

Williamson County Master Gardener Journal

Award Winning

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2008 ASSOCIATION OFFICERS

Master Gardener Seed Success

The Results are in!

In the summer of 2008, Susan Blackledge — MG class of 2008 and Park Manager of Berry Springs Park and Preserve — gave me a sack of Eve's Necklace (*Styphnolobium affine*) seeds. She was hoping to germinate them and when they were mature enough plant them along the fence

moved some of the tender plants to a pot that was a bit larger than the 4" pot. As these plants mature, we hope to get them in a one gallon pot and take them out to Berry Springs to be cared for until they can be transplanted into the ground - hopefully fall of this year.



line behind her new home at the Park. I took the seeds to the WCMGA greenhouse and the Master Gardener and Master Gardener interns planted the Eve's Necklace seeds in 4" pots. Some were scarified, some we removed the seed cover and planted just the seed and others we scarified just the seed.

As time went by - several weeks - we had achieved an 80% germination rate. We

The Eve's Necklace seeds are poisonous so they will be planted in an area that is not accessible to the Park visitors. Eve's Necklace is an evergreen that grows 15-20 feet high and 15-20 feet wide. It requires sun/part shade and blooms in the spring. Water requirements are very low and is wildlife and deer resistant. It is classified as a small tree/large shrub.

Join Us June 8th for our Monthly Meeting

This month Kim Bacon, a Capital Area Master Naturalist will be presenting a program on Native Bees and how important they are to American gardeners. Kim will discuss the different lifestyles of Texas' native bees, the role Texas Bee Watchers have in native bee research, and how gardeners and naturalists can attract native bees to their landscapes.



Master Gardeners at Work

News and Notes

Awesome Opportunity

Yes - - you could be the facilitator of the 2009 Fall Master Gardener class. The sessions start in mid-August through mid-Nov. every Tuesday afternoon from 1-5 P.M. Basic knowledge of computer projector set up for the speakers is required. You will lead a talented volunteer group to make each class run seamlessly. On-the-job training is provided. Only those who do not presently perform other leadership roles need apply. E-mail John Papich at texasjapp@yahoo.com for job description and further details. Selection will be made by June 18,2009.

New Signs Available

If you are involved on a project let people know that it was a MG project. Collect your sign from the Extension office or contact Wayne for one. We need to let people know that we have been busy within our communities.

Congratulations!

Our Congratulations go to Walter Hoke and Kay Myatt from the class of 2009 becoming Certified Master Gardeners. Well done y'all!

Oak Wilt Specialist Course Held

Recently, fourteen WCMG (below, left and right) attended an Oak Wilt Specialist course at the Williamson county Extension center; they were: Grace Bulgerin, Christine Powell, Liz Grieder, JoAnne and Charles Dieterich, Lisa LaPaso, Winola and Jim Van Artsdalen, Kay Myatt, Wayne Rhoden, Jeanne Holmes, Walter Hoke, Kris Stanley, Jeanne Barker and Grace Bryce. Participants of the training class concluded the day with visiting the home of JoAnne and Charles Dieterich to treat two trees infected with oak wilt. Master Gardeners attending the training will also need 15 hours of oak wilt public outreach to become Oak Wilt Specialists.

Text and images by Grace Bryce



Veggie Gardeners Wanted

Vegetable gardening is underway at the Williamson County Extension Office. Volunteers worked for three hours filling raised beds with 15 yards of soil from Gardenville. The prepared beds are now ready for Master Gardeners to begin planning, planting and nurturing our first demonstration gardens. These gardens will include an herb bed and fall vegetable garden. The Vegetable Garden Committee will meet at the Extension Office on Tuesday, June 16 at 6:00 pm.



Master Gardeners Norma Beissner, Robert Brandon, JoAnne Dieterich, Charlie Dieterich, Jeanne Holmes, Walter Hoke, Ruth Olmsted, Wayne Rhoden and Margaret Seals fill raised beds.



Text and images by Sandy Lawrence and Jane Williamson

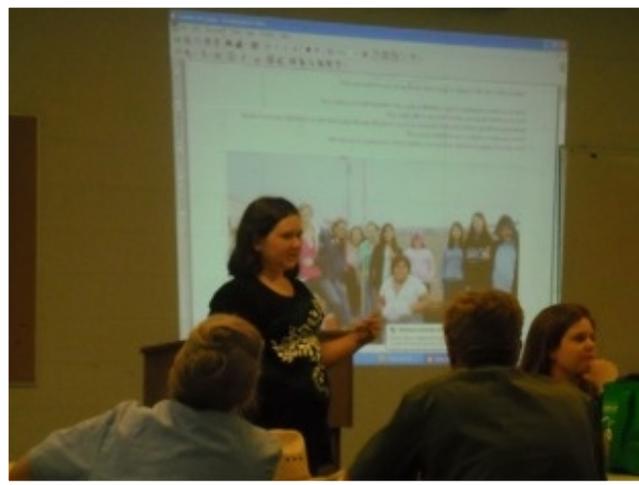


WCMGA General Meeting, May 11th

The May meeting of the Williamson County Master Gardeners reinforced the impression that our Junior Master Gardener program is having a major impact. Students from Forbes and Benold Middle Schools involved in JMG and the After School Action Program gave us much to think about. The JMG program is about supporting youth in the acquisition of “developmental assets,” a list of some 40 common sense things that kids should develop as they grow to responsible adulthood. These assets promote good decision-making and the avoidance of the bad choices that can haunt a lifetime.

Four students presented information about JMG projects such as rebuilding the Benold garden, the Berry Springs Donkey Project, and the Benold Butterflies. Lauren told us about Commitment to Learning, Scarlett about Empowerment, Carolina about the Constructive Use of Time, and Liliانا about Support. Their presentations touched on other assets such as Positive Identity, Social Competencies, Boundaries and Expectations, and Positive Values. The students showed that they are wise beyond their years, thanks in part to their involvement with good role models through JMG activities.

The watchword for the program is “Building Assets by Believing in Youth.” Thanks to the selfless efforts of our Master Gardeners, these young people and many like them are “Growing Assets Through Gardening!”



September 28 – October 2, 2009 Master Volunteer Entomology Specialist Training

Texas AgriLife Extension Service Montgomery County Office, Conroe, TX

Hosted by Dr. Paul R. Nester, Extension Program Specialist, Houston/Metro area, and the Montgomery County Master Gardeners.

- Registration fee of \$300.00 includes collecting kit with lots of goodies; lectures; Extension bulletins; 3 lunches, 1 dinner, snacks & drinks
- Transportation and lodging is on your own
- Course is limited to 25 applicants; deadline is July 18, 2009

Contact Paul Nester at PNester@ag.tamu.edu or 281-855-5639 with any questions.

[Registration material](#)

Master Gardener Training

Advanced Training Opportunities

Each month I am going to try and include new and unusual advanced training opportunities for you to try. If you take advantage of one of these suggestions then please let us all know how it goes so we can build up a record of interesting and worthwhile events to attend so we can all become more knowledgeable. So, for a change this month I decided to look at what some of the local nurseries are offering. Don't dismiss these classes too quickly as they often have very knowledgeable people giving the talks and some can be real gems. So, check out your favorite nursery and see what they are doing this month.

The Natural Gardener (<http://www.naturalgardeneraustin.com/weekly/index.html>)

All classes are held Saturday morning at 9:00 a.m. unless otherwise specified, and classes are about 1 hour long. All classes are subject to change- please call first to confirm. Classes are held outdoors, so please dress for the weather and bring a chair if you like.

June 6: Judy Barrett of *Homegrown Magazine* presents "What Can I Do With My Herbs?" Judy has been publishing the Texas gardener's favorite local bimonthly magazine for over a decade. "Featuring both timely and timeless information for Texas gardeners, homegrown shows how to garden successfully and enjoyably in Texas while having a positive impact on the environment. You'll learn that organic gardening is the only way to go if you want a truly Texas-friendly outdoor space." Now Judy has a great new book, *What Can I Do With My Herbs?* and we're lucky that she'll be sharing her herbal expertise with us.

June 13: Betsy Ross of Ross Farm (RossFarm.com), Sustainable Growth Texas (SustainableGrowthTexas.com), and Soils Alive! (SoilsAlive.com) presents "Compost Tea: The Power and Importance of Soil

Biology." We are very excited and privileged to host one of the region's authorities in compost tea and soil biology, Betsy Ross. Betsy has been a certified Soil Foodweb Advisor since 2004. (SoilFoodWeb.com) She operates, with her family, a 530-acre ranch in eastern Williamson County. "Betsy Ross Grass-fed Beef" is sold through Whole Foods, Peoples Pharmacy, and Greenling Organic Food Delivery, as well as online & on the farm. No corn, hormones, antibiotics, synthetic fertilizers, herbicides, or insecticides are used. She is also the CEO and a founding partner in Sustainable Growth Texas, a biological services company. They manufacture liquid compost extract and blend it with biological and organic amendments to promote soil quality and crop growth. They treat pastures, prairies, orchards, lawns, revegetation sites, and

farms. Don't miss this opportunity to learn about the benefits and uses of compost tea from Texas' foremost expert on the soil foodweb!

June 20: Lucinda Hutson presents "Culinary Herb Gardens from Around the World." Life is a fiesta with Lucinda Hutson! She's written two cookbooks, *The Herb Garden Cookbook* and *Tequila! Cooking with the Spirit of Mexico*, and numerous articles for magazines. She also designs gardens and interiors, and is a much sought-after lecturer. Our very own herb garden is designed by Lucinda, and has been featured in *Kitchen Gardening* and *Fine Gardening* magazines, among others. Come travel the world with Lucinda and learn all about herbs on the way – without ever leaving Central Texas!

**Zilker Botanical Gardens** (<http://www.zilker garden.org/about/events/calendar.html>)

I have included the the Zilker Botanical Garden Calendar of Events because they have groups of many varying kinds from all over the Hill Country meeting there. Often the shows and sales have speakers. It is a great place to visit, talk to like minded people and to pick up advanced hours.

Events listed below are held at Zilker Botanical Garden unless noted otherwise.

