AgriLIFE EXTENSION
Texas A&M System

Brazoria County Master Gardener Association

WHAT'S GROWIN' ON

APRIL 2009

CONTENTS

COMING UP

⇒ **PEARLAND GARDENING SERIES**
Sat, 04/04/09
9 am-12 noon
Pearland Campus
Alvin Community College
Room P104
"Sensible Lawn Care"

⇒ **BCMGA BOARD MEETING**
Tues, 04/14/09
4:30 pm AgriLIFE Office
All members welcome!

⇒ **BCMGA MEETING**
Tues, 04/14/09
6:30 pm AgriLIFE Office
Plant Sale Prep

⇒ **OPEN HOUSE**
Sat, 04/18/09
9 am-12 noon BEES
"Something New for Your Garden"

ED BARRIOS, THE PREZ, SEZ

Just when we thought the cold weather was gone, another winter blast. At least it didn't get to freezing, but there may be some damage to tender plants in the cooler areas of the county. It has been exciting to see lots of things start coming to life and seeing how much, if any, winter damage was done to some of the more tender species.

A much discussed topic lately is how exactly the gardens are run and who is in charge of what. Well that's been an ongoing issue and we're going to be addressing it at the next board meeting in April. In 2007, our president Barbara Ross asked me to lead a group of folks to develop "Operating Procedures for the BCMGA Education Station". Ann McLain, Carole Wenny and I recently modified this document as a general update of our by-laws and procedures. The committees that were created include: Gardens – made up of the board members; Maintenance – Ray Michalik chair; Propagation – Bebe Brown chair; Spring Plant Sale – Cindy Goodrum chair; Citrus Sale – Gil Livanec & Barbara Bruyere chairs; Vegetables – Jesse Knight chair.

If you have questions, issues, ideas, suggestions, want to adopt a bed, want to put up a bed for adoption, want to start a new bed, or want to change the theme of your bed, contact the appropriate committee chair. All of this will be discussed at the next board meeting. I've sent the original document to David Higginbotham to post on our website until the board approves the revisions that were made to the procedures.

Happy Gardening.

PAULA CRAIG'S AGRILIFE

RETENTION COMMITTEE NEWS

The response to the member retention issue has been wonderful. Many positive and helpful responses have come my way from the meetings and from individual emails. Carole Wenny has agreed to work on the "Fun" Committee to schedule learning and leisure events for the membership.

I have sent a survey out to the new interns asking which areas they need more training in during their 60 hours of advanced field training. Most responses are in and I will get the garden, newsletter and education chairs together to work out a training schedule.

GETTING OUT THE WORD ABOUT BCMGA

Sandy Henderson and Carol Farmer are working on a presentation board, and Lee Withers is working on a brochure that will inform county residents about the Master Gardeners and their volunteer mission.

If you'd like to be involved, please let any of us know.

FOREST TENT CATERPILLARS

They're heeerrrre. The annual nuisance, masses of grey caterpillars with blue stripes running either side of the length of their little bodies. Forest tent caterpillars attack most hardwoods, especially oaks, and they don't build tents. And while they can defoliate a tree quickly, the damage is not lethal.

The momma moth lays the eggs in masses around small stems. When the masses emerge, they will feed on the foliage of the existing tree and often will crawl along to other trees. You can discourage this movement by coating a portion of the trunk with petroleum jelly or other goopy substance. Don't coat the whole trunk or you may suffocate your tree.

If you simply can't stand having squirmy creatures drop out of trees into your hair, you can spray with a BT-containing product.

And look out for the tussocks and wooly bears.

THE BEES BUZZ WITH LEE WITHERS

WOW! BEES have been buzzing! There are some very special people who should get a raise for all the work that has been accomplished lately. Billy Heck has been everywhere. The Japanese arch, the potting shed cover, helping with the new pergola, rebuilding my bench, making Bebe a plant dolly for her container gardens, and on and on. What a jewel!

