

Denton County Master Gardener Association

THE ROOT

Grow With Us



Canva Stock Photo

Hummingbird Feeding On Turk's Cap

Buds From The Board

BY KATHRYN WELLS, PRESIDENT

Happy August, friends; what a (relatively) mild summer it's been! As I'm writing this column (in mid-July), our temperature highs have remained in double digits—what a blessing for North Texas gardens (and gardeners)!

And, we've been able to return to most of our in-person service projects and educational opportunities; yay! Although Zoom meeting commutes are easy, we much prefer the joy of seeing you out and about in the community.

Speaking of Zoom, our monthly General Meeting & Program will remain virtual through September, but we look forward to resuming in-person monthly gatherings this October.

In the meantime, please plan to join us in cyberspace for our August 11th General Meeting and Program; DCMGA veteran member Liz Moyer will present, "Welcome Pollinators to Your Yard." As always, our monthly meetings are free and open to the public. For these virtual

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WHAT'S
GROWING ON



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Buds From The Board (Cont.)

gatherings via Zoom videoconference, advance registration is required for both members and guests; replays of all our recent virtual meetings and programs are available on our DCMGA YouTube channel.

And, 'tis the season for our 2022 Board of Directors selection process. Our Nominating Committee, chaired by DCMGA veteran member Jerry Alexander, has been working with wisdom and diligence to assemble a slate of officers. Once approved by CEA-Hort Janet Laminack, the candidates will be announced to our membership, who will vote to elect them at our November General Meeting. I am grateful to all the outstanding individuals who are serving on this year's Nom Com: Jerry Alexander (Chair, 2015), Tom O'Brien (Vice Chair, 2019), Clarice Luce (Vice Chair, 2003), Melinda Woolley (Secretary, 2017), Judy Allen (2020), Dee Payne (2009), Carolyn Stoy (2018), Sherri Ursini (2021), and Trina Zais (2014).

Denton County Master Gardeners and Denton County residents—you are all blessings! I can't imagine North Texas without you.

Kathryn



Janet's Corner

BY JANET LAMINACK, AGRILIFE EXTENSION HORTICULTURE AGENT, DENTON COUNTY

This would be secret confession time, but if you have known me professionally for any length of time, you already know that I really like bagworms. Maybe I should say that I really like talking about bagworms. Bagworms are a destructive pest but they are slow moving. Typically you will find them on junipers and arborvitae. They are so commonly there that you may think it's just an ornamental feature, until the tree is defoliated. This week someone brought in bagworms on a rose shrub, so they aren't completely selective eaters. Also, Texas does have different species of bagworms who, of course, have their own special diet preferences.



The dangling bags are made from the plant material, which means it is camouflaged. The bags dangle from the branches gracefully swaying in the wind. But they also can wiggle on their own and that's pretty freaky to see. They can go unnoticed for a while, but eventually they will eat all the leaves and make themselves the main attraction. (The gentle reader understands that no leaves is a very, very bad thing for a plant, right?)



What should you do if you see bagworms? Pick them off by hand! That is a completely effective control, provided you can reach all of them. Don't just drop them, though; they need to be killed or disposed of.



MALE BAGWORM MOTHS

It's the female bagworm who lives in the bag, which she has to make herself. Since she's wingless, she stays her whole life in the bag. The male bagworms turn into moths and have all the freedom in the world. I hardly even notice the inequality in these lifecycles, much less am I bitter about it.

The different species have different life cycles, some overwinter as larvae in the bags while some are overwinter as eggs. Every bag has the potential of hatching 500 to 1,000 eggs, so get to pickin'!

DENTON COUNTY MASTER GARDENER ASSOCIATION

2021 Garden Tour

SATURDAY, OCT. 2, 9AM TO 4PM

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MY GARDEN PLAYGROUND Highland Village



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Email Dee Payne for information
dolorespayne@msn.com



Denton County Youth Fair

BY SUE MURRAY

One of my favorite writers, Erma Bombeck, once said "children make your life important." Well, that is certainly true for the organizers and judges of the Denton County Youth Fair. You may have heard some older adults bemoaning the attributes of the current generation of young people, but the kids who participate in the events of this Fair are among the best and hardest working. Unfamiliar with the Fair? Looking for a way to get your kids interested in gardening? Well, here are some things you need to know.

The Denton County Youth Fair (DCYF) is typically held in March at the North Texas Fairgrounds in Denton, but preparation begins months earlier. There are over 200,000 young people in Texas who are members of 4-H, Family, Career and Community Leaders of America (FCCLA) and the National Future Farmers of America Organization (FFA). Those who live in Denton County and are between the ages of eight to eighteen are eligible to participate in the Fair. They compete in a fair and friendly manner in eighteen livestock and project "shows" and three contests including tractor driving, public speaking, rodeo, and a livestock knowledge "Skillathon" There is also a rodeo, plus a Queen and Princess competition. It is similar to the Fort Worth Stock Show, except smaller and for young people.

The Fair is sponsored and supported by the Denton County Livestock Association and the Blue Ribbon Club. Its purpose is to encourage and promote projects by Denton County youth, under the supervision of a teacher or 4-H. It is a wonderful opportunity for students to learn responsibility and showcase their hard work and dedication.

