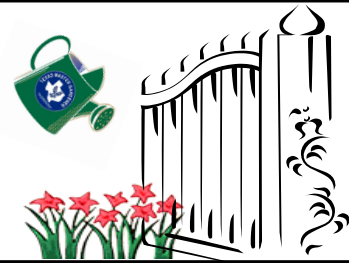




Ellis County Master Gardener's E-Gardening Newsletter



Volume VIII, Issue Seven

Official E-Newsletter of the Ellis County Master Gardeners Association, Waxahachie, Texas

July, 2015

Welcome to the Ellis County Master Gardener's **E-Gardening** Newsletter. The purpose of this newsletter is to give you a month-by-month agenda of what you should be doing with your landscape. We will feature horticultural articles that we hope you will find interesting, and important dates where you can find the Master Gardeners speaking, demonstrating, and passing out information relative to your garden. If you would like to receive this newsletter monthly via your email address, log onto our website www.ECMGA.com and click on subscribe. It will be sent around the first of every month. Best of all; it's FREE! Susan Clark, Editor

What's Happening in July?

Every Saturday from April to October from 8am–1pm.

410 S. Rogers (across from City Hall in the old lumberyard building)
Visit the Master Gardeners' Booth!

- Useful gardening tips
- Plants and herbs for sale
- Free handouts...Some items for a fee
- Tell a friend to sign up for the **E-Garden Newsletter**... it's **FREE!**



July 11th—It's the second Saturday of the month and that means it's kids activity day. Master Gardeners involved in the Junior MG program will have a Venus fly trap project for kids of any age. Come by the table for a fun activity. Fresh produce is still being picked by the farmers so come on down and spend local!

July 18th—Today is pepper power at the market...some like it spicy; some like it mild...raw, roasted or sautéed...whatever your palette...shop your local market first and support your local community!

July 25th—Along with your favorite local sellers, the market has some extra visitors today...pets available for immediate adoption. Time for a four-legged companion? Come by the market today to see if your new best friend awaits you!

Coming in August! We are just weeks away from our annual **MG Grill Fest**, so be sure to mark your calendars for Aug 15th. We'll be grilling up veggies as well as fruit from our local farmers and MGs. You definitely don't want to miss out!

Ellis County Master Gardener Monthly Meeting—You are invited!

Tyler Wright of Texas Trees Foundation will be speaking at our monthly meeting on Tuesday, July 14th. Tyler Wright earned his Bachelor of Science in Forestry degree while attending West Virginia University and has a Master of Science in Forestry degree from Virginia Polytechnic Institute & State University. In 2013, Tyler was hired by the Texas Trees Foundation as an Urban and Community Forester. His duties include research and technology, education and outreach, nursery management/volunteer coordination, and he provides technical assistance for Urban Forestry consulting to municipalities, universities, corporations, and homeowners. He is a member of the Dallas Urban Forestry Advisory Committee, Trinity Blacklands Urban Forestry Council, and the International Society of Arboriculture.

Social time begins at 9:30am and the program begins at 10am. Please be our guest! The meeting takes place in the Family Life Center of the First United Methodist Church, 505 W. Marvin Ave., Waxahachie. For info, call (972) 825-5175.



Indian Trail Master Naturalists Events

Join the **Indian Trail Master Naturalists** at their monthly meeting on **Monday, July 27**. The program for the evening is entitled **"Observing Nature Around Us"**. **Dr. Craig Barrington** will discuss the use of microscopes in nature exploration and education with microscopes, inexpensive attachments for turning your smartphone into a microscope. Bring your Samsung phone or iPhone. The program is free and follows

(Continued on page 6)

TEXAS A&M
AGRI LIFE
EXTENSION



Listen to KBEC

Saturday mornings at 9:00 a.m. on 1390 AM.

The Ellis County Master Gardeners have a five minute segment every week, offering you helpful information on what you need to be doing in your landscape, as well as "happenings" around the county. Be sure to listen in!

Melinda Kocian

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Cilantro/Coriander—Annual: 2' – 3'. The leaves are called cilantro by Mexicans and have a sweet intense flavor. They are used to flavor Mexican, Middle Eastern and Asian foods. The seeds and roots are used in curries and pickling spices.

Coriander is an easy herb to grow from seed, but does not like to be transplanted. As a garden plant, coriander attracts useful insects like bees and other pollinators. It will quickly go to seed when days are long and hot, so plant in early spring or fall.

Tomato, Basil and Cheese Salad

By Jim Suggs

1 head Boston lettuce
½ tsp salt
½ lb. fresh mozzarella cheese
Fresh basil, chopped
3 large tomatoes, sliced medium thin
Olive oil

On large platter, make a bed of lettuce. Slice cheese into thin rounds with a cookie cutter about the same size as the tomato slices. Place a round of cheese, then a tomato slice, cheese, tomato, until all is used.

