

Williamson County Master Gardener Journal

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Pickett Elementary Butterfly Garden: A MG volunteer project

Duffy Banfield

I never knew about Pickett (Dell Pickett to be exact) Elementary, in Georgetown. I was not involved in the initial planning stages or, for that matter, volunteer efforts of the WCMGA. OK – enough said. I had been working at Berry Springs Park and Preserve and was out-of-touch on existing projects. So, when I saw the call for volunteers, I answered and it was a BIG turn in my efforts. Neil Cochran had been in touch with the principal of the school. The project had been postponed twice because of rain...yes rain.

OK.... picture these beds (I don't have pics, but if you close your eyes, you can imagine.... fill dirt as hard as concrete, big cracks in the dirt and the whole landscape is as hard as a rock. I helped Neil till these beds...I won't take but a little credit...the tiller just bounced around as if we were tilling concrete. He went the

next day to rent a commercial tiller that must have helped some.

Neil called me on Friday, June 27th, to ask me if I would go buy the plants. Well, I have never done this for a community project and feared that I might buy the "wrong" plants, but I think I did OK. I went to Hill Country Landscape (close to my home) and talked with the manager there. I also took my copy of "An introduction to Butterfly Watching" which listed plants that attract butterflies. I spent about two hours roaming through the gardens and finally filled up four Radio Flyer wagons with plants.....Bee Balm, Turk's Cap, Lady in Red Salvia, X flame Lantana, and four other assorted lantana, purple cone flower, greg's mist flower, flame acanthus, and or course, the famed woolly butterfly bush. I bought a total of forty-two plants that we planted in the two beds (see below and top of page 2).



W. Rhoden





N Cochran



W. Rhoden

We dug the holes – Wayne really put his heart into the digging...he was digging with what I call a pick-ax – and then we put some good soil in each hole. From there, we placed the plants, covered them with more good soil (Wayne had a truck bed of rose soil that he donated to the cause) and after planting the plants, we mulched (Neil went to Gardenville to get the mulch) and watered like crazy...Winola and Joy did a great job of mulching the first bed and we let them rest on the mulching of the second bed. Winola and Joy were the true examples of MG's...they had sweated and had mulch dust on their faces...they looked like raccoons!!

MG events are so much fun. Even if you can only come for a short while, every minute of your time is appreciated, and I promise you, enjoyed.

The Beautiful Flowerbed at the Greenhouse – GISD

Hello everyone...when we first took over the greenhouse at the GISD High School campus, there was a big bed on the right side of the greenhouse as you walked in. This bed was Mexican heather, nutgrass, and Bermuda.

OK – several MG's planted a “new life” garden here...all of the old stuff was taken out and we planted a great new flower garden. The amazing thing is that ALL of the plants in this bed are plants that we propagated in the

greenhouse – greg's mistflower, bat faced cuphea, shrimp plant, porter weed, lantana (yes...lantana) and it is just beautiful! We also planted peach salvia, hen's and chicks, Victoria blue sage and the list goes on and on. It is truly a beautiful bed (below). I can't name all the plants in this bed. When school starts again in August/September, won't it be eye-candy for students/teachers to see this once “pitiful” flowerbed turned into a flower wonderland?

Neil and I took the extra mulch that we had from the Pickett planting over to the greenhouse Saturday and mulched the bed and watered thoroughly. If you are in the area, please stop by and check it out. I know everyone is not interested in the same project, but it is encouraging that we try to find time for some sort of MG event.



Left, this image taken by Neil Cochran shows the green house garden before while Wayne Rodens image was taken after the green house garden had been planted.



Praying for rain, Duffy Banfield

Monthly Meetings—July 14th

Deb Martin, a master gardener from Bell county and one of our class specialists that talked about oak wilt will be our speaker for the July meeting. The topic she will be presenting is a program called "Spices around the World." **CAP**

Master Gardener New Class Volunteer Opportunities

The new MG class starts Aug. 19 and ends Nov. 18. and will be held from

1-5 PM at the extension center classroom. Most of the classes will be on Tuesday but there will be some classes on Monday or Wednesday. I would like to arrange a schedule for each class for members and interns to assist in the set-up and breakdown of the classroom, bringing the cooler and water, assisting in the kitchen with food and cleaning, and sign-in and homework check. You can sign up for any duty for any class at a time that works in your schedule. You need not stay for the entire class after your duty is complete but are welcome. This will be a good chance to earn vol-

unteer time and get to know the new class members and get education hours if you stay for the lecture. I know there is great feedback when there are experienced people present to mingle and share with students.

Anyone that can help would be greatly appreciated. I will get a schedule made but for now contact me if you can help. My e-mail address is texasjayp@yahoo.com. **JP**

Correction

I would like to apologize to Sam Myer and all of our readers for not including



Beautiful Display

Got a SuperStar in your yard ... a plant performing particularly well? Send a photo and caption so we can share your joy!

Red Firecracker is as dependable a perennial as it is showy, with lots of tubular shaped red/orange flowers. Hummingbirds love it! Firecracker also comes in a much harder to find, but lovely, pale yellow. **GK**

Yet Another Beautiful Display

On Memorial Day Rich Rosen of the Austin Daylily Society opened his personal backyard to the public. Here's a photo showing a portion of his seven hundred daylily cultivars. **GK**



Plant Conservation and the Millennium Seed Bank Project

Rare and endangered plants were the topic for the June 9 meeting of the Williamson County Master Gardeners. Flo Oxley (pictured right), Director of Plant Conservation for the Lady Bird Johnson Wildflower Center, told them that gardeners are the key to plant conservation. By good practices and by their support of sound public policy, they can mitigate harm and even help in the recovery of many endangered species. The first step is to recognize the nature of the problem.

Everyone can name at least half a dozen endangered animal species, but hardly anyone who isn't a botanical specialist can name a single endangered plant. In politics, money goes where public interest goes. Therefore, over 95% of the funding in America for the study, protection, and recovery of endangered species goes to animals. Gardeners, as people who love plants, should be aware that 75% of the identified endangered species are plants. On average, then, each endangered animal species gets about 57 times as many dollars as each endangered plant (and zoologists would argue that the funding for animals is already grossly inadequate).