The Denton County Master Gardener Association (DCMGA) supports the DCYF by registering, validating and judging entries in the Horticulture competition. Horticulture education is provided through advice, and feedback along with a Horticulture Guide and 4-H workshop. The workshops focus on fun plant growing skills and generate interest in the competition. The two Horticulture Show Departments include Plants and Flower Arrangements. Flower Arrangements were



Photos Courtesy DCMGA Member Lynda Harvey

Denton County Youth Fair (Cont.)

added in 2017. Each Department has two divisions denoted by age. The junior division is third through eighth grade and the senior is ninth through twelfth. For the Plant entries, there are twelve classes including flowering, herbs, ferns, container gardens and fruit/vegetable. Normally, plants are validated in person on a Saturday in February at the Agrilife Office in Denton. However, in 2021, due to Covid restriction, a new online validation process was created and utilized. Coaching was done via email, text and phone plus a Zoom workshop. In March, three DCMGA judges scored the plants on ten different qualities. Each year, score sheets with feedback are given for every entry to enhance the learning experience.



Floral arrangement entries are required to be fresh and contain only natural accents (foliage, branches, etc.). No artificial plants are allowed. There are four Classes in the judging: vase arrangements, container (non-vase) arrangements, mono-color and holiday themed. Two DCMGA judges evaluate entries based on ten different qualities from condition and color to design and distinctiveness. The arrangements are so beautiful, choosing the best one can be difficult. Over the years, the Horticulture entries have been unique – anything from water lilies in a tub to a five foot tomato plant in a pot. This year, included never-before-seen exotics, including a carnivorous plant. Many Horticulture contest participants return subsequent years. The Show attracts about the same number of boys and girls.

DCMGA member Lynda Harvey has been involved in the Fair since 2005. She is the Superintendent (manager) of the Horticulture competition. She is responsible for selecting the judges, often members of DCMGA. With Covid restrictions, this year's competition was a challenge. Lynda is grateful that DCMGA 2021 intern Ruth Tweeto stepped in and contributed numerous volunteer hours to assist with the Horticulture event. One of Lynda's favorite memories from past years is of one female student who competed for 10 years in numerous categories but never won. Finally in her last year of competing, she won a Champion belt buckle. Lynda got to present it to her. The girl's entire family cried and hugged. Memories like that keep Lynda coming back each year.

Denton County Youth Fair (Cont.)

First place winners in each Class and Department receive a rosette ribbon. Each Division (Junior/Senior) has a Grand Champion and Reserve Champion for each Class. The senior champions each receive a belt buckle.

The Fair highlight is the auction on the final day. As of 2018, Horticulture champions became eligible for the auction. The livestock is sold at the live auction and the premiums go to the participant who raised the animal. The Silent auction includes the Foods and Horticulture winners. The DCYF auction awarded over \$440,000 in premiums in 2021, which included five Horticulture participants from the silent auction. We hope to see you next year at the Fair!



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And don't forget to subscribe!

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

Fruit, Vegetable, Herb & Flower Show

BY DEBBY ISHEE

The 2021 Fruit, Vegetable, Herb, and Flower Show took place on June 19, 2021, after a year's hiatus due to Covid19. What a thrill it was to get together again working side by side in the gorgeous setting of the Historical Park next to the Community Market. We had a great turnout. 54 Youth and Adults brought over 127 fresh fruits, vegetables, herbs, and flowers that were entered into the competition. Special thanks go to the City of Denton for providing the funds for this year's show and for those who volunteered and participated.



**LEA WATSON,
GRAND CHAMPION
ADULT (GARLIC)**



**SHERRI URSINI,
RESERVE GRAND
CHAMPION ADULT
(SUNFLOWER)**



**MICHELLE ARENAS,
1ST RUNNER UP ADULT
(QUINOA)**



**LERYN SHIREY,
BEST OF SHOW
(HYDRANGEA)
AND
ROWYN SHIREY,
RESERVE GRAND
CHAMPION YOUTH
(SUNFLOWER)**



**ROWYN SHIREY,
GRAND CHAMPION
YOUTH (TOMATO)**



**BIBI ARENAS,
1ST RUNNER UP YOUTH
(GARLIC)**



Photos Courtesy DCMGA Members
Phyllis Minfon, Lea Watson,
and Kathryn Wells

Meet Daniel Arenas Richieri

BY CHERYL HUCKABEE

Before I interviewed Daniel, I only knew him as a fellow Master Gardener and one of the Garden Crew members that steward the beautiful Israel Prayer Garden at the Glory of Zion/Global Spheres Center. I was impressed by his enthusiasm for all things gardening, and even more, impressed by how he encouraged his staff to become certified Master Gardeners. Interviewing Daniel has dramatically expanded the adjectives I now use to describe him - Daniel is passionate, generous, sharing, driven, engaging, conscientious, and knowledgeable.



**Daniel Arena Richieri
DCMGA Class of 2013**

Daniel came to gardening in a round-about way. He is a native of Brazil and grew up in São Paulo. São Paulo is the most populous city in the Southern Hemisphere, with 21.5 million residents in the greater metropolitan area. It is a financial center with rich cultural institutions and architectural traditions. Living in a big city, Daniel did not garden as a child.