Sprinkle salt over all when complete. Just before serving, sprinkle with fresh basil and drizzle with a light coating of olive oil. Serves 12.

It's July....What Needs To Be Done?

Planting

- ✧ Plant tomatoes and peppers from 4" pots. For a chart of recommended varieties for Ellis County, visit www.aggie-horticulture.tamu.edu/vegetable.
- ✧ Crape Myrtles are in bloom at local nurseries so you can be sure that you plant the color you desire. Newly planted trees and shrubs should be kept watered until established.
- ✧ Early July is the time to plant small and medium pumpkins for a Halloween harvest.
- ✧ Lawn grasses can be planted this month, although they will need to be watered frequently until established.

Fertilizing and Pruning

- ✧ Fertilize plants that bloom on new growth, such as crape myrtles, tropical hibiscus and roses, with a high nitrogen fertilizer to promote late-summer growth and fall blooms. Apply the same fertilizer to give a boost to summer annuals and fall-flowering perennials, as well.
- ✧ Light pruning of erratic spring growth may be pruned to maintain the natural form; however, major pruning should be postponed until mid-winter. Dead and diseased wood from trees and shrubs should be removed any time the need arises.
- ✧ Deadhead all blooming plants and clean up containers of dead leaves and spent blooms.

Garden Watch

- ✧ Cicadas are noisy, but do no damage to landscape plants. They are; however, the main food source of very large, wasp-like insects, known as cicada-killers. Although cicada-killers look threatening, they are actually beneficial and generally harmless.
- ✧ Galls on the leaves of live oaks, hackberries and other trees are caused by many species of gall-forming insects and are the result of the female stinging the leaf tissues as she lays her eggs. Although they look unusual, they are harmless and no control is called for, since the insect doesn't feed on the plant tissues.
- ✧ Whether or not the preceding months have been kind with abundant rainfall, the gardener should be alert for summer drought conditions which could occur at any time now. A typical pattern of the last several years has been for rainfall to be shut off in early July, leaving normally well-hydrated plants lacking sufficient water.
- ✧ Watch out for lawn pests. Chinch bugs multiply rapidly in warm weather and their feeding causes St. Augustine grass to look like drought stress.



Featured Texas Wild Flower of the Month

*Submitted by Melinda Kocian
Ellis County Master Gardener*



Curlycup Gumweed -- Sunflower Family (Asteraceae)
Grindelia squarrosa (Pursh.) Dun.

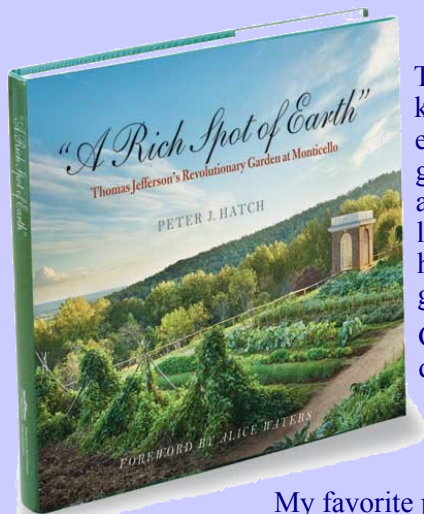
Range: 1, 3-5, 7-10 (Ellis County is Region 4)

Size: 3 feet

Blooms: July–October, Perennial

Curlycup gumweed is a bushy plant with small, bright, blue-green leaves. It can be found in many habitats, ranging from dry and rocky to moist, sandy areas; it grows along roadsides, fence rows, in pastures and on prairies. Yellow flowers are about three-fourths to one inch across and may have ray flowers, but the disk flowers bloom from a cup notable for the little downward-bent bracts that cover it. A sticky resin is exuded by the plant, rendering it unpalatable to cattle. Early settlers and Indians used curlycup gumweed medicinally, to relieve symptoms of asthma and bronchitis, and to treat poison ivy. *Grindelia* species also yield a natural dye.

"A Rich Spot of Earth" – Monticello, Virginia



The summer of 2014 our families, siblings, their kids, grandkids, various cousins and friends gathered on Smith Mountain Lake in southwestern Virginia to help celebrate John and my 50th wedding anniversary. After a long weekend of water play, lots of food and catching up on family news, we headed off to explore Virginia with our son and grandsons.



*Submitted by
Arlene Hamilton
Ellis County
Master Gardener*

Grandsons David and Ian know that anytime they travel with Grammy, it will include gardens. Our first stop was Monticello, home of our third president, Thomas Jefferson. After a tour of his home and inventions we exited out onto the front yard or "green". Flower beds outline the green and meander off into the trees. When you look back at the house from the green, the view is the one pictured on the back of the nickel.