Larry (L.D) Lewis gets special mention for the extremely quick new outdoor potting shed roof for us ladies and gents who are working on the plant sale success. He had some help or hindrance from Rich also! Ha!

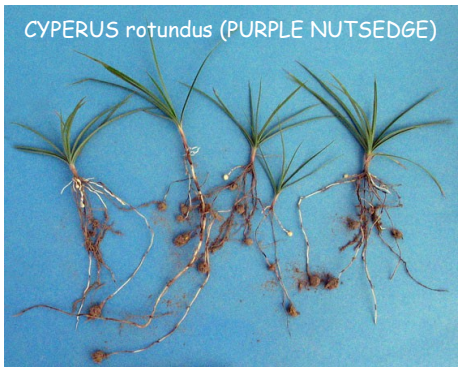
But it's the guy interns (the ones who are about to graduate) that have really WOWED me and others. A.J. Knoll is out there nearly every work day doing whatever I need and that takes a special guy. If I haven't grabbed him for a special chore then Bebe puts him to work and he goes without complaint. Got to love a guy like that. At least us gals do. Chuck Reynolds has been out there finishing the bleachers – sometimes all by his lonesome. What a trooper!

But the two interns that deserve special honors, the Meritorious Award for Really Impressing the Goddess (the MARIG award) should go to Al Fedoruk and Jim Hillis. Jim designed and mostly built (with a couple of able hands) the pergola in what used to be called the Memorial garden. It is a beautiful entrance to the BCMGA BEES grounds. I suggested he use my extra "boysenberry" stain but it was decidedly TOO MAROON for him. I will concede that his choice was a good second.

Al is the man!!! What hasn't he done? He spread mulch in his native bed, then spread mulch in my square foot garden, then spread mulch in the herb bed, then spread mulch to help finish the Native Home Landscape that I have been trying to finish for the last 2 years. If that wasn't enough, Al, with help from Dan Sebesta and Ted Jagen, cleaned up the walkways to the Herb Garden - a chore that I've been battling for a year and a half. When I drove down our drive, turned the corner around the equipment barn passing the Herb Garden to my special parking spot, I dropped my jaw. I thought the tooth fairy, my fairy godmother, my wish upon a star had all come true. I think I scared Al when I hugged him. He is my new best friend and so is his lovely wife Sandy. I thank her for giving him up to do these gifts of service. They are well appreciated.

There are many more people that work tirelessly to make our little 5 acre spot of Eden special. If you talk to one of these guys in the near future give them an "atta boy". It is well deserved.

REFLECTIONS OF A GARDEN GODDESS BY LEE WITHERS


CYPERUS rotundus (PURPLE NUTSEDGE)

I really, really hate nut grass. I don't like to use the word "hate" usually but I definitely have a very strong animosity towards nut grass. I was trying once again to rid myself and my garden of this horrible menace. While out in my square foot garden at home I began to notice several nasty little shoots poking their spiky little heads out of the asparagus square. Reserved to my unpleasant task I began to dig deep into the bowels of my square foot. With the tenacity of a badger I began to unearth parts of this 4 by 4 ft bed. Only because I have added so much compost the soil was so loose that with only a little effort I began to find the nut. But nut grass doesn't work that way, you see it is sneaky. It will allow you to find the first nut with not too much trouble, then you have to follow the little leader tendril (that breaks really too easy) usually deeper and deeper to the second nut. Then just when you think it's over, there continues the tendril to the third nut criss-crossed somewhere tangled in the roots of the asparagus. Just about then you either want to throw your very dirty hands up in despair OR you steel your resolve to not let this mere plant defeat you.

I decided to steel my resolve (not surprising, right). After having teased the tangled tendrils through torturous turns and having extracted enough nut grass to grind into a loaf of bread I began to have weird thoughts. Digging up over one hundred nuts at one time can make you a little weird. Yes, I counted. The most nuts on one tendril were 9 - I think I set a world record. At least personally I have. I guess the Guinness Book of World Records probably doesn't have a category for unusual weed pulling. The previous day my record was a mere 5 nuts in a row (without breaking the tendril I might add) but I knew no self respecting nut grass would really stop at 5 or 9.