Photos Courtesy DCMGA Member Daniel Arenas Richieri

After graduating with a B.S. in Industrial Design, Daniel began his career as a product designer. One day, he opened a door at the back of the shop area and was dismayed to see piles of discarded product prototypes and materials. As a result, Daniel decided to rechannel his training into eco-design and promote environmental responsibility. With this new outlook, he decided on a change of plans: He started a career with the NGO Tires as Art to train the community to make products from upcycled tires. He then became involved in exhibitions and projects focused on economic development, social, and environmental responsibility. His work with both organizations then combined a mobile recycling center that traveled to music concerts and entertainment events. His involvement in these projects introduced him to horticulturists, permaculturists, and his wife Michelle, a biologist.

Daniel came to the U.S. in 2010 to work for the Glory of Zion International Ministries at their newly acquired Global Spheres Center property. He began his career there preparing the

Daniel Arenas Richieri (Cont.)

property for future use and eventually asked to transition into maintaining the almost 25 acres of gardens and grounds. Pam Pierce, a Denton County Master Gardener and Glory of Zion founder and VP, became Daniel's gardening mentor and introduced him to the Master Gardener program. Pam's influence launched Daniel's expanding interest in horticulture, sustainable gardening, and permaculture. Daniel earned his Master Gardener certification in 2013, became a Master Naturalist in 2017, and in 2020 completed the 72-hour Permaculture Design Course through the School of Permaculture in Plano, TX. Through the Master Gardener program, Daniel has completed continuing education and advanced training in composting, vegetables, tree care, Earth-Kind landscape design, water conservation and is currently working on greenhouse management training. He is also certified to teach and develop Junior Master Gardener training.

Beulah Acres Agroforest on the grounds of the Global Spheres Center is the culmination of all of Daniel's training and passions. Its mission is to focus and connect all elements into a balanced ecosystem using permaculture design and Earth-Kind design practices. His journey to the Agroforest began in 2011 with the Israel Prayer Garden. A community garden came next, then a vineyard (some of the oldest vines are now part of the Beulah Acres Agroforest), and a compost operation. Each of these projects led to the development of the current Agroforest and continues to inspire other projects.

Beulah Acres Agroforest



Daniel Arenas (Cont.)

Daniel generously shares his wealth of knowledge through weekly volunteer and continuing education sessions for Master Gardeners, Master Naturalists, and church members at the Agroforest. He also hosts Junior Master Gardener summer camps, gives presentations on permaculture and sustainable gardening, and leads the occasional tour through the gardens.

The goals of the Beulah Acres Agroforest pretty much say it all about Daniel's passions:

"To understand and steward the land and the ecosystem to be enhanced and preserved. Plant selected and native species, attract wildlife, analyze, and optimize natural resources. For others to participate in the design process, select elements to be implemented, and explore possibilities. Learn, educate, demonstrate, research, document data, and engage with others. Develop an inviting area to connect people and nature."

Take some time to volunteer at Beulah Acres Agroforest or attend one of Daniel's training sessions. The experience will enrich you.



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

We're pleased to feature Denton County Master Gardener Liz Moyer, who will present, "Welcome Pollinators to Your Yard."

Advance registration is required.

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

In-person monthly meetings will resume in October. Until then, we look forward to seeing you in cyberspace!

TEXAS MASTER GARDENER
DENTON COUNTY MASTER GARDENER ASSOCIATION
AUGUST 2021
Virtual
GENERAL MEETING & PROGRAM
"Welcome Pollinators to Your Yard"
PRESENTED BY LIZ MOYER
WEDNESDAY, AUGUST 11TH, 2021
10:00 AM - 12 NOON
VIA ZOOM VIDEOCONFERENCE

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Plant of the Month - Chile Pequin *Some Like It Hot!*

BY CHERYL HUCKABEE

Master Gardener and 2021 Garden Tour Homeowner Amy (My Garden Playground) grows chile pequin (*Capsicum annuum* var. *glabriusculum*) for nostalgia and beauty. Her mom grew it as an ornamental, and Amy loves its delicate leaves, tiny white flowers, and the "small bright red peppers that are the show."

Little Pepper, Big History

Chile peppers originated in Brazil, the home of the largest number of wild chile species.



Joseph A. Marcus / wildflower.org

Chili Pequin (*Capsicum annuum* var. *glabriusculum*)

Christopher Columbus gave them their name on his journey through the "New World" declaring them to have the same heat as black pepper. He took pods back to Spain where their popularity quickly spread throughout the Eastern hemisphere. Chile peppers are grown in almost every country and are popular in cuisine worldwide.

There are 31 known species of chiles; 26 are wild and 5 are domesticated species - *annuum*, Chinese, *frutescens*, *baccatum*, and *pubescens*.

Chile pequin is from the *annuum* species as are jalapeño, bell pepper, cherry, poblano, and hundreds of more pod types. The name 'pequin' is thought to have originated from the Spanish word *pequeño* meaning small.

The chile pequin grows as a wild crop on the low mountain slopes and some forest areas in Sonora, Mexico. A small seasonal industry has developed around the chile pequin for people who live in Sonora. They are harvested by hand in the red mature stage and laid out on fabric in the sun for several days to dry. Along with the dried chiles, green immature pods are sold in fresh produce markets. In its ground, dried form, it is an ingredient in Sonoran regional traditional dishes such as "Menudo," "gallina pinta," and "cocido."

