of that biology is fungi. Most of the time, fungi stay hidden while breaking down organic material. When conditions are right, like prolonged periods of wet and humid weather, fungi burst from the soil, like flowers in the spring. A fungus spreads spores into the air and dies when the sun comes out, or the soil dries up.

When people think of fungi, they think about their visible fruiting bodies: mushrooms and toadstools. Mushrooms are just a minor part of the fungus that inhabits the soil. Fungus is always found in soil, before mushrooms are visible, and is still there when the mushrooms are gone. The work of fungus happens in the soil, forming strands of fungal hyphae (high-fee). These hyphae are thin, delicate, root-like structures that allow for the transportation of water and nutrients to plants.



Love the Fungus Among Us! (Cont.)

Within the soil's ecosystem, fungus hyphae are like roads and highways connecting cities. The hyphae will connect with plant roots, creating a symbiotic relationship. Fungi make nutrients soluble, thus making them available for uptake by plants. The hyphae ensure that water, nitrogen, phosphorus, and essential trace elements transport to where they are needed. The fungi then access nitrogen from the plant. This mutually beneficial relationship is called mycorrhiza.

Most plants, including trees, turf grasses, annuals, and perennials, depend on some fungal activity to live. Fungal relationships improve drought and disease tolerance, reduce stress from weather, and accelerate a plant's growth rate at every stage. Even though one may not be fully aware of all that fungi do under the soil, gardeners can make sure to care for the delicate systems of fungi in all gardening practices.

How can we grow and care for fungi?

Fungi is present in your soil already. You have healthy fungi if you have healthy perennials, trees and shrubs, and crumbly rich soil. With a bit of help, one can keep fungi thriving and multiplying.

Feed it mulch and compost - Fungi eats organic matter. Top your soil with organic pine straw, hardwood or bark mulches, fall leaves, or compost made with plenty of these items. Organic material from trees is ideal.

Consider a 'no-dig' garden - Mechanically tilling your garden pulverizes fungi particles. Use hand tools to work the soil to ensure a healthy fungal network by disturbing the soil as little as possible.

Minimize the use of chemical fungicides – Chemical fungicides can harm soil fungi. Try alternative methods for fungal diseases on plants. Some natural alternatives include cinnamaldehyde (a derivative of cinnamon), neem oil, jojoba oil, and baking soda.

Use cover crops and crop rotation – Grass and legume cover crops capture nitrogen and provide winter protection for soil fungi. In vegetable gardens, onion, bean, and corn families are good partners to soil fungi. Rotate these crops to keep fungi thriving.

The benefits of fungi in organic gardens are largely unrecognized. While some fungi eat dead leaves, others eat live things like nematodes. All add benefit to the soil. Resist the temptation to get rid of the mushrooms that show up in your landscape. They are a sign of **healthy soil** containing lots of organic matter.

Got Pests? Eek!
Control Them Safely with IPM

BY CHERYL HUCKABEE

Did you know in horticulture, the definition of a pest is "any living organism that negatively affects plant health or becomes an annoyance to people or pets"? (*Texas A&M AgriLife Extension*). Insects and arthropods can be pests? Yes. Can plant diseases be pests? Yes. Can weeds be pests? Definitely! Bambi and Thumper? Sometimes. Lions, tigers, and bears? Well, maybe.

There are safe and environmentally sensitive practices for dealing with pests in the landscape, garden, and home. Integrated Pest Management (IPM) emphasizes prevention above treatment by combining several effective methods that make the conditions more favorable to plants than pests, not the eradication of pests. (*Texas A&M AgriLife Extension*)

The IPM Institute of North America describes the difference between IPM and organic pest management: "IPM allows the use of pesticides, fertilizers and other materials made from synthetic materials when necessary. Organic certification programs largely restrict allowable pesticides to those made from natural materials. Pesticides used in organic programs can also have harmful effects on humans, animals, and the environment and are carefully used only when needed. IPM strategies can also help organic programs reduce hazards when used in conjunction." (*IPM Institute of North America*)

