WRITTEN BY GALVESTON COUNTY MASTER GARDENERS IN COOPERATION
WITH THE GALVESTON COUNTY OFFICE OF TEXAS A&M AGRILIFE EXTENSION SERVICE

# GULF COAST *Gardening*

Issue 211 • July / August 2018

TEXAS A&M AGRILIFE EXTENSION

TEXAS MASTER GARDENER

## *2018 Master Gardener Association Leadership*

*President*
**Sharon Zaal**

*Sr. Vice President*
**Henry Harrison III**

*VP for Programs*
**Denny & Nancy Noh,** Education Programs
**Judy Anderson,** Monthly Meetings

*VP for Projects*
**Clyde Holt, Bobbie Ivey, Julie Cartmill, Tish Reustle and Jenni Hudgins**

*VP for Volunteer Development*
**Peggy Budny and Ann Anderson**

*VP for Media Relations*
**Nita Caskey**

*Co-Secretaries*
**Bernice Shirey and Jenni Hudgins**

*Treasurers*
**Ed Klein and Debra Brizendine**

*Newsletter Editors*
**Linda Steber and Robin Stone Collins**

*MG Intern Course Team Leader*
**Peggy Budny**

*Hospitality Coordinators*
**Judy Anderson, Lori & Keith Boydston and Jackie Auer**

*Speakers Bureau Coordinator*
**Cindy Croft**

*MG Volunteer Hour Recorders*
**Wayne Elliott, Dr. Margaret Canavan and Linda Steber**

*Jr. Master Gardener Programs Leaders*
**Kaye Corey, Dana Crawford and Gayle McAdoo**

*Earth-Kind Study Coordinator*
**John Jons**

*Plant Sale Chairman*
**Ira Gervais**

*Photography Team Leaders*
**Herman Auer, Tom Fountain and Chris Anastas**

*Videographers*
**Barbara Hankins**

*State Association Delegates*
**Terry and Velda Cuclis**

*State Association Alternate Delegate*
**Ira Gervais**

*Grants & Inkind Support Coordinator*
**Frank Jackson**

*Webmaster*
**Genevieve Benson**

*CEA-HORT and Master Gardener Program Coordinator*
**Dr. William M. Johnson**

*Board of Directors*
**Julie Cartmill, Camille Goodwin, Tim Jahnke, Tish Reustle and Frank Resch – Chairman**

*Beach insights from our Gulf Coast Ocean: Wear flip flops, Avoid pier pressure, Don't be a crab, Make waves, Wish upon a Starfish, Bet on a shore thing, Come out of your shell, Don't get tide down, Live a life of porpoise, Take everything in tide, Don't be shellfish, Adapt to changing tides.*

Like gardening, the ocean stirs the heart, inspires the imagination, and brings joy to the soul. I thought I'd open with some beach inspirations since we're moving into the part of the summer where gardening is enjoyable only early in the morning or evening leaving "beach time" for the rest of the day! Whether you beach time is relaxing at the beach or cooling off inside your home, save time to enjoy the current issue of our *Gulf Coast Gardening* newsletter where you always get the latest research-based knowledge on current problems effecting our landscapes.

This issue is packed with several important topics. From our Q&As, discover the very concerning deadly Basil Downey Mildew (page 4) and what we can do about it. The Yellowstriped armyworms visited our MG Interns' Tomato Performance study! This annoying insect can cause a lot of damage to our lawns and gardens. Learn how to identify and control this insect on page 5.

Our Discovery Garden had another worldly-like visit to an orchid tree. You might have this phenomenon happening on your fruit, nut, maple, magnolia, oak, redbud, or other woody ornamental host trees and shrubs in our horticultural zone. Do you notice any weird toothpick looking structures (boring dust) protruding from their trunks or accumulations of sawdust at their base? Take a look at the article on page 6 to make sure you don't have Ambrosia beetles infesting your trees. This is a serious insect that might require removal of your infected trees.

If the above disorders aren't enough, are your citrus trees experiencing bloom or fruit drop? Page 7 will tell you what you need to know about this problem. You probably think you know all there is to know about a bell pepper; nonetheless, the article on page 8 will teach you about many different varieties, how to grow them sweeter, there's a recipe included and a list of Galveston County Master Gardeners' recommended peppers for your home garden (page 9).

by Camille Goodwin
MG 2008

On pages 10 - 11 look for health benefits of houseplants along with maintenance advice. Since the scorching part of our summer seems to have arrived a few months early, you'll want to read the story on page 19 for ideas to keep our trees, flower and vegetable gardens going in the humid Gulf Coast heat.

The 2018 freeze made our Discovery Garden look unwelcoming in March; by May our 9 diverse demonstration gardens look like they've been dancing in sunshine (page 18)! Please know it's not all insects and mystery in our Discovery Garden – we actually had a magical event occur as well. The Giant Agave plant, transferred from our past Hwy 3 location, has bloomed! See the video and read about it on page 20.

We all studied about good gardening practices in our MG course. Have you ever considered beneficial gardening practices for our feathered friends? Several awful diseases effect birds that are very easy to prevent. See the diseases and gather tips to prevent them on page 16. Most of us understand the benefits of compost, but compost tea made from our compost might be better (page 14). Learn about this interesting process and the benefit to our gardens.


Enjoy meeting Bettie Moss (page 17), one of our very talented GC Master Gardeners. In our continuing series on how our Master Gardeners came by their talents we showcase Judy Anderson, Gene Speller and Ira Gervais (page 12). New legislation to promote botanical research, sciences and education is in the works (page 21). Keep up-to-date on the patenting of John Jons' rose (page 24).

In Dr. Johnson's the Last Word (page 31) we get educated on poison ivy. Recurring updates include the Carbide Update (page 29) and Seasonal Bites (page 22) stories. Don't miss the photos from the recent Texas Master Gardener State Conference where our newsletter won First Place in our division. Galveston County received another First Place in Research for Tomato Trials by the Interns (pages 25 - 27).

*May you always have a shell in your pocket and sand between your toes! Happy Summer my Gardening Friends!*

# Inside This Issue...



Cover:
Gerber Daisy
Photo courtesy Shan Revak, MG 2004

Find us on facebook

Galveston County Master Gardeners are on Facebook with information about upcoming programs, Dr. Johnson's weekly column and more.
*Like us on Facebook and don't forget to opt to receive notifications. Share with others!*

*www.facebook.com/pages/Galveston-County-Master-Gardeners/220088841395231*

## How to Reach Us


Extension Office:
281-309-5065
galvcountymgs@gmail.com

To Submit Newsletter Articles:
Contact Linda Steber
281-534-6695
steber8@msn.com


We encourage your articles!
Due the 20th of each month.


Speakers Bureau:
Contact Cindy Croft
281-332-9501
garden.speakers@gmail.com


TEXAS A&M AGRILIFE EXTENSION


**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.**


Subscribe to our Newsletter

**To subscribe to our newsletter, just click on the subscribe button above.**

Interested in gardening in Galveston County? To receive a free online subscription to the Galveston County Master Gardeners' Magazine, please enter your e-mail address after clicking on the "Subscribe to our NEWSLETTER" button above. You will automatically receive an e-mail message when each issue is posted. Your e-mail address will not be used for any other purpose other than sending the e-newsletter. We will not send any commercial mail to the address provided nor will the newsletter itself contain any advertisements . . .*we are all about the joy of gardening*.

Thanks for your interest!

# Q&A ask a master gardener

## *What is this fuzzy gray stuff on my Basil?*

**By Laurel Stine**
**MG 1996**

Of the herbs I have grown, basil is one which I grow each year and freeze for winter when the growing season is done.

This spring, as I usually do, I purchased two transplants from my local nursery. One was sweet basil, and the other was Italian Large Leaf, my personal favorite. Two plants are usually all I need for a bountiful harvest. I also had a volunteer seedling from the last year, called Aussie basil.

I cheerfully put the purchased basils in the ground and checked them daily, looking for signs of new growth. After a week and a half, I noticed some yellowing of the leaves. I was busy and thinking it might be transplant shock, I told myself to be patient.

Then the leaves started to shrivel and fall at an alarming rate—within the next day or so. Oh, no. Now, finally, I closely inspected the leaves and was amazed to see the bottoms almost completely coated with fine, very light gray "fuzz." I had just made the acquaintance of Basil Downy Mildew (*Peronospora belbarhii Thines*).

It was first reported in Florida in the fall of 2007. It has since spread across our northern, southeastern, central and pacific states, including Hawaii. These diseases are nearly impossible to prevent as the spores of this fungus are easily dispersed long distances by wind.

*Peronospora belbahrii* is not a true fungus but rather a member of the Oomycota group. The oomycetes, also known as "water molds," are a group of several hundred organisms that include some of the most devastating plant pathogens. The diseases they cause include seedling blights, damping-off, root rots, foliar blights and downy mildews. Some notable diseases are the late blight of potato, downy mildew of grape vine, sudden oak death, and root and stem rot of soybean.

Like other downy mildews, they must have a living host to survive. That means they don't overwinter where hosts are killed by frost. They can survive in a heated greenhouse, however.

As a result, many common fungicides provide no control against downy mildew. In one study, extreme periods of rainy wet weather resulted in no control by any fungicide combination.

The best time to scout for spores is early morning. If you still suspect downy mildew even with an absence of spores, you can place leaves upside down on a wet paper towel in a closed plastic bag. Leave the bag in a dark room for a day and then check again for spores.

If downy mildew diseases are a persistent problem year after year in your herb garden, consider growing a variety of basil less susceptible to the disease. Unfortunately, all sweet varieties are very susceptible to downy mildew. Red types, Thai basil, lemon basil, lime basil, and other spicy basils have been found to be less susceptible.

Public and private sector breeders have made progress in breeding for resistance to Basil Downy Mildew. Eleonora is the first commercially available resistant variety. Emma and Everleaf (aka Basil Pesto Party and M4828Z when evaluated at Cornell) also have moderate resistance providing limited suppression.

Other researchers have made progress as well. I have found Eleonora available at Johnny's Selected Seeds.

The one spray I could find labeled for homeowner use against downy mildew on basil contains the active ingredient potassium bicarbonate. However, Wisconsin Extension makes this remark: "Use of fungicide treatments to control basil downy mildew is NOT recommended. Products that currently are available to homeowners, even when applied in the best manner possible, will likely not control the disease adequately, if at all. Thus using these products would be a waste of time, effort and money."

Do you remember the Aussie Basil seedling I mentioned? It has Downy Mildew. I just harvested some this morning, as the plant seems to be tolerating it. It is safe to eat leaves from infected plants. The disease does not harm people.

Does the basil taste as good as my beloved Italian Large Leaf? No. But does it taste pretty good? Yes. So I guess I'll adapt—which seems to be true for many of life's situations.

**Photos courtesy of Margaret Tuttle McGrath, Cornell University**

# Q&A ask a master gardener

## Tomato Pest Spotted in the Discovery Garden

By Diane Schenke
MG 2018

The Master Gardener Intern Class of 2018 started its tomato trials on February 27, 2018, transplanting 24 small plants of 12 different varieties into 2 beds. On March 17, one of our members attended a class on tomato pests at the Extension Office, inspected the plants, and found the small worm, shown in the pictures below.