Jun 6: The Garden Club of Austin Show and Sale 10am - 5pm

Jun 7: The Garden Club of Austin Show and Sale 11am - 4pm

Jul 11: Becoming A Garden Detective: Diagnosing Plant Problems 10am - noon
Join us to learn the causes of plant problems, the process for diagnosing plant problems, and preventive garden management techniques. This class is free and open to the public. A plant clinic will run during the seminar to help you diagnose current problems so please bring samples of problem

plants. This free seminar is presented by the Travis County Master Gardeners Association, a volunteer arm of the Texas AgriLife Extension Service in Travis County. For more details, see <http://www.tcmastergardeners.org> or call the Travis County Master Gardener's help desk at (512) 854-9600.

Aug 22: Texas Bamboo Society Bamboo Show and Sale 10am - 6pm

Aug 23: Texas Bamboo Society Bamboo Show and Sale 10am - 5pm

Sep 5-7: Cactus and Succulent Show and Sale 10am - 5pm

Sep 12: Iris Society of Austin Rhizome Sale 9am - 4pm

Oct 10: Violet Crown Garden Club Flower Show 1 - 4:30pm

Oct 11: Violet Crown Garden Club Flower Show 1 - 5pm

Oct 17-18: Austin African Violet Society Show and Sale 10am - 4:30pm

Oct 24: [Heart O Texas Orchid](#) Seminar and Sale 10am - 2pm

Nov 7: The Garden Club of Austin Show and Sale 10am - 5pm

Nov 8: The Garden Club of Austin Show and Sale 11am - 4pm

Invasive Species Identification

Oma's Garten Pflanzen (<http://www.omasgartenpflanzen.com/seminars.htm>)

Oma's in Kileen is well worth the drive and usually has a program on each Saturday at 10am to provide plant information and advice on Smart-Scaping your yard.

June 6: Ian Toland, a local hobbyist will be giving advice and demonstrations in the art of Bonsai.



Hill County Water Gardens (<http://www.hillcountrywatergardens.com/seminars.html>)

The Hill Country Water Gardens is another interesting resource especially for those of us who feel that it is essential to have a water feature (or two or more) in their garden. Most of the seminars are on, obviously, ponds and water features but just now and then a different subject comes up.



It's About Thyme Garden Nursery (<http://www.itsaboutthyme.com/>)

It's About Thyme Garden Nursery in south Austin has a variety of spring programs available. Just check their website for details.



Forever Gardens (<http://www.forevergardens.net/>)

Forever Gardens here in Georgetown usually have a spring festival where they have a day of presentation or sometimes they put on the occasional speaker. As with all the sites I have mention just keep checking back for information.



Antique Rose Emporium (<http://www.antiqeroseemporium.com/index.html>)

If you have never been to the Antique Rose Emporium then why not have a day out and visit somewhere special and learn something at the same time. I have only been to the branch in Independence but it is a fabulous place just to wander around and enjoy the beautiful gardens. This is a must visit place for a rose lover but anyone who just loves beautiful gardens will be in their element. Trust me, your going to love it!

06/08/2009 Location: San Antonio Display Gardens "What Do I Do With My Herbs?" Seminar 10:00 am Judy Barrett, editor/publisher of *HomeGrown* Magazine. Learn how to grow, use and enjoy these versatile plants. Judy's book will be available for purchase and for author signing. Sponsored by the Comal Master Gardener's Herb Special Interest Group. Free and open to the public.

06/27/2009 Location: San Antonion Display Gardens "Children's Day in the Garden." 1:00-4:00 Join the Bexar County Master Gardeners in an afternoon especially for our younger friends. We will be offering hands on fun and educational activities with garden and outdoor themes. You are sure to

take home some great crafts and pleasant memories. FREE

06/27/2009 - 06/28/2009 "Gallery in the Hacienda." Location: San Antonio Display Gardens. Enjoy the original works of local area artists when the Hacienda becomes a Gallery of Fine Art. The collection of fine art on display will be available for sale. FREE 07/04/2009

Fourth of July
Location: Independence/San Antonio

09/19/2009 "Celebrate Art in the Garden." Location: San Antonio Display Gardens. Visit local art vendors on the lawn. A fresh air art fair. FREE

10/24/2009 - 10/25/2009

"7th Annual Garden Festival of Roses." Location: San Antonio Display Gardens. FREE seminars all weekend with local gardening experts.

11/06/2009 - 11/08/2009 "Fall Festival of Roses." Location: Independence Display Gardens Free weekend event featuring lectures from national gardening experts.

11/07/2009 "Bountiful Blooming Bulbs Seminar." Location: San Antonio Display Gardens. Local bulb fanatic, Davie Will, will teach us how to successfully grow bulbs in Texas FREE

I hope some of these suggestions help but this list is by no means exhaustive. If you know of somewhere that offers classes or really good ideas then please let me know so we can share that information with others.

From Bob's Blog

Some Williamson County Master Gardeners may not know that our County Extension Agent, Bob Whitney, has a web log ("blog," sort of an internet diary) at

<http://theagriculturalist.blogspot.com>

/ Here are some recent highlights:

Hypoxyton Canker of Oaks

The Texas Hill Country is known for its beautiful live oak, red oak and even post oak and blackjack oak species. These trees seem to thrive here with little trouble except from people and nature. People affect them by building houses, driveways or yards around these fine trees and nature affects them by the drought we are currently in now. Droughts put oaks under significant stress and this stress sets the tree up for the possibility of disease infection. Besides oak wilt we have another problem disease of these oaks called Hypoxyton canker caused by the disease organism *Hypoxyton atropunctatum*. This disease is found everywhere in abundance but it is not a problem for healthy trees. Stressed trees, unfortunately, are susceptible to this fungus through wounds and then the disease grows easily in the sapwood. The first symptoms are yellowing and wilting of leaves, and death of top branches of the tree. The fungus is capable of spreading over 3 feet in all directions in a single year from the infection point. Hypoxyton canker is characterized by the large pieces of bark that fall from the tree as it dies because the disease works on the cambium layers that hold the bark in place. Underneath the bark are the fruiting structures of the fungus that produce dusty brown spores. These blow from tree to tree to spread the disease further to weak, drought-stressed trees.

Before you think all your oaks are going to die, please be assured that this disease is not that widespread in our beautiful oaks but it is more of a problem in droughts. Watering all trees but especially oaks in our landscapes a little more this summer will help prevent the stress and consequently the disease.

Where Do Seedless Watermelons Come From?

Recently we had a Vegetable Production Tour around Taylor and Thrall. On this tour we

talked about a lot of things including melons and melon production. I have been asked on occasion "Where Do Seedless Watermelons Come From?" and since we are very close to enjoying the first seedless melons of the season, I thought we might learn about this great-tasting treat.

How do you get seed from a seedless watermelon? Well the process is simple but lengthy, taking two generations. First, you need to understand a little about chromosomes, the threadlike bodies that contain genes for development. A regular watermelon has two sets of chromosomes and is called a diploid (di for two). A plant breeder will take a diploid watermelon seed and treat it with a chemical called colchicine. This causes the seed to develop a melon with four sets of chromosomes called a tetraploid (tetra for four). This melon is grown out and the seed harvested for the next growing season. This tetraploid seed is planted and begins to grow but the plant is covered with a spun row cover to prevent any pollination so that the plant breeder can pollinate at the right time with a diploid melon variety. These melons will grow and the seed from them will be harvested. The cross of tetraploid plant with a diploid plant results in triploid seed. This plant has three sets of chromosomes and is the "mule" of the watermelon family. This seed when planted produces a seedless melon, meaning it is sterile.

Seedless melons are really a favorite of the urban clientele. They don't buy grapes with seeds and they don't like melons with seeds (what do you do with the seeds in a nice restaurant). They are excellent for salad bars and are sold in grocery stores sliced and ready to eat. Seedless watermelon are typically smaller and so fit easily in the refrigerator, another plus for the urban American.

Growing seedless melons is a little different than growing the typical watermelon. First, this seed is very fragile and must be germinated under higher than normal germination temperatures. We germinate seeds in chambers with 90+ degree temperatures. This forces the seed to quickly germinate and begin to grow. A cold soil in the field will slow seed germination enough that most seedless plants won't make it. Because of its temperamental nature, a seedless watermelon is grown as a transplant first and then moved into the field later after getting a good root system established. These seeds cost

from 17¢ to 25¢ apiece and growing the actual plant in a pot to be transplanted costs another 10¢ for a total of approximately 32¢ per plant. The germination percentage is low for seedless, around 80%, so that cost can go up even more. It takes about 1500 to 1700 plants per acre for commercial production or about \$450.00 per acre of planted seedless melons, a lot of money and still 80 days till harvest.

Seedless melons have other good traits besides being seedless. They are very productive, generally producing more melons than any other hybrids if grown properly. They are also disease tolerant plants, resisting many of the diseases that quickly kill other melons. Finally, seedless are good shippers, holding flavor for a long time.

I mentioned that the seedless is the "mule" of melons. Normally, watermelons produce both male and female flowers so that we can plant one variety in a field and bees can pollinate with no trouble. A seedless melon produces a male flower that cannot pollinate another melon so to get by this we have to plant seeded melon rows next to the seedless rows to insure good pollination. I have seen mix ups in the field where seedless plants covered 10 solid rows so that the outside two rows were they only ones with melons. Having a pollinator row for seedless melons is mandatory if you want any melons, a fact you should know if you want to try seedless in your garden.

Do You Have Borers or Just a Woodpecker?

The yellow-bellied sapsucker (*Sphyrapicus varius*), a member of the woodpecker family, is a migratory bird whose summer breeding range includes Texas. The identifying field markings of adult birds are a black crescent on the breast, pale yellow belly, white wing stripe, and a crimson crown. The male also has a crimson chin and throat, distinguishing him from the female whose chin and throat are white.

Although insects make up part of its diet, the sapsucker is better known for its boring of numerous holes in the bark of live trees to obtain sap, the activity from which it derives its name. The yellow-bellied sapsucker is the only member of the woodpecker family to cause this type of injury. More than 250 species of woody plants are known to be attacked. In our area, they love our oak species and seem to be particularly fond of red oak and burr oak.

The sapsucker bores neat rows of 1/4-inch holes spaced closely together through the bark of trees along and around portions of the limbs or trunk. As these holes fill with sap, the sapsucker uses its brush-like tongue to draw it out. The bird periodically enlarges these holes and eats portions of the cambium and inner bark, together with the fresh sap. Puncture wounds and resulting sap flow on branches and trunks of trees are the most obvious symptoms of injury inflicted by the sapsucker.