My favorite part of the tour was Jefferson's beautifully maintained vegetable garden. It is said if Jefferson walked through his land today, he would feel very much at home as it has been recreated much as he knew it. His terraced one-thousand-foot long vegetable garden is planted with the vegetable and herbs he was growing. The garden sits on the south slope of his mountain so vegetables such as tomatoes, okra, eggplant, peanuts, peppers and other foods from South America, Africa and the Mediterranean thrived, but were not common to most of colonial America whose gardening customs came out of Europe.

As I stood among the thriving vegetables and herbs and looked to the south, the next terrace area was filled with fig trees. Beyond that were more orchards and the Piedmont Mountains. Above us, toward the mansion was Mulberry Row where excavation and restoration continue on the slave quarters as well as craft buildings where the materials needed to maintain the plantation were created or repaired.

If you enjoy gardening and the history of gardening in America, I recommend "A Rich Spot of Earth" Thomas Jefferson's Revolutionary Garden at Monticello, by Peter J. Hatch. It is a beautifully illustrated, fascinating book on the horticulture legacy Thomas Jefferson gave us. Hatch writes of the 330 varieties of ninety-nine species of vegetables and herbs that provide the biodiversity of a true American garden brought together by our worldwide immigrating ancestors. Once you have read the book you will most certainly want to visit this ... "Rich Spot of Earth".

Delightful Little Bloomin' Trees

By Shirley Campbell
Ellis County Master Gardener



Love those beautiful old shade trees that grace the streets of Waxahachie! It breaks my heart to see them "butchered" to accommodate the power lines. With that in mind, I'm recommending several "Delightful Little Bloomin' Trees" to brighten the landscape and not interfere with power lines.

Small trees can serve many useful functions such as shading a west window, lining a driveway, forming a living fence along a property line, providing a focal point to a patio or entry courtyard, or providing a little shade for a poolside sittin' spot. They make great accent plants to draw attention during their blooming season. They can also provide a light shade to give understory plants a break from the blistering summer sun, or serve as understories themselves peering out from the edge of a larger tree's shadow.

Many offer the added feature of blooms. In fact they are so attractive and versatile that even if you have the space, you might forgo a larger tree in favor of a grouping of small trees. Groupings are nice because they add interest and can extend the blooming season for many months.

Here are a few I'll bet you just can't live without.

Redbud—One of the first signs of spring are the blooms of the redbud trees. Their blooms appear before the foliage emerges to announce the arrival of the new season. Two great choices are the varieties 'Oklahoma' with its wine-red blooms and 'Forest Pansy' which sports purplish-red new foliage that fades toward green as the season progresses.

For central, south and west Texas, the Texas redbud (var. *'texensis'*) and Mexican redbud (var. *'mexicana'*) are good choices. The Texas and Mexican varieties usually top out at 20 feet and 15 feet respectively and are very well adapted to full sun exposure. Plant redbuds in a well-drained soil.

Dogwood—Spring wouldn't be spring in the southeast without dogwoods. The white or occasionally pink blooms of Eastern Dogwood (*Cornus florida*) adorn the forest edges throughout the easternmost parts of the state. Bring them into your landscape and they will die sure enough. Folks in the western two thirds of the state will find dogwoods, like azaleas, a very risky challenge most likely doomed to failure.

For those of you in non-dogwood country, there is a cousin known as Roughleaf Dogwood (*Cornus drummondii*). It produces clusters of small blooms that do not resemble their eastern relatives. However, they are worth a spot in the landscape and do well in a sun to part-shade location. The trees tend to

sucker, forming a thicket that reaches 12 to 20 feet in height.

Orchid Tree—Gardeners not living in East Texas may want to try Anacacho Orchid Tree (*Bauhinia lunarioides* (B. congesta)). This tree can take heat, drought and cold (to about 15 degrees), producing a covering of small white blooms in the spring. It can take a variety of soil conditions as long as the

soil is well drained. Anacacho Orchid reaches only about 10 feet tall making it ideal for a courtyard or within a perennial bed.

