



Dear Friends,

Here is the fifth issue of our weekly gardening newsletter for Houston, the Gulf Coast and beyond. This a project of The Lazy Gardener, Brenda Beust Smith and John Ferguson and Mark Bowen of Nature's Way Resources. We also have a great cast of contributors writers who will chime in regularly. We would love to keep receiving your input on this newsletter . . . comments . . . suggestions . . . questions . . Email your thoughts to: lazygardenerandfriends@gmail.com. Thanks so much for your interest.

Please .

Enjoy!

TOUGH LADIES, MORE HUSBAND TALES AND BLOOMING TREASURES!

By BRENDA BEUST SMITH



Brenda Beust Smith photos

Bauhinia-combo

It's probably not strictly accurate to call our recent (and continuing) drought a

deus ex machina.

But the fact is, we do owe the withhold-the-rain-gods a tip o' the trowel for the incredibly beautiful blooming trees this spring.

Above, are our spectacular native bauhinias, left and center, and, at right, my Mexican bauhinia, an offshoot of a tall tree bauhinia in Kathy Huber's yard. These "orchid trees" are ideal for drought conditions (translation: plant them high in Houston and don't overwater!).

Two other incredible bloomers seen around town are the red bottlebrush and white fringe tree.



Bottlebrush & Fringe Tree

Ornamental trees are especially great for our shrinking yards, most of which we tend to landscape on a horizontal plane, with plants at or near eye level and below.

Trees pull the eye upward giving the area a far larger scope. These spring bloomers are especially effective in directing the eye away from still-emerging summer flowers that will brighten the garden come summer.

In my Awesome Plant Hall of Fame is another of our favorite ladies, the pink magnolia. This is mine on the left. On the right, ane Hoffett Moore's magnificent pink (or saucer) magnolia at 1620 Calumet (in better times):



Pink Magnolia (mine and Jane's)

She's scraggly, I'll admit. But, hey, she's alive and after what she's been through, that's saying a LOT! She's one of my very best friends.

As a young, very dumb new and temerarious gardener, I was determined to make her grow one direction. She wanted to grow another. So I got a rope, and pulled her taut the way I wanted her to go. In protest, she broke, stripping bark all the way to the ground. I raced inside, got some electrical tape, and wrapped that bark back up tight.

Then I pulled her the way I wanted her to grow and tied the rope to an adjacent tree. That was probably 40 years ago. She survived.

Then came Hurricane Alicia and huge branches fell out of the oak hanging over her. They crushed her flat to the ground. I tied a ribbon on her limp broken branches so Husband wouldn't accidentally pull her out of the ground in cleaning up the mess.

She survived.

Then came the Alison Flood that kept her under about 6 feet of water for almost 36 hours. In between were more floods, and droughts, and one dog that insisted on peeing on her and another that dug mercilessly in that bed.

She survived. She may not be as beautiful as Jane Hoffett Moore's is - or was, I should say. But these are two TOUGH LADIES

Every spring I drive over to my old neighborhood (I grew up off Southmore and Sauer next door to the ol' Sutton Elementary) to check on Jane's delight, which has been honored in the [Harris County Tree Registry](#) of outstanding area trees. It always takes my breath away.

[Not too long ago I wrote about](#) Jane's tree's bout with the dreaded ball moss. Now it's being threatened again . . . by our recent droughts. This was not a good year. But Jane's reporting new growth and that's great news! Click on the link above for that story.

If you know of a tree that's truly spectacular, consider nominating it for the ["Trees of Houston Tree Registry"](#) which records the largest species of tough trees for our area. It would be a great resource for selecting trees. You can download a free pdf version by clicking on the above link.

In the meantime, if you're looking for a great-for-this-area small tree to plant, take a tip from the Garden Club of Houston which is completing its 4-year-long [Great Small Trees Project](#) (in celebration of the Garden Club of America's Centennial Celebration

this year).