I began to reflect on my childhood digging. The time that the neighborhood kids, including me, began to dig to China. After about 4 feet everyone but one kid and I had given up. We persevered knowing we would reach our goal but, alas, even Chuck began to lose faith and eventually gave up too. At that point the hole was over 6 feet deep — enormously deep for a 10 year old shrimp of a girl. I had to get ladders at this point.

And what does this have to do with nut grass? Well, while I was digging in the asparagus bed I realized that just because I plucked 9 of those little nuts at one time, in reality that wasn't the end of the string. Surely the last tendril had broken only to lead to another nut and another nut deeper and deeper in the ground. The other nuts had merely given way as a matter of instinctive survival knowing my tenacity and need for victory. I realize now even though I do not have any scientific proof that the nut grass community is intertwined, much like families in the Ozarks or West Virginia. This is their strength. They know when to break the tie and when to hold on for dear life. They all lead back to the Mother of All Nut Grasses. Don't you know where it is? Deep on the other side of the world, somewhere in a rice patty in China lives the original mother nut with tendrils spread across the oceans to wreck havoc on our gardens, all because I never finished digging that hole.

Happy Gardening – May all your flowers bloom and your veggies forever fruit.

MORE BUZZ: PEACH & PEAR GRAFTING WORKSHOP

BCMGA held its first ever grafting workshop for pears and peaches on Saturday March 14. Several master gardeners participated in the session, including David Higginbotham and Mike Mayfield. We sat down with them the week after the event to find out how it went.

So, was the grafting workshop worthwhile for you?

David: Yes. Even though I had been to a grafting class before, it seems like there is always something more to learn.

Were there some downsides to this workshop?

David: Well, it was very cold. And dark – the lights in the barn don't work when they're cold.

Mike: And we did have a first aid case.

One student made a pretty good slice into her thumb. Is there anything that could help with the safety issue, do you think?

Mike: Maybe we could furnish gloves – I have some Kevlar gloves for cleaning fish.

David: Having the proper knife might help. You need a good sharp knife and good technique.

Explain the technique.

David: Well, we learned that a single cut does less damage to the wood. For the root stock cuts, you can use the table as leverage. On the scion wood, your finger can help support the wood as you cut, but then if the knife slips – uh-oh.

Mike: The main thing is that you need practice. One grafting guy told me you should pick out a tree you don't care about, and just start grafting on it until you've cut it all away. Then you have the technique.

You both had done grafting before – what sorts of things did you pick up this time that were new to you?

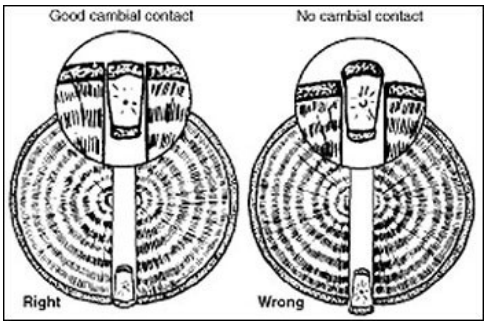
Mike: One thing I got this time was that it's important how you hold the clippers when you cut the top off the root stock. You need to line them up so that the anvil blade is on the side away from the roots. The anvil causes some crushing, and you don't want to damage the wood you're going to graft onto. So you hold the clippers so that the slicing blade is toward the roots.

David: It was good to get specifics about keeping things sterilized, too. At this workshop we used a bleach solution (1 part bleach to 6 parts water) to keep our clippers and knives clean. Every time you get ready to cut something new, you should move the blade in the bleach solution for 15 seconds and then in clean water another 15 seconds.

Explain to me what I'm looking at here, with this little grafted pear tree. It looks like a stick wrapped in tape and foil.