Consider why the animals are endangered: in many cases, it is because of a lack

of food, shelter, and places to raise their young due to the loss of habitat. They rely for each of those critical needs on particular plant species. If the plants become scarce, it is almost impossible for the animals not to do likewise. That then has a chain-reaction effect among other plant and animal species that rely on the endangered animal for pollination, food, or some other critical need. The open niche when a plant or animal species disappears invites invasive species that drive other natives into trouble. If the chain reaction proceeds far enough, the whole ecosystem collapses and there is nothing left but weeds and cockroaches.

Saving the plants thus provides a crucial firebreak against ecological disaster, one that is even more fundamental than saving the animals. The public indifference to this issue, clearly expressed by the 57-to-1 funding ratio, flies in the face of those facts. Master Gardeners, as horticultural educators, can do as much as anyone to help the public to understand this. Ms. Oxley insisted that they need to educate themselves, not be afraid to ask ques-

CACTUS THEFT

Water has become a scarce and rationed commodity in many parts of America.

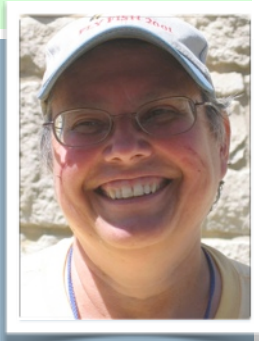
Xeriscapes and rock gardens with plants that can withstand an arid or semi-arid regime are among the most popular of the alternatives to water-hungry European or Northeastern plants. That has created a huge demand for rare cactus and other succulents, far exceeding the supply of plants available from legitimate channels.

Where there is an unmet demand, someone will try to fill it. In this case, it is Mexican smugglers who have added cactus as their third most popular product line, after drugs and guns. Illegal collectors have already driven some varieties to the brink of extinction, and almost a third of the 684 Mexican species are at risk. Their scarcity puts their entire ecosystem at risk.

The marketing can be quite sophisticated. In 2005, some 3,791 Web sites were offering 531 Mexican varieties. Texas species are equally at risk from poachers trying to satisfy the demand from states with more regulation. Rare cactus plants were recently dug up from a Williamson County park, for example.

Arizona has laws requiring legally harvested wild cactus to be labeled, so that purchasers will know that they aren't subsidizing a drug cartel. Similar bills have been proposed in Texas, the primary entry point as well as a major market, but have not yet passed. Researchers are exploring the use of DNA testing to distinguish legal from illegal plants.

In the meantime, the ethical burden is on purchasers to determine the origin of the cactus (or other rare plant) that they are buying. Don't be afraid to ask questions.



2,000 YEAR OLD SEED GERMINATES

Proving that seeds can remain viable for a very long time, researchers in Israel have succeeded in germinating a date palm seed found at the ancient fortress of Masada in the Judean Desert. Other seeds from the same cache have been radiocarbon dated to about the time of the Jewish Revolt in AD 69–73. This is thus the oldest tree seed that has ever sprouted. Modern Israeli date palms were imported from California, so this is the last survivor of the ancient forest that lined the Jordan Valley from the Sea of Galilee to the Dead Sea. DNA tests hope to identify differences between the ancient and modern varieties.

Researcher Elaine Soloway, working with the Louis L. Borick Natural Medicine Center at Hadassah Hospital in Jerusalem, planted three seeds collected by archaeologists thirty years ago. She soaked them in warm water, and then added gibberellic acid, a potent growth hormone used to induce germination in reluctant seeds. Next, she added a special rooting hormone for woody plants called T8 and an enzyme-rich fertilizer to supplement the natural food inside it. She then planted them in sterile potting soil and waited five weeks until a shoot came up.

tions, be vocal, set an example, and get involved.

There are currently about 300,000 known species of plant, with probably about as many more species that have not yet been identified by science (and may never be, if they disappear first). It is estimated that 29% of these, as many as 175,000 species, are currently at risk. Extinction is occurring at the rate of roughly one plant species per hour, twenty-four a day, or 8760 a year. If that rate were to continue unabated, we would run out of diversity well within our grandchildren's lifetimes. To put that in another perspective, this is a mass extinction on at least the same scale as the one that eliminated the dinosaurs.

Out of 20–30,000 plant species in North America, 730 are formally listed as rare, threatened, or endangered, but there are at least 6000 that are at risk. As the number of individual plants in these species spirals down and their ecosystems deteriorate, other species become at risk. Because of urbanization, overly intensive recreation, invasive species, and overcollection, Texas (along with California, Hawaii, and Tennessee) is a hotspot for endangered species. Of 5–6000 species

found in our state, many are at risk. Despite a moratorium on new listings that has lasted for a number of years, almost 230 Texas species have been formally declared to be endangered, threatened, or of concern.

Again, Texas gardeners can play a key role by being conscious to avoid development or overuse of critical habitat, by being careful not to disturb plants at risk that they find in the wild, and by refusing to buy scarce species from commercial nurseries unless the sellers can account for where they acquired them. Many of these plants cannot reproduce successfully except in very specific soil, climate, floral, and faunal conditions that are limited to their natural range and cannot be duplicated even in a major botanical garden. Do not think that you are doing your bit to preserve one of these plants by putting it in your home garden. In many cases, it is illegal to possess them without a state or federal permit. Home gardeners may be the last best hope for the preservation of some local endangered plants, but only with proper training and permits.

Ms. Oxley described the Millennium Seed Bank, a project spearheaded by the

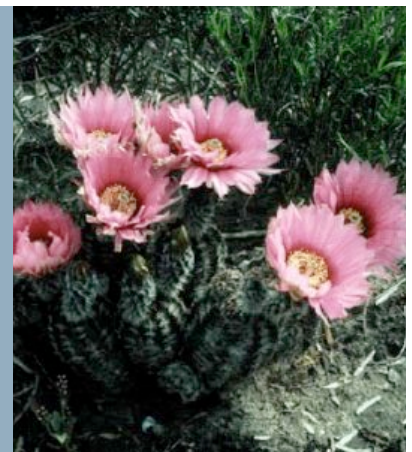
Royal Botanical Gardens in Kew, England. The idea is to collect and preserve seeds from as many plant species as possible in order to protect their genetic content from extinction. Seeds can remain viable for up to centuries if properly dried and frozen. The Lady Bird Johnson Wildflower Center has been one of the leading American participants in the program, collecting and cleaning many Texas and Southwestern species. The Wildflower Center then distributes the seeds between three secure seed banks in widely scattered locations to minimize the possibility of their destruction in a local disaster. Several Williamson County residents have participated in the "seed cleaning parties" that Ms. Oxley sponsors to help carry this work forward. If you are interested in participating, contact Christine Powell at 512-863-8250 or xtinepowell@verizon.net.