The GST Grove now includes almost 250 trees, including Native Fringe Tree, Two-Winged Silverbell, Rusty Blackhaw Viburnum, Chalk Maple, American Holly, Hornbeam, and Sweetbay Magnolia, among others.

Look up . . . you may be missing some great treasures for your own garden!

STOP BY AND SAY HI!

* Friday, April 19: "I LOVE Oleanders!" by Brenda Beust Smith at the big Oleander Luncheon in the Moody Gardens Hotel, kickoff event for the 2013 Oleander Festival, April 20-21 at Moody Gardens Visitor Center. Luncheon reservation (and festival) details at <http://www.oleander.org/festival.html>

"THE LAZY GARDENER'S GUIDE ON CD" - Specifically for Houston Area gardens - WHAT TO DO EACH MONTH - when to fertilize, prune, plant what where, best plants for sun, shade, butterflies, hummingbirds, etc. Based on Brenda's quirky 40+ year Houston Chronicle Lazy Gardener column. PDF format, print out only the month you need. \$20 total, checks payable to Brenda B. Smith. Mail to: Lazy Gardener's Guide on CD, 14011 Greenranch Dr., Houston, TX 77039-2103.

Weekly Events & Announcements Calendar:

April 13: 10 - 11:30am. Go Organic with John Ferguson of Nature's Way Resources. Come hear John talk about how to improve your soil and make your garden grow better. Location: Maas Nursery, 5511 Todville Road, Seabrook, 281-474-2488, <http://maasnursery.com/coming-events/future-events/>

April 13: Memorial Northwest Ladybugs Garden Club Annual Garage and Plant Sale: 8:30 a.m. - 2:30 p.m. at 17814 Shadow Valley Drive, Spring, TX 77379. Please assist the Ladybugs Garden Club, a non-profit organization and help raise funds for many deserving community projects.

April 13: "Orchids are Not Hard To Grow" class at Clown Alley Orchids, fee, 1:00 pm, 3119 Lily Street, Pasadena, TX, (281) 991-6841, www.clownalleyorchids.com

April 13: 10 am - 6 pm, League City Garden Club Presents: Dirt Divas & Diggers Plant, Herb & Garden Craft Sale, Location: Butler Longhorn Museum, Texas Gathering Event, \$10 Entry Fee, 1220 Coryell, League City, TX, Featuring Plants, Trees, Tropicals, Herb Pots & Vegetables, Bottle Trees, Glass Flower Art, Hand Painted Birdhouses, Frog Houses, Cork Art, Garden Grab Bags and Raffle Proceeds Benefit Educational, Beautification and Scholarship Programs, leaguecitygardenclub.blogspot.com

April 16-17: Florescence: Treasure, A Garden Club of America Major Flower Show, Beck Bldg., Museum of Fine Arts, Houston, www.gchouston.org, www.flohouston.org, Sponsored by The Garden Club of Houston, River Oaks Garden Club and the Museum of Fine Arts, Houston
EVENTS:

Open to the Public, Reservations required.

To purchase tickets, visit mfah.org/florescence or call 713-639-7523

Tuesday, April 16,

2:30 p.m.

"Flo and Prosecco"

Presenter: Miles Redd, Interior Designer

www.milesredd.com

Brown Auditorium, Law Building, MFAH, 1001 Bissonnet,

7:30 p.m.

Cocktail Reception at the Flower Show

Beck Building, MFAH, 5601 Main Street

April 19: Oleander Festival Kick-off luncheon, Silent Auction, Door Prizes; 11:00 am, Viewfinders Terrance, Moody Gardens Hotel. April 20-21 - Festival featuring Plant Societies, Tropical Plant Vendors and Children Activities; 10 am - 4 pm each day. <http://www.oleander.org/festival.html>

April 20: SFA Gardens to host Spring Plant Sale. NACOGDOCHES, Texas - The SFA Gardens at Stephen F. Austin State University will host its annual Garden Gala Day Spring Plant Sale from 9 a.m. until 2 p.m. Saturday, April 20, 2013 at the SFA Pineywoods Native Plant Center, 2900 Raguet St. in historic Nacogdoches, Texas. A wide variety of hard-to-find, "Texas tough" plants will be available, including Texas natives, heirlooms, tropicals, perennials, shrubs, trees, and exclusive SFA and Greg Grant introductions. Most of the plants are extensively trialed in the gardens before being offered to the public and most are produced by the SFA Gardens staff and volunteers. This popular event benefits the SFA Mast Arboretum, Pineywoods Native Plant Center, Ruby M. Mize Azalea Garden, Gayla Mize Garden, and educational programs hosted at the gardens.