After repeated attacks on the same area of a tree, large patches of bark may be removed but I seldom see this happen in our area. If this area is girdled, the portion of tree above this point will die. Many small limbs are killed and sometimes the trunk is girdled and the whole tree is killed, but not often. Sapsucker feeding on shade and ornamental trees leaves unsightly bleeding wounds that attract bees, hornets, and other insects to the sweet, oozing sap.

Early in the spring, the sapsucker tests many trees around its selected nesting site by making sample drillings before selecting ones it prefers. These trees, because of the quantity or sugar content of the sap, are visited several times a day for the rest of the season and sometimes are used as a food source for several years.

Feeding wounds serve as entry points for a wide variety of wood decay or stain fungi and bacteria. On high quality hardwoods, sapsucker wounds cause a grade defect called "bird peck" that lowers the value of the trees. Many forest trees are attacked high in the crowns, making light feeding wounds or sample drillings less evident. A condition known as black bark may develop which results from certain fungi colonizing the sap flow and discoloring the bark, and is good evidence that injury exists.

To discourage sapsuckers from feeding on a favorite shade tree, wrap hardware cloth or burlap around the area being tapped or smear a sticky repellent material, such as bird tanglefoot, on the bark. On large acreage or orchards, leave favorite feeding trees of the sapsucker untreated. Birds will concentrate their feeding activities on these favorite trees, which often protects nearby trees from serious injury.

The Migratory Bird Treaty Act and Federal regulations promulgated under its authority prohibit shooting or trapping of sapsuckers. Shoot-

ing of this species would be an ineffective control anyway because transient birds tend to replace occasional losses to local sapsucker populations.

Galls on Oak Trees

I don't think there is a week goes by that somebody doesn't call wanting to know what those little balls are on their oak tree and how to keep them from killing the tree! How do you tell someone that the damage they see is really not bad at all and, in fact, these balls are part of the normal eco-system? Well, I can honestly say that most people need more of an explanation than that and here is the answer.

The Mealy Oak Gall has been around as long as the live oak tree. What is a gall, in particular the mealy oak gall? Galls are abnormal swellings of plant tissue that can be caused by insects, bacteria, fungi, mites and nematodes. In our area, the galls of most concern are those caused by insects and few by mites. Basically the insect, through many different processes depending on the insect, causes the plant to form or grow tissue that surrounds the insect. As the tissue grows the insect is surrounded and protected within a gall and this gall is the food source for the insect. Once the gall is mature it quits using the plant nutrients but the insect inside will continue to feed through its life stages.

This gall making and insect feeding may sound very harmful to the plant but overall gall-making insects are not considered problems and even some galls are attractive and used in crafts. In the case of the Mealy Oak Gall most people

assume that these round galls on the stem are harmful and so want to spray them. However, it is impossible to get an insecticide to the insect since it lives inside the tree and remember they are not harmful to you or to the tree.

The Mealy Oak Gall is caused by the gall-making cynipid wasp. There are over 1,000 species of gall-making wasps world-wide, but in our area this is the primary one. This cynipid wasp has a unique life cycle that includes two generations with one being asexual and one being sexual. The generation we are most concerned with is the asexual when the galls are formed. You can begin seeing them on the stems by late summer and really notice them in late fall. Sometime in January the adults will emerge from these galls and the sexual generation starts but only with a very tiny gall structure.

A second gall-making insect I get lots of calls about is the Oak Apple Gall. This is a really big gall that looks like a green apple on a red oak tree. This gall is basically hollow but if you can imagine as many as a hundred "apples" hanging on your red oak then you understand why people start calling for help. Again this is a harmless pest but the gall makes for really interesting conversation.

Lastly, let me say again that these galls are not a problem. It is not helpful to spray for them or try to inject the tree with some chemical. In fact, most gall-making insect populations peak and then begin to disappear. As I said before, these galls are just part of the eco-system... like we are!

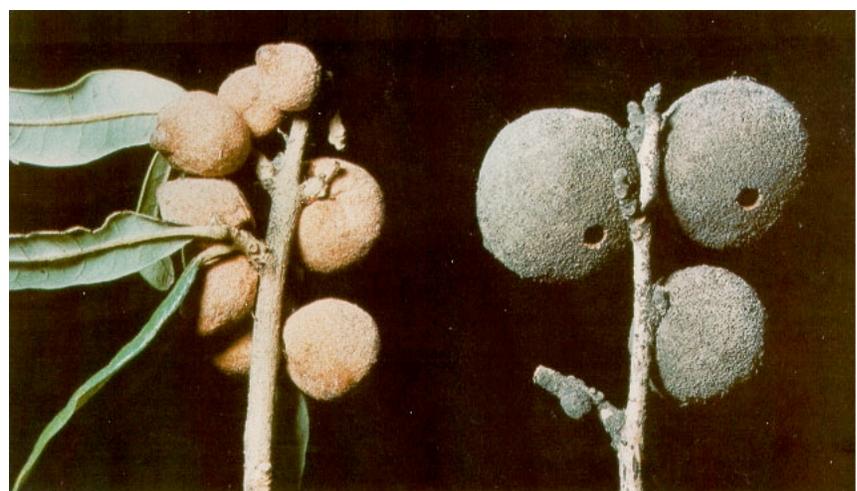


Figure 1. Mealy-oak or spherical galls of *Disholcaspis*. Left: Developing galls of asexual generation. Right: Old, vacated spherical galls. Holes in top two galls made by emerging *Disholcaspis* adults.

A Master Gardener Walks

...along the trails
Annette Banks

With each week come new surprises. Even in a week past the prime of spring blossoms, those plants that savor the sun are showing color. The purple or lavender plants seemed to be most prominent, so I shall touch on five of that color family. The prairie spiderwort (*Tradescantia occidentalis*) has long, slender and pointed alternate leaves of a blue-green color. The flowers sit on top of the leaves. They consists of clusters of three petals with two leaf-like bracts for each cluster. Each purple flower is about an inch wide. Looking down upon it, some think it resembles a spider. The old English word for plant is wort.; thus its common name. The flowers only last a single day and seem to decay into a sticky mass. Occasionally, the greens are eaten and used as herbs.

Texas thistles (*Cirsium texanum*) stand high above most of those plants adjacent to the trails. We all know to use caution if handling its usual solitary stem because of its sharp spines. It likes warm weather and blooms from mid spring to mid summer in sunny to partial shade spots. It is found in Edwards Plateau and South Texas plains; it grows from two to five feet tall from a taproot. The disk flowers are many and rose-purple in color. Bees swarm around it, butterflies like it, and some birds eat the seeds and use the fluff, cast away from the seeds, as nest liners. White-tailed deer eat the buds; some turkeys eat the seeds. The Texas thistles bloom from April to July.



Photo: Annette Banks



Photo: Annette Banks



Photo: Annette Banks

The wild morning glories (*Ipomoea cordatotriloba*) or the Purple Bindweeds are beginning to entwine themselves to the sunflowers now taking growth and to any other nearby plants. It resurfaces in March after the winter kill of the above ground parts. The flowers are pollinated by moths at night, and are very showy in early morning hours. Their vines latch onto to any close objects, other flowers, trees, light poles; and the plants soon cover much area. Judging by the common names of other wild morning glories, Hedge Bindweed, Great Bindweed, Larger Bindweed, Bell Bind, Rutland Beauty, Lady's Nightcap, Pisspot, Devil's Vine, and Hellweed, it seems justified to assume that many people find them invasive and obnoxious.



Blue Curls

The blue curls (*Phacelia congesta*) have claimed their places on the trails in their preferred rocky areas along the river; they bloom from March through June. You may hear them referred to as caterpillars or fiddlenecks. The coiled regemes, resembling the underside of an octopus tentacle, uncurl into 1/4 inch dainty bluish-purple flowers that are cupped, with five yellow-tipped conspicuously protruding stamens that give a look of whiskers. Only a couple of flowers open at one time: they open progressively from the base to the terminal tip. Blue curls are sticky, hairy plants that are composed of an erect, brittle stem with alternate leaves that are irregularly toothed and lobed. They are considered perfect plants since they have both stamen and pistils. Blue curls are a member of the waterleaf family.

The greatest surprise of all the finds was the American germander (*Teucrium canadense*) This lavender member of the mint family (Lamiaceae) reaches about three feet tall, but the ones on our trails are about half this size right now. The

central stem has four distinct ridges with smaller side stems on the plant's upper half; its leaves are opposite, ovate, and serrated; and the root system is rhizomatous. Atop each stem are blossoms of numerous complex purple flowers in spiked racemes. The American germander is identifiable from other members of its family by the long lower lip and reduced size of the upper lip. They usually flower for about six weeks in mid to late summer. Since they do not withstand drought, we may see a shorter blossoming here. A wide assortment of bees, butterflies, hummingbirds, and hummingbird moths visit for the nectar. Because of the bitterness of the leaves, mammals seem to ignore them. Note: This plant does not appear in most references for wildflowers within our area. Thanks to my friend and naturalist, Nancy Ohlenbusch, I now recognize this lovely wildflower.

Hit the trails soon..get to know fellow strollers, eavesdrop on power-walking buddies, yield to the bicyclists, and admire the jogging moms and their precious cargo. Life is beautiful..live it..love it!



Master Gardeners Talk

Speakers at Hutto Farmers Market

Patsy Bredahl

Master Gardening is all about volunteering and teaching. It is great when we, as Master Gardeners, can form a symbiotic relationship with other organizations within our communities.

In January of this year, I became a member of The Keep Hutto Beautiful (KHB) Commission. One of the KHB main projects at this time is organizing the Farmers Market. At one of our meetings we discussed how nice it would be to have a speaker each Saturday at the market. I volunteered to help contact speakers. After all, I know lots of good speakers! Master Gardeners love to talk!

Wayne Rhoden was well recieved on May 16 by KHB as well as the visitors at the market when he spoke on Vegetable Gardening.

On June 6, Ed Myatt will speak on Worm Composting . When I told the Commission about that, they were really excited. On June 13, Christine Powell will speak on Native Plants: Attracting Birds and Butterflies to Your Garden.

Other speakers from the community are scheduled for the remaining Saturdays.

The Hutto Farmers Market will continue through June. In the Fall we will start it back again for a couple of months. So Fellow Master Gardeners, let me know if you have a topic that you would like to speak about. Paul Lawrence, I already have you down for Rain Water Harvesting!