With the able assistance of Ira Gervais and Dr. Johnson, this worm was identified as a species of armyworm; most likely the Yellowstriped Armyworm (*Spodoptera ornithogalli)*. While it's hard to differentiate armyworms when they are young and small in size without a hand lens, we know that the Yellowstriped Armyworm is a species that shows up early. Armyworm caterpillars can be identified by examining the front of the head capsule. They have light-colored markings along the seams (sutures) of the "face" that appear as an upside-down Y, which can be seen in the photo on the right.

Adult caterpillars are up to 2 inches long and vary in color from green, when small, to almost black when large. They have two cream-yellow to orangish stripes along the back, and a prominent dark spot on the sides of the fourth body segment behind the head (the first legless abdominal segment). Partially grown larvae appear to have pairs of triangular dark markings along the back of each body segment inside of the light-colored stripes. Adult moths have a wing span of 1-1/2 to 1-3/4 inches.

Adult moths lay clusters of eggs on host plants and then cover them with scales from her body. Small (1/8 inch) caterpillars hatch from eggs in about 6 days (see photos). Caterpillars develop through several molts to increasingly larger stages (instars) over a period of about 20 days until they pupate in the soil for 14 days or overwinter. Adult moths emerge from the pupae. Several generations can be produced each year, each being completed in 35 to 45 days to several months depending on temperature, food and environmental factors. Tomatoes are a favorite host plant.

Ira recommends that biting or chewing insects are best controlled with a spray of bacillus thuringiensis (BT). BT insecticide is a biologic insecticide that kills caterpillar type insects, but has no effect on birds, earthworms, or beneficial insects such as honeybees and ladybugs, when used as directed. It can be used on edible plants up to the day of harvest. BT will tend to wash off after a rain, so reapply as necessary.

A complete discussion of the worms, along with more information on treatment options, can be found at
texasinsects.tamu.edu/yellowstriped-armyworm

A schedule of upcoming classes offered by the Galveston County Master Gardener Program can be found at
aggie-horticulture.tamu.edu/galveston/educ_programs/index.htm

More reports will follow as the Master Gardener Class continues to grow its 12 different types of tomatoes—stay tuned!

Photo courtesy of Dr. William M. Johnson

Photo courtesy of MG Ronnie Corley

# Ambrosia Beetle
# *Discovery in the Discovery Garden!*

**By Tish Reustle**
**MG 2008**

When I became a Master Gardener, I expected to learn about insects. All kinds of insects. I expected aphids, whitefly, lots of caterpillars; as well as bees, wasps and spiders. I was ready: for the good, the bad, the bizarre and the ugly. I was, however, totally unprepared for what I encountered in the Discovery Garden at Carbide Park one cool Thursday morning this February! Not one Garden Guru in the past ten years had warned me about a possible invasion by the Intergalactic Toothpicks! (If you think I'm being fanciful, just check the pictures below!) I had checked the trees at the far end of the garden and found that the Orchid Tree had succumbed to the severe cold spell we had just been through and was, most likely, dead. While I checked carefully for any sign of emerging life I saw a truly strange sight. A large number of what looked like toothpicks sticking up at an angle from the main trunk and some of the lower branches! I checked with some other gardeners but nobody had seen anything quite like it or had a good explanation. Research was needed! Advice from Dr. Johnson and a few hours in the company of Google provided the answer. I didn't need to go into outer space for an explanation; just as far as the insect Family of Coleoptera.

The invader is known as the Granulated Ambrosia Beetle (*Xylosandrus crassiusculus*). It arrived in the USA in the 1970s in South Carolina; most likely from Asia and was initially called the Asian Ambrosia Beetle. Since its arrival it has moved across the Southern States attacking a wide variety of ornamental trees and shrubs and causing a lot of damage to nursery stock as well as home gardens. It attacks a wide variety of trees such as fruits, nuts, magnolias, maples and crape myrtle. Although the beetle seems to prefer dead or dying wood and stressed trees, it is perfectly capable of attacking live wood as well. The beetles are very small, less than ½ inch long, and reddish-brown to black in color. They take flight in groups in early spring and, having selected a tree, burrow through the bark and make an extensive tunnel system with many galleries. As it chews up the wood it excretes fras out of the tunnel which hardens in the air to form the visible "toothpicks." When the tunnel is finished the beetles lay eggs which hatch into larvae. The larvae then pupate, emerging later as adults who mate and leave; flying off to find another host tree. Very often all stages of metamorphosis are present in one tunnel system and the whole life cycle takes about fifty-five days.

This is not the entire story, however. It gets even stranger. This unusual little insect does not actually feed on the tree and neither do the larvae. The adult brings fungal spores into the tunnel when it burrows, carried in special structures on its body and this fungus multiplies and provides food for both adults and larvae. This ambrosia fungus thrives on the beetles' fras as the larvae thrive on the fungus, in a process called "nutritional symbiosis."

Unfortunately for homeowners and nursery growers, treatment is extremely difficult. A healthy tree with a small infestation may well survive, but a stressed tree with a large number of beetles is likely to show leaf wilt and finally die. Once the beetle has plugged its tunnel up, there is no way that any chemical can reach it. Since the larvae are eating the fungus and not the tree itself, systemic insecticides are also useless. Prevention is the only cure. This is where "Integrated Pest Management" comes in. If trees are well watered and fertilized and other diseases are adequately treated, the tree will be in good condition to survive an attack. Once an infestation has appeared the tree should be quickly removed and the wood burned. If burning is not allowed, the wood must be double-bagged in heavy-duty bags and disposed of properly to prevent spread. Cut or damaged wood on other non- infected trees should be removed promptly. There are traps available for those willing to try to capture an insect less than ½ inch long that flies mostly at night and pyrethroids can be used as a preventive if they can be applied just before the beetles arrive.

This seems to be a fascinating story without a very happy ending. Gardeners, though, are as enterprising as the Ambrosia Beetle and a lot smarter! Now that we know that we are not dealing with space invaders we can put good preventive practices into place, keep our trees "stress free" and deal with infestations quickly. We can learn to contain the problem until a better solution comes along.

**Photos courtesy of MG Library**

# Blossom Fruit Set and Fruit Drop

**By Briana Etie**
**MG 2017**

During a recent walk through our Orchard at the Discovery Garden, I noticed golf ball-sized fruit all around my favorite Meyer Lemon tree. With the two unique weather events we have had this last year, Harvey and record freezing temperatures. I wondered if those events played a role in this fruit drop occurrence.

In my quest to find the answer, I have spoken to experts, Herman Auer and Robert Marshall in our Orchard, and Bonnie Childers of Lumberton, TX. I also used the resources we have available online at our Aggie Horticulture link aggie-horticulture.tamu.edu. These are great resources. Click on Fruit and Nut Resources. There are publications and books available free to download. Bonnie Childers was featured in *Ambrosia in Our Backyard*. This can be found from our Master Gardener website aggiehorticulture.tamu.edu/galveston click on Master Gardener Books or Extension Fact Sheets and Publications.

Our experts believe the tree could have experienced fruit drop due to the recent weather events. Even the long period that Galveston County went without rain could have contributed. In the book, *Ambrosia in the Backyard*, that Herman Auer co-wrote with other Galveston County Master Gardeners, I found that fruit drop is a normal occurrence.

A citrus tree will produce an abundance of flowers. All varieties of citrus produce more blossoms than the tree can possibly set. If 3-7% of the flowers set and make mature fruit, it is considered a good crop. Approximately 98% will fall even under the best cultural management practices. There are three periods of natural thinning or fruit drop. Immediately after blooming, 75-80% may fall. About 2 weeks later, pea to marble size fruit will drop. Then in May, golf ball size fruit will fall. It is not unusual for fruit to drop until harvest.

Photo courtesy of GCMG Digital Library

Photo courtesy of MG Herman Auer

However, if 2% of the blossoms fail to set fruit, this can be related to many factors. Late spring frost that occurs during bloom period causes a weakening or death of the abscission layer. This layer of cells connects the flower to the tree. During sub-freezing conditions that injure the cells, blossom drop will result. Improper irrigation is also responsible for blossom drop. Fruit trees in the blooming stage require very special attention in connection with soil moisture. Citrus trees should never be allowed to stress for water, this will weaken the connecting layer. Trees that have been over watered at this stage can experience blossom drop. Irrigation should be maintained on the same level used during the growing season. Water when soil examination reveals a need for moisture. Careful not to overwater during the blossom stage.

Mr. Childers told me not to forget the importance of nutrients for our citrus trees. He reminded me to fertilize Valentine's Day, Mother's Day and Father's Day. And do not fertilize past Father's Day. Referring to our fact sheets online under Fruit and Nut Resources, nitrogen is usually the only fertilizer element required in most Texas soils, but additional elements should not do any harm. For the first year, use 1 cup of 8-13 % Nitrogen. If you are using a fertilizer with other ingredients, Nitrogen is the first number. Or use a ½ cup of 17-21% Nitrogen for the first year. For the second year, use 2 cups of 8-13% Nitrogen or 1 cup of 17-21% Nitrogen. For the third year, use 4 cups of 8-13% Nitrogen or 2 cups of 17-21% Nitrogen.

Mr. Childers also told me that Mr. Mac is a great Satsuma variety on Flying Dragon root stock. This is a semi-dwarf rootstock. He also told me to get the Kishu Seedless Mandarin, although he believed that the cultivars of this sweet variety were no longer going to have it available. I was very proud to tell Mr. Childers that these are the exact 2 varieties I chose for our Aquaponics Unit.

# "Bell Peppers, Sweet, Mild, and Hot"

## *The Island Garden*

*Editors Note: This is a reprint of Jan's article in the Galveston Monthly magazine*

**By Jan Brick**
**MG 2001**

With the ever increasing emphasis on eating healthy, natural and organic, the search for those natural and unprocessed foods that will benefit our health can begin in your own backyard or community garden. When contemplating which vegetables may give you the most "bang-for-your-buck" consider the modest bell pepper.

"*Capsicum Annum*" is the scientific name for Bell Peppers. Prehistoric remains confirm that they existed and were cultivated in Central and South America in very early times. In 1493, Columbus brought the peppers to Spain where they were embraced and quickly adapted into local recipes and grown for home consumption, its popularity spreading rapidly across Europe, Africa and Asia.

Bell Peppers are an excellent food for the promotion of good health and disease prevention. Low in calories and fat with high enough levels of a beneficial alkaloid compound to be a factor in the prevention of cancer and diabetes and in the reduction of triglycerides and LDL. Bell peppers are an excellent source of the vitamins A and C that are powerful antioxidants and as suppliers of the vitamin B-complex (thiamin, niacin, and riboflavin). In addition, bell peppers have levels of many essential minerals, such as copper, iron, magnesium, manganese, potassium, selenium, and zinc.

Cultivars can be found sporting several colors including red, yellow, orange, green, brown, white and purple differing by variety. Green peppers are less sweet than yellow or orange peppers while red bell peppers are the sweetest. The taste can fluctuate depending on growing conditions and harvesting techniques; the sweetest fruits are those that are allowed to ripen fully on the plant in maximum sunlight. The white ribs can be eaten as well but may have a bitter flavor and are usually discarded.