Six Steps in IPM

Step 1 - Scout and monitor for pests in the landscape. Regularly inspect the plants for damage and the presence of pests that may be causing the damage. Note the overall health of the plants and what stage of development they're in, e.g., budding, blooming, dormancy, etc. Connecting the health of your plants with the presence of pests will help decide if control practices are needed and which to use. (*Texas A&M AgriLife Extension*)

Step 2 – Accurately identify pests in the landscape. Knowing the type of pest makes a significant difference in choosing the appropriate control method. (Texas A&M AgriLife Extension) Is the damage caused by rabbits or grasshoppers, woodpeckers, or wood-boring insects? The control measures are quite different in these examples. "How to Identify Bugs" on the Denton County Master Gardener Association website has information about what to look for and resources for insect identification (https://dcmga.com/north-texas-gardening/community-gardening/how-to-identify-bugs/). The resources listed at the end of this article help identify the most common pests in and around the home.

Got Pests? Eek! IPM (Cont.)

Leaf Scorch

Adult Squash Bugs

Tomato Hornworm

Red-bellied Woodpecker

<u>Step 3 – Recognize and diagnose plant damage.</u> Injury to foliage may include physical damage (breakage, sunscald); plant diseases (fungal, viral, bacterial); arthropods (insects, pillbugs, aphids, mites); slugs and snails; or vertebrates (rabbits, deer, squirrels, birds, etc.) The type of damage caused by arthropods is related to the type of mouthparts they have; in other words, they cause damage by chewing, sucking, or rasping. (*Texas A&M AgriLife Extension*) Boring and chewing insects can cause branch and twig damage, and in some cases, birds or mammals cause similar damage.

Disease symptoms take many forms. There will likely be a noticeable change in color, shape, or function of the plant as it responds to the pathogen. For example, a powdery substance on the foliage, gummy oozing from the twigs, fungus on fruit. (*Isleib*) The *Texas Plant Disease Handbook* by Texas A&M AgriLife is an excellent resource for identifying plant diseases (<u>https://plantdiseasehandbook.tamu.edu/</u>)

<u>Step 4 – Determine an action threshold.</u> When the damage to plants or their health or the nuisance is intolerable, it may be time to take action and implement control measures. Insects play an essential beneficial role in the environment, so eradicating them should not be the goal. Taking action when there are only a few pests found is also not a goal. (*Texas A&M AgriLife Extension*)

Got Pests? Eek! IPM (Cont.)

Step 5 – Apply the appropriate IPM practices. Prevention is key through choosing genetically resistant plants, proper planting and maintenance, and encouraging beneficial insects. If action is necessary, control should begin with cultural or mechanical methods, only using chemical controls when these methods are not effective, and choosing the least toxic product. (Texas A&M AgriLife Extension)

Step 6 – Evaluate the success of the program and make adjustments.

Dallisgrass

Brown Rot

Why You Should Implement IPM

More than ever, using only a single method for controlling pests in the landscape is no longer environmentally acceptable or economically prudent. IPM's emphasis on strengthening and stabilizing the ecosystem to prevent and avoid pest problems respects insects' essential role in a healthy ecosystem. Don't hesitate to contact the DCMGA Help Desk for help with implementing IPM in your landscape (email: master.gardener@dentoncounty.gov or phone: 940-349-2892).

IPM Resources for Homeowners

These resources are helpful to homeowners in identifying the most common pests, planning for IPM, and providing additional resources for pest management for areas in and around the home.

Turfgrass
https://landscapeipm.tamu.edu/ipm-for-turfgrass/ipm-planning-for-turfgrass/

Ornamental Plants
https://landscapeipm.tamu.edu/ipm-for-ornamentals/

Got Pests? Eek! IPM (Cont.)