If you are free on a Saturday morning from 9:00 - 12:00 you are welcome to come check out the Hutto Farmers Market at HWY 79 and Short St. at the site of the old cotton gins. The speakers start at 10:00 AM. It's also a good chance to buy fresh vegetables, peaches, honey, free range eggs, etc. Lots of fresh, local produce!

Who are these people?



They are your WCMG Board at work and they need your help. Join a committee or offer to help them with one of their many projects— they'll love you for it!

Master Gardener Basics

Back to the Basics

Winola VanArtsdalen

The Back to the Basics series continues this month with the story of building my disappearing fountain. This was such a fun experience with lasting rewards that I hope you will be encouraged to build one yourself.

BUILDING MY DISAPPEARING FOUNTAIN

Have you ever wanted badly to do something for years and years until you finally were almost ready to give up? Well, that's the situation with me and my disappearing fountain. While a little girl growing up on a farm in Southeastern Kansas, I loved watching my grandfather working in his blacksmith shop. When he worked with the huge grindstone sharpening tools and repairing equipment, I was mesmerized watching the grindstone turning around and around. From the first time I saw a disappearing fountain, I knew I wanted to make one using old grindstones.

About fifteen years ago, my sister found three old grindstones in a Kansas antique store where such things are more affordable than here in the Hill Country. I was ecstatic! We dragged them home, parked them behind the garage in Clear Lake, but never quite figured it out or found the right spot. Then we moved and dragged them with us, storing them behind the barn in Brenham. By this time, we had some leftover slate and river stones from a couple of other projects, so, of course, we carried those along with us, too. Then we moved and dragged all this with us again, this time finding an out-of-sight spot in the woods in Liberty Hill. Finally, this last move, to Georgetown, I put my foot down and insisted, "There WILL be a disappearing fountain with those grindstones in this backyard!"

It only took five years of planning after we moved here, but, finally, we converted an area of grass across the back of the yard for a large flower bed with the focal point to be my fountain! Now, let me give you a most important warning. Be sure that early in the planning stages you get a bid on the cost of wiring installation. In our case, the electrical installation was the most expensive part of the project. If you learn this bad news early in the game, you may choose to change the location which could save a large part of the expense. I was determined to see the fountain centered with the living room window, and that was an expensive lack of compromise!

For some strange reason that defies explanation, I like to dig and insisted on doing the digging myself. Now, a 3 x 3 ft. diamond shape, 14" deep hole may not sound very big, but when you start digging, it becomes monstrous! Almost every morning of the summer, I got my tools ready the night before and went out to dig when it was barely light. Because I was concerned about possibly damaging the roots of my neighbor's tree, every morning after digging I wet down the area. I then covered the hole with plywood, so the deer would not fall in overnight. When I thought the hole was huge, I got out my pattern for the area needed and put it on top the hole. I was not a fourth of the way there. What a shock! To make matters worse, it was at this point that my husband reminded me the hole needed to be a few inches wider



The roots of an old elm tree halted progress.



Blocks in Pan



Pan Leveled

than the actual size of the pan for the fountain. This news was not welcome!

Rallying myself, I managed to keep digging and got within a foot of the last side when I ran into a problem I simply could not handle myself. All the digging was an enjoyable challenge, but when I came into the roots of an old elm tree, I had to call for help. Those roots were as hard as concrete! (We needed help to come that last day to help with the assembly anyway. Those grinding stones are HEAVY!) After those roots were cut away, we were ready to level the bottom, fill it with a couple of inches of builders' sand, and proceed with the assembly. Details for building your own disappearing fountain follow this writing. Incredibly, after all those years of careful planning and deliberation, it went together quickly and easily!

A matter to consider carefully when purchasing equipment is the size of the pump. We knew we wanted a quiet, relaxing sound gentle enough that it would not scare the birds away. We are so happy for choosing a 250 gph pump, as now the small birds play at the edge of the stones where the water is running off to the stone below. The larger birds actually get right into the plume of water at the top and take a vigorous shower. It is so much fun to watch them!

Yes, this project took a long time in the planning and a bit of work, but it delights both the wildlife and us. In the late afternoon



Completed Fountain

when the sun is shining and sparkling on it at a bit from the side is when it is most beautiful, but we enjoy it every moment of the day, every day of the year. I would encourage you to look for some rustic artifact or natural type of stone that speaks to you personally and make one yourself. If it takes some time to find that treasure, you will love it even more and be rewarded with hours and hours of pleasure.

More Technical Information for Building Your Own Disappearing Fountain

A disappearing fountain consists of:

- a pan buried in ground to hold the water,
- a grate covering the pan to support the fountain,
- a plastic screen to keep debris out of pan,
- an assortment of stones for covering the screen,
- an electric submersible pump,
- a structure for the water to run through and over,
- hoses, pipe and fittings to provide the water to the fountain top,
- a source of electrical power, 120 volts.

Most of the above items are available from a pond supplies store.

Planning and preparation:

Determining the details of the projection required considerable time. In our case, the beginning point was three old grindstones, 22 inches, 18 inches and 12 inches in diameter. These were to form the fountain structure. This led to a pan 3-foot square, actually a little less than recommended, as 10 inches of pan beyond the structure is recommended to avoid water splashing out.

The stones were to be separated 1–2 inches to provide falling water. The large stone was used on the bottom and was raised above the grate by an 18 inch diameter round concrete stepping stone used as a spacer. Thus the 22 inch grindstone overlapped the spacer by 2 inches. A 12 inch concrete stepping stone was used as a spacer between the 22 inch and 18 inch stones. Three 1 ¾ pieces of gray PVC pipe were used as spacers between the 22 inch and 12 inch

stones. This arrangement allowed for a short water fall and the spacers were not visible.

The fountain effect required the water to be pumped up the middle of the stones, returning to the pan by falling down over the stones. A piece of ½ inch PVC pipe was used for this purpose. The grindstones had center holes large enough to accommodate the PVC pipe. Holes were drilled in the spacer concrete blocks using masonry bits, beginning with a small size and increasing in size until the center hole was slightly larger than ½ inch.

Short pieces of hose along with pipe fittings, including a 45 degree elbow, were used to connect the pump to the ½ inch PVC pipe. The PVC pipe was cut to length so that the end of the pipe was flush with the top grindstone.

Construction and assembly:

An area large enough for the pan must be located. Excavation of the soil slightly larger than the pan is required for final adjustment. The depth of the hole must be a little deeper than the 12 inch pan, because a layer of sand is used for final leveling of the pan. With the pan in place, concrete building blocks must be placed in the pan to support the center of the grate. The pan edges are offset to support the grate at that point. One corner of the grate should be cut so that it can be removed for ease in servicing the pump. The grate must be orientated so that this corner is facing the source of electrical power. Then set the screen in place and cut a center hole for the vertical PVC pipe.

For this fountain, the grindstones were temporarily set in place to determine the exact length of the vertical PVC pipe. After cutting the pipe to length, the stones were set over the PVC pipe in proper order. At this point, plumber's putty was used to fill in around the hole in the top grindstone and the vertical PVC pipe. The final step was covering the visible grate area with small stones.

Electrical:

The pump comes with a fairly long electrical cord, but, in our case, it was not long enough to reach any existing outlets. An electrical outlet was installed in a short pedestal near the fountain.. Switches were installed such that the fountain can be conveniently operated from inside the house. This work was done by a licensed electrician.

“Bug” of the month

This month's bug of the month is the bed bug. There has been a resurgence of the insects lately particularly throughout parts of North America, Europe, and Australia and it has been all over the news and television. Bed bugs are increasingly becoming a problem within residences of all kinds, including homes, apartments, hotels, cruise ships, dormitories and shelters. This was a common problem in the early days of the twentieth century but better controls almost eliminated the bed bug in America.

Their color ranges from nearly white (just after molting) or a light tan to a deep brown or burnt orange. The host's blood may appear as a dark red or black mass within the bug's body. Because they never develop wings, bed bugs cannot fly. They feed on warm blooded animals including humans and rodents at night while you are sleeping and hide during the day in cracks and crevices, including your headboards, mattress seams, under pictures and baseboards of walls. Their bite causes swelling and itching. The skin lesion produced by the bite of a bed bug resembles those caused by many other kinds of blood feeding insects, such as mosquitoes and fleas. The offending insect, therefore, can rarely be identified by the appearance of the bites. A physician should be consulted to rule out other causes for the lesions and to offer treatment, as needed. They are most abundant in rooms where people sleep, and they generally hide nearest the bed or other furniture used for sleeping. Bed bugs are most active in the middle of the night, but when hungry, they will venture out during the day to seek a host. What should you do if you find bed bugs? Because several different kinds of insects resemble bed bugs, specimens should be carefully compared with good reference images to confirm their identity. Because bed bugs readily hide in small crevices, they may accompany (as stowaways) luggage, furniture, clothing, pillows, boxes, and other such objects when these are moved between apartments, homes and hotels. If any questions remain regarding the identity of your samples, then submit them to a competent entomologist for evaluation.

What can you do to manage bed bugs? Before considering treatment, collect specimens and confirm their identity. Managing bed bugs requires a multi-faceted approach that generally includes cleaning, room modifications, and insecticidal treatments to the residence. Thoroughly clean the infested rooms as well as others in the residence. Scrub infested surfaces with a stiff brush to dislodge eggs, and use a powerful vacuum to remove bed bugs from cracks and crevices. Dismantling bed frames will expose additional bug hiding sites. Remove drawers from desks and dressers and turn furniture over, if possible, to inspect and clean all hiding spots.



Mattresses and box springs can be permanently encased within special mattress bags. Once they are installed, inspect the bags to ensure they are undamaged; if any holes or tears are found, seal these completely with permanent tape. Any bugs trapped within these sealed bags will eventually die. To prevent bed bugs from crawling onto a bed, pull the bed frame away from the wall, tuck sheets and blankets so they won't contact the floor, and place the frame legs into dishes or cups of mineral oil. Caulk and seal all holes where pipes and wires penetrate walls and floor, and fill cracks around baseboards and cove moldings to further reduce harborages.