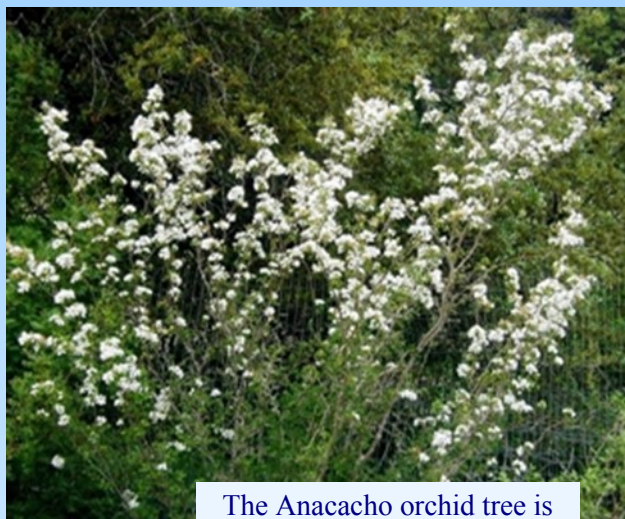
Texas Mountain Laurel—The bluebonnet may be the official symbol of our state when it comes to wildflowers, but when it comes to native landscape plants, Texas Mountain Laurel (*Sophora secundiflora*) is the poster plant. It produces dark green foliage and tolerates thin calcareous soils, but still does well on deep fertile soil. It just needs great drainage.

Be patient. Its growth rate is slower than molasses, but it is well worth the wait. The purple spring blooms leave the air laden with a heavy, grape bubble gum or grape Kool-Aid aroma.

Texas Mountain Laurel can actually grow over 20 feet in some conditions, but for practical purposes is a small to medium sized shrub/tree. It

makes a great specimen plant but also works well planted in a row down a property line to form a loose evergreen screen.

Rusty Blackhaw Viburnum (*Viburnum suspensum*) is one of the most outstanding small flowering trees for Texas. It is a native that does well in most parts of the state if provided a little supplemental moisture. It takes full sun or some shade. In spring four to six-inch bloom clusters adorn the branches. These are followed by blue-black fruits that attract birds.



The Anacacho orchid tree is considered utility-friendly.



Delightful Little Bloomin' Trees (Continued from page 4)

In fall, the dark green foliage turns shades of red/orange/burgundy before falling. These tree/shrubs reach to about 18 feet in height. This natural beauty is planted partially under a large cedar elm in my backyard. What started as a five-inch twig in a coffee can is now a beautiful large shrub looking very much like a snowball viburnum.

American Smoke Tree

(*Cotinus obovatus*) is underused considering its unique beauty and versatility. In spring, pink to purple, cloud-like bloom clusters appear as smoke floating through and over the foliage. While not that interesting up close, it creates a dramatic effect from a distance. Trees will reach 20 feet or more in time and while they may be pruned to a single trunk, usually take on more of a multi-trunked form.

Its foliage is its ace-in-the-hole-feature. New growth emerges with a pinkish bronze hue and turns a dark attractive blue-green color. Fall color is often excellent with bright shades of yellow, orange, red and burgundy/purple.

Desert Willow (*Chilopsis linearis*) will take a lot of abuse when it comes to poor soil and drought. It is best suited to a western-style landscape where a rugged look and xeric design is your goal. Its form is airy and its foliage casts a light shade making the space around its base suitable for many other plants.



American Smoke Tree
at the Dallas Arboretum

There are several varieties on the market. The standard form bears pink blooms with dark pink features. 'Bubba' produces reddish-burgundy blooms and the blooms of 'Regal' are even deeper burgundy-purple.

This plant needs full sun and well-drained soil. It can reach 15 to 30 feet in height and will reward you with almost care-free beauty for years to come.

Chaste tree (*Vitex agnus-castus*) is one of the few summer blooming trees. It produces large spikes of blue (or white) blooms. Blue is a hard color to come by in summer. These multi-trunked trees are tough enough to be used in some highway plantings and with a little pruning and care can form a very attractive small tree about 10 to 15 feet tall, or even larger.

It does best in full sun and a soil that ranges from moist to dry. Several varieties are on the market including variations in the blue to purple shades as well as white and pink blooming varieties. Purchase this plant either by variety name or when it is in bloom to make sure you are getting a specimen with especially attractive flowers. A butterfly magnet!

Now I know I've overlooked quite a few small blooming trees that are bound to be favorites with some readers, but this list should get you off to a great start. Look at others like 'Little Gem' or 'Teddy Bear' Magnolias and Chinese Fringe tree. Of course, our beloved Crape Myrtle, with its many varieties and sizes, warrants an entire column by itself.

DID YOU KNOW?

An average tree absorbs ten pounds of pollutants from the air each year, including four pounds of ozone and three pounds of particulates. A medium-sized, deciduous tree removes pollutants from the atmosphere and reduces emissions of air pollution at an average savings of \$1.89 per year in an urban environment.

Over the tree's estimated 40-year lifespan, each tree will save about \$75.60 in reduced and removed air pollutants. (Source: Center for Urban Forest Research, Pacific Southwest Research Station, USDA Forest Service; Davis, CA)



**Interested in becoming a
2016 Expo Sponsor Or
Expo Exhibitor?**

Contact James Kocian at
expo.ecmga@yahoo.com

Reserve the date: March 19, 2016!