CACTUS THEFT NOT JUST ABOUT SAGUARO ANYMORE

One example of an endangered Texas plant is the black lace cactus (*Echinocereus reichenbachii* var. *albertii*). The outer spines, which look like comb teeth, are straight and white with dark purple tips. The plant is rather small, only 1–2 inches wide and 1–6 inches high. That makes the flowers, which are bright-colored and 1–2 inches across, seem all the more spectacular.

The black lace cactus has been on the Federal endangered species list since 1979. The variety only occurs in Kleberg, Jim Wells, and Refugio counties of south Texas, where it is found in grassy openings on rangeland invaded by mesquite and other shrubs. It is at risk because landowners have cleared much of the natural rangeland for grazing or crops, and because the large pink or purple flowers make it attractive to illegal collectors.

If you see one of these in a nursery, it was quite likely stolen. Ask questions!



Capital Area Invaders Workshop

The Capital Area Invaders gathered for an all-day training at the Lady Bird Johnson Wildflower Center on June 7. This local satellite of Invaders of Texas (itself a branch of the Invaders National Program) currently includes about twenty citizen scientists from a wide swath of Central Texas. Their mission is to collect reliable data on 137 significant invasive species, out of at least three times that number that infest our state. By gathering information on the location and prevalence of these species, the program is building a statewide Invasive Species Detection Database that organizations such as the Texas Parks and Wildlife Department and the United States Department of Agriculture (to say nothing of Congress and the Legislature) will use as a basis for action.

Damon Waitt and Joe Marcus, the Invaders Program Director and Program Manager from the Wildflower Center, provided the background. Invasive species—plants that are not native to a specific ecosystem and that are likely to cause economic or environmental harm or harm to human health—are destroying native habitat in wide areas of Texas. The damage includes alteration to fire regimes, excessive water consumption, toxicity to other species, changes in soil chemistry, erosion, and sedimentation. All this affects the faunal population by harming native animals and promoting non-native species that can live more easily with the non-native plants.

The problem is not restricted to Texas. To give just one example, the

National Park Service estimates that the national park system has over 2.6 million infested acres. That is a problem, since tourists do not go to a park in the United States expecting it to look like China, Japan, or the Argentine pampas. Everyone agrees there is a crisis, but there is no definitive knowledge on the distribution of these species. That's where the Invaders come in!

The Invaders National Program was developed by a consortium of botanical gardens, museums, zoos, and other stakeholders. Our state affiliate, Invaders of Texas, is sponsored by the Texas Invasive Plant and Pest Council, which has 96 participating agencies resolved to form a definitive list of invasives and coordinate a response. So far, there are over 320 Texas volunteers trained in 19 workshops. The 14 satellite groups around the state have made over 2500 observations of 95 different invasive species. The aim is to have "boots on the ground" making their own observations and training others who can be recruited into the program.

The actual training on June 7 began with a number of safety tips and advice on how to deal with landowners. Data can only be collected with the owner's consent. The bulk of the teaching involved the mechanics of gathering reliable, consistent data. Each observation requires filing out a data sheet that includes GPS coordinates (which can also be obtained from Google Maps), area photographs that place the site in context, and closeups that allow experts to

confirm the plant identification. Access to a digital camera and GPS unit is helpful but not necessary. While most Invaders have a digital camera, some prefer using film and have their photo processor transfer the images to disk. The Google Maps connection means that people without a GPS unit can still make accurate observations. The completed forms and photos are uploaded to the Invaders website for validation, after which the data is included in the state and national databases.

The final section of the training included instruction on some of the most significant invasive species, such as Yellow Star Thistle, Japanese Honey-suckle, Chinaberry, Nandina, Lagustrum, Kudzu, Bastard Cabbage, Brazilian Vervain, Chinese Tallow, Chaste Tree, various Asian privets, Hoarhound, and grasses such as Johnson Grass, Dallis Grass, Bahia Grass, King Ranch and Kleberg Bluestem, and Japanese Broom. The graduates then went out to execute their mission. Since their training, the Capital Area Invaders have already made forty-six observations. If you are interested in participating, please contact satellite leader Christine Powell at 512-863-8250 or xtinepowell@verizon.net. She hopes to organize group data collection events (which need not be limited to trained Invaders and may include as social element) as well as to support individual endeavors.

Green Master Gardening
Green Gardening
Christine Powell

One way to add beauty and benefits to your garden is to add a pond. This will attract beneficial insects and critters while providing an area of peace and tranquility. Not too sure just what having a pond entails? Then the Austin Pond Tour (<http://www.austinpondsociety.org/2008PondTour/>) on the 19th and 20th July 2008 is for you. Actually, it is for anyone who wants to see some incredible gardens with beautiful water features. Go get some ideas. This is green gardening at its best.

Master Gardener Finds Great Finds

Gaye Kriegel

OK all you equal opportunity shoppers, it's time to get off your beaten path and visit some new or new-to-you nurseries. After an enormous lapse of time, this month I made trips to Shoal Creek Nursery and Pots and Plants Nursery, both in Austin.

This adventure began when I wanted to plant a pot with variegated society garlic and variegated ajuga and couldn't find either on my regular rounds.

My call to Shoal Creek Nursery (2710 Hancock Drive, 512-458-5909) was met with a pleasant and informative response which should be a reminder to allstore owners that a phone call is an opportunity, not a nuisance. This nursery is but a few quick turns off the 45th Street exit of Mopac. How many hundreds of times I've driven past not remembering how close it was! I found the plants I'd come for and, of course, a few more including a pink indigo and an evergreen wisteria (to replace the ones I unsuccessfully tried to relocate in my yard), a white turk's cap, white cleome, and white foxglove (to add to my bed of all white flowers), a houttuynia chameleon (grown more for the green, yellow, and pink foliage than its tiny flowers), and a blue leadwort plumbago (to add to my blue daze and blue beard).

Then, in a quest to cross off a few more plants from my perpetual looking-for-list, and because it was on the way home from the seed cleaning party at the Wildflower Center, I headed to Pots and Plants (5902 Bee Caves Road at 360, 512-327-4564). Yes, this is the nursery you've seen with the hundreds of pink plastic flamingos out front. There I found starts of gregg dalea (tiny bluegreen foliage), Algerian ivy (with amazing marbling), a fuzzy wandering jew (so strange looking, yet perfect colors to add to the variegated garlic and ajuga pot), and a St. John's wort (covered in so many promising buds that I thought they might burst open on the way home.)