Bell peppers are among the easiest of home garden plants to grow with the reward of a plentiful harvest throughout the growing season. Plant in the spring when the temperature and the soil have warmed from the cold of winter. Full sun is the number one requirement…from dawn to dusk if possible. A slow release liquid organic fertilizer, compost tea or fish emulsion is best for a healthy and robust plant. Fertilize every few weeks for maximum effect. Bell peppers do prefer to be a little on the dry side but perform at their optimum when the watering is consistent…a key factor…not too little but not too much. Although, pepper plants are generally very low maintenance, they will yield larger fruit if you pinch off some of the flowers buds as well as any suckers or extra growth.

Bell peppers may be effected by a variety of pests and diseases that can be controlled by spraying with a strong blast of water from the hose or an application of an insecticidal soap solution. If an infestation of pests or incidents of blight or collapse occurs, removal of the problem plants is recommended.

Easy to grow, tasty, easily adapted for use in favorite recipes, can be eaten raw, in salads or with dips, it is no wonder that Bell peppers have become so popular. Consider also that peppers will make your garden bright and vibrant with their glistening leaves and vivid shades of red, orange, green, and purple. Plant peppers in several spots around your space for a dazzling and flamboyant look; everything around them will appear heathier and tastier.

### Interesting Facts

- Usually considered a vegetable, bell peppers are in fact fruits as they grow on flowering plants and have seeds.
- The longer bell peppers ripen, the sweeter they become.
- Paprika is made from dried peppers.
- China is the world's largest producer of Bell Peppers followed by Mexico and Indonesia

### Bell Peppers recommended by the Galveston County Masters

#### Sweet Peppers

**Better Bell II**… 4" long, thick wall, mature to shiny red in 75 days
**Big Bertha**…giant 7" long medium to tall plant, matures in 72 days
**California Wonder**…4" long, thick wall, medium size plant, heavy bearing, very mild and sweet
**Orange Sweet Bell**…big fruit, thick wall, tangerine orange, sweetest of all colored peppers
**Yolo Wonder**…Heirloom variety, uniform shape and size, good container plant

#### Mild Peppers

**Sweet Banana** …very sweet, heavy yield, compact plant, 85 days
**Cajun Belle**…miniature bell pepper, a blend of heat and sweet, 60 days

#### Hot Peppers

**Hot Banana**…medium hot, 6" long, will produce in hot weather
**Carolina Reaper Hot Chili Pepper**…extremely hot after a sweet fruity start
**Tabasco**…prolific bearer of small thin fruit, delicious flavor, attractive 4 foot tall plant
**Trinidad Moruga Scorpian**…named world's hottest pepper, red/orange wrinkled fruit

## Stuffed Bell Peppers
## Genius Kitchen

**Ingredients**

6 large green peppers
1 lb ground beef
½ cup chopped onion
1 (16 ounce) can diced tomatoes
½ cup cooked rice
1 tsp salt
1 tsp Worcestershire sauce
1 cup shredded cheddar cheese

**Directions**

Cut tops off of peppers, discard seeds and membranes
Chop tops to make ¼ cup, set aside
Cook the whole green peppers, uncovered in boiling water for five minutes, invert to drain well
Sprinkle insides of peppers lightly with salt
Cook beef, onion, and the ¼ cup chopped pepper in skillet until meat is brown and vegetables are tender
Drain off excess fat then add drained tomatoes, salt Worcestershire and a dash of pepper
Add cooked rice to meat mixture
Stir in cheese and stuff peppers with mixture
Bake in a 10x6x2 baking dish at 350 degrees for 30 minutes
In last five minutes sprinkle additional cheese to the top of peppers

# Health Benefits of Houseplants

By Elayne Kouzounis
MG 1998

For centuries, houseplants have been grown for their beauty. Many houseplants, however, have an added bonus. They possess powerful health benefits for you and your home. Some beautiful indoor plants purify the air of harmful toxins. Other beneficial houseplants can be used to make "tonics" which are wonderful substances for healing, "poultices" which are preparations, usually from leaves, that form a moist medicated covering and applied directly to the affected area, and lastly "tinctures" which is a solution with an alcohol solvent that can be used to treat many different conditions.

There are just a few items I would like to bring to your attention. There are definite differences between growing indoor and outdoor plants. Indoor plants cannot grow bigger roots to search for more nutrients when they are hungry. Your home is designed for your comfort, not your plants. Think about (or consider) the air-conditioning, low humidity, and lack of proper sunlight.

**Suggestions of items that will come in handy for maintaining indoor plants**

1. Drainage for your containers
2. Watering container
3. Sharp Shears
4. Spray Bottles
5. Gloves

**Fertilizers and potting soil to have on hand:**

1. Fortified potting soil has fertilizer included
2. Controlled-release fertilizer pellets- high quality will include the major NPK nitrogen, phosphorus, potassium) nutrients
3. Liquid fertilizer- rapidly absorbed- look to be sure it is for indoor houseplants.

**10 simple steps to successful beautiful and healthy indoor houseplants**

1. Use high quality potting media-never use gardening soil for indoor plants
2. Beware of bagged potting soils-over time, the peat breaks down and becomes more acidic; the bigger chunks of soil crumble into smaller, denser particles that compress around the plant's feeder roots making the plant unable to take up water and oxygen
3. Water correctly-over watering results in decay and root rot, while not watering enough leaves your plant dry and they will waste away
4. Increase humidity-mist your plant leaves regularly
5. Use fertilizer-liquid fertilizer or controlled-release pellets
6. Watch for common pests-aphids, whiteflies, mealybugs, scale insects, and spider mites
7. Keep plant clean-wipe leaves with moist cloth or paper towel
8. Container size-go up by one pot size at a time so the plant soes not use too much energy into root growth instead of leaf growth
9. Learn the plant's native habitat
10. Watch your plants-look under leaves, wiggle the stems, are leaf margins turning brown, leaves turning yellow and dropping?

ARECA PALM *(Dypsis lutescens)*

PEACE LILY *(Spathiphyllum wallisii)*

PHALAENOPSIS *(Phalaenopsis species)*

Barberton-GERBER DAISY - Photo courtesy of MG Shan Revak

ENGLISH IVY - Photo courtesy of MG HermanAuer

BOSTON FERN *(Nephrolepis exaltata 'Bostoniensis')*

**Below are six houseplants that have tremendous health benefits:**

**ARECA PALM** *(Dypsis lutescens)* Removes airborne toxins. It is one of the most powerful air-purifying plants you can purchase. In 1989, NASA published a study that researchers singled out the areca palm for its ability to remove formaldehyde from the indoor environment. Formaldehyde is a skin irritant that has been linked to asthma, and is commonly found in cleaning products, furniture products and insulation as it often escapes from materials over time. Do wipe the leaves often so the pores can do their magic for air purification.

**PEACE LILY** *(Spathiphyllum wallisii)* Removes airborne toxins. Removes airborne mold. The peace lily is a very popular houseplant thanks to its beauty and tolerance for low-light conditions. It is a powerhouse for filtering air. Studies led by NASA Researcher Dr. Bill Wolverton, found the peace lily effectively filtered benzene, formaldehyde, trichloroethylene (TCE), xylene, toluene, and ammonia from indoor air. These industrial toxins are found in our everyday cleaning products and furniture which can cause headaches and respiratory problems. Other studies found the peace lily is capable of removing airborne mold, which helps allergies and asthma symptoms. Be aware the leaves contain calcium oxalate, which is an irritant for people and animals.

**PHALAENOPSIS** *(Phalaenopsis species)* Removes airborne toxins. Increases daytime oxygen. Also known as the moth orchid, the plant is an air purifier even though it is relatively slow growing and does not have tremendous leaf surface. Again, Dr. Wolverton found the plant filters formaldehyde from indoor air, which can lead to headaches and trouble breathing. It also increases oxygen levels in your home.

**BARBERTON DAISY** *(Gerbera jamesonii)* Increases nighttime oxygen. Removes airborne toxins. The Gerbera Daisy was included in a NASA clean air study in 1989 as one of the most effective air purifiers. The study found the daisy to remove trichloroethylene (TCE) and benzene from the environment. Unlike most plants, the daisy releases oxygen at night. Move the plant to your nightstand before bed for more breathable air.

**ENGLISH IVY** *(Hedera helix)* Removes airborne toxins. Increases daytime oxygen. Treats respiratory conditions.Fights inflammation. English Ivy has a rapid growth rate which is why it is excellent at producing oxygen and purifying the air of trichloroethylene (TCE), xylene, benzene, and formaldehyde. These harmful toxins can be found in many of the household cleaners and manufactured furniture we all use and own. They can cause headaches, respiratory problems, and an increased risk of cancer.

**BOSTON FERN** *(Nephrolepis exaltata* 'Bostoniensis') Removes airborne toxins. Increases humidity. Among the oldest plants on the planet, ferns are known for their ability to remove airborne pollutants, formaldehyde, xylene, and toluene. These are all common industrial toxins that are in household cleaners and manufactured furniture, which can lead to many health issues such as headaches and breathing problems.

I typically choose indoor plants that have air-purifying power, unique physical features, and medicinal properties. You might already have one or more of these in your home. If you don't, consider giving one a try! If you do, add another! While your home's interior appearance will be enhanced with the addition of a houseplant, it will also become a healthier place!

This article is not intended to replace professional medical advice.

# Green Genes passed down to Master Gardeners

By Karolyn Gephart
MG 2017

## Judy Anderson

Master Gardener Judy Anderson looks back on a happy childhood where gardening was definitely in the picture.

"When you think about Master Gardener genes, mine come from across the Red River. Growing up in Western Oklahoma, I often helped my grandparents in their gardens (This is my memory, not theirs). At both of the homes, they grew vegetables; my mom's parents also had a small orchard and a cellar where they stored canned vegetables; plus, it was a safe place when storms came. They also had big flower beds with a large variety of flowers, but the biggest thrills were the many irises that my grandmother grew. There were so many colors and they all had that peaceful fragrance that seemed really special when she would walk with me through the flowers," Judy said.

Her other grandparents also shared their love of gardening.

"When I was with my dad's parents, I can remember spending the mornings helping my grandmother pick peas and beans in the garden, then, shelling them for the next meal. We would sit in the deep shade of the front porch and sip a cold drink as we cleaned the vegetables and talked about what my cousins were doing. My mother grew peonies and roses and a lot of other flowers, while my dad grew the veggies," Judy said.

But it took a radio program by John Burrows that made Judy realize she wanted to be a Master Gardener. By this time, she had left Oklahoma for Clear Lake and after she bought a house, she took a landscaping class at College of the Mainland taught by George Meador, the former Galveston County Extension Agent. From the class she was introduced to her mentor, Anna Marie Wagner and Herman and Jackie Ayer. Herman and Jackie encouraged her to pursue her dream to become a Master Gardener.

"I knew the Master Gardener class was going to be awesome, but I didn't realize how many new friends I would make in that group of 24. I still work with many of them on other projects, both Master Gardener and other organizations. New friends may be the best kept secret of the MG program."

Her dream came true in 2012. Since then she has worked in the Herb Garden, the Butterfly Garden and now is the coordinator for the Earth-Kind Garden.

She also coordinates the MG monthly meetings.

## Gene Speller

Gene Speller became a Galveston County Master Gardener in 2001 after transferring his membership from Harris County (Bear Creek Park) where he earned his MG certification in 1997. He had been a backyard gardener since 1974 and a Texan since 1968. He was originally from North Carolina and spent much of his childhood in Virginia.