David: Well, these were cleft grafts. That means we made a V-shaped cut in the root stock, and then we carved the scion wood to make a wedge tapered on two sides.

The scion wood goes into the cut in the root stock and you line up the cambium layers.



Then we wrapped the green tape around it pretty firmly. Next comes a strip of Parafilm. We made sure not to wrap over the buds on the scion wood. The wrappings are to keep the graft connection steady, and also to help keep it from drying out.

So what's the aluminum foil for?

David: That's put on loosely to keep the sun off the graft, as well as to conserve moisture. We put it on shiny side out to reflect more sun and keep the new graft cooler.

Hey, that stick has little buds opening out already!

David: That's why we don't cover them with the tape.

Why do grafting?

David: You can get earlier production than with growing a tree from seed, plus you can have the plant you want on a root stock that grows well here.

Mike: It's a hobby, too. We just like tinkering around. It's to answer the question "Can I do it?"

Will you be doing it again?

Mike: Oh, yeah.

David: I've got about enough fruit trees now, but I think I will.

So, David, is your peach tree going to make it?

David: Sure. It had better!

GRAFTING LINGO

Scion

A piece of detached twig or shoot from the cultivar that will produce fruit. The scion usually contains two or three buds, although it may contain more.

Rootstock (also stock or understock)

This is a term applied to the part of the graft that produces the root system of the grafted plant. After grafting, any new growth from the rootstock is removed.

Cambium

This is a single layer of cells between the wood and bark of a tree or shrub that produces new cells. In grafting, the cambium of the scion must line up as closely as possible with the cambium of the stock for a good union.

OUT & ABOUT: ARANSAS/SAN PATRICIO MG CHILDREN'S GARDEN

Oh my! Ed Barrios, Carole Wenny, Rich Tillman and Monica Krancevic felt like kids again as we explored the Aransas/San Patricio Children's Discovery Garden in March. Part of the Master Gardeners' Green Acres Demo Gardens in Rockport, it's "an exciting and fun approach to bringing the plant and insect world to young people. Hopscotch, a maze, Granny's House, the gourd tunnel and a bridge invite children to immerse themselves in nature as they learn. Cultural diversity is celebrated in theme gardens."

Painted paving rounds lead into a special enclosed space.

Among the mosaic walls and painted murals, we each quickly found a favorite place.

A **Plexiglas tank showed development of plant roots as well as the above ground plant parts.** A large simple schematic detailed the name of each plant part.

In the **alphabet primer garden,** **individual tiny pots showed a letter of the alphabet** and nestled in amongst flowers and herbs beginning with that letter.

A **20' long wetland/stream recirculated water from the upper wetland down through a stream** to show how wetlands and their plants provide essential water filtration, as well as the plants that grow in different water levels.

A **specially designed covered wood pavilion** holds classes for local school students which are conducted by a retired biology professor.

Mini-gardens highlight plants from different ecosystems.

The entire garden is chock-full of ideas for teaching children the joys and fascination of plants and their place in nature.

We want to thank the Aransas/San Patricio Master Gardeners who warmly welcomed us, and particularly Linda Collins who explained the garden's evolution, and discussed some of their very interesting projects.

How many of these ideas could Brazoria Master Gardeners use at BEES?

WEED OF THE MONTH BY PAULA CRAIG: *Oxalis violacea*

Family: Oxalidaceae, Wood Sorrel

There are so many "weeds" blooming right now that it was difficult to choose just one. A short list of problem broadleaf weeds includes: sow thistle, catchweed bedstraw, chickweed, henbit, wild geranium, bull thistle, wild strawberry, basketgrass and evening primrose. I chose wood sorrel because it is so thick in my own back yard. -Paula

Wildflower or weed, it depends on where it lives. Violet wood sorrel is blooming in sunny woodlands and lawns throughout the region. The common name, wood sorrel, derives from the French, *surele*, meaning sour. Oxalis, from the Greek *oxis*, also means sour or sharp, the flavor imparted by oxalic acid. Some members of this family have leaves with "sleep movements", opening in the light and closing in rain or darkness.