And, if you're wondering, they're nearly all planted. I have to leave something to do after returning from vacation.

Top: Variegated society garlic, fuzzy wandering jew, variegated ajuga.

Middle: White turk's cap, leadwort plumbago.

Bottom: Bouttuynia chameleon.



Images: Gaye Kriegel

Master Gardener Exotics
Blue Butterfly Bush:
Clerodendrum Ugandense
 Annette Banks

Probably the most delightful surprise of my garden last year was my first encounter with the blue butterfly bush. It was in bloom most of the summer and into early fall, even in the hottest of times.

The butterfly bush gets its name, not from the fact that butterflies may be attracted to it, but from the shape of the blooms. They are in the shape of dainty butterflies in two shades of blue. The genus name *clerodendrum* is derived from Greek and encompasses about four hundred species. *Dendron* meaning tree and *kleros* chance, a reference to the varied medicinal properties claimed for some of the members of the genus.

I had planted my small bush in full west sun and feared that the leaf texture and delicate blooms would not survive our Texas sun. It survived beautifully and thrived into a large stand-alone bush.

The three to five inch elliptical bright green leaves are opposite, egg shaped, and toothed. The flowers cluster at the end of long tender arching branches. Intricate flowers give the perception of butterflies in flight. Each one has four pale blue lobes and a bottom pedal of violet blue.



To keep the bush from appearing gangly, simply cut back the old wood to a pair of buds. The wood is tender and easy to prune; the pruning fosters improved flowering. It flowers on the current season's growth so the bush can be pruned at any time.

Propagation is effective from stem cuttings or from rooted suckers.

Since the plant is native to Kenya and Uganda in East Africa, I was skeptical about its survival of the winter months. I cut it back, mulched it, and it has grown into a lovely bush this year. What a delight.



A Master Gardener Remembers
The Life of a Novice Pecan Farmer
 Sandra Rosen

We bought ten beautiful acres out on a quiet country road—plenty of room for the horses we wanted and no close neighbors to complain about my son's German Shepherd. On the cleared portion of the land were fifteen beautiful, stately pecan trees—perfect for shading the yard and part of the pasture, perfect for building a tree house, perfect for swinging in a tire swing, and perfect for making pecan pies.

The land sloped down into a small pine forest with a creek that meandered through the woods. We bought the house in the springtime and enjoyed our first summer there. The kids played “kick the can” in the pasture and spent hours exploring the creek and watching the critters—and there were many. Wintertime brought rip-roaring fires in the fireplace (country people don't use gas logs), and tranquil days and evenings.

Finally, it was springtime again—the flowers were gorgeous, the grass was green, and the pecan trees were—well, the pecan trees were bare, no beautiful green leaves here. Had we bought this country place with the lovely pecan trees and now some horrible disease had crept in during the winter and killed them all? My first pecan lesson—the pecan trees are usually later

than most everything else to show their springtime finery. Soon, however, the trees were full of the soft green leaves. Spring is not really here until the pecan trees say so!

My next pecan lesson came several years later. We'd had great pecan crops. I cooked pecans in nearly every recipe. Even my kids were making suggestions, but pecan chili never made it to the table. I'd look out the kitchen window and see a neighbor or two with a bucket or sack collecting pecans. Sometimes I'd see a squirrel meticulously getting his lunch out of the shell.

After several years, however, the pecan crop seemed to fade. Finally, I went to our local feed store for help. Ah, the second pecan lesson—the trees needed to be fed and it wasn't cheap. At the time, I could hardly afford to feed my children, much less the trees, but, of course, we did, and they soon began to flourish and thrive.

The pecan trees still stand on the old place. I know because I always drive by when I go back. They are still beautiful and majestic, but welcoming enough for a tree house or a swing. I just hope someone is feeding them!

Name that Plant

What's in a Native-Plant Name?

Bill Ward

Lindheimer's senna, Engelmann daisy, Drummond phlox, Ashe juniper, Wright lip fern. Lots of native plants of this area are named after men. Who are these guys whose names will live in posterity, forever connected to the common and scientific names of certain species of Texas plants?

Most are men who had a prominent role in the history of botany in Texas. For brief discussions of these early botanists see the concise history of Texas botany in "Illustrated Flora of North Central Texas" by Diggs, Lipscomb, and O'Kennon. "The Handbook of Texas Online" is a quick reference for a few further details on early plant collectors in Texas.

The first person to make extensive plant collections in the area that became Texas was Jean Louis Berlandier, who was trained as a botanist in Geneva. When Berlandier was in his early twenties, his patron, the foremost Swiss botanist Augustin de Candolle, sent him to make botanical collections in Mexico. He arrived in Vera Cruz in 1826, and for the next three years he collected plant specimens from Mexico City to San Antonio, then in northern Mexico.

Berlandier also compiled notes on animal species and made ethnological studies on over forty North American tribes. In 1829 he settled in Matamoros, where he became a physician. During the Mexican War, he was in charge of hospitals in Matamoros. Berlandier continued to make collections of plants and animals in Texas and Mexico. He drowned in a river near Matamoros when he was in his mid forties. Berlandier is honored in the scientific names of several species of animals and plants. The genus *Berlandiera* (greeneyes) is named for this early botanist. The Hill Country species is *Berlandiera texana* (Texas greeneyes).

Thomas Drummond also studied plants in this area before there was a Republic of Texas. Drummond was born in Scotland about 1790. He followed his father and older brother James into horticulture and botany. In 1825 he was made assistant naturalist on Sir John Franklin's second expedition to Arctic America. Drummond was

Top: *Berlandiera betonicifolia*, Texas greeneyes.

Center: *Anemone berlandieri*, Tenpetal thimbleweed, Ten-petaled anemone, Wind-flower.

Bottom: *Calylophus berlandieri*, Berlandier's sundrops, Square-bud primrose, Sundrops.



assigned to make botanical collections in the wilds of the Canadian Rockies (Mount Drummond and the Drummond Icefields are named for him). On returning to Scotland he became the first Curator of the Belfast Botanical Garden.