"If I had to pick a single person and incident having the most influence on my gardening interest, it would be my Grandfather Lawrence (my mother's father) and time spent together on the front porch looking out over the corn field during a thunderstorm. We rested there together after a hard day's work and watched Mother Nature do its job and water the fields. That quiet time together was not appreciated as much then as it is now," Gene said.

Farming was part of both his maternal and paternal grandparents and parents.

"Both of my parents grew up in farming families in North Carolina. So, my grandparents (maternal and paternal) and their parents were farmers. My father was one of 12 children (six boys and six girls) living on a farm. One of paternal ancestors owned a 1,000-acre (or larger?) farm in Windsor prior to the Civil War. My mother and her four siblings (three brothers and one sister) lived and worked on a 300-acre farm until their late teen years," Gene said.


Gene spent many summers on his maternal grandparents' farm working the fields: picking and hauling watermelons and cantaloupes to market, picking and hanging tobacco leaves in the curing barn, weeding the cotton and peanut fields, and feeding the chickens and hogs.

"When I was a teenager hoeing weeds from the peanut fields on the farm, I swore off farming and gardening altogether. In 1974 after four years in a home with a backyard, I decided it was time to start a backyard garden. I've been gardening ever since - some 44 years! Imagine that. Guess it's in my genes," Gene said.

Gene is known in Galveston County as an expert in chile peppers.


## Ira Gervais

"I enjoy the entire process from prepping the soil, sowing the seeds, transplanting, watching them grow, harvesting, and of course eating fresh veggies. It is also rewarding to share gardening information with other gardeners," Gene said.

Another Texan who arrived after birth was Ira Gervais from Thibodaux, Louisiana. Ira became a MG in 2011. He is known for his great tomatoes and his successful term as President.

Tomatoes, though are not his only claim to MG fame. He also grows green beans, eggplant, cabbage, cauliflower and seasonally anything he finds interesting.

Ira's genes for gardening came from his father who influenced him the most. When he as about 10-11 in age, his uncle gave him some Creole variety tomato seeds. His dad gave him a spot to grow them where he added aged manure and nurtured them as they grew to about 15 feet tall and produced tomatoes as big as 2-3 lbs.

"My father was so proud he took some of the tomatoes to work to show his fellow workers what I had grown," Ira said.

In 2011 Ira became a MG.

"Joining the Galveston County Master Gardeners has been very rewarding. The people are exceptional to work with," Ira said.

No doubt about it. The Galveston County MGs can look back to see where their love of horticulture is planted with their ancestors.

# An Introduction to Compost Tea

By Jon Johns
MG 2003

Since I began gardening I have heard about the "value" of compost tea but I never really gave it much thought as I never saw much data to support the "value." But when I started to have interactions with professional nursery people and landscapers, I noticed that they were using compost tea. Some of these gardening professionals used compost tea "… as an alternative to chemical fertilizers, pesticides and fungicides" and even had what they considered "propriety" and multiple special purpose compost tea formulations (recipes) for specific plants and applications.

So, what exactly is compost tea? "… a concentrated liquid fertilizer made from steeping biological active compost in aerated water. It "contains micro-organisms that enhance plant health, suppress plant diseases, provide plant nutriments, reduce fungicide and fertilizer requirements." Plus, it is nutritionally rich and can help provide plants with beneficial soil bacteria and fungi. There are two kinds of compost tea, bacterial and fungal dominant compost tea. The bacterial dominant compost tea is best suited for annual plants, flowers, vegetables and grasses. The fungal dominant compost tea is best for perennial plants, woody plants, shrubs, and trees.

How do you make compost tea? Making or brewing compost tea is relatively simple process. The recipes I use make a 5-gallon (19 liter) batch of compost tea.

The recipes have four simple steps. You will need a 5-gallon (19 liter) bucket, an aerator (air) pump, that ideally is capable of pumping at least 570 gallons per hour or 38 liters per minute, and an (air) bubbler. The air bubbler can be aquarium air stones or a custom-made bubbler product. The air bubbler(s) will need tubing to connect it to the aerator pump. You will also need a compost "tea bag" that is porous bag with at least a 400-micron mesh that can contain at least 2 pounds (900g) of compost. The compost "tea bag" can be a paint strainer bag or a custom-made compost tea bag.

## Steps for Compost Tea

1 Select the right compost tea recipe for plant(s) that you intend to grow. There are three basic compost tea recipes: Bacterial dominant, Fungal dominant, or a combined (equal ratio of) bacterial and fungal compost tea and three key ingredients: water, compost and food sources and nutriments for microorganisms.

### Bacterial Dominant Compost Tea

- 5 gallons (19 liters) of de-chlorinated or reverse osmosis water
- 3-4 tablespoons (45-60ml) of liquid black strap (un-sulfured) molasses
- 4 teaspoons (23g) of dry soluble kelp (seaweed) or 2 teaspoons of liquid kelp
- 3-4 teaspoons (15-20ml) of fish emulsion
- 1.5 pounds (700g) of bacterial compost or vermin-compost (worm castings)
- Brew for 12-18 hours at 65-75 Fahrenheit (18-24 Celsius)

### Fungal Dominant Compost Tea

- 5 gallons (19 liters) of de-chlorinated or reverse osmosis water.
- 4-5 teaspoons (20-25ml) of fish hydrolyses
  Let it sit in the water for 10-20 minutes
- The add 3-4 tablespoons (50ml) of humic acids
- 2 teaspoons (10ml) of yucca extract
- 4 teaspoons (23g) of dry soluble kelp or 2 tablespoons of liquid kelp
- 2 pounds (900g) of fungal compost
- Brew for 16-24 hours at 65-75 Fahrenheit (18-24 Celsius)

### Equal Ratio of Fungal & Bacterial Compost Tea

- 5 gallons (19 liters) of de-chlorinated or reverse osmosis water.
- 3-4 tablespoons (45-60ml) of humic acids
- The add 3-4 tablespoons (50ml) of humic acids
- 4 teaspoons (23g) of dry soluble kelp or 2 tablespoons of liquid kelp
- 3-4 teaspoons (15-20ml) of fish emulsion
- 1.5 pounds (700g) of a mixed 1:1 ratio of bacterial and fungal compost
- Brew for 16-24 hours at 65-75 Fahrenheit (18-24 Celsius)

2 In the second process step you start the actual process of "brewing" the compost tea by placing 5 gallons (19 liters) of de-chlorinated or reverse osmosis water into a bucket. You then mix the specific (bacteria or fungal dominant or equal ratio of each) recipe's microbial food and nutriment ingredients into the water. Do not add the compost as this will added in the next process step.

3 Now the third process step. You insert the bubbler(s) connected to the aerator pump with tubing and the compost tea bag containing compost into the bucket of water. Try to suspend the compost tea bag containing the compost in the center of the bucket of the water to enable the bubbles produced by the aerator pump and bubbler to bubble through the compost tea bag.

4 Finally, in the fourth process step you will now turn on the aerator pump and start brewing the compost tea by bubbling air bubbles through the water and the compost team bag for between 12-24 hours, per the specific compost tea's recipe. While brewing the

compost tea foaming may occur. Some ingredients (like molasses) will initially make foam but this will go away. A few hours into the brew more foam may be present. This indicates a bacterial bloom has occurred. This is a good sign. The brewing compost "…should have good earthy or sweet smell. If it smells rotten or putrid it has gone anaerobic (loses oxygen) and should be discarded." If the compost tea mixture has fish ingredients it may smell fishy but this smell will go away as the microbes ingest the fish.

When brewing compost tea, do not brew in the sun. Avoid brewing for more than 24 hours as the compost tea may develop organisms (protozoa and ciliate) that will eat the good bacteria and fungi. Use the compost tea as soon as you brew it, as it will go bad (turns anaerobic). If it goes bad as indicated by a bad smell – do not use.

### The compost tea can be used:

- At every watering or just weekly.
- For soil preparation as a soil drench
- As a foliar feed by being sprayed on to the plant's leaves.

These compost tea recipes will cover most gardeners' needs. You can't overdose with compost tea unless you are simply over-watering. And finally, just keep in mind that "… using fungal dominant tea on an annual or bacterial dominant tea on a perennial will not harm it in any way; it's a better/best scenario."

**Photo courtesy of © MG John Jons**

## For YouTube videos that illustrate this article in more detail you may want to see

| | |
|---|---|
| An Introduction to Compost Tea | https://youtu.be/j7tOPJrtmTU |
| Compost Tea for Roses | https://youtu.be/mM8blvymPhU |
| Compost Tea for Vegetables | https://youtu.be/JFLXXau0vqo |
| Compost Tea for Garden Lawns | https://youtu.be/T9jeG_ANECg |
| Compost Tea for House Plants | https://youtu.be/1CjpOqKRBMg |
| How to Make Compost Tea: A Simple Four-Step Process | https://youtu.be/ZCAJTn9XF7U |
| Proven Compost Tea Recipes | https://youtu.be/qmqMICh5Wtk |
| Compost Tea: Bacterial vs. Fungal | https://youtu.be/sYWAvmZ258U |
| Using Compost Tea: How to | https://youtu.be/BR7zQ86Z5jw |

# Beneficial Gardening Practices for Our Avian Friends

by Camille Goodwin
MG 2008

When we are working to clean out our gardens, how many of us think to extend good gardening practices to our wild bird community? We remove garden debris to reduce the possibility of insect pests, diseases and other horticultural disorders. We need to extend these practices to maintain the health of the Avian wildlife in our landscapes as well. For the small amount of time to regularly keep birdbaths, feeders, food and water dishes clean the reward to the birds is immeasurable. Most of us probably don't think about it, but there are several diseases that can affect the health of wild birds (and even chickens, if you raise them.) Most are transmitted by ingestion of contaminated water or food containing bacteria, secretions or feces of infected birds, also aerosol transmission may occur. Bacteria can survive up to 4 months in soil or water.

*Mycoplasma gallisepticum* (MG), also known as house finch eye disease, was formerly confined to domestic birds such as chickens and turkeys. Recently, this disease may have evolved into a new strain that affects house finches and possibly other songbirds. Symptoms in domestic birds are very similar to those in-house finches, and include cloudy eyes, swollen sinuses, sticky nasal mucous, coughing, sneezing, and labored breathing. Domestic birds that are MG-positive spread the disease to each other through exhaled respiratory droplets and in their feces, or to their young during egg formation. The disease usually infects one eye first and then spreads to both. Sick finches may appear mangy-looking, lethargic, disoriented, or weak, and are often alone at feeders. Severely ill birds may not fly at all, and often remain on the ground pecking at seeds dropped from the feeder above. Finches with partial vision loss may fly into bird feeders and windows or allow bird-watchers to get close. The infection apparently causes some discomfort, since diseased birds frequently wipe their eyes on branches and bird feeders, possibly contributing to the spread of the disease. The disease has affected several other species, including American Goldfinch, Evening Grosbeak, and Purple Finch. Studies at the Cornell Laboratory of Ornithology concluded that other songbirds are rarely affected by this new strain of MG. Humans and other mammals will not catch conjunctivitis from contact with sick birds because MG is an exclusively avian disease.

*Salmonellosis* is a common bacterium that causes birds to be weak, thin and listless. It spreads through bird seed or water contaminated by fecal matter from birds. All species of birds are susceptible to salmonella infection; the outcome of infection depends on a variety of factors, including age, stress, host species susceptibility, and bacterial virulence. *Salmonellosis* is a common cause of mortality in birds at birdfeeders. Commonly reported signs include ruffled feathers, droopiness, diarrhea, and severe lethargy; chronically infected birds often appear severely emaciated. Sick birds may also be observed to seizure.