Depending on the source, there are 5-8 genera and 800-900 species growing in temperate to tropical regions on six continents. Because of its trifoliate foliage and heart-shaped leaflets, violet oxalis is often confused with clover. Attractive 5-petaled flowers are pink to violet with darker striping in the flower throat. This herbaceous perennial is generally prevalent from March to May. Once the summer heat arrives, the tops will die back, and next year, the cycle will start anew.

The problem with oxalis is that, like fire ants, it loves lawns and flower beds and it can be difficult to control. It will reproduce sexually from seed but most often, it spreads by off-shoots of scaly bulbs and underground runners. Control? The best way is to dig it out—ALL of it. Yellow wood sorrel (*Oxalis dillenii*) is also blooming around the county and is a mini version of the violet O, with smaller leaflets and flowers and a spreading growth habit.

There are some cousins of *O. violacea* that are cultivated and sold as container or bedding plants. *O. regnellii* is sold as Irish shamrock. *O. triangularis*, coveted by Aggies, has maroon leaves and light pink flowers and does well in filtered sun light.

If you must resort to chemicals, Amdro Image® or Ortho Weed B Gon® for Southern Lawns can be used on St. Augustine.

ANN McLAIN, THE INQUIRING GARDENER: THE GREENHOUSE

When I caught up with the greenhouse gang last week, they were in the middle of evacuating our venerable glasshouse. The plant population that was at its peak right before the Fruit Tree Sale, is dwindling down toward summer.

Our greenhouse serves many functions. It provides a winter haven for the tender beauties from the Tropical Garden and other places, as well as being the place where much of our Spring Plant Sale material is propagated and grown on. There have always been some veggies produced there as well, for our vegetable gardens, but this winter the propagators turned out hundreds of baby veggies for the Fruit Tree Sale. So the place looked well filled two months ago.

This seems to have been a pretty good year for the greenhouse. Although you probably wouldn't choose to spend a hurricane in a glass house, this one did pretty well with Ike. Apart from some broken glass panes and a few missing thingamabobs, there wasn't much wrong with the thing after the storm that hadn't been wrong before it.

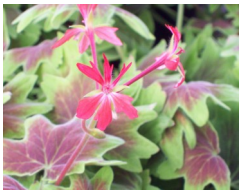
Along with the general fixing up, the non-functioning heating system was replaced with heaters with thermostats. As we all know, dependable heat makes a difference to one's disposition, and that seems to be true even for greenhouses. Beginning in the fall, the greenhouse has also had a new person looking out for its best interests. Cindy Goodrum completed the greenhouse specialist training in the fall (the week after Ike), and she is now supervising operations.

In the specialist classes there were lots of rules for preventing problems, and Cindy assures me that as soon as she gets a minute, there will be a list of do's and don'ts posted to keep us on track. She says the first rule will be "CLEAN UP YOUR OWN MESS", which is pretty much the basic foundation for all other preventative measures, not to mention keeping the greenhouse gang happy. We'll probably get a full rundown on rules and procedures before the greenhouse activity starts up again in the fall.

Although in the past we have had a variety of pest problems, this winter wasn't too bad, Cindy said. There was a mouse presence during the period that the veggie propagation was in full swing, but that has passed. Mites were the other problem this year.

Now that the greenhouse can handle winter weather, I wondered if there would be any upgrade that would allow us to use it during the summer. Cindy says that although there are ventilation fans and shading, it really can't be kept at a reasonable temperature in warm weather. That's why all those lovely potted things were headed out to cooler places. Only the most cold and wind sensitive specimens are still inside.