What's Happening (Continued from page 1)

the 6 p.m. Master Naturalist meeting that is also open to the public. Meeting location: First United Methodist Church, Family Life Center 505 W. Marvin Ave., Waxahachie. For more info, call (972) 825-5175 or email ellis-tx@tamu.edu

Master Naturalist 2015 Annual Spring Training Class. ITMN will hold their Annual Training Classes on Tuesdays from 6pm–9p.m. from September 15 to November 17 at First United Methodist Church Family Life Center, 505 West Marvin Avenue, Waxahachie. The Texas Master Naturalist Program is co-sponsored by the Texas A&M AgriLife Extension Service and the Texas Parks and Wildlife Department. Applications are due by August 19. For more information and to receive an application, please e-mail ellis-tx@tamu.edu, or contact the AgriLife Extension Service Office by phone: (972) 825-5175.

Saturday, July 18, 9am, Wildflower & Bird Walk. Members will be leading a walk at Mockingbird Nature Park. Join in this ½ mile stroll along the trails to identify wildflowers and birds. Free to the public. Participants should bring drinking water and binoculars. The walk will be canceled if raining. Info at: <http://txmn.org/indiantrail/> or email: Information@itmnc.com



Find us on:
facebook®

Are you a Facebooker? You should be! Ellis County Master Gardeners are on Facebook and we'd love to have you join us. Check in to find out where and when our local events will be held—events like the Downtown Waxahachie Farmer's Market or Lighthouse for Learning Classes. Drop by our page after an event to see pictures.

Use our page as your point of contact to ask us gardening questions or get information about flowers, vegetables and herbs...we cover it all! Some of the recent articles posted are how to build a greenhouse using repurposed windows and doors, lasagna gardening, how to make your own ollas and updates on local events that gardeners will find interesting and educational. You can also post pictures and let us know what is happening in your gardens and landscape.



You'll find us at this link, and all you have to do is click the "Like" button to see our daily posts! We look forward to hearing from you with questions and comments. If you have a QR Code reader on your smartphone, you can scan our code and be taken directly to our Facebook page.

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



Save The Date!
Saturday, March 19, 2016



The glory of gardening:
hands in the dirt, head in the
sun, heart with nature. To
nurture a garden is to feed
not just on the body, but the
soul.

~Alfred Austin

A Scented Garden: Fragrant Plants Make Gardens Special

By: Shirley Campbell, Ellis County Master Gardener



Fragrance, though often subtle, can make a difference between an ordinary garden and a memorable one. In the garden, we find a space where we can feel both removed from our daily cares and connected to nature. Going back to our childhood, what pleasing scents do we remember from Grandma's garden? A memorable garden needs fragrance along with color and texture. Here are some favorites that do well here in Texas.

During the cool-weather months, you simply have to experience a fence planted with sweet peas. Seeded or set out early in the spring, they will add fragrance to the landscape from February to May. Pinks, members of the dianthus family, are extremely fragrant with their clove-like scented blossoms that fragrant the air until warm weather arrives. Plant them close to your entry so you can enjoy their fragrance as you pass by.

Looking for a vine, try Carolina Jessamine. It commands all the attention in the landscape with its impressive burst of yellow fragrant funnel-shaped flowers that make quite a show in early spring.

Texas Mountain Laurel is a native tree. This evergreen produces blossoms with a strong, grape-like fragrance reminiscent of 'Grapette' soda that we old-timers will remember. Although it is a slow grower, it is worth the wait. Blooms appear March and April. Southern Magnolia, also an evergreen, is a charmer best known for its fragrant showy flowers. Little Gem and Teddy Bear are smaller species of the Magnolia that are better adapted to small city lots.

If a hedge is in your plans, Rosemary could be a good choice. This perennial is evergreen, you can cook with it, and as a bonus it has a wonderful fragrance and light blue blossoms. Brush against the foliage to release its wonderful scent. Rosemary likes to be kept on the dry side. If you need a hedge in a more moist location, Elaeagnus is an evergreen shrub with silvery leaves. This shrub will surprise you each fall with its sweetly fragrant, though obscure, flowers that appear.

Used in our area as an annual, Nicotiana or flowering tobacco likes afternoon shade. Consider planting it around the porch or patio where you can enjoy its fragrance as you sit in the afternoon shade. The large tubular white flowers of Angel's trum-

pet, Datura, come out each evening for only one day. Enjoy its magnificent fragrance as you watch for the lunar moth (as large as a hummingbird) to come out at night to visit the blossom.



Enjoy the anise-like scent of Mexican mint marigold whose leaves may be used in cooking.