*Avian cholera* is a horrible bacterial disease that has infected domestic chickens for more than 100 years but was not discovered in wild birds until 1994 when it was found in migratory ducks and geese. The disease shows up periodically along migratory waterfowl flyways, including rice-growing regions of coastal Texas. An epidemic of the disease can decimate a population of waterfowl rapidly. Field observations may include the sudden appearance of large numbers of dead birds in good body condition with few, if any, sick birds present. Sick birds appear lethargic, and when captured may die within minutes. Other signs include convulsions; swimming in circles; throwing the head back between the wings; erratic flight and miscalculated landing attempts; mucous discharge from the mouth; soiling or matting of the feathers around the vent, eyes, and bill; pasty, fawn-colored or yellow droppings; or blood-stained droppings or nasal discharge. Besides ducks and geese, coots, gulls and crows may also contract this disease. Afflicted birds may suddenly drop dead and in many cases fall right out of the sky. Humans are not high risk for infection but if you pick up sick or dead birds, be sure to wash hand thoroughly.

**Practices to help prevent these diseases include:**

- Clean feeders and bird baths on a regular basis with a 10 percent bleach solution.
- Avoid using moldy seed and keep the ground area around the feeder as clean as possible. Throughout the year, rake the area to remove accumulated seeds beneath the feeder.
- Use nonporous plastic, metal, or glass feeders that are easy to clean, and provide ample feeder space to reduce crowding.
- Keep platform feeders clean and put out only the amount of seed that birds can consume within a day or two.
- Use plastic disposable gloves if picking up birds, wash all tools if used, boots and clothing after cleaning feeders, birdbaths and water dishes. Wash hands thoroughly.

Finally, don't wait until sick birds are present to implement these precautions.

Photo by Errol Taskin. House Finch eye disease

# Meet Bettie Moss MG 2001

By Kaye Corey
MG 2001

Have you ever met someone and immediately wished she had been your friend for years? That is how I felt when I sat down to visit with Bettie Moss in her beautiful South Shore Harbour home. Unfortunately, Bettie and husband Kent are moving a little farther away from the coast to Spring, TX, this fall. League City is losing a dedicated gardener and civic leader.

Bettie H. Moss was born in Arkansas and graduated from the University of Arkansas with a major in French and Spanish. She worked as an administrative assistant and corporate translator in Dallas where she met her future husband Kent. They have been married 48 years and have three very successful sons. Eight grandchildren include the rare experience of beautiful triplet granddaughters.

Having been introduced to gardening as a child, Bettie loved plants even when she was put to work weeding and tending the veggies. As an adult in her own gardens she said she learned by trial and error. After moving to League City, she decided to become a trained gardener and joined the Master Gardener classes in 2001. She had an entirely new set of gardening rules to learn in our zone 9 from the zones 7 and 8 she knew.
Serving as a Galveston County Master Gardener, Bettie proofreads articles for this gardening newsletter and she looks forward to keeping her knowledge current with the annual Master Gardener classes. She just attended the Texas Master Gardener Conference in College Station that was not only fun but educational.

In their former home of Carrollton, Texas, civic-minded Bettie helped establish landscaped gardens around the city. Being involved with the PTA in her children's schools, she was able to encourage the improvement of their elementary school's appearance with new landscaping.

Her gardening enthusiasm continued when they moved to League City 22 years ago. Friends and neighbors are enjoying the beautiful landscaping which she helped plan in Marina Bay Park near their South Shore home. Of course, her at-home gardens are nothing but outstanding. She and Kent have planted native plants and perennials that are bouncing back after our hard winter along with accents of brightly colored annuals.
The honor of being President of the League City-Appointed Board of the Butler Longhorn Museum was bestowed upon Bettie in 2007. She led the group that worked diligently to help establish the museum for the citizens of League City in 2009. Bettie and husband Kent funded the Heritage Park Gardens adjoining the museum. She also led a group of members of the League City Historical Society to refurbish the landscaping around the West Bay Common School Children's Museum. As a member of the League City Parks Board, Bettie has had a hand in the development of several parks around the city.

A twenty year member of the League City Garden Club, Bettie says she has held every major office but President. She is dedicated to the goals of this educational and civic-minded organization. Being a former Beautification Committee Chairwoman; helping with the club's wildflower project on Hwy 96 at Hwy 3 and decorating the Bandstand at League Park at Christmas; being a docent at the annual garden walk and participating in numerous fundraisers have been favorite activities. President of the Garden Club Linda Garren-McKillip says the club is losing a valued member and hopes the Moss family will be happy in their new home.

Don't think Bettie has spent all her life just working the soil. No, she is an avid water sports participant. Sailing and skiing have been among her favorites. In addition, family and friends enjoy her skills at the piano; she said she even took harp lessons once. She and Kent are active members of Bay Harbour United Methodist Church in League City.

So, Spring, Texas, look out; you are about to experience a new movement in your area that will include beautiful plantings accompanied by sweet music from a lovely lady.

# Discovery Garden Recovery

By Pat Forke
MG 2010

By Judy Anderson
MG 2012

It is obvious our Discovery Garden was damaged by the freezing temperatures of this past winter but it is also obvious that a group of educated, committed Master Gardeners can turn this damage around. Never underestimating Mother Nature is a good thing to adhere to but also never underestimate the abilities of Galveston County Master Gardeners. Our now beautiful gardens are a testament to that. The adversity of the severe weather of this past winter has offered an opportunity to regroup, replant, learn and enjoy the new growth of the spring.

If you were in the Discovery Garden in early March, it was cold, with grey skies and everything looking brown. Judy Anderson lamented that the only thing flourishing was the weeds. The avocado looked good but it had been protected from our unusually cold temperatures with frost cloth and Christmas lights. The grafted fruit trees really took a beating with most citrus new growth coming from the root stock. These would need to be cut down or regrafted. Other trees had been mulched and watered before the freezes and seemed to be okay. The blackberries, salvia, rosemary and day lilies seemed to be fine. Some other survivors include the lantana, Dutchman's pipe, salvia, honeysuckle, Belinda's dream rose, Confederate Rose, Texas Star hibiscus and ligularia. Questionable survivors include the shrimp plant, porterweed, orchid tree, fire spike, sage, Texas mountain laurel, Arabian lilac, Mexican olive, and Rose of Sharon. The bananas and papaya did not survive. The Bamboo Poaceae oldhamii survived but was severely damaged by the freezes. Generally everything looked dismal. The aquaponics area, which was able to maintain a 48 degree interior temperature during the freezing temperatures survived well with lots of butter crunch lettuce almost ready for picking.

Now fast forward to the end of May for a return trip to our gardens. It is hard to believe you are in the same place. You see lots of green with about 40 people buzzing around tending to the tomatoes, weeds, trees, and other plants. The words that came to my mind were things like glorious resurrection, healing powers of Mother Nature and WOW!

The vegetable beds which are tended by various Master Gardeners are green and full of all kinds of vegetables. There are various forms of research done on these beds with records kept. The results of these various research projects are used in presentations and in other ways communicated to interested gardeners. There is a delicious selection of tomatoes, corn, and other plants and vegetables. All are doing quite well. The citrus area made a nice recovery with many trees covered with leaves and blooms. Robert Marshall commented that perhaps the freeze was responsible for an extra abundance of blooms on the fruit trees. This observation was repeated in other areas as other plants, particularly the vitex, is covered with an unusual abundance of healthy, vibrant blooms. Even the weeds, thanks to a lot of pulling and mulching, seem under control.

If you are not acquainted with our Discovery Garden, you are missing not only an enlightening additional educational opportunity but also a wonderful place to interact with some of the greatest gardeners anywhere. There are nine different gardens within our Discovery Garden: Butterfly (Joan Hardgrove and Brenda Romero), Trees and Serenity (Tish Reustle), Earth Kind (Judy Anderson), Orchard (Julie Cartmill), Community Beds (Bobbie Ivey and Clyde Holt), Greenhouse (Stewart McAdoo and Mary Gonzales), Aquaponics (Robin Collins) and our beautiful Pergola area (Marie Leal). These folks are happy to share information about their areas and are always in need of volunteers. Plants are labeled and it is interesting to see how well these plants are growing. If none of these areas are calling you to volunteer, then consider the construction, composting, or kitchen areas. Don't miss this opportunity available to Galveston County Master Gardeners to be productive, learn even more about gardening and be an active part of an awesome group of gardeners.

Photo by MG Pat Forke

# We Have How Many Seasons??

By Donna Ward
MG 1996

Fresh from the Midwest some four decades ago, I remarked to a native Texan that I was going to miss the four seasons. He replied "We have four seasons, Summer, Summer, Summer and Christmas." At the time I was confused, but soon I came to understand completely. Summer seems to last way too long in these parts, and the problems that go along with summer seem to be endless.

The first concern of most homeowners with an interest in gardening and curb appeal is the care of our landscape trees during our scorching and predictably dry summer months. Considering the value good tree-enhanced landscape can bring to your home's worth, it is important that we take time to learn a few facts.

Most trees hardly ever create a taproot but do grow a spread-out sizeable network of feeder roots. They originate a few feet away from the base of the tree, take up water and nutrients, and extend outward in every direction. These roots are usually found in the top 12 to 24 inches of soil, but they can spread horizontally well past the drip line (the tip of the outermost branches) of the tree. Each leaf has its own personal hair-like root beneath the soil surface, and if that root dries out, its personal leaf dies.

There's a variety of ways to prevent this from happening. There's the old tried and true lawn sprinkler running for hours and hours, the soaker hose, or bucket irrigation. But in my opinion the best watering method is a basic garden hose turned on to a little more than a trickle and placed at the drip line of your tree. Let it run for at least an hour, and then move it a few feet around. Continue until the area under the canopy of the tree has been soaked to a depth reaching the feeder roots. This can take up to a whole day for a large tree. Deep watering should be done once a week during our hot summer months. I guess it goes without saying that summer is not the time to be planting new landscape trees, or shrubs.

Mulch is the best friend your veggie or flower garden can have. It blocks weeds, moderates soil temperatures both hot and cold, but best of all it conserves moisture. An added advantage is that as it decays it adds organic matter to the soil. Not all of our landscape plants are deep rooted - our much-loved azaleas for example have roots very close to the soil surface. They dry out quickly during sizzling summer temps. Regular watering keeps the mulch damp and roots alive. All of our shrubbery should be mulched to a depth not less than 2 inches.

Those cute little bedding plants you put in this spring are struggling to stay alive during this stressful time. I know, they're looking leggy and a bit droopy, but don't fertilize them now, they can't possibly put on new growth under such stressful conditions. They don't need the added burden of being forced to produce flowers or new leafy growth. I tend to prune them back a bit, mulch and water regularly. You'll see them practically pop with new growth once a few cooler days arrive. And don't replace them just because the nursery has them on sale. They are so traumatized at this point even Mother Nature may not be able to perform a resurrection.

Raise the lawn mower blades to their highest level on your mower, or at least educate your mowing service. The intense sun and blistering heat not only scorches the stolons (runners) but accelerates evaporation. If the blades of grass are allowed to grow taller you can at least provide some much-needed shade to the soil, stolons and roots.