Cindy was looking pretty frazzled from directing the migration of all those pots, and Bebe could be heard muttering under her breath about how empty the greenhouse looked. My last question for Cindy was one of those dumb interviewer questions – what plant had been her favorite in the greenhouse this winter. She had to think a while on that – I think it was like asking a mother which was her favorite child. Finally she said that overall, she was really enjoying the 'Ragtime' geraniums, but it would be hard to beat the cattleya orchids now blooming. I had to agree; the 'Ragtimes' look neat even out of bloom, and the flashy cattleyas smell wonderful. But my favorites had already headed out. Those would be the new white shrimp plants, covered with showy flowers. I tracked them down in the potting shed and took their picture.



PLANTS OF THE MONTH

GROUND COVER: Acalypha chamaedrifolia [A.reptans] (Dwarf Chenille Plant)

Size: 8"-12" x 2'-3'

Shape: Dense trailing

Light: Filtered sun to almost full sun

Soil/Water: Average/ average

Flowers: Prolific rosy-red

Fertilize: Average

Propagation: Stem cuttings; layers on ground at nodes

Photo courtesy of Monica Krancevic
Flowers and leaves on March 09, 2009

FUZZY FLOWERS

A member of the copper plant genus, this is a dwarf version of the red-hot cat tail. Originating in the Caribbean basin countries of Central America, it's proving frost hardy in the warmer parts of Brazoria where it blooms almost all year.

The plant's habit and leaves reminds one of strawberry plants; although the rosy-red 3"-4" long flowers aren't edible they're fun to fondle.

Once established, it sends out spreading runners which are easily controlled.

It also does well in hanging baskets or containers where the flowers can gracefully droop over the sides.

There's conflicting info about the minimum temp this plant can take, but it should survive in Brazoria even if frosted.

Available at some nurseries, local plant sales, or pass-along.

NATIVE: Penstemon tenuis (Gulf Coast Penstemon)

Size: Basal rosette 8" x 2'; flower stalks up to 30+"

Shape: In flower, upright unbranched stems with flowers along upper 1/3 stem length

Light: Filtered to full sun

Soil/Water: Average; wet to moist—even seasonally flooded

Flowers: Lavender pink—variable hue intensity

Fertilize: Average

Propagation: Collect seeds; allow to self-seed; division of expanded rosette

NOW BLOOMING

While the steamy south isn't noted for a proliferation of penstemons, *P. tenuis* is native to Gulf marshes and prairies from Mississippi to Texas.

The big show occurs late March-early April when the stems are loaded with 3/4" flowers, bees and hummingbirds.

If cut back to the basal rosette before seeds are set and given a bit of fertilizer, it will send up additional flushes, although not as exuberantly as the first bloom period.

If not cut back, seedlings pop up around the mother plant and are easily transplanted or potted up for bloom the following year.

The basal rosettes usually remain evergreen in Brazoria, but become rather woody and gnarly with age. Rejuvenate by division, disposing of the oldest sections.

Available at nurseries, plant sales or as pass-along.

SHRUB: Calliandra emarginata (Dwarf Powderpuff)

Size: To 7' x 7'

Shape: Rounded, graceful

Light: Sun to part sun

Soil/Water: Well-drained, but moist

Flowers: Tiny petals, long stamen clusters; prolific

Fertilize: Low nitrogen

Propagation: Seeds; stem cuttings

Photo courtesy of US Botanical Gardens

BEES LOVE IT...WILL YOU?

How can you not like a plant that shows buds like little raspberries, then explodes into a mass of 1-1/2" long stamens that bees swarm around? It blooms constantly when warm, but is a bit tender with tip die-back when frosted.

A member of the mimosa family, its home is southern Mexico to Honduras. Full sun allows best flowering, but even a few hours of sun will give adequate displays.

As the plant is a legume, it fixes nitrogen and makes typically bean-y looking seed pods. Flowering is more prolific and extended if you're willing to keep removing the pods.

The leaves fold up in the early evening and reopen with the sun; the plant looks rather sparse without the open leaves. If that's disconcerting, place it for daytime viewing only.