Drummond made a second trip to America in 1831 to collect specimens from the United States. In time, he made his way from New York to New Orleans. Apparently he was inspired to travel to Texas by reports of the botanical collection made by Berlandier. In 1833 he went by ship from New Orleans to the Texas coast. Drummond survived floods, sickness, and other hardships to spend twenty-two months collecting plants from Galveston to the Edwards Plateau. He is reported to have collected about seven hundred and fifty species of plants and one hundred and fifty species of birds. His specimens from Texas were the first to be widely distributed among museums and scientific institutions of the world. In other words, Drummond put Texas on the botanical map!

He intended to return to Scotland to bring his family back to Texas. En route, he collected in Florida and Cuba. He was sick with fever when he left New Orleans and died in Havana, Cuba, in 1835.

Many plant names commemorate Thomas Drummond, but probably the best known in this area is the Drummond phlox (*Phlox drummondii*). Several others who collected botanical specimens in Texas (Lindheimer, Roemer, Wright, Buckley, and more) also are honored with native-plant namesakes. In future columns I'll write about some of these other men. And what about women? Are there any plants named for female botanists?



It is not commonly known that one of Texas' most beautiful wildflowers has been prized in Europe as an "exotic" cultivated garden flower for nearly one hundred and fifty years. In 1835, botanist Thomas Drummond collected the seeds of this annual wildflower in an area where a red-colored variety overlapped with a pink-flowered form. This collection of wild seed was sent first to Great Britain and later was distributed to nurserymen in several European countries. About two hundred true breeding strains were developed from this single collection of seed, including red, pink, white, lavender, maroon, coral, pale pink, and the mixtures of these colors, with the central "eye" of the flower differing in color from the outer color of the petals.

LBJWC



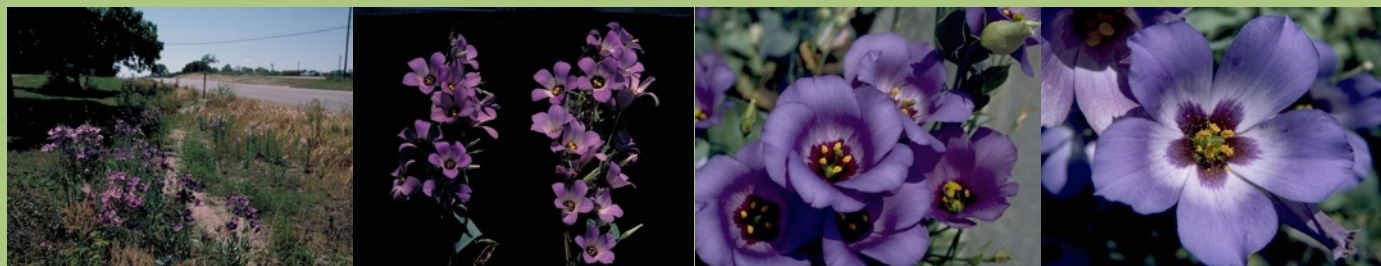
Above: *Phlox drummondii*, Annual phlox, Drummond phlox, Phlox Below: *Clematis drummondii*, Drummond's clematis, Old man's beard, Texas virgin's bower, Goat's beard. Right: *Scutellaria drummondii*, Drummond's skullcap.

Images: LBJWC



Bill Ward of the Boerne Chapter of the Native Plant Society of Texas has kindly allowed me to reproduce this series of articles that I think you will enjoy. Please let me know if you do so I can send on your thanks to Bill.

Plant of the Month



Eustoma exaltatum* ssp. *russellianum Texas bluebells

Our flower for this month is the one of the loveliest of all prairie plants, the Texas Bluebell (*Eustoma exaltatum* ssp. *Russellianum*, formerly *Eustoma grandiflorum*), also known as the Prairie Gentian or Showy Prairie Gentian. As the alternate names suggest, this is not a member of the same family as the European bluebells, but is related to the other gentians, such as the bottle gentian of East Texas and the mountain and meadow pinks. One bluebell relative, *Centaurium texense*, is named Lady Bird's Centuary after Mrs. Johnson's efforts to collect seeds and grow it on the LBJ Ranch. The Texas Bluebell was her favorite of all flowers, so it is especially dear to the Wildflower Center.

Bluebells are particularly associated with the prairies of the Brazos Valley near Brenham, where they provided the name for the famous creamery. However, they grow in moist sunny habitats almost everywhere in the state except the pine forests and mountains. The complete range includes Nebraska, Colorado, Kansas, Oklahoma, and New Mexico.

Gentians are notoriously difficult to cultivate, which may have led to their significance as "you are unjust" when sent as a message in the Victorian language of flowers. Bluebells propagate by seed and should be spaced 1–2 feet apart in the garden. They love the sun and

can tolerate Texas heat and fairly dry, well-drained soil, but do better with even moisture. In the limestone soils of Central Texas, they prefer low places. In many Texas climates, they are an annual, but they can survive mild winters for 3–7 years, with the best flowers in the second and third years.

Both the 1 to 3-inch leaves and the 1 to 3.5-foot stems of Texas Bluebell are blue-green and covered with a waxy bloom. The showy flowers (which can be white, yellow, pink, or purple as well as blue) appear from June to September. They are indeed bell-shaped, standing upright at the end of short stalks near the top of the plant. The genus name, *Eustoma* (Greek for "good mouth"), refers to the large opening into the flower's throat where the corolla lobes join. In the young flowers, the anthers produce pollen that visiting bees pick up. As the flower matures, the anthers wither and the stigma opens to receive pollen. This avoids self-pollination, which means that there must be multiple plants in the same area in order for any of them to seed.

While Texas Bluebells have become too scarce for commercial use, the clear bitter juice of the gentians has led to their use as medicinal bitters, as they seem to be a powerful anti-inflammatory. They are still used in herbal medicine as a tonic to aid digestion and fight debility. The term "moxie" (resourceful courage) originally referred to a popular New England soft drink made with gentian root. Gentian is also the dominant ingredient of the Angostura bitters used in cocktails.

This Texas wildflower is so attractive that it has become a popular garden flower in Japan, where it is known as *Lisianthus* (the former genus name) and has been bred in several colored annual versions with either single or double petals. Ironically, the Texas Bluebell has become scarce in its native habitat because the beautiful blooms (which are unusually durable as a cut flower) attract admirers who literally love them to death. So many flowers are picked from the wild by florists and individuals that the native populations do not produce enough seed to sustain their numbers. They have virtually disappeared from much of their original range.



Images LBJWC.