Wayne Rhoden
Entomologist Specialist

Master Gardener Field Trip

Prairie Magic
Christine Powell

As the armored gate closed behind us, our group of native plant enthusiasts knew that we had truly arrived at Prairie Chapel Ranch, the home of President and Mrs. George W. Bush near Crawford, Texas. We were there on a Saturday morning this April to tour the prairie restoration project sponsored by the former First Lady. The group included not only members of the Native Prairie Association of Texas and the Native Plant Society of Texas, but also a number of ranchers who were exploring the possibility of similar projects on their properties. When the Bush family bought the ranch, much of it was covered with non-native grazing crops such as bermuda and rye, with a fair mixture of invasive plants such as King Ranch bluestem (which, despite the name, is a noxious exotic weed rather than useful forage). Mrs. Bush wanted to restore a significant proportion of the ranch to the condition that it had enjoyed before white settlement of the area in the mid-nineteenth century. As she has written, “Native plant conservation is a great pastime for anyone who loves outdoor work, and it offers many environmental benefits. Native grasses are better for the soil, and they use less water than their non-native cousins. Wild prairies can include more than 100 types of grasses



President Bush takes a walk among wild flowers at his Prairie Chapel Ranch in Crawford, Texas, May 23, 2003 (Permission PD-USGOV-POTUS)

and forbs—and diverse prairies attract a more diverse array of wildlife” (from her article available at <http://www.foxnews.com/story/0,2933,325568,00.html>). Fortunately, there was a nearby prairie remnant that could serve as an example and source of native seeds. This was sheer luck, as less than 1% of the tallgrass prairie that covered much of Texas two centuries ago still remains. Because Crawford was located on a major branch of the Chisholm Trail, fairly substantial stretches of the native prairie were left as pasture for the passing herds

rather than being converted to farmland. By the time trail drives had been replaced by railroad trains as a means to ship cattle to market, cotton farming had already destroyed the thin native soil over most of Central Texas, but the economics of agriculture had fortunately changed sufficiently to prevent the loss of some of the remaining prairie. One such remnant is located only a few miles from Prairie Chapel Ranch. Mike Williams, the owner of Simpson Prairie (also on our tour that Saturday, below), had placed his land under a conservation easement to



Simpson Prairie

A Tallgrass Prairie remnant of the Grand Prairie / Lampasas Cut Plains

Tallgrass prairie once covered millions of acres of Texas, but less than 1% of the endangered tallgrass prairie experienced by early Texans now remains.

Protected in perpetuity for future generations by
Mike & Marliiss Williams

Via a conservation easement held by the
Native Prairies Association of Texas

<http://www.texasprairie.org/>

preserve the prairie in perpetuity and had received considerable attention from the Native Prairie Association and others for his efforts in preserving and restoring the land to its native condition. The First Lady solicited his aid for her nearby prairie restoration (he was also our tour guide).

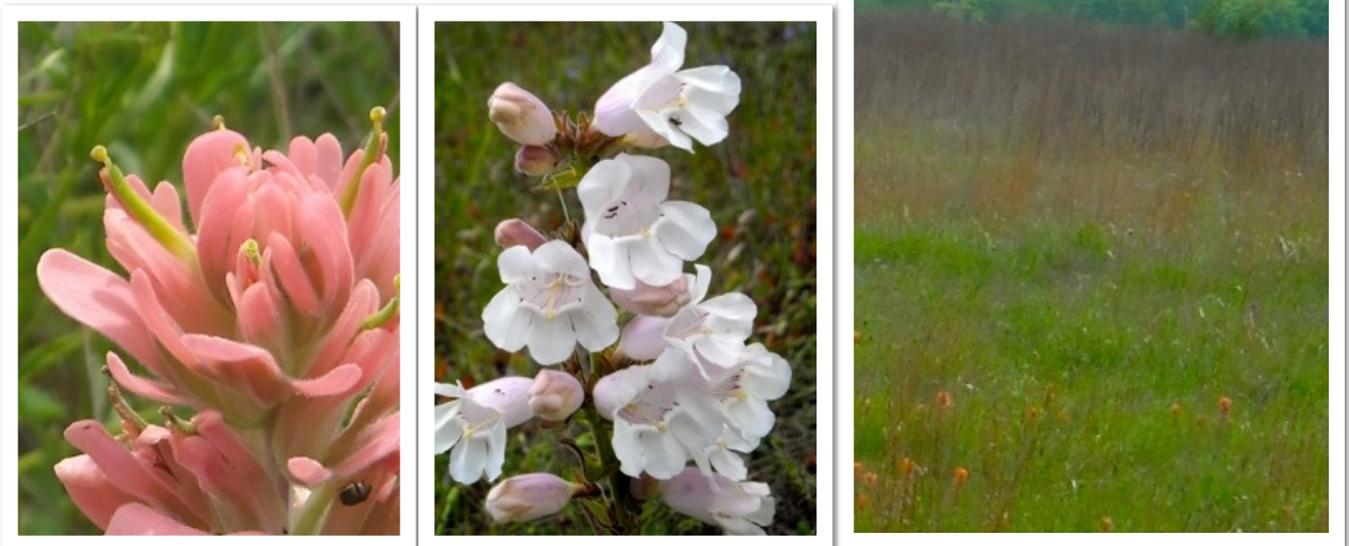
The first step was to plow under the non-native grasses on forty acres of the Bush ranch. When the vegetation reemerged after each rain, it was plowed under again. This was repeated for over two years until the land was finally clear enough to replant. Mike used hay from his own prairie and from the Burselson Prairie near Temple as well as other seed sources to cover the land with a reasonably diverse mix of grasses, wildflowers, forbs, and other prairie plants. As the “crop” came up, Mike and his wife literally went over the entire forty acres on their hands and knees examining each plant and removing the exotics by hand or with spot applications of herbicide. It took until the fifth year before the restored prairie looked fully natural, but it is now essentially self-sustaining. Another forty acres is currently undergoing the same process. Of course, it is possible to make substantial progress in promoting native plant environments more quickly and without going to these lengths, but the President and First

Lady wanted their restoration to be as authentic as possible. Even the lawn immediately surrounding the house is low-maintenance native buffalograss, rather than one of the more usual turf grasses. Native grasslands protect water quality and supply by allowing rainfall to soak in rather than run off. Tallgrass prairie plantings are a better source of biofuel than corn while simultaneously sequestering more carbon in the soil to fight climate change than is released by their use as fuel. Nevertheless, tallgrass prairie is the most threatened large ecosystem in our country, with up to 99% of it gone in many regions. Conservation and restoration of these prairies is an important method to protect and increase habitat for the imperiled native plant communities and prairie wildlife like grassland birds, which are the most endangered group in North America. The Bush prairie restoration and associated projects—such as the restoration of wetlands near the small lake where Jenna Bush was married—have quite significantly increased diversity of wildlife on the property, including game animals. This has substantially improved its value for enjoyable human use, as well. Often, the promotion of native plants and the conservation of the native environment are seen as liberal do-gooder causes. How-

ever, “conservation” and “conservative” are related concepts. The prairie restoration at the Bush ranch shows that preserving America to look like America and Texas to look like Texas is a bipartisan issue. The article by Mrs. Bush cited above lists some of the resources available to landowners who wish to move in that direction. (It also has links to video of the project; those of us on the field trip were forbidden from bringing cameras by the Secret Service or I could show you some lovely views.) I will let her have the last word:

“Now, our prairie includes sidecoats grama (the state grass of Texas), indian grass, switchgrass, buffalo grass, and native wildflowers. The main prairie grass of Central Texas, little bluestem, ripples across our land in the wind. Our native grasses serve as habitats for ground-nesting birds, and recently we heard the first call of bobwhite quail on our property since we’ve owned it. Last August, migrating Monarch butterflies stopped to rest in our wildflowers en route to Mexico. ... Whether you live in wide-open prairie or the inner city, practicing native plant conservation is a great way to get exercise, invest in your property, and protect our natural environment. Good luck, and happy planting!”

The perennial indian paintbrush were numerous and of many varying shades of pink while the penstemon cobaea, or wild foxglove were splendid on both properties and even along the roadsides. The vistas in every direction were incredible but impossible to capture in a photograph!



JMG Project at Cactus Ranch Elementary School in Round Rock May 18, 2009

Juanita James

On May 18, 2009, Walter Hoke, Janet White, Kay Myatt, Patsy Bredahl and Juanita James went to Cactus Ranch Elementary School in Round Rock with Brigid Mejia to show approximately 200 first graders how to make the 'Plant People' and 'Know and Show Sombers!'. It was a great day. Walter Hoke did a great job talking to the children about the 'Plant People' and the basic principles of planting a garden.



**It's fun
— come
and help!**



Old Settlers Park

May 7th, 8th and 9th, 2009

Juanita James

On May 7, 8 and 9 several Master Gardeners went to Old Settlers Park to explain the vegetables used by the Pioneers. The "Three Sisters Garden" planted by Patsy Bredahl, Wayne Rhoden and Juanita James at the park was also explained to the children. The Native Americans taught the Pioneers how to plant this garden, which consists of corn, beans and squash. Several stalks of corn are planted which serves as a pole for the beans. The beans help to add the nitrogen to the soil that the corn needs, and the squash provides a ground cover of shade that helps the soil retain moisture.

Master Gardeners helping explain Pioneer uses for vegetables were Jane Williamson, Jeanne Holmes, Sandra Pikoff, Patsy Bredahl, Juanita James, Wayne Rhoden and George Whiting. There were lots of children on field trips from Georgetown and Granger on Thursday and Friday. On Saturday we had adults with their children. Am including several pictures of the event. As you can see by the pictures some of us were



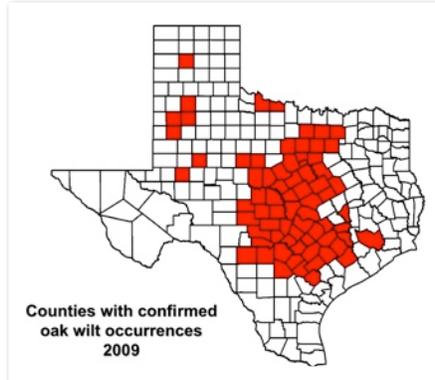
Master Gardener Specialist Training

Everything You Always Wanted to Know About Oak Wilt... But Were Afraid to Ask

Grace Bryce

Oak wilt is a growing concern across Texas. Currently 66 counties in Texas are affected. While central Texas has the heaviest concentration of cases, the disease has spread as far north as Amarillo. What might be your neighbor's problem today can certainly be the neighborhood's problem tomorrow. The first step in the battle against oak wilt, is education. As Master Gardeners, part of our job is to educate the public and increase awareness, so that early action or preventative measures can take place in a timely manner. Oak Wilt Specialist training is currently offered to Master Gardeners, Master Naturalists, and ISA Certified Arborists. As trained volunteers, Oak Wilt Specialists will be able to assist the Oak Wilt Suppression Project by reducing the time the Texas Forest Service now spends responding to inquiries from the general public and local property owners.