Trees
https://tfsweb.tamu.edu/insects/
https://citybugs.tamu.edu/factsheets/landscape/misc-landsc/
https://cdn-ext.agnet.tamu.edu/wp-content/uploads/2018/10/EB-5086-wood-boring-insects-of-trees-and-shrubs.pdf

Vegetables
https://agrilifeextension.tamu.edu/library/gardening/managing-insect-and-mite-pests-in-vegetable-gardens

Fruits
https://blogs.cornell.edu/treefruit/ipm/

Home
https://ipm.tamu.edu/isec

Sources

- Flynn, Paula. "Disease-Resistant Plants." Iowa State University Extension and Outreach, Iowa State University, 13 January 1995, https://hortnews.extension.iastate.edu/1995/1-13-1995/nodis.html. Accessed 26 08 2021.
- IPM Institute of North America. "The National IPM Roadmap definition of IPM, updated in 2018." What is Integrated Pest Management?, 2021, https://ipminstitute.org/what-is-integrated-pest-management/. Accessed 26 08 2021.
- Isleib, Jim. "Signs and symptoms of plant disease: Is it fungal, viral or bacterial?" MSU Extension Field Crops, 19 12 2012, https://www.canr.msu.edu/news/signs_and_symptoms_of_plant_disease_is_it_fungal_viral_or_bacterial. Accessed 26 08 2021.
- Texas A&M AgriLife Extension. "IPM Practices." Landscape IPM, Texas A&M AgriLife Extension, 2021, https://landscapeipm.tamu.edu/what-is-ipm/ipm-practices/. Accessed 26 08 2021.

Online Education Opportunities

For Master Gardeners and the Community We Serve

Science-based knowledge on a variety of topics in an innovative and interactive virtual format.

DCMGA General Meeting Presentations

September 8, 2021. 10:00 am to Noon
Open To The Public
"Shady Transformations" presented by Toni Moorehead
To Register:
https://us02web.zoom.us/meeting/register/tZUscuCopjooE9atS8AO855kkRCDLCEsieFV

October 13, 2021. 10:00 am to Noon
Open To The Public
"Fall Succulent Topiaries" presented by Wanda Stutsman

Upper Trinity Regional Water District, City of Lewisville and Keep Lewisville Beautiful virtual classes

Information to help you save water year-round.
Spring Into Action for Long-Term Success
Soil Preparation and How to Plant a Plant
Lawn Care Basics
Getting Started With Natives

Chat with Green Aggies

Texas A&M AgriLife Extension

Join us for CWGA 12:12pm, 1st and 3rd Thursday each month. Please register for both 1st Thursday at https://tinyurl.com/wpwcxzwa & 3rd Thursday at https://tinyurl.com/urc5mr3m so that you don't miss any chats.

Sept. 2 - Spring trials update with Dr. Pemberton
Sept. 16 - Preventative care for lawns
Oct. 7 - Turfgrass field day special edition
Oct 21 - Fall Favorites

Keep Lewisville Beautiful (KLB)

September 2nd: Caring for your Holiday Cactus, 6:00-7:00pm

Class is limited to the first 100 people who sign up. Contact KLB to register, and KLB will send you a Zoom meeting link the Monday before each class. You can register for just one class, or the whole series. Please register by Noon the day of the class to give staff enough time to email you the meeting link and details.

Register by Email:
amy@keeplewisvillebeautiful.org
Register Online:
https://keeplewisvillebeautiful.org/register/

Tuesdays with Texas Master Naturalists

On the Second Tuesday of each month at the noon hour (12PM Central Standard Time), the TMN State Office will offer an hour-long virtual advanced training event. These will be recorded each month and shared to the website by the following day of each month. Here's a link to one YouTube video: A Presentation by Doug Tallamy – "Nature's Best Hope"
https://www.youtube.com/watch?v=WY4aV5hqkxY

Chat with Green Aggies

Texas A&M AgriLife Extension

All previous Chat with Green Aggies recordings:
https://www.youtube.com/playlist?list=PLxT5cUdFaycrUzUiWSA46JRPGBYSFiFzH

Online Education Opportunities (Cont.)