The educational programs at SFA Gardens reach over 15,000 students ages 1 to 100 on a yearly basis. The public is encouraged to arrive early and bring a wagon. For more information, call (936) 468-4404, or visit www.sfagardens.sfasu.edu and click on "garden events" for a list of available plants.

April 20: Clinic: Using Groundcovers in the Landscape.

Need an alternative to turfgrass? Looking to fill a void in your garden? Groundcovers offer many benefits in providing texture, color and variety. Discover the many varieties of groundcovers useful in hard to grow areas under trees, on slopes, and in rocky terrain. Use them as design elements, living mulch, traffic barriers or even visual guides in high traffic areas. Learn about tried and true groundcovers that perform well in Texas sun or shade. Join us at 10:15 a.m. for the clinics, Using Groundcovers in the Landscape. <http://www.calloways.com/garden-events>

April 27-28: BROMELIAD SHOW AND SALE The Bromeliad Society/Houston, Inc.

will hold their annual plant show "Bromeliads: Spectacular Beauties" and sale on April 26, 27, and 28 at Mercer Arboretum and Botanic Gardens (22306 Aldine-Westfield Road). Bromeliad growers will be on hand during sale hours to answer questions. SHOW HOURS: Saturday, April 27, 2-4 p.m. Sunday, April 28, 11 am - 3 p.m. SALE HOURS Friday, April 26, Noon - 4 p.m. Saturday, April 27, 9 a.m. - 4 p.m. Sunday, April 28, 11 a.m. - 3 p.m. Free Admission Website: www.bromeliadsocietyhouston.org. Charlien Rose (713)-686-9969

April 27 & 28: Saturday-Sunday, April 27 12-4 pm., April 28 1-5 pm. Heritage Gardeners of Friendswood 21st Garden Tour, "Through the Garden Gate", 112 W. Spreading Oaks, Friendswood, TX. \$10, children 10 and under free. (281) 992-4438, www.heritagegardener.org

April 27: Identifying the Perfect Plant for your Space Garden Clinic, 10:15 a.m. at both Cornelius Nursery locations, 1200 N. Dairy Ashford and 2233 S. Voss; <http://www.calloways.com/garden-events> Free.

April 27: 8:30 am - 4:30 pm, Montgomery County Master Gardeners in conjunction with Texas AgriLife Extension Service will be hosting the Aquaponics System Design and Operation Workshop. The workshop features both classroom time and "hands on" construction of a single family Aquaponics system. Your registration fee includes lunch and also enters you into a drawing to win the aquaponics home system. Classroom topics will include: history of Aquaponics, various system designs and terminology, planting and harvest techniques, fish health and water quality, pump selection and flow rates. Location: TomLeRoy Education Center 9020 Airport Road, Conroe, TX 77303, 936-539-7824, www.mcmga.com Registration (by April 19, 2013).

April 27: 9 am - 3 pm, 31st annual Herb Day - "A Bloomin' Seminar" presented by The South Texas Unit of The Herb Society of America. Registration deadline is April 19th. Event is held Saturday, April 27th at the Houston Civic Garden Center, 1500 Hermann Park Drive. Speakers: Lynn Herbert, "A Garden Book for Houston and the Gulf Coast"; Marian Buchanan, "Edible Flowers"; Jay White, "Herbal Bouquets". Includes box lunch, booklet, gift bag, door prizes, refreshments. Must register in advance for \$45, see website for details: herbsociety-stu.org

April 28: American Hibiscus Society/Lone Star Chapter Show and Sale, 1-4 p.m.