We immediately think of roses for their fragrance. You know, "Stop and smell the roses." Texas A&M in their Texas SuperStar program has developed Marie Daly, an easy-care shrub rose with few thorns and lots of very fragrant double pink blooms. The outstanding fragrance of heirloom roses is indisputable. Heirloom roses such as Lady Banks and Baroness Rothschild are vigorous and relatively carefree.

A must for every gardener's summer garden would have to include the salvias (there are over 700 species). *Salvia greggii*, or autumn sage, has fragrant foliage...the fragrance becomes obvious when you simply brush against it. Flowers and foliage of Pineapple Sage invigorate the air with a pineapple scent in the fall months and the flowers are edible.

During the cooler months of fall, look for two cousins that give fragrance to the garden. Enjoy the anise-like scent of the leaves of Mexican Mint Marigold (Texas tarragon) and Copper Canyon Daisy. Both have bright yellow blossoms that complement fall asters. A vine on a trellis should include Autumn Clematis, a vine that blooms in late summer with a knock-your-socks-off fragrance coming from creamy-white flowers.

The list could go on and on, but the most important thing is to include fragrance in your landscape. Breeding for larger and better blossoms

has removed the scent from many species. You may have to sniff around to find the right fragrance for you.



The blossoms of Angel's trumpet open in the evening.



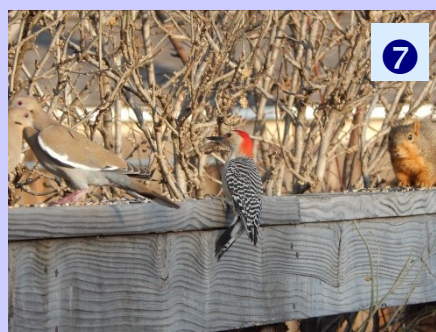
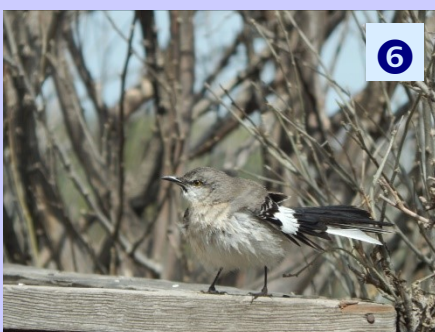
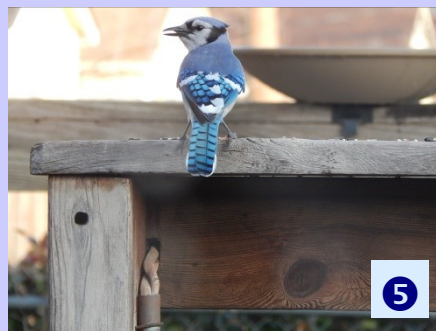
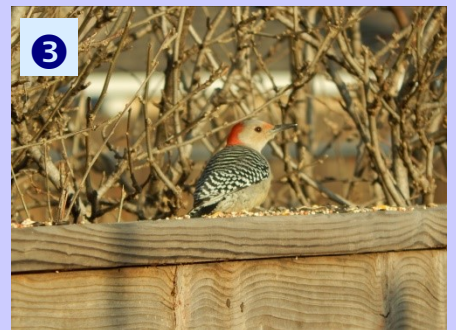
Sharing the Joy of Bird-Watching

With Mary Lee Nelson
Ellis County Master Gardener



When I was unable to gather all the information I wanted for my planned article, I decided instead to share some of my backyard birds' photos this month. They are so much fun to watch and identify, including the Juncos and Chickadees that are two seasonal visitors. My camera is a Nikon Coolpix L820 digital. One thing I really like about this camera is that the card plugs right into a slot on the side of my computer monitor for downloading. I hope you enjoy the following pictures.

- #1 Doves Four White-winged Doves hunker together on the deck rail amid Christmas lights, soaking up the warmth of the sun on a Texas winter day with a cold wind blowing.
- #2 Doves Three more of the doves, I've counted as many as 18 at one time, sit on a planter beside the deck in a sheltered area. Males and females are very similar in appearance, including a bright orange eye and turquoise "eye-shadow."
- #3 Woodpecker Female red-bellied woodpecker; notice that the red cap area ends somewhere near the top of her head—that's an identifying characteristic of the female of this species.
- #4 Woodpecker Male red-bellied woodpecker; his red cap extends over the top of his head to his beak. An Audubon source points out that the red belly patch on both male and female is not often visible in the field.
- #5 Blue Jay This blue jay looks like it posed for me, giving us a good view of the markings on the head and the colorful wing and tail feathers. While their appearances are similar, the social and mating behaviors distinguish male and female jays.
- #6 Mockingbird This Mockingbird, the Texas state bird, just got out of the birdbath. They do not eat the seeds in the feeder, but they sure do have a good time splashing in that water!
- #7 Woodpeckers One last surprising shot: I had been waiting for one of the woodpeckers to fly back down. Before I could focus on him, I got this group photo. I've noticed that the woodpeckers usually land on the edge of the rail, supported by their tails like they would be on a tree trunk.