Chile Pequin (Cont.)

All About Growing Chile Pequin

Grown as an ornamental plant here in Texas, chile pequin is a low-maintenance native perennial. It prefers sun or part-shade and requires some supplemental water in hot dry summers. It has small white flowers which ripen into 1/4 inch red-orange berries from summer to fall. It propagates easily from seed. It is also known as the 'Bird Pepper' because its red fruit is prized by birds who spread the seed.

Chile pequin is a small deciduous shrub maturing to just 2 ft x 3ft, making it a great plant for containers. It prefers a well-drained loam or sandy loam soil with a pH of 7.0–8.5, a nice fit for our alkaline soil here in North Texas. A warm-season crop, it does best in growing conditions similar to tomatoes and eggplant when daytime temperatures range between 65 and 85°F. Because they are highly susceptible to frost, chile peppers should be transplanted after the danger of frost in the spring and covered or brought inside when frost is expected.

It is best to have a soil analysis done to understand what nutrients might be needed by the plants. A light application of high nitrogen fertilizer (21-0-0) at the time of transplanting and again after flowering begins can give the plants a boost. Be careful not to fertilize too often as this will increase vegetative growth at the expense of flowers and fruit.

Applying a thick layer of mulch around the plants will help keep weeds at bay, retain moisture in the soil, and keep the roots cooler. The soil should be kept uniformly moist. Underwatering can result in blossom-drop, smaller fruits, and blossom end rot. Over-watering can promote Phytophthora root rot, which causes the plant to wilt and die suddenly. Avoid watering from overhead; instead, use a soaker hose, drip irrigation, or a watering can at soil level.

Pests of pepper plants include flea beetles, cutworms, thrips, leafhoppers, and aphids. Many of these can be controlled by hand-picking or applications of insecticidal soap and spinosad. Always carefully read and follow the instructions and safety cautions on the product label. Common diseases in pepper plants include Verticillium Wilt, Phytophthora root rot, and curly top. Keeping the soil evenly moist can help prevent Phytophthora root rot. Leafhoppers transmit curly top so should be monitored and controlled.

Unfortunately, Verticillium Wilt is an incurable fungal disease that lives in the soil. The first symptoms include wilted, yellow, or red leaves. The leaves will eventually turn brown and drop off and the stems and branches die back. You may see these symptoms on one side of the plant while the other side appears to be healthy. If you suspect it, remove and discard the diseased plant(s). It remains in the soil so don't plant another susceptible species in the same area. Soil solarization can often rid the soil of Verticillium Wilt. Learn more about that technique from Texas A&M AgriLife at this weblink: [10 Steps to Vegetable Garden Success](#).

Chile Pequin (Cont.)

Using The Harvest

The fruit is most often harvested when it has turned fully red. The fruit can be harvested when it is green and will be much hotter than when fully ripened. The trick is to harvest the fruit before the Mockingbirds eat them!

Chile peppers are a good source of vitamins A, C, and K, beta-carotene, and potassium. Iron, magnesium, and capsaicin are also found in chile peppers. Capsaicin is the chemical compound that causes the burning sensation and is considered a beneficial anti-inflammatory and antioxidant.

The chile pequin fruit is small but mighty hot. The Scoville scale rating is 30,000 to 60,000 units, 5 to 8 times hotter than jalapenos! It's best to protect your hands when handling the fruit. It has a fruity, citrusy, and nutty flavor and can be used in recipes either dried and ground or fresh. Did I mention that it's HOT? They are most often used in hot pepper sauces and salsas. The popular hot sauce Cholula is made with chile pequin fruit. They can also be pickled. Amy plans to make a chile pequin vinegar with her harvest this year.



Stephen J. Alexander/flickr.com/CC BY-SA 2.0
Chile Pequin fruit

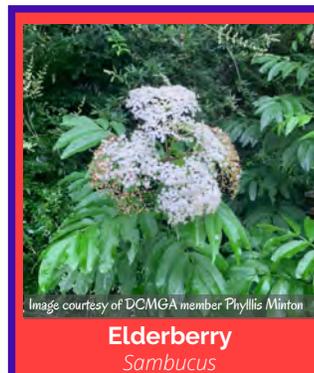
If you're looking for a beautiful atypical ornamental perennial plant give chile pequin a try!

Learn more about chile peppers and chile pequin at these websites:

- <https://aces.nmsu.edu/>
- <https://desertblooms.nmsu.edu/plantadvisor>
- <https://www.centraltexasgardener.org>



What's Growing in Members' Gardens



Composting With Worms - The Basics

BY DON EDWARDS

Vermicomposting is the process of converting organic waste into nutrient-rich humus called vermicast or worm castings. These materials have been shown to contain reduced levels of contaminants and a higher saturation of nutrients than do organic materials before vermicomposting. Compared to ordinary soil, worm castings may contain five times more nitrogen, seven times more phosphorus, and eleven times more potassium. They are rich in humic acid and improve the structure of the soil.