May 4-5: 2013 Water Garden and Pond Tour sponsored by the Houston Pond Society and Lone Star Koi Club. 10 a.m.-5 p.m. both days, members open around 20 private water gardens and ponds of all sizes, with owners on hand to answer questions. \$10 for both days; tickets available at any participating garden. Details at sites www.houstonpondsociety.org or www.lonestarkoi.com. Advance tickets available at Nelson Water Gardens, Katy.

May 11 & 12: Nursery Open 12-5 pm, Peckerwood Garden Foundation Open Days,

Guided garden tours at 1:00 & 3:00 pm \$10.00 per person.

www.peckerwoodgarden.org, 979-826-3232, 20571 FM 359, Hempstead, TX 77445

May 14: 6:30 pm, Green Thumb Lecture, Precinct 2 Harris County Master Gardener Will Isbell will present a program on "Insects in your Garden", Location: The Meeting Room at Clear Lake Park (on the lakeside), 5001 NASA Parkway, Seabrook, TX 77586. More info: jansidk@aol.com.

May 15: 10 am, Master Gardener Lecture Series, Diana Foss with Texas Parks and Wildlife speaking on Coyotes and Bobcats in our area, FREE AND OPEN TO THE PUBLIC, Location: The Meeting Room at Clear Lake Park (on the lakeside), 5001 NASA Parkway, Seabrook, TX 77586. More info: jansidk@aol.com.

May 20: 8:30-11:00 am, Open Garden Day. You are invited to tour the working and demonstration gardens maintained by the Harris County Master Gardeners at Precinct 2. Master Gardeners will be on hand to answer your gardening questions. A program on Dividing Bromeliads will be offered from 9:30 - 10:30 am. FREE AND OPEN TO THE PUBLIC, CHILDREN WELCOME! Location: Genoa Friendship Garden, 1202 Genoa Red Bluff, Houston, TX 77034. More info: jansidk@aol.com.

June 9: American Hibiscus Society/Lone Star Chapter Show and Sale, 1-4 p.m., Bellaire Community Center 7008 S. Rice, Bellaire, TX

Recipe for Success has summer internships available. For more information, visit <http://recipe4success.org/get-involved/internships.html>

Submit calendar items to lazygardenerandfriends@gmail.com. Events must be submitted by the sponsoring organization. Please note: "garden calendar request" in the subject line.

Need speakers for your group? Brenda's "Lazy Gardener's Speakers List" of area horticultural/environmental experts is available free for the asking. Email your request to: lazygardener@sbcglobal.net.

MULCHING PITFALLS

BY JOHN FERGUSON

This week we continue with gardening issues

associated with mulch.

Remember that many types of mulch develop various types of fungus on its surface as it decays. A few common types are artillery fungus, bird's nest fungus, slime molds, puff balls, toadstools, mushrooms and others. Visible signs of fungus are often the fruiting spores and are beneficial to the soil and plant health.



For example, fungi known as the Stinkhorn Fungus (*Phallus impudicus*) is often found growing on low quality mulches with a high carbon to nitrogen ratio (e.g. mulches that are dyed red or black and ashen mulches). It may start as an egg shaped mass to a stalk covered with slime coated head. This fungus deserves its name as it often has a strong odor similar to that of rotten meat. The fungi produce this strong odor to attract flies and other insects. As the insects crawl on the slime they pick up fungal spores that they carry and spread to other locations. This fungus is most often found during warm moist conditions in the summer and is actually hard at work breaking down the organic matter in the mulch into a form that plants and other microbes can use.

In rare cases large amounts of organic matter may actually increase disease rather than suppress it. The process in which this occurs is not fully understood. The soil environment is changed by the organic material, a rapid growth of the microbial population occurs using up all the available oxygen (O) and producing large amounts of carbon dioxide (CO₂) in the process. This happens when the material is compressed (compacted) or so saturated with water that air movement is restricted. Under these conditions disease organisms would have an advantage for a short while.