Save The Date!
Saturday, March 19, 2016





Landscape Gardening

From: Gail Haynes, Ellis County Master Gardener

Ellis County Master Gardeners have a website at www.ecmga.com. Check it for information on gardening in Ellis County, sign up for this monthly newsletter, or access other websites, including the Texas A&M Horticulture website. Questions for Master Gardeners will be answered with a return email or telephone call when you leave a message at (972) 825-5175.

Humus—It's The Dirt!

Article originally appeared in the July/August 2001 issue of Horticulture Update, TX Agricultural Extension Service. (Taken from: National Garden Bureau, Liz Ball, author)

To the uninitiated, gardening seems to be all about plants. Certainly each of the seemingly infinite variety of trees, shrubs, flowers, vegetables and grasses is fascinating. Artfully combining them to create landscapes and gardens is challenging and rewarding. However, to the initiated, gardening is really all about soil.

It is easy to take soil for granted. After all, soil is almost everywhere. It literally comes with the territory when you buy a home or property. Soil may be largely dense sticky clay, thin gritty sand, or powdery silt. (Only the truly fortunate discover loose woodsy loam in the yard.) Whichever type, this existing soil constitutes the planting medium for the garden on the property. To improve its ability to support and nourish plants gardeners strive to improve its structure and boost its fertility. Fortunately, there is an abundant, inexpensive magic ingredient that makes this job a lot easier - humus (often referred to as just plain organic matter).

HUMUS CREATES SOIL. It is not a coincidence that the word "humus" is part of every gardener's vocabulary and that compost piles, one source of humus, are part of their gardens. Humus transmutes sterile dirt into fertile soil. Derived from organic matter of all kinds, humus is the life support system of soil. The presence of humus among mineral particles and air spaces enables soil to nurture plants two ways. Humus creates a loose structure that simultaneously holds moisture and drains well. Humus also creates an environment that supports living organisms that convert soil nutrients into a form plant roots can use, building soil fertility. In short, humus brings soil to life.

In nature humus is constantly introduced into soil as plant debris, dead animals, and other organic matter that decomposes on the ground. Through the alchemy of bacteria, fungi, and other resident micro-life activity, this organic material is re-

duced by degrees to its soft, spongy essence, called humus. It permeates the top few inches of the soil through rains and the good offices of earthworms and other macro-organisms, where it continually revitalizes the soil around plant roots.

This natural cycle is repeated over the seasons out in the wild, sustaining the great forests and other natural areas. Where there is lots of vegetation to decay and enrich the soil, such as in woodland areas, the soil is rich in humus and very fertile. Where there is little or no vegetation to provide the organic debris, such as at the seashore or in the desert, the soil has little or no humus and is lean, infertile.

In developed areas, such as residential yards and gardens, where the natural vegetation has been removed or disturbed, this natural decay cycle is disrupted. Organic matter such as leaves, dried plant parts, prunings, animal remains, manures, and other debris is routinely removed before it can recycle into the soil. Intensive planting of crops, turf grasses, and ornamental plants rapidly depletes soil of its existing humus content. Bare soil in garden beds is exposed to the harsh effects of sun, wind and hard rains, which further reduce its humus content and destroy its structure and fertility. To grow plants successfully gardeners must emulate nature and constantly renew the soil by adding the depleted ingredient, humus.

HUMUS SOLVES SOIL PROBLEMS. There is no such thing as perfect soil. Every soil has problems in structure, texture, and/or chemistry that compromise its ability to nurture plants. The best way to confirm suspected soil problems is to submit a soil sample for laboratory analysis through

the local agricultural cooperative extension office. Their computer printouts profile the soil content and structure, pinpointing deficiencies. Fortunately, the addition of organic matter, or humus, can mitigate many of these problems. Following are six soil problems that can be addressed by adding humus.

Compaction

Good soil is loose and crumbly because it has lots of air spaces. Plant roots are able to penetrate soil deeply for extended drought resistance and stability. Air is also essential to the micro-life that lives on its organic content and processes its nutrients to create fertility. Typically soil in a home landscape



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Landscape Gardening (Continued from page 9)

is compacted, the air compressed from it by the weight of foot traffic, construction, mechanical yard care equipment, and harsh weather. To reduce compaction, regularly add humus in the form of a topdressing to existing lawns. Spread a mulch of some organic material on bare soil in beds and under trees and shrubs year round. Dig compost or the like into garden beds when planting to improve aeration.