Fourteen Master Gardeners from WCMGA attended advanced oak wilt training on May 14. The full day of training was presented by Dr. David Appel from Texas A & M University, Jim Houser, Oak Wilt Coordinator with the Texas Forest Service and Rob Grotty, Staff Forester also with the Texas Forest Service. The event was hosted by Bob Whitney and the Williamson County AgriLIFE Extension Service and the Texas Forest Service. The presentations were outstanding and it really was everything you always wanted to know about oak wilt and



then some. In attendance were Grace Bulgerin, Christine Powell, Liz Grieder, JoAnne and Charles Dieterich, Lisa LaPaso, Winola and Jim Van Artsdalen, Kay Myatt, Wayne Rhoden, Jeanne Holmes, Walter Hoke, Kris Stanley, Jeanne Barker and Grace Bryce. Several people attending the training either have oak wilt on their property or in their neighborhoods.

Oak wilt is caused by the fungus *Ceratocystis fagacearum*, which invades the xylem of the vascular system in the outer growth ring of the tree. During the training class, Dr. Appel (below left) explained the biological differences between the live oaks, red oaks and white oaks. Differences in vascular pore sizes and the fact that live oaks are root sprouting are susceptibility factors. It became clear why red oaks die so quickly, why white oaks are not as affected and why oak wilt is so devastating to live oaks. Even healthy trees can get oak wilt; they do not have to be weak or sick to become infected.

Live oaks and red oaks are not as efficient at compartmentalizing infection, so the infection is fairly widespread before the tree begins a defense process. By producing a substance to block vascular pores, the tree plugs the xylem channels in an effort to contain the infection, the tree is then unable to transport water to the living tissue.

Red oaks have very large summerwood pores and the fungus works really fast to consume the tree because it can travel faster.

Red oaks rarely survive and usually die within three or four weeks of initial symptoms.

The live oaks are most affected, however, because their root systems are grafted to other live oaks and the fungus can travel through the root system. Most live oaks will drop their leaves and die over a three to twelve month period. Approximately 5 - 20% of infected live oaks survive, but many are severely damaged and do not completely recover.

White oaks, such as Post Oak or Burr Oak, have a different physiology including smaller vascular pores and can compartmentalize the fungus more easily, so they may get the oak wilt fungus, but the tree will not show symptoms or infect other trees and will easily recover.

According to Dr. Appel, there are different disease cycles affecting red oaks and live oaks. A wounded red oak can get the infection from a Nitidulid Beetle, also called a Sap Feeding Beetle, carrying the fungus from another red oak that has oak wilt. The red oak exhibits symptoms and dies. If the red oak is not disposed of promptly and properly, fungal mats can even form on the cut wood. The fruity smelling fungal mats attract the Nitidulid Beetles, which in turn carry the fungal spores to open wounds of red oaks and live oaks. Red oaks typically do not graft their roots to other trees, so they are less likely to spread oak wilt through their roots.

The live oaks, which can be infected by the Nitidulid Beetle, do not spread oak wilt in the same way. A beetle can not carry the fungus from one live oak to another live oak, only from an infected red oak fungal mat to a wounded live oak. Once a live oak is infected, the fungus will spread through the root system and along to other live oaks, which are connected by root grafts. Oak wilt will continue to spread through the roots to connected trees.

Oak wilt typically spreads around 100 feet per year. Jim Houser described the Texas Oak Wilt Suppression Project and the trenching process. Trenching can be done to sever the root systems of live oaks to stop the spread of the oak wilt fungus through interconnected roots. A 100 foot buffer of healthy, asymptomatic oaks between the infected tree and the trench helps to ensure that all infected roots are confined inside the trench. The trench is at least 4 feet deep and encircles the oak wilt center. The healthy trees within the trench can be injected with a macro-infusion of fungicide as a preventative measure. Trees that are greater distances (75ft to 150ft) from the infected trees will yield the best results for preventative treatment. Trees outside the trench should be left untreated, so if oak wilt travels into that area beyond the trench, it can be detected sooner. While there is no guarantee, the overall success rate is about 78%. There is a federal program that provides up to 40% of the cost in matching funds for trenching and removal of red oaks, with a maximum of \$2000 for individual homeowners and up to \$10,000 for a neighborhood or a group of landowners. The tree injections are less expensive than they used to be. The patent has run out on Alamo™ and propiconazole is now available in a generic form called Qualipro. There are no matching funds for the fungi-

cide treatment. The fungicide, through macro-infusion injection, travels up into the branches and leaves of the tree, but only travels about two feet below into the root system. Oak wilt passes through a mott of live oaks like a wave. Propiconazole injections can provide protection for trees for up to two years, but it doesn't stop the fungal transport to untreated trees.

Rob Grotty (below) from the Texas Forest Service explained how samples can be taken of the oak wilt fungus and analyzed by the lab to confirm an oak wilt infection. However, diagnosis is usually made by inspection of the site. A pattern of mortality in a group of trees, the pattern in individual trees, foliar symptoms, or the presence of a fungal mat on a red oak are all considered. There are several other diseases or problems that affect trees and can be confusing to the untrained eye. In most cases, it is a combination of pre-disposing factors, inciting factors and contributing factors that kill a tree.

Rob also spoke about precautions homeowners can take to help prevent or reduce the spread of oak wilt. Always paint fresh cuts or wounds on oak trees immediately. Any paint will do. Nitidulid Beetles have been known to show up within 15 minutes of the cut being made. Disinfect tree trimming tools between cuts for each tree with Lysol spray or 70% alcohol. (Bleach can be corrosive to metal.) Just because you hire a certified arborist doesn't mean they understand how important these precautions are or that they will actually do them (unless they are an Oak Wilt Specialist, too). As a homeowner, education and vigilance to ensure your trees are properly trimmed and painted could save your property values from the destruction of oak wilt.



Veinal necrosis pattern found on leaves of oak wilt infected live oaks.

If your red oak has died from an oak wilt infection, prompt removal of the tree is important. Fungal mats can form on the cut wood if it is allowed to sit. Either shred the tree on the spot, burn it or bury it. It can also be sealed in clear plastic for a year, but it's safer not to save it for firewood.

Live oaks can remain until they dry out and can be used for firewood. They can also be burned or shredded. Oak wilt cannot be spread by smoke from the burning wood. Chipping or shredding sufficiently dries out the wood to prevent spreading oak wilt.

The Texas Forest Service recommends planting trees that are not susceptible to oak wilt. Your landscape can be diversified by planting a variety of trees that are adapted to central Texas.

Talk to your friends and neighbors about oak wilt and become aware of the condition of the trees on your property. Master Gardener Oak Wilt Specialists would love to come speak to homeowner associations about oak wilt and even take a look at your trees. For more information about oak wilt and tree health, visit these websites:

- <http://www.texasoakwilt.org>
- <http://texasreplanting.tamu.edu>
- <http://txforestservice.tamu.edu>
- <http://texasreacid.tamu.edu/>
- <http://www.texasinvasives.org/>
- <http://www.treesaregood.com/>



Continued on the next page

Oak Wilt in the Field Training

Participants of the training class concluded the day with visiting the home of JoAnne and Charles Dieterich to treat two trees infected with oak wilt. Macro-infusion injections of fungicide were demonstrated using one tank for a smaller tree and two tanks for a larger

tree. Using two tanks is more efficient and faster for trees with a diameter of 13 inches or more. Master Gardeners attending the training will also need 15 hours of oak wilt public outreach to become Oak Wilt Specialists.



Dr. Appel points to a live oak with oak wilt at the Dieterich's house. Patterns in individual trees as well as a pattern of mortality in a stand of trees can help diagnose oak wilt.



Rob assembles tubing and T-connectors.

Dr. David Appel drills holes in the root flares while Rob Grotty and Bob Whitney insert T-connectors with tubing into the holes.



Jim Houser measures the diameter of an oak tree with a special measuring tape that converts the circumference of the tree into the diameter measurement. This information is needed to calculate the amount of propiconazole needed for dilution and injection into the tree.



Master Gardener Warning

Cocoa Mulch and Dogs—A Bad Combination**Christine Powell**

I recently received the following email: “Over the weekend the doting owner of two young lab mixes purchased Cocoa Mulch from Target to use in their garden. They loved the way it smelled and it was advertised to keep cats away from their garden. Their dog Calypso decided that the mulch smelled good enough to eat and devoured a large helping. She vomited a few times which was typical when she eats something new but wasn't acting lethargic in any way. The next day, Mom woke up and took Calypso out for her morning walk. Half way through the walk, she had a seizure and died instantly.”

Since I have two dogs as well, I was naturally concerned and decided to look into the issue, and the following is what I found. Much of the stimulating effect of chocolate on human beings is due to a chemical called theobromine, which is a methylxanthene closely related to caffeine.

Like caffeine, theobromine is a reasonably safe stimulant for people but can cause a wide range of symptoms in dogs and cats, ranging from stomach upset all the way up to lethal cardiac arrhythmia or convulsions. The darker the chocolate, the greater the toxicity. Milk chocolate is less dangerous than baking chocolate or cocoa powder.

Unfortunately, the theobromine and caffeine content in untreated cocoa bean shells can be even higher. A 50-pound dog could suffer gastrointestinal upset from as little as two ounces of mulch, while it would take up to 7.5 ounces of milk chocolate to get the same effect. Nine ounces of mulch would likely be fatal. Smaller dogs are affected even more

as a byproduct of chocolate and cocoa production, has stated that only about 2% of dogs will eat the mulch, but agrees that half of those animals may exhibit symptoms of theobromine overdose to some extent. The scattered reports of harm are mostly anecdotal, however. There is only one well-

documented case of a dog dying from eating cocoa mulch, but that is not to say that there may not be other cases (like Calypso) out there. The ASPCA takes the situation seriously enough to have issued a warning. There are several possible ways to avoid this problem. One, of course, is to use another type of mulch. Another is to use cocoa mulch only in areas where dogs do not have any access. There is an even more attractive alternative, however. Home Depot, among other vendors, sells mulch that has been through several cleaning processes to remove the cocoa oil that contains the methylxan-

thenes. This will obviously reduce the desirable odor (akin to a chocolate Pop Tart) of the untreated mulch, but seems like a reasonable tradeoff for safety. The risk of untreated cocoa mulch to dogs and cats is a potentially serious problem that gardeners, naturalists, and pet owners should all keep in mind.