Materials Needed

- Container
- Bedding
- Worms
- Food Scraps

Containers

Worm containers can be purchased or made. They are normally plastic or wood and come in a variety of sizes. An inexpensive plastic storage container would make a good first worm bin. Whatever container is used, it should have holes drilled in the top, sides, and bottom for ventilation and drainage. Detailed information on worm bin construction can be found online.



Bedding

Worms need not only food, but a place to live within the container. Bedding materials provide both. The bedding must be able to retain both moisture and air while providing a place for the worms to live. Some suitable sources of bedding are:

- Shredded paper
- Shredded cardboard
- Coconut coir
- Leaves
- Peat Moss* (Peat moss grows at the rate of approximately one yard in depth every thousand years. Harvesting peat moss destroys its ecosystem and depletes the supply due to its slow regeneration rate. Consider using alternatives.)



Photos Courtesy DCMGA Member Don Edwards

Composting With Worms - The Basics (Cont.)

Worms

The worms most often used in vermicomposting are called red wigglers (*Eisenia foetida*) and can be ordered online or purchased from local sources. For a small bin, it is not unusual to begin with 500-1000 worms. A pound (about 1000) of red wigglers can consume a half pound of kitchen waste per day.

Food

The kitchen waste fed to worms can come from a variety of sources, including all vegetable and fruit waste, coffee grounds (with filter) and tea bags. Like chickens, worms have a gizzard so fine grit should be added to help the worms digest food. Cornmeal, coffee grounds, garden soil, and finely crushed egg shells are commonly used for this purpose.

Initial Set-Up

The first step is to add bedding to the chosen container. The amount of bedding depends on the size of the container. The bin should be 2/3 filled with "fluffed" prepared bedding. To prepare the bedding, place the dry, shredded bedding in a large container and add water until it covers the bedding. Allow the bedding to absorb as much water as possible before putting it in the worm bin. The overall moisture level of the bedding placed in the bin should be like a "wrung-out sponge". Next, add the worms. The general recommendation is 1 pound per square foot. Add the food waste and cover the worms and food with bedding.

Harvesting the Compost

After six weeks, the bedding will be noticeably darker with worm castings. After two and a half months have passed, there will still be some of the original bedding visible in the bin plus brown and earthy-looking worm castings. Although food waste is being added regularly, the bedding volume will gradually decrease and should be replenished. There are several methods used to harvest the compost. One of the simpler ones involves moving the finished compost over to one side of the bin, placing new bedding in the space created, and placing food waste in the new bedding. The worms will gradually move over to the fresh bedding and food waste, and the finished compost can be harvested.

Using the Compost

For potted plants, add a thin layer to the top of the potting soil. The compost can be added directly into your soil mix when repotting. In the garden, simply work it into the ground around the base of each plant. The compost is very mild so there is no worry about accidental burning or over fertilizing.

Disclaimer: Information given is for educational purposes only. References to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the AgriLIFE Extension or the TMGA is implied.

Composting With Worms - The Basics (Cont.)

Sources & Resources

Mary Appelhof (1997). *Worms Eat My Garbage*. Kalamazoo, Michigan: Flower Press.

Loren Nancarrow and Janet Hogan Taylor (1998). *The Worm Book: The Complete Guide to Gardening and Composting with Worms*. Berkeley: Ten Speed Press.

Frank Randall (2012). *The Worm Book For Beginners: A Vermiculture Starter or How To Be A Backyard Worm Farmer And Make The Best Natural Compost From Worms*. Backyard Farm Books.

Texas A&M University, Aggie Horticulture

<http://aggie-horticulture.tamu.edu>

Red Worm Composting

<http://www.RedwormComposting.com>

YouTube, www.youtube.com, (search for worm composting)

Worm Composting Headquarters

www.wormcompostinghq.com

DCMGA (Denton County Master Gardener Association)

Additional Information, Resources, and Supplies PDF

<https://dcmga.com/files/2020/04/Information-Resources-and-Supplies-rev4-2020.pdf>



YouTube Channel

Texas A&M AgriLife Research and Extension Center at Dallas. Lots of videos about sustainable, effective and safe gardening practices.

<https://www.youtube.com/c/TexasAMAgriLifeResearchandExtensionCenterDallas/playlists>

Book

"*Trees of Texas Field Guide*" (2009). Stan Tekiela, Adventure Publications. Hundreds of illustrations trees found in Texas.

Book

"*How To Prune, Train and Tie Rose Plants*" (2017). Tom Liggett, CreateSpace Independent Publishing Platform. Expert advice on how to achieve beautiful results with roses from an internationally recognized horticulturist.

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Misadventures and Lessons in Tomato Growing

BY KELLI BIXLER

I have been an avid tomato grower for many years. I successfully grew the usual nursery tomato varieties such as Celebrity, Early Girl, Best Boy, and Sweet 100. I am a recently certified Master Gardener (Class of 2020) and wanted to try a less common tomato variety.

My first step was to research varieties that thrive in North Texas. The hybrid 444 tomato was recommended many times and is a Texas Superstar plant. Also known as the Southern Star tomato, it is a determinate variety that produces all the fruit in a one- to two-week period. I'd never grown a determinate variety, so I was interested in giving it a try. The recommendations said it produces large, quality fruit and is even more abundant than the Celebrity tomato. Celebrity is my go-to tomato, so I had to try the 444!