Pitfalls of Mulching

As the popularity and benefits of mulch have become better known, mulched landscapes are very common. However, using mulch is a science; not an automatic guarantee of successful gardening. Misuse of mulch, ranging from improper mulch choices to misapplication, may lead to problems. Problems using mulches may occur when recommended horticultural practices and procedures are not followed.

A question we often hear is, "What really happens if I use cheap or bad mulch?" Another statement we often hear is, "I do not see any difference, why should I pay more?" or "I can get it cheaper down the street at your competitor." At the same time, we often hear these same people complain about all the weeds they have and the excessive time they spent weeding, or how much money and time they spent at the doctor's office for illness or allergic reaction related to the herbicides they used to spray the weeds or other chemicals that may be present in the mulch.

The following guidelines will help to ensure success:

Mulch choices and practices vary depending on many factors like climate, plant

species, age of plants, soil type, location, watering practices and others. These factors vary regionally (state to state) but can also vary in a single backyard.

Heavy mulch around certain plant species, during extreme wet conditions can hold too much moisture. This adverse condition typically occurs in plants adapted to dry conditions (cactus, mesquite, etc.).

If mulch is applied against the bark at the base of some woody plants it can lead to stem rot. Some people recommend that for Hosta's, mulch should be applied right up to the crowns but not over them or touching them (allow a small gap for air to circulate). Remember that in a forest, the leaf and twig litter (i.e. mulch) is thick under the leaf canopy but becomes very thin at the base of the trunk, hence this is how mulch is to be applied (i.e. copy nature).

Covering the soil with mulch too early in the season with certain vegetable species can hold them back by keeping the soil too cool (it helps other species grow faster and produce more). When using any soil amendment (compost, mulch, fertilizer, etc.) one must understand the cultural requirement of the species of plant being grown to get the best results.

If some types of mulches are applied deeper than 4", feeder roots often grow into the mulch layer. Later, a disturbance of the mulch or drying out of coarse mulch layers may injure or kill these feeder roots.

Always go look at mulch before you order. Sometimes people have a visual image in their mind about what they want, and very frequently they use terminology incorrectly. Also in different areas of the country words and terminology are used differently. As a result consumers will place an order, only to be disappointed in the results when it is delivered.

Also many dealers and producers will use incorrect or misleading terminology. Some suppliers/dirt yards sell products that use words like "Black" and "Humus" in their names. These products are often made from fresh pine bark fines, do not contain any humus, and are chemically burned to turn it black by adding very alkaline chemicals (i.e. it is mixed with boiler ash which is very alkaline and contains high levels of salts). Other dealers will grind up old pallets, scrap wood, trees, etc. and mix it with fly ash or bottom ash then sell it as a black hardwood mulch, humus mulch, etc. These type products are very poor mulch choices and are often toxic to many plants. People use them, but when the plants get sick and die, they think "I just do not have a green thumb." People buy them because they are often sold at bargain prices...but they are not very cost effective.

What to do in the Garden this Month.

By Brenda Beust Smith

The Lazy Gardener

APRIL

This month, you really should . . .

- * Move orchids outside in shady spots. Use in baskets, or hang from fences, limbs or walls.
- * If necessary, prune spring-blooming shrubs, such as azaleas, quince, wisteria, forsythia and climbing roses after flowers fade. Don't plant wisteria near trees!
- * Keep grafted roses well watered, but make sure none of your water runs off into the sewers. (Fertilizers & other lawn chemicals are damaging our bayous & Galveston Bay).
- * Feed all container plants. Feed hibiscus with hibiscus food or a low phosphorus fertilizer.
- * Plant caladiums in slightly acidic soil with good drainage.
- * Plant new shrubs before it gets any hotter and keep newly set-out plants well watered.
- * Cut flowers to extend blooming season.
- * Pinch tips from coleus, copper plants to make them bushier.