Weed Watching

I am sure you will all be pleased to know I have found a plant that I actually dislike. Having just recovered from pneumonia and with permission from my doctor that I was finally allowed out again in the garden, I decided to tackle just a little area of weeds. You know... so I could gradually work my way back into things. Well, I found that to get to the little patch of weeds I was going to have to pull up what seemed like acres of Johnson grass (*Sorghum Halepense*). What were they thinking when they took this Mediterranean grass to every continent of the world except for Antarctica? Some well-meaning traveler brought it from Turkey to the USA around 1830 and introduced it to South Carolina. Around the 1840s, William Johnson, for whom the plant is named, established the grass along the Alabama River as a forage species. What a disaster! Johnson grass quickly escaped cultivation and it has become invasive throughout much of the US and into Canada. It is on numerous noxious plant lists, even being named one of the world's ten most noxious weeds. In Suffolk County in West Virginia, it is against the law to have even a single plant on your property! It has literally bankrupted thousands of family farmers as it marched across the countryside.

Although originally grown for forage, this can prove to be deadly. When Johnson grass becomes stressed, subject to drought, or frost, it produces hydrocyanic acid that is poisonous to cattle and horses. Clearly this would be a major problem for livestock use, but what about as a land stabilizer? Well, unlike native prairie grasses the roots are shallow. It does nothing to aerate the soil or to draw water deep into the ground. Another problem is that it exudes a natural toxin from its roots that prevents other plants growing close to it, thus serving as a natural "herbicide" to the competition. It thus eliminates the plants that actually could stabilize slopes. There are several other names in common use, Cuba grass, Egyptian millet, maiden cane, Syrian grass. Perhaps we should just call it Mister Johnson's Curse?

The perennial Johnson grass can become extremely tall, up to six feet, prefers sun, any soil type, and blooms here early and continues through fall. It is noted by its erect culms and the presence of small hairs at leaf nodes. The leaf sheaths are without hairs. Leaf blades are very long and $\frac{1}{4}$ – $\frac{1}{2}$ in. wide. The inflorescence occurs terminally as a long panicle (6–10 in. long), that when mature is marked by its purplish-red color and opened branches extending radially outward. When immature, inflorescence will appear as a single stalk with branches folded upwards. Seeds are small and enclosed in spikelets.

You could be forgiven for thinking it is a native prairie plant if you see a spread of it swaying gently in the breeze. It can look lovely, but the plant often collapses with the weight of the heavy seed heads. Disturbed soil is its favorite place but it will establish almost anywhere. Seeds drop near the plant and many are blown on the wind, carried by water or distributed by agricultural activities. Wildlife also enjoys the seed and helps their dispersal since not all seeds (or animals) are damaged by the ingestion process.

Clearly, Johnson grass hasn't become this successful by being a shrinking violet. It is very successful at reproducing, so if you have one plant you will very quickly have a colony. I had thought that by carefully pulling them up before they were able to seed I would soon be well rid of it. Unfortunately, this is not the case. The seeds, encased in glumes, can lay dormant in the soil for twenty years and a single plant can produce 5,000 seeds per year. You do the math. In addition, the plant can spread by rhizomes; when pulled up the brittle roots usually leave pieces behind to grow into new plants. Either way you cannot seem to win.



This image is courtesy of Tau'olunga from Tonga. As you can see Johnson grass really is worldwide problem.



USDA-NRCS PLANTS Database / Hitchcock, A.S. (rev. A. Chase). 1950. Manual of the grasses of the United States. USDA Miscellaneous Publication No. 200. Washin

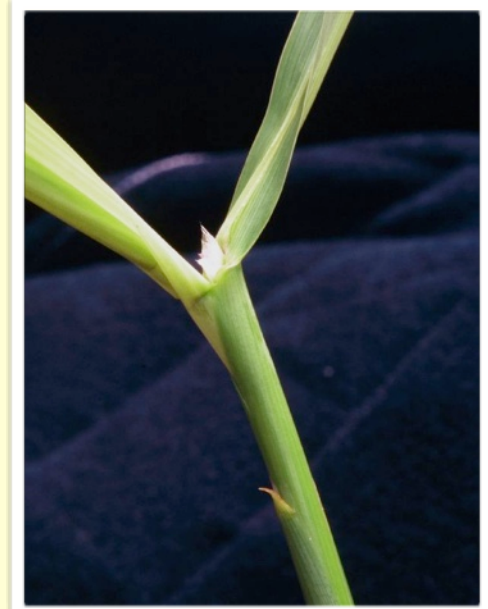
So, what should you do? Well, one source suggests cutting off the top growth to a few inches and then digging down deep to remove the rootstock. You then need to follow any spreading roots and dig those out as well. To be sure you have all the rhizomes, you should sieve the soil and remove the slightest hints of any roots. The area will need to be monitored so you can repeat the process as often as you can. All roots need to be disposed of in the trash, not composted. I guess whoever thought of this plan didn't live on a limestone outcrop as many of us do, or he owned stock in a dynamite company!

Apparently you can have some success with close, very frequent mowing, which will eventually kill the plant. Tilling the area can be successful in summer and winter, but if done too early it encourages vigorous new growth. Even the use of spot herbicides can be uncertain, since some biotypes are resistant to certain herbicides. If you must use a herbicide then make sure the product label specifically lists Johnson grass on the label.

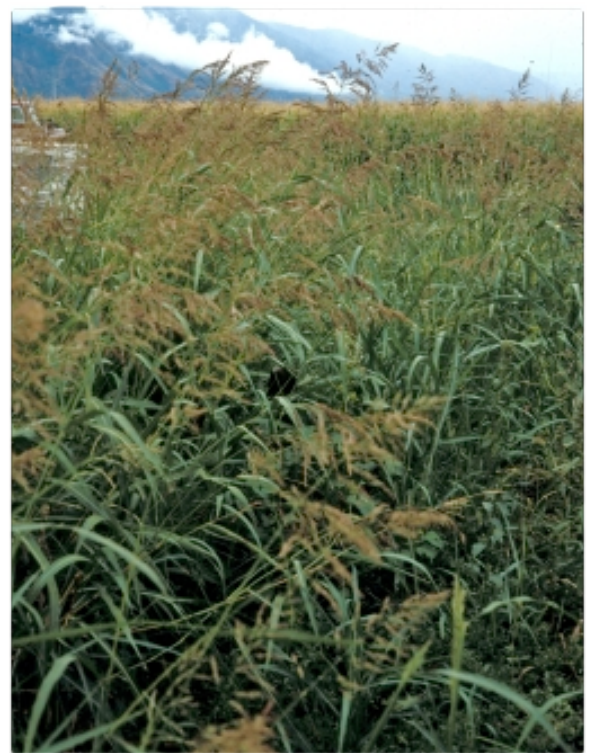
Finally, if all this isn't enough to convince you to rid yourself of this noxious weed, I have one more piece of convincing evidence against Johnson grass. It was from this grass, along with Bermuda grass, that the term "hay fever" was first derived. Although Texas has over five hundred species of native grasses none produces the size or amount of pollen to cause hay fever.