Sandy Soil

Sandy soil has large particles with large air spaces between them. Therefore, it drains so quickly that it dries out quickly. Also, water-soluble nutrients leach out rapidly before the plants can use them. Humus incorporated into sandy soil acts like a sponge, absorbing and holding moisture and any nutrients dissolved in it. Replenish the humus content of sandy soil at every opportunity.

Clay Soil

Clay soils are so thick because they have small particles with correspondingly small air spaces between them. They tend to stick together and cause water to fill up the air spaces. Since moisture does not drain from this soil well, plant roots rot. Adding humus to clay soils discourages the small particles from sticking so tightly. They aggregate into larger clumps creating larger spaces that drain more easily and hold air to improve soil texture.

Fluctuating pH levels

The acidity or alkalinity of soils, expressed as pH, affects how accessible their nutrients are to plants. Reduced acidity (pH higher than 8.0) inhibits the uptake of iron, boron, copper and other elements necessary for plant health. Excessive acidity (pH lower than 6.0) discourages plant absorption of other nutrients. Alter pH levels by adding either sulfur to increase acidity or limestone to reduce acidity in amounts indicated by soil test results. Because humus buffers soil against changes in its pH, adding lots of organic matter to the soil will help maintain desirable pH levels.

Pest insects, disease pathogens in soil

Soil rich in humus is alive. It supports active microorganisms to process nutrients and harbors beneficial macro-organisms such as ants and ground spiders that prey on soil-dwelling pest larvae and eggs. Humus creates a soil environment that supports beneficial nematodes and also bacteria such as milky spore that homeowners introduce into lawns to combat white grubs. Many other resident microbes attack and control disease pathogens that lurk in the soil. Topdressing and mulching lawns and gardens with organic material such as chopped leaves, compost or shredded bark products discourages soil pest problems.

Infertile soil

Soil becomes sterile over time as its humus content is reduced by hot weather, removal of topsoil, or intense cultivation without replacement of organic matter. The number and activity of micro-organisms in the soil is depleted. In their absence the production of nutrients in the soil is severely curtailed and

it become sterile. While fertilizer provides nutrients to plants, it does not solve a soil fertility problem. Supporting resident micro-life in the soil is the long-term solution. Topdressing lawns and perennial beds with humus and incorporating it into cultivated soil every year provides a home for these organisms so they can assure soil fertility.

Garden Checklist for July and August

Dr. William C. Welch, Landscape Horticulturist TX A&M Univ.

- ✧ Caladiums require plenty of water at this time of the year if they are to remain lush and active until fall. Fertilize with 21-0-0 at the rate of 1/3 to 1/2 pound per 100 square feet of bed area and water thoroughly.
- ✧ Don't allow plants with green fruit or berries to suffer from lack of moisture. Hollies will frequently drop their fruit under drought conditions.
- ✧ Prune out dead or diseased wood from trees and shrubs. Hold off on major pruning from now until midwinter. Severe pruning now will only stimulate tender new growth prior to frost.
- ✧ Sow seeds of snapdragons, dianthus, pansies, calendulas, and other seasonal cut flowers in flats for planting outside during mid-to-late fall.
- ✧ Time to divide spring-flowering perennials such as iris, Shasta or ox-eye daisy, gailardia, cannas, day lilies, violets, liriope, and ajuga.
- ✧ Plant bluebonnets and other spring wildflowers. They must germinate in late summer or early fall, develop good root systems, and be ready to grow in spring when the weather warms. Plant seed in well prepared soil, 1/2 inch deep, and water thoroughly.
- ✧ Make selections and place your order for spring-flowering bulbs, to arrive in time for planting in October and November.
- ✧ A late-summer pruning of rose bushes can be beneficial. Prune out dead canes and any weak, brushy type of growth. Cut back tall, vigorous bushes to about 30 inches. After pruning, apply a complete fertilizer, and water thoroughly. If a preventive disease-control program has been maintained, your rose bushes should be ready to provide an excellent crop of flowers this fall.
- ✧ Establish a new compost pile to accommodate the fall leaf accumulation.
- ✧ Picking flowers frequently encourages most annuals to flower even more abundantly.
- ✧ It is not too late to set out another planting of many warm-season annuals such as marigolds, zinnias, and periwinkles. They will require extra attention for the first few weeks, but should reward you with color during late September, October and November.
- ✧ Continue pruning fall blooming perennials through August. Chrysanthemums, Mexican Bush Sage, Copper Canyon daisies, autumn asters and cigar plant cuphea (*Cuphea macropetala*) all benefit from light pruning (remove top growth of four to six inches) at this time.



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