AgriLife Online Courses

Texas A&M AgriLife Extension

(Most, but not all, are free.)

https://agrilifelearn.tamu.edu/catalog?pagename=Plants-and-Garden

Earth-Kind® Online Master Gardener Training

Texas A&M AgriLife Extension

https://aggie-horticulture.tamu.edu/earthkind/training/

Introduction to Plant Identification

UDSA NRCS Science & Technology

http://www.conservationwebinars.net/webinars/introduction-to-plant-identification

Aggie Horticulture YouTube

Texas A&M AgriLife Extension

https://www.youtube.com/channel/UCbp4wkcScRVoHlN3Hi1_KUQ/

DCMGA YouTube CE Programs

"The Ease of Effective Hardscaping"
"The Pleasures & Pitfalls of Perennial Plants"
"Gardens Gone Wild"
"Getting Buggy"
"Texas Trees: Caring for Your Legacy"
"Using Technology for Plant Identification"
Business meetings

https://www.youtube.com/c/DentonCountyMasterGardener

Metroplex Tamil Sangam Gardening - "Perennial Gardening in North Texas" By "Sharrie & Rick Ely"

Presentation by DCMGA Member Sharrie Ely

https://www.youtube.com/watch?v=pF-BMdAaoqM

Home Grown Lecture Series from Harris County Master Gardeners

Join us for our Free, 30-minute, bi-weekly ONLINE on Thursdays at 10 AM Central time. Must register through Eventbrite to get the webinar link.

https://www.eventbrite.com/e/home-grown-lecture-series-tickets-143797364789?aff=erelexpmlt

September 16, 2021 - Growing Microgreens At The Windowsill - Brandi Keller, Texas A&M AgriLife Extension Agent-Horticulture
September 17, 2021 - Enhancing Your Dishes With Flavored Butter - Shannon Dietz, Texas A&M AgriLife Extension Agent-ANR

Gardening 101 + Virtual Learning Series

Aggie Horticulture

Texas A&M AgriLife Extension

Texas AgriLife posts great videos to the Aggie Horticulture Facebook. There are over 50 presentations here. View them at:

https://www.facebook.com/watch/Aggie-Horticulture-268030721431541129202716211/

Citrus Varieties: Gardening on the Gulf Coast

Texas A&M AgriLife Extension

Stephen Brueggerhoff, Extension Agent – Horticulture

https://youtu.be/wSIRjQJnxhE

The Bee Short Course - Ohio State University

"Building wild bee conservation skills together"

https://u.osu.edu/beecourse/

DCMGA Members

Plan Your Week emailed each Friday has the most current Online CE Opportunities.

See our Member Handbook for approved CE sources and guidelines. Note that members may claim up to 3 hours of annual discretionary education; veteran members with 10+ years of service may claim up to 6 hours.

BY HELP DESK TEAM

Q: What native plants will attract bees to my yard in North Texas?

A: So glad you asked. Providing nutrients and shelter for bees is increasingly important because much of their natural habitat is being lost due to our rapid growth and development.

An important strategy to attract bees is to add plants that flower at different times of the year so that nectar and pollen are consistently available.

The August 2021 monthly Denton County Master Gardener Association's virtual educational presentation was "Welcome Pollinators to Your Yard." The complete presentation is posted to our YouTube channel or you can view it by clicking here: https://www.youtube.com/watch?v=veN7JztMEIQ

The U.S. Forest Service tells us that bees like flowers that are bright white, yellow, blue, or UV and have a shallow or flat landing platform.

A great resource to find native plants that invite bees to your yard is the Ladybird Johnson Wildflower Center. They provide an extensive list of Texas native plants and for each one the description tells you which pollinators the plant will attract and when the plant is in bloom. There is an entire section of their native plant database for North Central Texas.

There are many plants on the Ladybird Johnson Wildflower Center list. To keep from getting overwhelmed, you can restrict your search by sun requirements, flower color and bloom time. For example, information about the Blackfoot Daisy tells you that it is a perennial that grows 6 to 12-inches tall, in full sun to partial shade, blooms from spring through fall, and provides nectar for bees.

The Native Plant Society of Texas offers an excellent overview of Texas's native bees and recommends The Pollinator Partnership Guide to find a list of plants specifically for your area based on your zip code.