Photo by Rose the Loop, LLC

quickly, of course. About one ounce of milk chocolate per pound of body weight can be lethal to either dogs or cats.

Some dogs love the smell and flavor of chocolate, so they may eat cocoa mulch if it is accessible to them. Puppies are at particular risk because they are both curious and light-weight. Hershey's, which sells the shells

**Making a Difference**

Through the course of the year it has been important for our group to share their experiences in the Benold Junior Master Gardener group. The students feel very strongly about the amazing experience they have had. It is our hope to inspire other students to join JMG and encourage adults to volunteer with a JMG program. Scarlett a sixth grader at Benold Middle School had this to say about her experience, “Junior Master Gardener is a great way for kids to socialize with people they didn't know before. They learn a lot about science and they have a good time. They make yummy food, plus it saves money to grow your own vegetables. I hope that kids will enjoy Junior Master Gardeners and have a great experience like I did.” It is the inspiring experiences like these that we hope more students can have. In the Fall when school begins there will be many opportunities to get involved with JMG groups, I encourage you to make the step and volunteer. It makes a huge difference to these students and helps to inspire future Master Gardeners. Take a second and make a difference today through a JMG program!

Sincerely, Scarlett & Mrs. Thornell

A Master Gardener Explores

Earth Day Walk in the Woods

Grace Bryce & Michael Bryce

I could send you pictures of dishes and laundry, but those wouldn't be the best Earth Day photos. Michael and I took a walk in the woods and found cacti in bloom. We also found *Euphoria kernii*. It is also known as the common flower beetle. The adults are known to feed on the nectar and pollen of Pricklypoppy, *Argemone* spp., Papaveraceae; Pricklypear, *Opuntia* spp., Cactaceae; Thistle, *Cirsium* spp., Asteraceae; and *Yucca*, *Yucca* spp., Liliaceae. We also found a great entomology website: <http://www.texasento.net/index.html>



Some of our other finds in the woods included:



Asclepias asperula (Dene)
Woods Spider milkweed



Sedum multiflorum Ray
Yellow stonecrop



Tradescantia bracteata
Spiderwort family

Michael's Joke:
Why did the firefly skip a grade?

Because he was really bright!

Master Gardener Favorites

Favorite Websites

Christine Powell

Well, Grace and Michael found one of my favorite sites all by themselves! I am not going to show you an image this time as, well, how should I put it—it's not really a beautiful site until you get into the images of the insects. It is a utilitarian website meant to supply information without any frills. So, if you need to know about a "bug" this is the place to go:

<http://www.texasento.net/index.html>

OK, I've done two sites, Grace and Michael have done one so now it is your turn. I have lots of favorite gardening and associated websites bookmarked on my computer but now it is time for you to send me yours. If you have a great site you know about or one you have just stumbled across then let me know. Ed.

Meet Your Master Gardeners

Annette Banks

Each month we will spotlight one of the the Master Gardeners in our group. Getting to know each other is something that we don't really seem to have time to do, so hopefully, this will be a way to make some more "connections" with the people in our group.

Sandra Rosen

You might be surprised to know what an adventurous life this quiet, reserved, and lovely lady has had. Annette's husband, Bill, worked in the international division of EDS, and as a result, they lived three years abroad and were able to spend time in surrounding European countries. They have traveled extensively outside Europe into Singapore, Greece, and British areas, and Barbados. Annette contrasts the primitive Kuala Lumpur, Malaysia, with the metropolitan city that it is today. On their 1980 visit there, the unpaved streets were dirty, full of noisy vendors, and reeked with pungent odors of spices and hanging meats. Their two trips to Athens, Greece, are etched memories. The first one was during the bombings of Serbia. After the plane detoured around the bombings, they finally arrived at their hotel to find it was surrounded by angry anti-American protestors. The second time they visited Athens, an earthquake hit just as they were claiming their baggage. As they entered the city, almost everyone else was trying frantically to get out. The hotel was filled with debris and was experiencing strong aftershocks. The ancient Plaka was dark, quiet, and damaged.

However, her three years living in Paris were delightful. Annette is an avid art fan and very much enjoyed the Paris art scene. She especially loved the French gardens, spending many hours in the Bagatelle and Luxembourg Gardens. She finds Paris wonderful at every season,

but particularly charming and breathtaking at Christmas. During her time in Paris, her two daughters were in college (Baylor) in the states. They have also lived in some more mundane places such as Fort Worth, Jackson, Dallas, Oklahoma City, and Little Rock.

Annette grew up in northern Louisiana and Mississippi. She developed her love of gardening from watching her mother garden, her grandparents' farming, and her overall love for outdoor activities. Annette holds bachelor and master's degrees in elementary education. In addition to teaching, she has worked as a realtor.

Annette and Bill decided to settle in Georgetown because of its offerings, the humanitarian spirit of its citizens, and the proximity of their two daughters and three grand children. In addition, Annette reads, writes — poetry and articles — cooks, arranges flowers, gardens and enjoys exercising. She is part of a small art group, she volunteers, and uses her organizational skills to help an old high school group "keep up." She also writes for our Master Gardener newsletter. "Along the Trails" and "A Master Gardener Explains" clearly show her talent for writing and her love of

nature and the outdoors. In a recent article, she shared the lovely thought, "The trails are alive with the sight of blossoms." We appreciate the talented, sweet, and spunky Annette Banks!



Award Received

Wayne Rhoden picks up the Award for the Williamson County Master Gardener Journal at the recent Master Gardener Annual Conference in Marshall, Texas,



Treats from the Master Garden

Sweet Potatoes

Margaret Seals

Grown in the southern states of the USA since the 1600s, sweet potatoes star every year on that elite list of Thanksgiving traditions. But they are not natives to this country, and in fact arrived with Christopher Columbus from the island of St. Thomas. According to Peggy T. Filippone, a food historian for About.com, the sweet potato (a member of the Morning Glory Family, *Ipomoea batatas*) dates back to 750 B.C. in records found in Peru. Often confused with yams, which are a different botanical plant, *Dioscorea batatas*, the sweet potato is paler-skinned and has a pale yellow flesh which is not sweet and has a dry crumbly texture. Doug Welsh, in his *Texas Garden Almanac*, lists two varieties, Beauregard (developed at LSU, 120–140 days to maturity) and Lucullus (similar maturity date), as the best adapted for Central Texas growing. Other varieties listed in numerous sources for Central Texas are Centennial and Jewel, each with 120–140 day maturity dates. Sweet potatoes are a warm weather, root crop usually grown from slips that can be planted two to eight weeks after the last freeze date in our climate zone. Planting in Williamson County normally lasts from April 1 to around June 15.

According to *The Gardeners A-Z Guide to Growing Organic*, you can make your own slips with a sweet potato cut in half lengthwise. "Lay the cut side down in a shallow pan of wetted peat moss or sand. Cover tightly with plastic wrap until sprouts appear, then unwrap. The slip is ready when it has four or five leaves, is 4 to 8 inches tall, and has roots." Sweet potatoes are slow growing, taking about 120–140 days to maturity. Weather conditions of about 98 degrees in the daytime with about a half inch of water per week should produce an abundant crop. Watering is not recommended for the last few weeks before harvest to prevent crop damage. Dig 2–4 inch deep furrows for planting and add rich, organic compost to the furrows. Mound the compost up to 10–12 inches in ridges above the ground to optimize the tuber size and the quality of your crop. Plant the slips in the middle of the compost ridges. Be sure to give them plenty of room to grow in your garden, planting no closer than twelve inches apart with sixteen inches an ideal distance between slips. Weeding is necessary until the vines cover the ground above the ridges. The enemy of the sweet potato is the nematode, but weevils and pill bugs can take a toll on them as well. Some old-timers swear that planting radishes and summer savory nearby helps the crop stay pest free. The radishes might be a "trap crop" to lure the bugs away from the sweet potatoes! Sweet potatoes can be stored in a dry, dark, cool place for up to a month, but they don't do well stored in a refrigerator. If they develop a bad spot, it is best to toss out the whole sweet potato since any damage spoils the whole tuber.

The chart below found on the *Whole Foods Grocery* website lists the nutritional benefits from sweet potatoes. Other information on the site states, "Sweet potatoes are relatively low in calories and have no fat. They are rich in beta-carotene, having five times the recommended daily allowance of Vitamin A in one sweet potato, as well as loaded with potassium. These nutrients help to protect against heart attack and stroke. The potassium helps maintain fluid and electrolyte balance in the body cells, as well as normal heart function and blood pressure." So eat up, they are good for you!

Sweet potato, baked, with skin 1.00 each, 77.00 grams, 95.39 calories				
Nutrient Amount	DV %	Nutrient	Density	Worlds Healthiest Food Rating
vitamin A	13107.70 IU	262.2	49.5	excellent
vitamin C	17.06 mg	28.4	5.4	very good
manganese	0.52 mg	26	4.9	very good
copper	0.26 mg	13	2.5	good
dietary fiber	3.14 g	12.6	2.4	good
vitamin B6 (pyridoxine)	0.25 mg	12.5	2.4	good
potassium	306.05 mg	8.7	1.7	good
iron	1.46 mg	8.1	1.5	good



Of course, the best thing about sweet potatoes is their taste! Sweetened or spicy, hot or cold, they deliver a nice flavor. Here are a few "different" recipes for you to try:

"Tipsy" Sweet Potatoes

From *Jack Daniel's Spirit of Tennessee Cookbook* (Rutledge Hill Press), for About.com. Whiskey makes mashed sweet potatoes a bit tipsy. They are sweetened with brown sugar and topped with pecans and/or marshmallows. Although much of the alcohol in the whiskey will burn off, the rich flavor will remain. This is a nice change from traditional sweet potatoes.

Prep Time: 10 minutes

Cook Time: 20 minutes

Ingredients:

2-1/2 cups cooked, mashed sweet potatoes
4 Tablespoons butter, softened
1/2 cup firmly packed light brown sugar
Pinch of salt
1/3 cup Jack Daniel's Whiskey
Pecan halves or marshmallow for topping
Preheat oven to 325 degrees F.