You may still be harvesting some veggies from the south forty, and during these hotter than hot days they wilt to reduce the amount of leaf surface exposed to the hot air. They may look good in the morning but wilt by mid-afternoon. If they haven't perked up and are still wilted in the evening - you've got a problem - get out the hose. But have faith - sure as the sun rises in the east – summer will be over and we're headed for Christmas.

**Photo courtesy of** Chris Anastas

# Meet our Green Giant in the Discovery Garden

By Linda McKillip
MG 2003

One Sunday in mid-April, I was invited to meet a very special plant at Carbide Park's Discovery Garden. It was Agave salmiana 'Green Giant' (Giant Agave). If you are looking for a specimen plant, this could be the one for you. It is a very striking, architectural plant with thick, graceful, curving dark grey-green leaves. It's hard to use the word 'graceful' when you are looking at spines along each leaf margin including a 3-inch terminal spike, but there you go.

This plant which resembles an urn-shaped rosette is 5-6 feet tall and twice as wide.

And why is this guy so special? It is monocarpic meaning it will bloom once, and then die. It usually takes 15-20 years to bloom, but when it does, it's a showstopper as a 20-foot tall candelabra inflorescence loaded with yellow flowers steals the show. But don't stumble and fall while you are taking in the magnificence of this massive plant. The sap of this plant is quite irritating if not caustic.

Master Gardener Tish Reustle has been keeping an eye on our agave. It actually was a transplant to Carbide from our previous Hwy 3 location. While the actual age of this plant is unknown, one wonders if extreme conditions of transplanting and now a hard winter might have kicked it into to bloom. Tish remarked that this is one of a few plants that reproduce in 2 different ways. It produces pups or baby plants but the flowers also produce seed pods. She said the rapid rate of growth of the inflorescence was truly amazing.

Green Giant's history goes back a 1000 years to its native southern and Central Mexico. Historically it was used to make food, beverages, and clothing, soap, rope and paper fibers. One of those beverages, 'pulque', known as 'the unappreciated cousin of tequila' uses the sap to make a fermented milky drink which was used throughout history for a wide variety of ways ranging from being a sacred beverage in mythology to having digestive and nutritional purposes.

These agaves are easy to grow. Matter of fact, their pups can, if left unchecked, become a nuisance. And if you are growing one, you will have to make a choice between making pulque or seeing it bloom. Instructions for harvesting the sap says to begin where the center of the plant starts to swell in preparation for blooming.

If you are interested in seeing a video of the Green Giant at Carbide Park click here.
https://drive.google.com/file/d/19Y5QHDzh9XU7xCzEaEITGBt-dD9aAoaU/view

While the video invites you to come see it, according to Tish, it is now reduced to a black pile of mushy stuff. But there are many other fabulous sights to be seen every Thursday between 9 a.m. - Noon at the Discovery Garden at Carbide Park.

# Please Support the "Botany Bill"
# Native Plant Society

## Have you heard about the "Botany Bill"?

Officially entitled House Resolution 1054, "The Botanical Sciences and Native Plant Materials Research, Restoration, and Promotion Act" the so-called Botany Bill is a bipartisan proposal that was introduced to Congress in February 2017. The legislation is intended to promote botanical research and botanical sciences capacity (including botanical education), generate demand for native plant materials, and authorize related federal activities. It allows federal agencies to act with the expertise required to preserve unique American landscapes and emphasizes the importance of protecting native plants and plant ecosystems.

Work on the Botany Bill began in early 2015, and on February 14, 2017, Representative Mike Quigley (D-IL) introduced House Resolution 1054, with co-sponsor Ileana Ros-Lehtinen (R-FL). Since then 23 co-sponsors have signed on.

At our second-quarter board meeting on April 21 the Native Plant Society of Texas state board voted to endorse the passage of this legislation and to encourage our membership to take individual action. The board rarely endorses legislation but considers this bill important based on its impact to native plant communities and the ecosystems they support.

If you would like to help promote the passage of this act to your House representative, the most important thing to do right now is to ask your representative to co-sponsor the bill. Find your representative and their contact information here. (https://www.house.gov/representatives/find-your-representative)

You can read the full text of the bill here
www.congress.gov/115/bills/hr1054/BILLS-115hr1054ih.pdf

This site
https://botanybill.weebly.com/
has more about the Botany Bill,
including statements from
Quigley and Lehtinen and
a summary
of the bill.

The article Please support the "Botany Bill"
https://npsot.org/wp/story/2018/10756/
appeared first at the
Native Plant Society of Texas
https://npsot.org/wp/
website.

Native Plant Society of Texas

# easy recipes
# Seasonal Bites

By Sandra Gervais
MG 2011

The calendar says June.....the temperature says August! Once again Mother Nature is testing us. She tested us with flooding from Harvey in September, and then gave us an extremely cold winter that would not end, and now she's giving us a super hot early summer. Bring it on, Lady! If our plants can adapt, so can we.

Let's start by eating well but with as little time at the stove as possible. Here are two dishes that do that.

## Simple Pasta Salad

**Ingredients**

| | |
|---|---|
| 16 ounces of | cooked pasta shapes, rinsed and well drained |
| 12-16 ounces | bottled Italian dressing (or make your own!) |
| 3 cups | chopped vegetables<br>(Use whatever is in your garden & your fridge<br>tomatoes, red and green peppers, mushrooms,<br>onions, carrots, broccoli florets, olives, fresh herbs, etc.) |

Put cooked pasta and chopped vegetables in a large bowl.
Add Italian dressing and mix thoroughly but gently.
(I save the last few ounces to add just before serving.)

Now get creative. Add in what you like—chopped cooked chicken, ham, bacon bits, pepperoni, drained tuna, cooked shrimp, whatever.

Mix in 1/4 cup or more of grated Parmesan cheese.

Cover and leave in refrigerator overnight for flavors to meld.
Stir before serving.

If desired, add more Italian dressing to taste.

Servings depend on how much meat and vegetables have been added.

Yields: 6-8 servings

## Bake Free Brownie

**Ingredients**

| | |
|---|---|
| 1/4 cup | butter |
| 1 pack | semisweet chocolate chips (12 ounces) |
| 3 cups | graham crackers, crumbled |
| 1 can | sweetened condensed milk (14 ounces) |
| 3/4 teaspoon | vanilla |

Grease an 8x8 square baking dish.

Melt chocolate and butter for 1 minute in microwave on High.
Remove and stir until smooth.

In large bowl, mix graham cracker crumbs, condensed milk, vanilla and chocolate mixture. (Mixture will be stiff.) Pour into baking dish and smooth top.

Let stand at room temperature for about two hours.

Cut into bars.

Note: do not refrigerate. Don't worry; it won't last long enough to go bad.

Yields: 6-8 servings

# Monthly Meeting Minutes

## APRIL 10, 2018

Karen and Tom Morris hosted the April Master Gardener meeting at their home on the Houston Ship Channel in Bacliff. MG Association President Sharon Zaal welcomed the members and Denny Noh asked the blessing for the meal. Karen and Tom provided a brisket and the pot luck offered by the members included many delicious side dishes for the Master Gardeners to enjoy on the spacious and beautiful patio overlooking the ship channel. There was a lot of good conversation and laughter heard from the groups of tables.

After dinner, Karen led the Master Gardeners to visit her freeze damaged garden, orchard and pond. The MG's who remained behind enjoyed the evening and the glow of the setting sun. Thanks to all of the contributions for the yummy dinner and those who helped with the set up and clean up. Many thanks to Karen and Tom for their great hospitality to the Master Gardeners.








## MAY 8, 2018

Master Gardeners gathered for the May "Backyard Meeting" at the Galveston home of Bret and Raini Cunningham. The garden of the beautiful home was filled with wildflowers, fruiting avocado and citrus, aromatic herbs, fragrant gardenias, and a variety of tropical ferns and palms. The home, which dates back to 1860, was open for touring, as was the new rv.

The meeting was opened at 6:30 pm by President Sharon Zaal. Visiting neighbors from Galveston Island and Master Gardeners from Hidalgo County were introduced and welcomed to the gathering. The invocation was given by Clyde Holt and a varietal feast that included barbecue brisket, summer salads, fresh fruits, and yummy desserts, was enjoyed by all. The evening closed with a glorious Texas sunset.








# GCMG Awarded a United States Plant Patent

By Jon Johns
MG 2003

Galveston County Master Gardener, John Jons has been awarded a United States Plant Patent for a rose that he has (invented) hybridized. The rose is called "JAJchel."

"The rose is a medium sized floribunda with excellent heat tolerance and disease resistance. This rose prolifically produces double to very double, long lasting flowers. The flowers are creamy white, the mature petals curve backwards to create a flower with a round "cotton ball" like form that is framed in medium green foliage that matures to semi-glossy dark green. The rose exhibits low spreading and moderate growth habit that is well suited to providing attractive minimal low care and low maintenance ornamentation to the homeowner with a small landscape."

This is the same rose that won John an American Rose Society Hybridizer Award. The award evaluators noted that it was a "really nice rose" and a "great rose!"

This rose, along with seven more roses that he has hybridized are being tested for potential commercial distribution by Bailey Nurseries.

Photo by MG Jon Johns

John noted that his success in rose hybridizing and writing the patent for this rose is attributable to the support and help of others. He noted that the Galveston Master Gardener Association helped him learn how to grow plants, the Houston Roses Society (HRS) helped him learn how to successfully grow roses and the Rose Hybridizer Association helped him learn about rose hybridization. In particular, he noted that Robin Hough, a rose exhibitor and hybridizer showed him how to hybridize roses. Gaye Hammond, past president of the HRS and internationally known rose author and speaker helped him focus his hybridizing objectives. Roy Martens of RiceTec, Inc., provided technical plant breeding info and Dr. David Zlesak, Associate Professor of Horticulture at the University of Wisconsin, River Falls, renowned plant breeder and plant pathology expert encouraged and guided him on writing the plant patent.

United States Plant Patent
Jons
Patent No.: US PP29,366 P2
Date of Patent: Apr. 3, 2018

John is very active in growing roses and gardening. He speaks, writes and produces YouTube videos on a variety of gardening topics.

*GULF COAST GARDENING* EDUCATIONAL SEMINARS

# Upcoming Events July 2018

## Galveston County Master Gardener Educational Programs for Interested Gardeners

**The following 2018 Master Gardener Programs are free to the public.** Location: **Galveston County AgriLife Extension Office in Carbide Park • 4102 - B Main Street** (FM 519)**, La Marque, Texas 77568**
GPS location: **29.359705, -95.003591**
**For course reservations,** call **281-309-5065** or email **galvcountymgs@gmail.com**
**http://aggie-horticulture.tamu.edu/galveston/index.html**

## JULY

**IRISES FOR THE GULF COAST GARDEN** — galvcountymgs@gmail.com for registration
**Saturday, July 14**
**1 – 3 p.m.**

Galveston County Master Gardener Monica Martens will talk about the types of irises that can be grown locally and elsewhere in Texas. The presentation will include tips for growing, information about ways to obtain irises, the effects of frosty weather, and landscaping mishaps and successes.

**A HOMEOWNER'S GUIDE TO WEED CONTROL** — galvcountymgs@gmail.com for registration
**Tuesday, July 17**
**6:30 p.m. – 8:00 p.m.**

Galveston County Master Gardener John Jons will present a comprehensive, illustrative, and entertaining program on identifying, managing, and controlling the weeds in your garden. The program is appropriate for both new and experienced gardeners.