Surprisingly, I was only able to find seeds, no transplants. I ordered the seeds and began planning for the spring growing season. What follows is my tomato growing journey and the lessons I learned.

I tested the germination of a few seeds in a wet paper towel inside a plastic bag. All the seeds sprouted! I gathered all my supplies to germinate the seeds and grow the transplants indoors. They included growing medium, small pots or mini greenhouse, larger pots for transplanting, a germination heat mat, grow light, and a spray bottle and watering bottle. I set my seed starting operation up in my dining room so I could keep a close eye on my progress.

Immediately, I had problems with the expensive sterile seed-starting soil I had purchased. It would not hold moisture! Some seeds didn't germinate, while others germinated, then dried out and died. I started over with potting soil and the seeds sprouted. *Lesson learned: Expensive seed-starter soil isn't required to germinate seeds.*

When my seedlings reached the top of the mini-greenhouse, I removed the lid and watered them daily with a spray bottle. I lost some of my seedlings because they weren't getting enough moisture. I switched to watering with a bottle with 3 holes in the lid, which seemed to correct the issue. *Lesson learned: It may be too dry inside for a spray bottle to provide enough moisture.*



**Kelli sharing her first
tomato with her gang
at the FMFB
Community Garden**

Misadventures and Lessons in Tomato Growing (Cont.)

The next step was to replant the seedlings to larger pots once they reached 3 inches and had their first true leaves. I planted the seedlings in peat pots based on a recommendation I saw on the internet. The peat pots absorbed all the water, the soil dried out, and I lost more seedlings. I repotted the remaining seedlings in disposable plastic drink cups with holes in the bottom for drainage. This did the trick; my plants grew, although a little leggy from reaching for the grow light, and were soon ready to transplant into 6-inch pots. I planted them deeply, knowing that tomato stems will sprout roots. *Lesson learned: Inexpensive plastic cups for containers worked great!*

Two weeks before the typical last frost, I began to take my seedlings outside on warm days to harden them off. Unfortunately, I left them outside too long on a very sunny day and lost a few more seedlings. *Lesson learned: Set a timer to avoid over-exposing the seedlings to strong light.*

When it was time to transplant my 444 tomato plants into the garden, I had only two plants remaining! I wasn't discouraged. I had successfully started plants from seed for the first time! I used large tomato cages, and within a couple of weeks my plants were heavy with fruit. I learned the 444 tomato is a compact bush, unlike Celebrity and Sweet 100, which grow quite tall and wide.

Photos Courtesy DCMGA Member Kelli Bixler



Lesson learned: The 444 tomato may be better suited for containers because they're compact.

I harvested 16 sweet, meaty tomatoes from the two 444 tomato plants. Shortly after harvest, the plants turned yellow and died. Growing plants from seeds is a huge commitment and I've learned many good lessons on this journey. All in all, the experience was rewarding, educational, and even fun. I will try growing 444 tomatoes again next year, and maybe some other unique varieties. Who knows, I may have tomato plants to spare, or not. Either way, I won't be afraid to try!

Flower Mound First Baptist Community Garden

BY DAVID HUFFMAN

Editor's Note: Denton County Master Gardener Association partners with Flower Mound First Baptist Church to maintain a community garden. Master Gardener and church volunteers plant and harvest fresh produce for donation to Christian Community Action, and provide gardening education for the community and youth. Master Gardeners David Huffman and Carol Noble co-lead the program.

As Co-Project Leader of the FMFB Community, sometimes it's easy to forget that it's not all about gardening. It's about feeding people. I've been making weekly deliveries to CCA's Food Pantry, but hadn't really taken time to see how things are flowing since the relaxation of Covid rules. Things are pretty much back to normal, where the families come in to select what they would like for the week (depending on income and family size). Most likely, most vegetable donations are surplus from area grocery stores. Today, there were no tomatoes on the shelf (see pictures below). As our fresh items were added this morning, it was like a breath of fresh air. Customers that had already selected their allotment were putting them back on the shelf and excited to get such an assortment of fresh-picked produce. Even the young female volunteer employee was "drooling" over the freshly shelled black-eyed peas, wishing she had some to go with a pan of hot cornbread. It is better to give than to receive.



Photos Courtesy DCMGA Member David Huffman

Volunteer Service Opportunity *General Meeting Program Chair*

Beverly-the-Great-Duncan is stepping down as our Program Chair after this year. (She's creating a little margin in her schedule to co-chair our 2022 Garden Tour with Lori Barr, as current Garden Tour Chair Karen Roberts has moved out of the area...sniff, sniff!)

So, we're looking for someone to step into the role of Program Chair. Responsibilities include researching and scheduling the presenters/speakers for our monthly General Meeting programs. Only nine months need to be booked (March through November), as there are no programs for December (Holiday Party), January (Graduation & Awards Banquet), and February (Volunteer Opportunity Fair).

A little something to sweeten the pot: Beverly and Gay Campbell are still willing to help identify and plan some fun field trips for us as opportunities arise, so new Programs Chair – whoever you are – you'll have some support!

Interested? Contact DCMGA President Kathryn Wells.