Available at some local nurseries.

NOW READ THIS

Healthy Soils for Sustainable Gardens, Brooklyn Botanic Garden All Regional Guides, Niall Dunne, Editor (Brooklyn Botanic Garden, 1000 Washington Ave., Brooklyn, NY 11225) 119 p, $9.95

Reviewer: Ellen Pedisich, Master Composter

In the past, scientists measured soil by its chemical and physical properties. Today, scientists determine the health of soil by its ecology, its habitat for microscopic organisms such as fungi and bacteria, and macroscopic organisms such as earthworms. A healthy, sustainable soil will continue to enrich our plants and animals.

In the chapter on physical properties of the soil, the author writes of the components of the soil, the texture, structure, and layers. Soil components are weathered rock, organic matter, air, and water. Texture is the size of the mineral particles of sand, silt, and clay. The structure of the soil describes how much the particles clump together by natural forces such as temperature, plant roots, and small animals. The topsoil is the most fertile and biologically active part of the soil. The subsoil is a source of nutrients and water.

Garden soil is a complex ecosystem composed of a variety of interacting organisms. Some of these are fungi, bacteria, protozoa, spiders, mites, ants, beetles, and earthworms. These all contribute to the formation of humus. One group of decomposers multiplies and is then taken over by another group until a somewhat stable condition is reached. Beneficial organisms interact with plant roots to protect the plant from harmful predators and help the plants grow. Gardeners want to foster a healthy soil-food web.

Essential nutrients for fertile soil are nitrogen, phosphorous, and potassium. Secondary nutrients are calcium, magnesium, and sulfur. The soil pH, a measure of the acidity or alkalinity of the water in the soil, affects the availability of plant nutrients. A colored chart shows how the soil's pH affects the ability of the plant to absorb nutrients. Plants prefer a slightly acidic to neutral range.

You get to know your soil by working in it and performing a few simple experiments. You use the texture triangle and percolation test. Then you may accurately determine the pH and nutrient levels with a laboratory test. Also, you may have a biological test done to test for fungi, bacteria, and other organisms.

Most gardeners inherit soil and consider conditioning their soil to improve its quality. They use organic conditioners such as compost, manure, and green manure. Some use inorganic conditioners such as lime, gypsum, and sand. The author recommends using renewable conditioners when improving the soil.

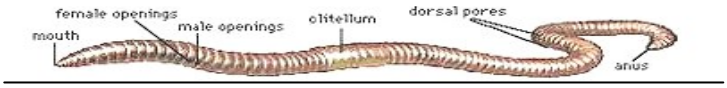
"Composting is an art and a science" (p51). Be a microorganism farmer. The photos of compost piles are similar. They have piles of leaves, small sticks, and fruit and vegetable trimmings. A composter mimics nature, and for the garden compost is a win-win situation.

To fertilize the garden use fertilizer made from renewable sources instead of synthetic products. Some natural fertilizers are manure, compost, fish meal. Synthetic fertilizers usually create wastes. Read the labels, use products wisely, and plant cover crops to protect bare soil from wind and water erosion.

The authors continue with soil care strategies for different types of soil. Their photos reinforce their written words. Mixing your own soil and making raised beds is an answer for problem soils. Once you have your raised bed established add compost each year.

This book is informative and motivational. It's easy to read, has colored charts and photos, and a list of resources. You can visit Brooklyn Botanic Garden in NY; actually it's on Long Island, and you can also visit it on the web. For more information on soils go to http://www.bbg.org/soils.

THE UNDERGROUND: 'NATURE'S PLOUGH' PART 1



The description given to **EARTHWORMS** by Charles Darwin (*The Formation of Vegetable Mould through the Action of Worms*, 1881) who added: "It may be doubted whether there are many other animals which have played so important a part in the history of the world, as have these lowly organized creatures."

2000 years earlier, Aristotle had referred to earthworms as the "intestines of the earth". Between Aristotle and Darwin, however, earthworms somehow garnered a reputation as an agricultural pest.