**ARRANGING FRESH & ARTIFICIAL FLOWERS** — galvcountymgs@gmail.com for registration
**Saturday, July 28**
**9 – 11 a.m.**

Galveston County Master Gardener Jackie Auer will demonstrate and explain the basic techniques of fresh and artificial flower arranging. She has produced arrangements for the retail market, as well as for individuals. Bring your own vase for hands-on arranging.

# Texas Master Gardener State Conference 2018

*Link to State Conference award photos:*
*https://drive.google.com/drive/mobile/folders/1ivQmnYQDd_VK_WWA-7fKuURtQnFTcGFI?usp=sharing*

First Place Galveston County Research - Tomato Trials by Intern Class

First Place Galveston County Written Education Gulf Coast Gardening Newsletter

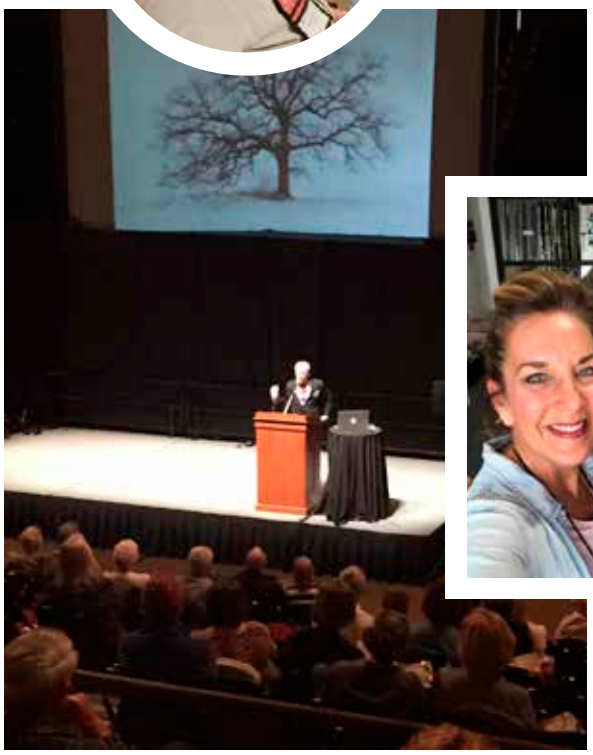

# Texas Master Gardener State Conference 2018 cont'd

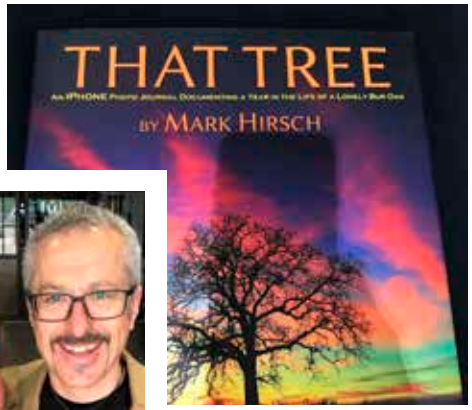
Mrs. Jerilee Owens, at 91, is the longest tenured Texas Master Gardener and was one of the original Master Gardener members in the first association formed in Texas in Galveston County 35 years ago.


WELCOME TO
AGGIELAND
TEXAS A&M UNIVERSITY

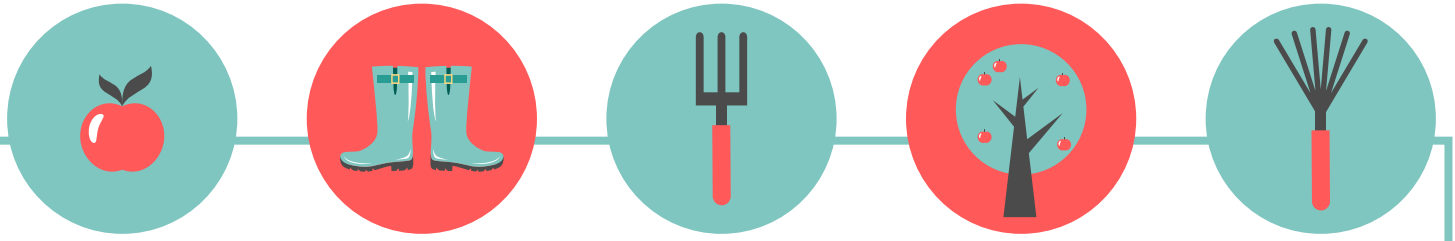

Lemon
Grass


TEXAS
GARDEN
ALMANAC




THAT TREE
BY MARK HIRSCH


Anna Wygrys
Galveston County



## REMEMBER

**In order to maintain your status as a certified Texas Master Gardener, each year you must complete a minimum of 6 hours continuing education, as well as 12 service hours. Additionally, those hours must be reported through the online Volunteer Mangement System or other approved means. Contact MG Wayne Elliott at gcmghours@gmail.com for more information.**

| Date | Name of Program | Speaker | MG CEU's |
|---|---|---|---|
| 1/6/18 | Growing Avocado and Papaya | Jerry Hurlbert | 2.75 |
| 1/6/18 | Growing Peaches in Galveston County | Herman Auer | 2.50 |
| 1/11/18 | Collection and Storage of Budwood for Grafting | Sue Jeffco | 1.25 |
| 1/13/18 | Growing Great Tomatoes | Ira Gervais | 2.00 |
| 1/13/18 | Kitchen Gardening | Mary Demeny | 2.00 |
| 1/18/18 | Wedge Grafting | Sue Jeffco | 1.00 |
| 1/20/18 | Successful Spring Vegetable Gardening | Herman Auer | 2.50 |
| 1/20/18 | Small Yards, Small Trees | Sandra Devall | 1.50 |
| 1/23/18 | Garden Tool Talk | Tim Jahnke & Henry Harrison III | 1.75 |
| 1/25/18 | Grape Pruning | David Cooper | 1.25 |
| 1/25/18 | Discovery Garden Lunch & Learn - Community Beds | Bobbie Ivey & Clyde Holt | 0.25 |
| 1/27/18 | Growing & Using Herbs | Tricia Bradbury | 2.00 |
| 1/27/18 | Texas Tuff Plants | Sandra Devall | 1.25 |
| 1/30/18 | Anyone Can Grow Roses | John Jons | 1.00 |
| 2/3/18 | Simply Succulents | Paula Spletter | 2.50 |
| 2/3/18 | Growing Backyard Citrus | Robert Marshall | 2.00 |
| 2/8/18 | Discovery Garden Lunch & Learn - Hops & Weeds | John Jons | 0.50 |
| 2/10/18 | Planting Fruit Trees | Herman Auer | 2.00 |
| 2/15/18 | MG Class - Botany | Jayla Fry | 4.00 |
| 2/20/18 | MG Class - Plant Pathology | Dr. David Appel | 4.00 |
| 2/22/18 | Rose Pruning | John Jons | 1.00 |
| 2/22/18 | Discovery Garden Lunch & Learn - Butterfuly Garden | Judy Anderson | 0.25 |
| 2/24/18 | Growing Blueberries | Dr. David Cohen | 1.50 |
| 2/24/18 | How to Grow Native Milkweed | Barbara Keller-Willy | 2.00 |
| 3/1/18 | Discovery Garden Lunch & Learn - WeatherLink | Gene Speller & Ken Goodwin | 0.50 |
| 3/1/18 | MG Class - Plant Hybridization & Weed Management | John Jons | 3.00 |
| 3/6/18 | MG Class - Insect Identification & Management | Dr. Robert Puckett | 4.25 |
| 3/8/18 | Discovery Garden Lunch & Learn - Garden History | Jim Edwards | 0.50 |
| 3/9/18 | MG Class - Vegetables | Tom LeRoy | 4.00 |
| 3/13/18 | MG Class - Soils | Dr. Sam Feagley | 4.00 |
| 3/15/18 | MG Class - Fruit & Citrus | Herman Auer | 3.50 |
| 3/17/18 | Tomato Stress Management | Ira Gervais | 2.25 |
| 3/17/18 | Composting | Jim Gilliam | 2.00 |
| 3/22/18 | Fig Tree Pruning & Propagation | Terry Cuclis | 1.25 |
| 3/20/18 | MG Class - Urban Pesticide | Dr. Don Renchie | 3.50 |
| 3/22/18 | MG Class - Plant Ecology & Environmental Stewardship | Dr. Barron Rector | 4.00 |
| 3/27/18 | MG Class - Organic Gardening | Robert 'Skip' Richter | 3.00 |
| 3/29/18 | MG Class - Urban Forestry | Lanny Dressen | 4.00 |
| 4/10/18 | MG Class - Perennials & Roses | Dr. Bill Welch | 3.00 |
| 4/11/18 | MG Class - Propagation | Tom LeRoy | 3.75 |
| 4/12/18 | MG Class - Earth-Kind | Dr. Don Wilkerson | 3.50 |
| 4/17/18 | MG Class - Intern Presentation | MG Interns | 3.50 |
| 4/19/18 | MG Class - Year Round Care & Beneficials in the Garden | Dr. William M. Johnson | 2.00 |
| 4/28/18 | Growing Curubits | Herman Auer | 1.50 |
| 5/5/18 | What is an Orchid | Joyce McMillan & Clyde Holt | 2.00 |
| 5/5/18 | Beneficials in the Garden | Dr. William M. Johnson | 1.75 |
| 5/19/18 | Turning Dirt into Soil | Jim Gilliam | 2.25 |
| 6/2/18 | Successful Vegetable Gardening | Herman Auer | 2.00 |
| 6/2/18 | A Passion for Plumeria | Loretta Osteen | 2.00 |
| 6/13/18 | Irises for the Gulf Coast Garden - MG Only Presentation | Monica Martens | 2.00 |
| 6/16/18 | Soil Health | Jim Gilliam | 2.25 |
| **2018 Recertification Hours for MG's** | | **Total CEU's (Hours)** | **114.50** |

*Last Updated June 26, 2018*

# The Discovery Garden Update

By Tom Fountain
MG 2008

Summer is knocking on our door and another hurricane season has arrived! Spring temperatures started off normal enough, but then during the past month temperatures jumped into the 90's and caused several record highs. Our rainfall has been below normal yet spread out just enough to keep us out of drought conditions for now. Our extended outlook continues to indicate temperatures will be above normal most of the summer and rainfall is expected to be slightly below normal.

Late spring is always a busy time In the Discovery Garden with plenty of weeding, mulching, and harvesting. So far, the harvest has resulted in 193 pounds of potatoes, 46 pounds of onions, 299 pounds of tomatoes, 14 pounds of squash, 54 pounds of turnips as well as green beans and lots of lettuce. Pictured in Fig. 1 is Ira with a 2½ pound tomato from an Atlas tomato plant grown in the tomato trial beds by this year's MG Interns. Stephanie is pointing out some of the large tomatoes grown in the trial beds in Fig. 2. Pictured in Fig. 3 is a one-day harvest of tomatoes. Pictured in Fig. 4 is Jennie displaying green beans that she, Pam and a few others just picked.




Photos courtesy of MG Tom Fountain


The mild weather of spring also produced lots of visitors. We provided tours for Harris County and Fort Bend County senior groups. We had a greenhouse-grown plant sale. Also, Robin and other members of the Aquaponics team had a reception one evening to thank volunteers and donors, and to show off the Aquaponics unit. It was a wonderful evening. Briana, Robin, and Bill are showing some donors through the unit in Fig. 5.