Combine sweet potatoes, butter, brown sugar, salt, and whiskey. Spoon into a greased 1-quart casserole. Top with pecans halves or marshmallows for topping. Bake for 20 to 25 minutes until bubbly. (I have also used the same ingredients as above except substituting 1/3 C of Grand Marnier for the Jack Daniels. Both are good!)

Grilled Sweet Potatoes

(Started in the microwave!) From an old (stained from use!) newspaper clipping, probably *Houston Post*, cir 1975

Ingredients:

2 pounds sweet potatoes, peeled and sliced 1/2 inch thick or cubed if planning to use a skewer
1 C water
1/2 C Dijon or Honey Dijon Mustard
2 T olive oil
1 T chopped fresh Rosemary
If using a skewer, large pineapple chunks, slices of red and green bell pepper and sweet onion

Place sweet potatoes and water into large microwave-safe dish; cover. Microwave on High for 6 minutes or until potatoes are crisp-tender, turning once. (If necessary, you might have to cook the sweet potatoes in two batches.) Drain them well.

Combine mustard (I like the Honey Dijon Mustard version better, but suit yourself), olive oil and rosemary. Grill sweet potato slices on an oiled rack over med high heat for 5 min or until fork tender, turning and basting often with mustard mixture.

I have used this recipe and put the sweet potato cubes between some large canned pineapple chunks, red and green bell pepper and onion slices on a skewer. This makes a great side dish for grilled pork chops or chicken.

Sweet Potato Salad

From *Taste of the South Magazine*, 2006

Ingredients:

5 pounds sweet potatoes
1 Granny Smith Apple, chopped
1 C chopped celery
1 C chopped pecans
3/4 C raisins
1 C sour cream
1/4 C orange juice
2 T lightly packed brown sugar
1 T lemon juice
1/2 t ground cinnamon
1/2 t salt
1/4 t ground ginger

In a large saucepan, cook sweet potatoes in boiling water for 20-30 minutes or until tender. Drain and cool, then peel and cut into cubes. In a large bowl, combine sweet potato cubes, chopped apple, celery, pecans and raisins, tossing gently. In a small bowl, combine sour cream and remaining ingredients, tossing gently to coat. Cover and chill before serving.

Sweet Potato Wedges

From *Vegetarian Times*, Nov/Dec 2004

Ingredients:

3 1/2 pounds sweet potatoes
3 T olive oil
1 1/2 t. chili powder (or to taste)
1/4 t. cumin
1 1/2 t low-sodium soy sauce or Tamari sauce (aged soy sauce)
salt to taste
1 heaping T chopped fresh Rosemary

Preheat oven to 450 degrees. Line two shallow roasting pans or rimmed baking sheets with aluminum foil. Halve potatoes crosswise, then lengthwise, and cut each half into 4 wedges. Mix oil, and other ingredients (except Rosemary) in a bowl. Drizzle over potatoes and toss to coat. Arrange skin side down in one layer in baking pans. Sprinkle with salt. Roast 12 minutes. Turn wedges and roast until tender, 8-12 min or more. Toss in chopped Rosemary before serving.

President's Column

All Change Wayne Rhoden



Hello Master Gardeners!

Has this been a strange spring or what? We get cloudy wet days and then have temperatures above 90 degrees for several days. What is a tomato to do? How about not setting any fruit. When giving presentations these days we get many questions about problems with tomatoes and they usually are caused by the weather. I am sure you are getting the same questions. When you look at why tomatoes do not set fruit or drop blossoms you can find that it is, too much or too little water, temperature too high or too low, humidity too high or too low, too much or too little nitrogen and stress from insect damage or disease. I think we have had all of the conditions except insect damage so far this year. However we all love tomatoes enough to continue to grow them.

This month we will be forming the Nominating Committee to elect officers for 2010. I will send out an email when the committee is formed to let you know who to contact if you wish to run for an elected office this fall. If you are a certified member, you are eligible to run. All officers will be elected this year so you can run for president, vice president, treasurer or secretary. We also will be changing our by-laws soon and you will get a copy to read and then be asked to vote on the changes. The vote will be at one of the next monthly programs and you will be given time to read them and decide for yourself if you wish to vote the changes permanently.

Try to stay cool this summer.

Happy gardening
Wayne

Submissions?

If you would like to contribute to the award winning *Williamson County Master Gardeners Journal* please send your articles, items, and photographs to Christine Powell at xtinepowell@verizon.net by the 25th of the month. Remember to include captions and attribution details. The Editor is grateful to all those who have submitted items in the past and would like to thank those who would like to send things in the future. Thank you!

Texas Master Gardener Vegetable Specialist Training

June 29-June 30th

Somervell County Expo Center, Glen Rose,

Texas Hosted by Somervell County Master Gardeners and AgriLife Extension Service Master Gardener

Vegetable Specialist Training will include training by experts on the subject of all phases of vegetable growing such as soil prep, garden location and set up, cultural practices, plant growing, vegetables A-Z, insects and disease control and handling and harvesting vegetables. This will be two full days of training and will include a workbook, lecture, books, informational files, 2 lunches, snacks, drinks and dinner the first night.

Transportation and lodging is on your own. Course will be limited to 50 participants.

[Registration Information](#)

Texas Master Gardener Vegetable Specialist Training

July 31 – August 1, 2009

Texas AgriLife Extension Office and the Fort Bend County Master Gardeners

1402 Band Road, Suite 100, Rosenberg, TX 77471

Master Gardener Vegetable Specialist Training will include training by experts on the subject of all phases of vegetable growing such as soil prep, garden location and set up, cultural practices, plant growing, vegetables A-Z, insects and disease control and handling and harvesting vegetables. Fort Bend County is hosting the first part of the program, the in class training July 31 – August 1, 2009. The second part of the training is the commitment to complete 30 hours of volunteer service coordinated through your County Agent.

Course will be limited to 50 participants. Registration opens to Master Gardeners in all counties on July 1. Application and fees must be received at the Fort Bend County Extension Office by Friday July 17, 2009. Late registrations are accepted if seats are still available. No refunds are given for cancellations after 5:00 pm July 17, 2009.

Lodging is not included in the application fee. However, a block of rooms has been reserved at the Holiday Inn Express and La Quinta Inn (contact information attached). These rooms are available on a first come first serve basis. Additionally, contact information for other closely located hotels is included. For more information contact the Fort Bend County Extension Office at 281/342-3034 or the Fort Bend County Master Gardeners at 281/341-7068



Master Gardener Specialist – Irrigation Efficiency Training

June 24 - 26, 2009

Tarrant County Texas AgriLife Extension Service Office

200 Taylor, Fort Worth, Texas 76102

The Master Gardener Specialist – Irrigation Efficiency training will cover hands-on practice for determining irrigation efficiency, setting controllers, soak and cycle method, minor irrigation repairs, system trouble shooting, catch-can test, converting spray heads to MP rotators, converting to drip irrigation and other water conservation practices.

Master Gardener Irrigation Efficiency Specialists will volunteer 12 hours above their current volunteer obligation, train Master Gardeners in their county, present the information to at least 3 other groups and do a catch can demonstration for Master Gardeners, a garden club, neighborhood association or civic organization.

Only 15 participant spots are available for this training. Registration is on a first come/first serve basis. Submit your [registration forms](#) as soon as possible. Payment and forms must be in our office by June 18, 2009 and no refunds will be given after this date. Registration fee of \$200.00 per person that includes: - Irrigation Efficiency Master Gardener Specialist Manual - Power Points, evaluations, and report form for public presentations - Three lunches (Wednesday, Thursday and Friday) - Snacks and drinks will also be provided each day Demonstration box has over \$200.00 of equipment. This demonstration box may be purchased by the county Master Gardener Association to keep at the county office or by the individual Master Gardener. We want to make this offer to keep down the cost. Participants will need to provide their own travel and [hotel arrangements](#). If you are looking to car pool or for a roommate, let us know. Dress appropriately for outdoor activities.

Future Irrigation Efficiency Trainings: Midland, Texas October 14 - 16, 2009 San Antonio TBA 2010 El Paso TBA 2010

Williamson County Master Gardener Association Officers for 2008

Officers:

Wayne Rhoden, President:	mgardener@suddenlink.net	(512) 869-8016
Juanita James, Vice-President	jjames20@sbcglobal.net	(512) 341-7116
Nancy Moore, Treasurer:	nancy3610@att.net	(512) 215-9697
Jeanne Barker, Secretary:	jubarker@yahoo.com	(512) 608-1296

Standing Committees/Chairpersons:

Programs/Education:	Paul Lawrence	pwlawrence@austin.rr.com	
Communications: (Newsletter, Website & Publicity)			
	Christine Powell	xtinepowell@verizon.net	(512) 863-8250
Membership/Volunteer Opportunities:			
	John Papich	texasjayp@yahoo.com	(512) 863-4098
Awards:	Margaret Seals	marjim@suddenlink.net	(512) 863-4127
Class Training/Facilitation:			
	John Papich	texasjayp@yahoo.com	(512) 863-4098
Jr. Master Gardener Coordinator:			
	Patsy Bredhal	pbredahl@austin.rr.com	(512) 217-0693
	Juanita James	jjames20@sbcglobal.net	(512) 341-7116
Fundraising:	Janell Crego	jgcrego@verizon.net	(512) 869-8997
Greenhouse Manager:	Duffy Banfield	villaparkcats@sbcglobal.net	

Ad Hoc Committees:

New Class:	John Papich	texasjayp@yahoo.com	(512) 863-4098
Newsletter Editor:	Christine Powell	xtinepowell@verizon.net	(512) 863-8250
Newsletter Layout:	Christine Powell	xtinepowell@verizon.net	(512) 863-8250
Webmaster:	Christine Powell	xtinepowell@verizon.net	(512) 863-8250

WCMG Website:

<http://grovesite.com/mg/wcmg>

Mailing address:

3151 Inner Loop Road, Suite A, Georgetown, TX 78626

Monthly Meetings

Williamson County Master Gardeners hold monthly meetings at the Williamson County Extension Office, 3151 SE Innerloop Road, Suite A, Georgetown on the second Monday of each month at 6:00pm. Master Gardeners and the public are welcome to attend.