The Worm Has Turned

We now know the importance of earthworms in soil ecology.

Soil Builders Ingesting organic matter and soil up to 100% of its body weight each day, the earthworm excretes "castings", water-stable aggregates that have 5 times more nitrogen, 7 times more phosphorus, 11 times more potassium and 1000 times more beneficial bacteria than existed in the original material. That equates to about 1/3 pound of very rich fertilizer per worm per year – actually too rich to use at more than 20% of soil volume.

Aerators Tunnels allow oxygen to penetrate deeper into the soil.

Tillers With some tunnels up to 7' deep, earthworm activity loosens soil and brings subsoil minerals to the surface. From .03 lbs. - 4.6 lbs. of soil per square foot per year will be turned over.

Composters All earthworm species contribute to the breakdown of plant debris, although each species' role may vary. Surface dwelling species can start the decomposing process with raw materials. Most species, though, come into the composting process after the organic matter has been partially decayed.

Possible Pollution Mitigators Some research has shown that the mucous-lined walls of tunneling earthworms absorb and detoxify pollutants; this aspect requires significantly more research however.

Possible Pollution Bio-Monitors Another interesting idea, but no methodology has been established to factor in all the variables.

Next Month: Keep the Worms Turning

BCMGA

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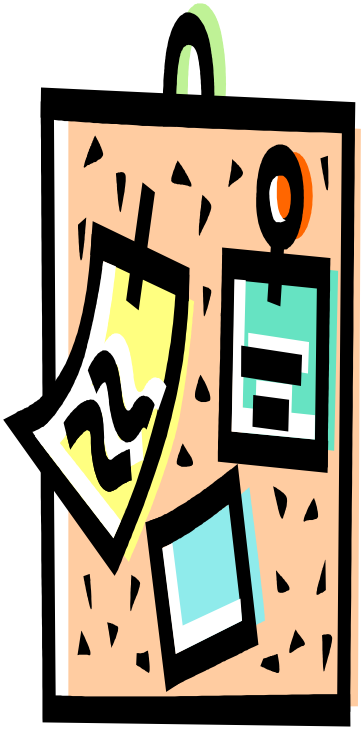
http://grovesite.com/mg/bmg

ANNOUNCEMENTS AND VOLUNTEER OPPORTUNITIES



TAMU Cantaloupe Seeds: Growers Wanted for Seed Harvest
From Joe Masabi, TAMU, 979.845.8562; jmasabni@ag.tamu.edu

There are 7 old open-pollinated varieties developed by TAMU that are no longer on the market. He needs 7 volunteers, each of the 7 volunteers growing 1 variety.

If you are growing vegetables this year and are interested in growing 1 of these varieties, here are the conditions:

- You must not have any other cantaloupe variety in your garden or nearby. He doesn't want the melons to cross-pollinate with other varieties
- He needs only the harvested seeds. You can eat the melons, just save and dry the seeds, then send them to him.

Contact him immediately if interested. Seeds sent to first 7 who reply and meet the conditions.

State Master Gardener Conference in Marshall, TX, April 23-25: Registration at http://2009tmgc.org/

Volunteers Always Needed: B.E.E.S. (the gardens), every Tuesday and Friday, 7:30am—12:00pm

Texas Rose Rustlers & Fort Bend Master Gardeners: "Fling with Felder", Saturday, April 18, 10am, FREE
Felder Rushing, http://www.felderrushing.net/index.htm, speaks at Fort Bend County Fairgrounds, Building "C", Rosenberg, TX

10th Annual Alvin Area Garden Tour and Plant Sale: Saturday, April 18, 10am-4pm
$5 advance/$6 day of tour/children under 12 free. Information at http://amuseums.blogspot.com/

Lake Jackson Garden Club Plant Sale: Lake Jackson Civic Center Plaza, Saturday, April 4, 8:00am—12:00pm