The Serenity, Butterfly, and Earth-Kind Gardens are always busy areas and a favorite area for our visitors. Tish, Wendy and Joanne can be found in the Serenity Garden on Thursdays as they maintain it and make improvements. One of the new features is the fountain just to the right of the entrance (Fig. 6).



The Aquaponics unit had one not-so-welcome visitor recently. A raccoon came in the night and after exploring the garden, gorged himself on the available fish food. He left none for the fish. One raccoon was caught in a trap and was relocated without harm. No additional problems have been reported but, just in case, animal traps are still maintained around the fish tanks as shown in Fig. 7 in the event the raccoon's cousins decide to make another late-night visit.


Photo courtesy of MG Robin Collins

Have a great summer, and we will see you in the garden!

# bulletin board

## Volunteer Opportunities

For the **Master Gardener Hotline** contact Ginger Benson by email at galvcountymgs@gmail.com or call the office at 281-309-5065.

## Volunteer Opportunities

**Tideway is a program of the Transitional Learning Center**

Dr. Johnson has approved Tideway Transitional Learning Center (644 Central City Blvd., Galveston, Texas 77551) as a location where Master Gardener service hours may be earned. Plans to prepare the gardens at Tideway for spring planting are ready and volunteers are needed. Volunteers can contact Jennifer Pinard at jpinard@tlc-tideway.org. The focus is on the long-term needs of individuals with an acquired brain injury. The program offers accessible horticultural experiences, through which individuals with a brain injury can improve sensory awareness, motor skills, range of motion, endurance and flexibility as well as regain confidence, and learn new skills. This provides the opportunity for our residents to develop the necessary skills to gain and maintain a productive lifestyle whether it is on site or volunteering in the community. The residents at Tideway are very much "hands on" in building the different garden beds, in fact some of the residents came up with the designs. And they have chickens!

## Volunteer Opportunities

**Libbie's Place Adult Day Care** has been designated as a Demonstration Garden for the Master Gardener Association. It is located at 5402 Avenue U in Galveston and is part of Moody Methodist Church outreach ministries http://www.moody.org/libbie-s-place-senior-day. A crew is needed to maintain and upgrade the garden as needed with your time spent counting towards MG volunteer hours. MG Pam Windus is heading up the crew and will determine the day, time and frequency of the work days. If you are interested, or have any questions, please contact Pam at 409.771.5620, email DrPGilbert@aol.com to let her know the day/times (AM/PM) that would work best for you. Thank you for your time and consideration in this great new endeavor for the Master Gardeners.


Don't forget to put the link for our weather station on your smart phone and computer:
www.weatherlink.com/user/gcmga

## SPECIALIST AND OTHER MG RELATED TRAINING

Please see the Texas Master Gardeners Website for details. By visiting the website you can find up-to-date information on Specialist Programs that were added in between editions of the newsletter. txmg.org. You may download the application forms from that website. Note all applications for the Specialist Training courses must be approved and signed by Dr. William M. Johnson. Note fees do not include lodging or food unless specified otherwise.

### Specialist Training

**Junior Master Gardener**
July 24-26 hosted by Denton County

**Vegetables**
September 4-6 hosted by Bexar County

**Texas Superstars**
September 18-20 hosted by Smith County

**Composter**
December 5-7 hosted by Fort Bend County

Click on each class for further details

## VOLUNTEERS NEEDED

Tour Guides for "First-Thursday-in-a-Month" Public Access and Tour of our Discovery Garden

Long-winded title but it says what we will be doing. Our Demonstration Garden will be open for touring by the general public on the first Thursday of each month from 9:00 -11:00 am. MGs are needed to serve as tour guides for our demonstration Garden. Contact MG Robert Marshall 281.993.5595, email rbrtm01@att.net or MG Bobbie Ivey 713.748.8564, email blivey@sbcglobal.net to volunteer.

Volunteers are needed to develop and deliver presentations on various horticulture topics of interest to the public in our surrounding communities and our Master Gardeners. Classes are given at the Extension Office on Tuesday evenings and on Saturday. This is an excellent opportunity to contribute, develop and use skills from life experiences as well as contribute to one of the main GCMG missions of Education. We have experienced GCMG Mentors and Specialist available to guide and support. Please contact if you have any questions and so we can get you scheduled to present a class. Volunteers are also needed to help with the Saturday programs and the Tuesday evening programs. If you can help, please contact

Denny Noh @ 281-723-2830 or dnoh@aol.com

Nancy Langston Noh @ 832-289-7087 or nancylnoh@aol.com

AgriLife Extension Office Discovery Garden needs volunteers!

The gardens around the AgriLife Extension Office are maintained by Master Gardeners under the team leadership of MG Ginger Benson. This is an opportunity to make a good impression on the many visitors to the AgriLife Extension Office. Come out and have a good time while learning more about ornamentals. Please contact Ginger at 281-309-5065, email galvcountymgs@gmail.com to find out the schedule and join her team.

amazon smile

Here is a great way to support our GCMGA. Amazon will donate 0.5% of our personal purchases to Galveston County Master Gardener Association.

All you have to do is: Go to smile.amazon.com
- Choose Galveston County Master Gardener Association as your charity.

Save smile.amazon.com to your favorites.
- Always start from this site to do your Amazon shopping.
- You should see your chosen charity in the top bar on Amazon's website.
- If you have any problems, search smile on Amazon's website

# "Poison Ivy: Leaves of Three, Let it Be"

Editor's Note: This article is a reprint of Dr. Johnson's Weekly Gardening Column in *The Daily News*

By Dr. William M. Johnson
CEA-HORT & MG
Program Coordinator

One topic I have yet to discuss in this column is poison ivy. Poison ivy is abundant in urban, suburban and rural landscapes in addition to parks and other areas. Gardeners often come into contact with poison ivy and many contract a bothersome rash as a result. It pays to be able to identify and avoid it.

Poison ivy contains urushiol oil and it's potent stuff. Just one billionth of a gram is enough to cause a rash. Urishiol is also a very stable oil. Urushiol can remain stable on an axe handle or other tool for several years and still be able to cause a rash.

The rash (an allergic contact dermatitis) can be caused by direct contact with urushiol by touching the plants or by indirect contact with the plant oil that may have contaminated a pet's fur, gardening tools, clothing, or other surfaces.

We typically think of this plant as lying deep in the woods, but in fact it's most commonly found in less remote areas: the edges of your backyard, the shoulder of a highway, even a sand dune on a beach or along walking paths in parks. This plant can snake up a tree, creep along a fence, sprout through the cracks of a sidewalk, and grow low as a shrub. This character is definitely a Jekyll and Hyde in the landscape.

**Recognizing poison ivy:** Poison ivy is a tall, climbing vine that drops its leaves (deciduous) in winter. As it climbs tree trunks, wood fences or other flat structures, the stem produces many small roots that cling to the surface. This is a good identifiable characteristic of the vine in case you can't easily see the leaves.

Poison ivy has a characteristic compound leaf consisting of three leaflets—hence the saying, "Leaves of three, let it be." Mature leaves are 2 to 4 inches long and dull or glossy green with pointed tips.

New seedlings of poison ivy are easily overlooked. They may have a reddish tint to their foliage and will appear upright. As they get older they will begin to vine and grow up nearby shrubs or trees. It is easy to come into contact with young poison ivy seedlings when weeding flower beds, so you need to be observant.

**Controlling poison ivy:** In controlling poison ivy, one of the most important things to do is to periodically check your landscape carefully for seedlings or vines. Look for the three-leaflet leaves in out-of-the-way areas, under shrubs, along back fences and by trees.

**Three methods can be effective in eradicating poison ivy in landscapes.**

**The first method** is hand pulling or digging it out when the soil is moist; getting out as much of the roots as possible. Use long-gauntlet, rubber gloves available at local hardware stores or use dishwashing gloves when handling the vines and wear a long-sleeved shirt. Place the plants into a plastic bag, seal it (in consideration for trash collectors).

**The second method** is to carefully spray the foliage with a systemic herbicide. This is only possible when the spray will not get on the foliage of desirable plants. If needed, nearby desirable plants can be covered with plastic sheets or bags to protect them while you do the spraying. Be sure to wet the foliage of the poison ivy vine thoroughly with the herbicide spray.

Systemic herbicides are absorbed by the foliage and enter the plant's "circulatory system", sending the material into the vine's roots and killing them as well. Glyphosate (Roundup, Eraser, Hi-Yield Killzall and other brands) or triclopyr (Brush-B-Gon, Brush Killer and other brands) are commonly recommended for poison ivy control. Once the vine dies it may be removed. The dead leaves still contain the rash-causing oil and should be handled cautiously with gloves.

**The third method** of removal is for larger, established vines growing up in trees or intertwined in shrubs. Spraying the vine foliage is not practical in these situations because of the potential to injure desirable trees and surrounding landscape plants. Poison ivy control in sensitive areas can best be achieved by the cut-vine method.

Cut off the vine a few inches from the ground with loppers and immediately treat the surface of the freshly cut stump with undiluted triclopyr (Brush-B-Gon, Brush Killer, Greenlight Cut Vine and Stump Killer and other brands). The vine in the tree or shrub will die because it has no root system. The treated stump will die because the herbicide gets absorbed by the freshly cut surface and translocates to the roots. Applying the herbicide to the fresh cut is necessary because it prevents the stump from re-sprouting. This method is very effective and may be used any time of the year.

Getting poison ivy off your property will probably take repeated herbicide applications. Watch out for this unwelcome plant and be prompt and aggressive in your efforts to control it.

Photo courtesy of Dr. William Johnson

# 2018 GCMGA Monthly Meetings

By Judy Anderson
MG 2012

## July

Do you ever question what the best use of water is in the garden or landscape? Karolyn Gephart will present a program on watering practices at the July Master Gardener Meeting at the Extension Office. Expect an entertaining program with practical information that can make your watering system more effective. The Social will begin at 6:00 p.m. with the pot luck dinner to begin at 6:30 and the program will be at 7:00. Bring a dish to share for the pot luck.

## August

Mark your calendar for a very special August meeting for the Galveston County Master Gardeners at the historic Moody Mansion. Moody Mansion and grounds will be open to the Master Gardeners, along with the Betty Head Oleander Gardens. Master Gardeners, Claire Rhoads, Mary Hoehne and Cindy Croft are on the Moody Mansion staff and will be our hosts for the evening; they will be available for questions and information. More details to follow.
your calendar for this Garden Party.

| | |
|---|---|
| July | Extension Office, Pot Luck; "Best Practices for Watering" presented by MG Karolyn Gephart |
| August | Moody Mansion |
| September | Backyard visit to the home of Melissa and Barry Terrell |
| October | Plant Sale Presentation |
| November | Annual Meeting at the Extension Office |
| December | Holiday Meeting at the home of Mikey and Allen Isbell |

MG Judy Anderson thanks MGs for hosting backyard meetings. You may contact Judy at jande10198@aol.com for information.


*Gulf Coast Gardening* published by the **GALVESTON COUNTY AGRILIFE EXTENSION OFFICE**
**4102-B Main Street** (FM 519) | **La Marque, Texas 77568** | **281-309-5065** | **http://aggie-horticulture.tamu.edu/galveston/index.html**