Texas alternatives include Square-stem spikerush (*Eleocharis quadrangulata*), Sugarcane plumegrass (*Saccharum giganteum*), and Powdery thalia (*Thalia dealbata*).

Above right, It is the hairs at the joints of the leaves that distinguish Johnson grass from similar species. Image: Ted Bodner @ USDA-NRCS PLANTS Database / Miller, J.H. and K.V. Miller. 2005. Forest plants of the southeast and their wildlife uses. University of Georgia Press, Athens.



The roots always have many new shoots waiting to grow so you have to ensure you rid the area of all the remaining roots and shoots or the Johnson grass will just reappear. Image: Steve Dewey, Utah State University, Bugwood.org



Infestations like this occur all over the United States and the world. If you find Johnson grass in your garden quickly remove it before it gets out of control. Image: Steve Dewey, Utah State University, Bugwood.org

Bug of the Month

While not strictly an insect, this arachnid (it has eight legs instead of six) is commonly found around, usually outside, homes and in gardens. If you see one, let it be. Spiders are a gardener's friend. They are found around the world, mostly in temperate climates, and come in many different (often brilliant) colors. Their webs trap many flying insects - which they hurry to entomb in silk and then feast on at leisure by sucking their body fluid.

Argiope are large, two inches in body and up to six in leg span, and very colorful. Check them out early in the morning when the dew is on their web for a really nice sight. Or delight and educate your kids by tossing a dead fly into the web and watch the action!

Sam Myers
Entomology Specialist



Argiope spider, photo by Sam Myers

What happened to my squash?

Was your squash growing beautifully and then one day it just wilted? Well, you might have squash vine borers. This moth lays its reddish-brown eggs (see photo to the left- courtesy of B. Leander) singly on the base of squash plants. When the eggs hatch, the larvae bore into the squash stem where they feed on the plant from the inside. So if the insect is on the inside of the plant, how can you tell if that's the problem? Typically, there is a hole in the stem where the larvae entered which has yellow sawdust-like frass coming out of it. Larvae overwinter in the soil and pupate then emerge as adults in the spring to mate and lay eggs.

If you have had squash vine borers infest your squash, vines should be removed and destroyed soon after squash harvest. Soil can be tilled before planting to reduce the number of larvae that are in the soil. Row cover can be used to protect new crops of squash you may plant, just remember to remove the row cover when the squash has blooms to allow pollination to occur.

You can also try to remove the borer from the stem before too much damage occurs if you catch the infestation early enough. Slit the stem lengthwise with a sharp knife, remove the borer and then cover the cut stem with moist soil. Eggs can also be scouted and squished on the plant before the larvae emerges if you keep an eye out early in the season.

Taken from Wizzie Brown's blog on June 6th 2007:

<http://urban-ipm.blogspot.com/2008/06/what-happened-to-my-squash.html>



Entomology Specialist Program

Sept 15-19, 2008 Austin, TX Hosted by Wizzie Brown, Extension Program Specialist, Travis County

• 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 20 applicants; deadline is July 18, 2008 Contact Wizzie Brown at ebrown@ag.tamu.edu or 512.854.9600 with any questions. Agenda/Registration Form >>

Treats from the Master Garden

Summer's Best Taste: A vine ripened tomato from your garden!

Margaret Seals

This spring, on March 15, I transplanted four Early Girl tomato plants into my garden. I used a plastic row cover over them for about six weeks until the weather improved, and then uncovered them. On May 25, I harvested my first vine ripened, red tomato of this season. I doubt if there is any taste that is better than that first spring tomato. Now the Early Girl vines are loaded with ripening fruit, along with the Celebrities that were transplanted the second week in April. Except for a battle with stinkbugs that I won with diligence (the catch and squash method of pest control) and insecticidal soap spray, the vines and fruit have been disease and pest free. I have used a mild solution of seaweed extract a couple of times as a spray on the leaves, and I side dressed the vines with compost tea as the first fruit began to set. I've only watered when the soil begins to dry about 4 inches down from the surface, and I thoroughly wet the soil when I water. This crop has been my best effort in the past five years, and the dividends that have not made it, sliced and seasoned, to the table are now lining my kitchen cabinets waiting to become next winter's savory delights. I will can some and freeze the rest.

My favorite way to eat tomatoes (other than right off the vine) is sliced on a BLT. Slicing them pretty thickly, I try to stick the tomatoes to the bread with a minimum of mayonnaise, and think BLTs are best when the tomato juice dribbles down my sleeve as I'm eating. You, no doubt, have your own favorite way to stack this classic sandwich. Even if you leave off the B or substitute a turkey "bacon" product, the tomato is tops in this classic trio and will trump the other ingredients anyway. Beyond the BLT, I have several other tomato recipe favorites that I'll share with you below.

The first recipe is one I cut from the *Houston Post* years ago when La Madeline restaurants first started in Texas. It was given to the paper by the first owner of those restaurants, and is still served there. They also sell it in jars at selected stores and at the restaurant locations. However, it is better when you make it with your own fresh tomatoes using herbs from your garden.

La Madeline's Tomato Basil Soup

4 C fresh tomatoes, peeled, cored and chopped
4 C tomato juice
12 to 14 fresh, washed sweet basil leaves, chopped
1 C heavy cream
1 stick unsalted butter
Salt and pepper to taste

Combine tomatoes and juice in a large saucepan. Simmer over medium low heat for 30 minutes. Cool slightly, then place in blender or food processor. Process, along with the basil leaves to a puree. Return to a saucepan and add cream and butter. (Or put tomato puree in a large glass bowl and add cream and butter if you want to microwave.) Heat until butter is melted and soup is hot. Add salt and pepper to taste. Makes about 6-8 servings.

For those really hot days when a cold side dish is welcome at the table, here is a really old "do ahead" favorite, Tomato Aspic.