Bees also appreciate a water source and will visit your yard often if you provide a shallow container with places to stand and rest. "Good systems include shallow bird baths or pot bottoms filled with water and pebbles or corks. These allow the bees to stand and drink; they'll generally dry out too quickly for mosquitoes to be an issue." according to Christine Casey, University of California-Davis.

One quick reminder: if you have to spray a pesticide or other chemicals, please do so carefully when bees are not foraging. Best management practices to protect bees from pesticides.

- Pollinator Syndromes https://www.fs.fed.us/wildflowers/pollinators/What_is_Pollination/syndromes.shtml
- Texas North Central Recommended https://www.wildflower.org/collections/collection.php?collection=TX_northcentral
- Native Bees in Texas https://npsot.org/wp/story/2012/2422/
- Ecoregional Planting Guides https://www.pollinator.org/guides
- Best management practices to protect bees from pesticides http://ipm.ucanr.edu/mitigation/protect_bees.html

If you have questions about any horticulture-related subjects, please contact our Master Gardener Help Desk at 940.349.2892 or master.gardener@dentoncounty.gov. It's free of charge, and it's our pleasure to assist you.


2021 Greater Aubrey Area
Gardening Series
September 16: Texas Native Plants
Liz Moyer: DCMGA
October 21: Made for the Shade
Daniel Cunningham:
Rooted In
Presented virtually throughZoom
Register for each session at:
www.dcmga.com/upcomingevents
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Keep Lewisville Beautiful
GARDEN SECRETS SERIES
Join us for our free virtual class series for gardening in North Texas, with speakers from the Denton County Master Gardener Association. Classes are free, but registration is required to attend. All virtual classes will be hosted on Zoom.
• Tree Care & Pruning, presented by Pat Moyer. Thursday, April 29, 6:30p - 7:30p
• The Pleasures & Perils of Planting Perennials by Carol Rowley. Thursday, May 13, 6:30p - 7:30p
• Getting Started with Natives, presented by Liz Moyer. Thursday, August 5, 6p - 7p
• Growing a Sustainable Flower Garden, presented by Sue Newhouse. Thursday August 19, 6p - 7p
• Caring for Holiday Cactus, presented by JoAnn Spurgin. Thursday, September 2, 6p - 7p
For more information, visit us online at www.keeplewisvillebeautiful.org
For more info or to register, email: info@keeplewisvillebeautiful.org
A ZOOM invite will be emailed to you the Monday before the class.
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Denton County Master Gardener Association
2021 Events
DCMGA General Membership Meeting program:
September 8
Program: "Shady Transformations by Toni Moorehead
Keep Lewisville Beautiful
September 2: Caring for Christmas Cactus by JoAnn Spurgin
Greater Aubrey Area Gardening Series:
September 16: Texas Native Plants by Liz Moyer
October 21: Made for the Shade by Daniel Cunninghan
Garden Tour: Cancelled
DCMGA New Member Round Up: Oct. 20
TEXAS MASTER GARDENER
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Denton County
DCMGA.COM

Mission Statement

Denton County Master Gardener Association educates and engages county residents in the implementation of research-based horticultural and environmental practices that create sustainable gardens, landscapes, and communities.

Extension EO/EEO Statement

Texas A&M Agrilife Extension provides equal opportunities in its programs and employment to all persons, regardless of race, color, sex, religion, national origin, disability, age, genetic information, veteran status, sexual orientation, or gender identity. The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating.

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https://www.pinterest.com/DentonCountyMGA

YouTube:
http://www.youtube.com/c/DentonCountyMasterGardener

Save the Date

September 1	Board Meeting - (Virtual)
September 8	General Meeting & Program - "Shady Transformations" (Virtual)

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Content

Submission deadline for the October edition of *The Root* is Wednesday, September 15.
Submissions may be revised at the discretion of the editor.

Ideas, photos, and articles are welcome and may be submitted to Editor Karen Gibson or Communications Director Cheryl Huckabee at dcmga.communications@gmail.com.

All photos are courtesy of DCMGA's Creative Visual Arts (CVA) Team unless otherwise attributed.