American Elderberry

BY KAREN GIBSON

Summer is the time for American Elderberries (*Sambucus canadensis*). The Feature article on Shrubs in the October 2020 issue of *The Root* included the following:

"American Elderberry, *Sambucus Canadensis* – a large shrub, over 6' tall and wide with gorgeous large white flower heads in spring and bunches of dark purple berries in late summer. It's berries are good for syrup, jelly, wine. Elderberry bushes drop leaves under extremely dry conditions and then re-grow them rapidly."

Recently several DCMGA members on Facebook shared how they use elderberries. It seems some members have an abundance of the elderberries! Here are some of their suggestions:

- Elderberry jelly
- Elderberry Liqueur
- Elderberry Wine
- Elderberry pie
- Elderberry Syrup
- Elderberry Tincture

A word of caution: All parts of the elderberry, especially the roots, are toxic. Consuming any portion, including the raw berries, can result in nausea and digestive upset. Always cook the berries.



Photos Courtesy Marilyn Walker

American Elderberry (Cont.)

Elderberry Pie Recipe

4 cups elderberries

1 cup sugar (or less)

1/4 tablespoon salt or lemon juice

1 tablespoon tapioca or cornstarch

Stir together the above ingredients.

Pour into a 9 inch pie crust. Add top
crust. Bake at 425 degrees for 35-40
minutes.



Resources

Texas A&M Aggie-Horticulture

"Common Elderberry, Elderberry, American Elder, Sweet Elder, Pie Elder, Elder-blow"

<https://aggie-horticulture.tamu.edu/ornamentals/nativeshrubs/sambucuscanaden.htm>

"Poisonous Plants"

<https://aggie-horticulture.tamu.edu/archives/parsons/publications/poison/poison.html>

Earth-Kind Landscaping

"American Elderberry"

<http://ekps.tamu.edu/details?id=355>

Denton County Master Gardener Association (DCMGA)

<https://dcmga.com/north-texas-gardening/trees/#Shrubs>

Happy Healthy Mama, "Homemade Elderberry Syrup Recipe"

<https://happyhealthymama.com/homemade-elderberry-syrup-recipe.html>



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

August 11, 2021. 10:00 AM - Noon.

Open To The Public

"Welcome Pollinators to Your Yard" presented by DCMGA member Liz Moyer.

To Register:

<https://uso2web.zoom.us/meeting/register/tZEvd-2tpzMuGtWWf9kl8E4KoLfBc32ft7Bl>

September 8, 2021. 10:00 am to Noon

Open To The Public

"Shady Transformations" presented by Toni Moorehead

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](#)

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

[BMdAaoqM](https://www.youtube.com/watch?v=pF-BMdAaoqM)

Keep Lewisville Beautiful (KLB)

August 5th: Getting Started with Natives, 6:00-7:00pm

August 19th: Growing a Sustainable Flower Garden, 6:00-7:00pm

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

Each 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>



FYI: Underlined Texts are active Internet Links throughout this publication.



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/UCbp4wkcScRV0HlN3Hi1_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>

The Bee Short Course - Ohio State University

"Building wild bee conservation skills together"

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

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>

August 5, 2021 - Cooking Safely Outdoors - Shannon Dietz, Texas A&M AgriLife Extension Agent-ANR

August 19, 2021 - Fall Vegetable Gardening - Paul Winski, Texas A&M AgriLife Extension Agent-

Horticulture

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-26803072143/1541129202716211/>

Citrus Varieties: Gardening on the Gulf Coast

Texas A&M AgriLife Extension

Stephen Brueggerhoff, Extension Agent - Horticulture

<https://youtu.be/wSIRjQJnxhE>

Chat with Green Aggies

Texas A&M AgriLife Extension

All previous recordings:

<https://www.youtube.com/playlist?list=PLxT5cUdFaycrUzUiWSA46JRPGBYSFiFzH>

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: In the last few weeks, there has been increasing media attention to reports of the Southeast Asian Hammerhead Flatworm being found in the Dallas-Ft. Worth area. This month the DCMGA Help Desk would like to provide you with evidence-based information about this unusual creature including how to identify it, its habits, and management.

A: The Southeast Asian Hammerhead Flatworm, also known as the Arrowhead Flatworm, is an unusual creature originating from southeast Asia. It belongs to one of the most primitive animal groups, the Phylum Platyhelminthes – also known as flatworms. It is a planarian which is defined as "a free-living flatworm which has a three-branched intestine and a tubular pharynx, typically located halfway down the body." There are both water and land planarians. The Southeast Asian Hammerhead Flatworm is commonly known as a land planarian or terrestrial flatworm.

Quick Facts

- The most commonly found species of terrestrial flatworm in Texas is the *Bipalium Kewense*.

- It has a flattened head, sometimes half-moon or arrowhead-shaped, with distinct longitudinal stripes, is up to 10 inches in length, is slimy and grey or brown.
- It reproduces primarily by fragmentation but also lays eggs.
- They are found in dark, cool, moist areas such as under rocks, logs, shrubs, and the soil's surface after rain. Greenhouses are a favorite habitat.
- The Hammerhead Flatworm is considered both beneficial and predatory. Beneficially, they feed on slugs and other harmful insect larvae. They also prey on earthworms and are cannibalistic when food sources are scarce.
- They move around and feed at night.