Tomato Aspic

2 C tomatoes, peeled and chopped
1 sweet onion, chopped
½ C chopped celery
½ stick unsalted butter
Salt and pepper to taste
1 small box lemon Jell-O
¼ C white vinegar
¾ C water

Sauté onion and celery in butter. Add tomatoes and water or tomato juice to barely cover. Stew for 20 minutes or until all vegetables are tender. Remove from heat, let cool and process in a blender or food processor until smooth. Return to saucepan, bring to a boil and add Jell-O. Stir until dissolved. Remove from heat, and add vinegar and water. Stir well. Pour into a greased mold or pan. Refrigerate until set, about 4-6 hours. Serves 4-6.

Roasting tomatoes really brings out a deep flavor, and once you start roasting them to make tomato sauce, I'll bet you will keep it up. Here is a simple recipe from *Everyday Food Magazine*.

Roasted Tomato Sauce

3 pounds fresh tomatoes, cored, but not peeled, quartered

1 sweet onion, halved and sliced 1/4 inch thick

2 carrots, sliced into 1/4 inch rounds

4 garlic cloves, peeled and diced

1 t of fresh thyme leaves, or 1/2 t dried thyme

2 T olive oil (I like McEvoy Ranch Organic from Whole Foods.)

Salt and pepper to taste, plus a pinch of sugar

Preheat oven to 425 degrees. Cover a jellyroll pan with foil. Place tomatoes, onion, garlic and carrots in a large bowl and toss with olive oil. Add salt, pepper and sugar. Place tomatoes, cut side down, on pan in a single layer. Add onion, garlic and carrots. Sprinkle with thyme. Roast until tender about 30-35 minutes. If vegetables begin to brown too quickly, push them to the center of the pan. Remove from oven when nicely browned and let cool completely. Process in blender (including juices) or food processor, pulsing so mixture remains a little chunky. Use as topping for pizza, Bruschetta or pasta. (I also use this in lasagna.) Freezes well up to three months.

Tomatoes Stuffed with Cream Corn

Now I discovered this trick by accident, but next time you fire up the grill have ready one large (I mean big) tomato for each person you will be serving. Take the top off the tomatoes and scoop out a spot to hold about 1/4 to 1/3 C Rudy's Cream Corn. (From Rudy's BBQ restaurants) Place those tomatoes on a grill pan so they won't fall through the grill, and let them heat up awhile. When they begin to turn brown, fill each with heated cream corn and serve immediately with a little chopped basil or cilantro on top for garnish. Your crowd will think you have graduated from chef school! Of course, you can make your own cream corn, but this is a great quick serve version!

If you just can't wait to eat tomatoes from your garden, and you planted late this year, here is the last of my tomato favorites, Fried Green Tomatoes. I got this recipe from The *African-American Heritage Cookbook* by Carolyn Quick Tillery.

Fried Green Tomatoes

1 C yellow cornmeal

3/4 T all-purpose flour

1 t each: sugar, salt and cayenne and ground black pepper

5 green tomatoes, sliced

2-3 T bacon drippings or peanut oil

Mix cornmeal, flour and seasoning. Coat both sides of tomatoes with the mixture. Place on a wire rack and let dry 10 minutes. (Don't skip this step; it is what makes the tomatoes crispy.) Heat drippings or oil in a cast-iron skillet over medium heat. Fry tomatoes in a single layer until brown on each side. Serve immediately. Makes 2-4 servings



Antelope horns in a flower arrangement?

It had never occurred to me, I must admit, to consider putting the seed pods from *Asclepias asperula* ssp. *capricornu*, or antelope horns, into a vase. The flowers (insert), yes, most definatly, but not the pods as they are bursting open. However, recently at the Wildflower center I saw a vase filled with recently burst pods in a very formal setting and it was fabulous. The large pods had burst open to expose vast quantities of silk and seeds. Everyone who entered the gallery stopped and stared, all watching the play of light on the gossamer threads. This was a lesson on thinking outside the box, or in this case, outside the vase.



President's Column

Good News**Wayne Rhoden**

Kniphofia x spp at the Denver Botanical Gardens.

Image: Wayne Rhoden

For the first time in a long while (Texas speak) I got to take a vacation. My wife has had a long history of back problems and was not able to travel but thanks to modern technology she has recovered to be able to ride long distances in a car. We just returned from a trip to visit our daughter in Denver and enjoyed the cool weather and mountain air of that state. While there we visited the Denver Botanical Gardens which were in full bloom and it was a beautiful sight. There is a big difference between what they grow there and down here. I was not able to identify many of the plants but still enjoyed seeing them. However there were many roses blooming and the aroma was wonderful as we walked through the gardens. I will only show one of the many pictures that I took while there but if you ever get to visit Denver during the summertime I recommend a trip to the botanical gardens. You will not be disappointed. Our County Extension Agent, Zan Matthies has resigned

and will be moving to Midland to take a job there. We will be welcoming a new agent shortly. Our program will continue as always, growing to meet the horticulture needs of Williamson County. As soon as the new agent gets here I will ask him to come to our monthly meeting so all of you can meet him. We look forward to a long association with him. As a reminder we will start our new Master Gardener classes in August and we are looking forward to having around 30-35 new interns to help with the needs of our many programs. I will be appointing a nominating committee to come up with a slate of candidates for officers for 2009. I will let you know at the next monthly meeting who will chair the committee and if you are interested in becoming an officer, you can contact the chairperson and let them know you are interested.

There are still many volunteer opportunities available and we always need help. It is your duty as a Master Gardener to help with these projects. After all we are a part of the Texas A&M University system and it is our responsibility to educate the community by building demonstration gardens, giving educational programs, working with young people, and answering questions from the community. You will benefit from each of these experiences more than you know.

Thanks to the Master Gardeners who helped with the youth program in Sun City. I heard that it went well.



The purpose of this course is to provide advanced training whereby Master Gardeners can obtain specialization in rainwater harvesting. For more information visit:

http://rainwaterharvesting.tamu.edu/training_gardener.html

Taylor Blackburn coordinates the MG trainings in rainwater harvesting. TABlackburn@ag.tamu.edu

- 2008 Kaufman, Texas - July 16-18,
- 2008 Conroe, Texas - Sept 11-12

Monthly Meetings

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

Williamson County Master Gardener Association Officers for 2008

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Leslie Meyers, Secretary	myersls@earthlink.net	(512) 671-3002

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Quote of the Month

“Heaven is not merely over our heads, but under our feet.”

Henry David Thoreau