Arun T.P., Bugwood.org 5379895
SOUTHEAST ASIAN HAMMERHEAD FLATWORM

Reported Locations Terrestrial flatworms are found in over 50 countries. They were discovered in the United States over 100 years ago. Their natural habitats in the U.S. include hot humid environments in southeast states (AL, CA, FL, GA, LA, MS, NC, SC, TX). Reporting is inconsistent in Texas. They have been reported from Orange to Uvalde; numerous Gulf Coastal counties, and the DFW area over through East Texas. They are spread most often by the landscape, nursery, and mulch industries.

Impact on Gardeners Most often, they're considered a nuisance in the United States and typically do not cause significant destruction of the earthworm population for home gardeners. Flatworms do not eat plants, and as noted earlier, can be considered beneficial predators of slugs and harmful insect larvae.

Management There are no known control measures for Hammerhead Flatworms. As a preventative measure, the soil of potted plants should be carefully checked for them and should not be combined with compost, garden soil, or other potting soil if they're present.

Hammerhead Flatworms secrete a neurotoxin to disable their prey. This neurotoxin can be irritating to the skin if touched or to pets if eaten. Protect your hands with gloves or use a paper towel or stick to pick up the flatworm. Drop it into a zipper-lock bag with salt or vinegar, seal the bag and discard it in the trash. Wash your hands thoroughly after handling them. They can be sprayed with citrus oil, e.g., orange oil, a combination of citrus oil and vinegar, or just vinegar, or sprinkled with salt. Resist the temptation to chop up the flatworm as this will result in it reproducing from the segments in about 10 days.

The Texas Invasive Species Institute is documenting distribution in Texas using reports from citizens. To help in this effort, take a picture of the flatworm, document the location coordinates, and send an email to invasives@shsu.edu.

So far, earthworm populations in Texas have not been decimated by these unusual creatures. Based on anecdotal evidence and the lack of consistent reporting in Texas, this doesn't appear to be a real risk at this time for the home gardener. That being said, it's always good to be educated about any potential harm to the coveted and precious earthworms in our gardens.



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

August 19: Waterwise Gardening
Jolayne LaCour: DCMGA

September 16: Texas Native Plants
Liz Moyer: DCMGA

October 21: Made for the Shade
Daniel Cunningham:
Rooted In

Presented virtually through Zoom
Register for each session at:
www.dcmga.com/upcomingevents





 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.

BROUGHT TO YOU BY:



Keep Lewisville Beautiful
247 W Main Street, Lewisville Tx 75057



www.keeplewisvillebeautiful.org
info@keeplewisvillebeautiful.org

DENTON COUNTY MASTER GARDENER ASSOCIATION

2021 Garden Tour

**Saturday, October 2
9 am to 4 pm**

**A favorite family-friendly event you don't want to miss!
Inspiration abounds on self-guided tours of four unique Denton
County private properties.**

**Master Gardeners are on-site in each garden to provide
information about the garden, as well as featuring learning
opportunities on a variety of gardening topics.**

**Our SWAt (Science With Attitude) team will be on-site to
provide hands-on learning opportunities for children.**

**Our "Ask a Master Gardener" booth will also be on-site at one of
our gardens to answer your gardening questions.**

**Go to www.dcmga.com/upcomingevents
for tickets and further information as the date draws near.**



#GrowWithUs



@DentonCountyMGA



Denton County Master Gardener Association

2021 Events

DCMGA General Membership Meeting program:

August 11 at 10:00

Program: "Texas Native Plants" by Liz Moyer

Keep Lewisville Beautiful

August 5: Getting Started with Natives by Liz Moyer

August 19: Growing a Sustainable Garden by Sue Newhouse

September 2: Caring for Christmas Cactus by JoAnn Spurgin

Greater Aubrey Area Gardening Series:

August 19: Waterwise Gardening JoLayne LaCour

September 16: Texas Native Plants by Liz Moyer

October 21: Made for the Shade by Daniel Cunningham

Garden Tour: October 2

DCMGA New Member Round Up: Oct. 19



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.

2021 Board of Directors

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Facebook:

<https://www.facebook.com/DentonCountyMGA>

Instagram:

<https://www.instagram.com/DentonCountyMGA>

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<https://twitter.com/@DentonCountyMGA>

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<https://www.pinterest.com/DentonCountyMGA>

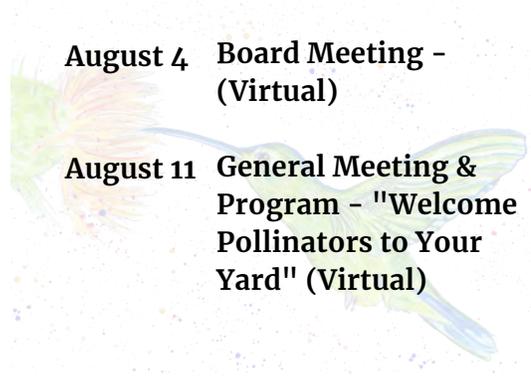
YouTube:

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

Save the Date

August 4 Board Meeting - (Virtual)

August 11 General Meeting & Program - "Welcome Pollinators to Your Yard" (Virtual)



Contact Information

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Content

Submission deadline for the September edition of *The Root* is Sunday, August 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.