If the spirit moves . . .

- * Fertilize azaleas, magnolias, hydrangeas, irises with azalea food.
 - * Plant Easter lily bulbs in the garden after they finish blooming inside.
 - * Consider ornamental grasses in among your flowers. These add eye-interest by providing varied leaf textures and shapes. Nurseries carry many new varieties now.
 - * Water, mow often to make St. Augustine fill in dead areas more quickly.
 - * Plant bush beans, cantaloupe, cucumbers, eggplants (plants), peas, peppers, pumpkins, squash, watermelon. Put in large, well-established tomatoes so they bear fruit quickly.
 - * Seed bare sunny areas with fast growers such as cosmos, tithonia and other sunflowers.
 - * In the water garden, fertilize hardy lilies after they start to grow. If they aren't blooming as well as they used to, they may need dividing and repotting.
- If you're really feeling energetic . . .
- * Start an herb garden with basil, chamomile, mints, thyme, sage. Plant basil and chives



around plants susceptible to whitefly. Plant squash on small hills to discourage problems.

- * For larger caladium leaves, remove the largest "eye" or bud.
- * Give tomatoes a light feeding of nitrogen when fruits are golf-ball size.
- * Mulch tomatoes, peppers, eggplants. Newspaper under mulch slows weeds.
- * Try shredded sandpaper, crushed egg shells and/or seaweed at base of plants to discourage snails/slugs. (Better yet, get rid of plants eaten by snails/slugs.)
- * Check with County Extension Agents about pecan grafting workshops this month.

Great Don't-Do tips for really Lazy Gardeners

- * Don't panic over silky white webs on tree trunks. Bark lice - good bugs at work!
- * Don't treat for problems before you see actual damage. (See Insect Removal, Page 29).
- * Don't seed bluebonnets or most other wildflowers now. Put in plants. Plant seeds in fall.
- * Don't remove spent foliage from amaryllis, daffodils, irises, lilies. Let it die naturally.
- * Don't overfertilize. Leaf spots, dark areas on older plants may result.
- * Don't overwater. Leaf drop can result. (Also is a sign of underwatering!)
- * Don't plant larkspur, hollyhocks, stocks, delphiniums or snapdragons now. It's too hot.

The monthly gardening activities information above was excerpted from "The LAZY GARDENER'S GUIDE." See below to find out how to get the complete guide:

"THE LAZY GARDENER'S GUIDE ON CD" - Specifically for Houston Area gardens - WHAT TO DO EACH MONTH - when to fertilize, prune, plant what where, best plants for sun, shade, butterflies, hummingbirds, etc. Based on Brenda's quirky 40+ year Houston Chronicle Lazy Gardener column. PDF format, print out only the month you need. \$20 total, checks payable to Brenda B. Smith. Mail to: Lazy Gardener's Guide on CD, 14011 Greenranch Dr., Houston, TX 77039-2103.

GOT GARDENING QUESTIONS?

GARDENING Q&A WITH MARK BOWEN

The most common question this week:
How do I use compost to improve my lawn?

Answer: This is a great time of year to topdress lawns with finished compost. Good finished compost (from the backyard compost pile or a good commercial source) can

work wonders when applied/sprinkled on top of your lawn at a 1/2-3/4" thickness level. It is important to keep the layer applied thin enough so the grass does not get smothered. Also, it is essential to use compost that is not too hot (hot rather than warm to the touch) or that has too high of a salt content (as is the case with mushroom compost and most composts that are poultry or cow manure based).



By adding a compost topdressing this spring, you will be supplying essential macro and micro nutrients to your soil and grass. You will be providing a wide variety of microbes that will help improve the health of your soil, that will help make nutrients available to your plants and that will help fight off diseases and in some cases pests.

Additionally, the compost will help your soil maintain adequate moisture levels during droughts and will help your soil maintain adequate aeration levels so that excess moisture during heavy rain periods can be shed and that adequate oxygen levels can be maintained to avoid disease problems.

The one situation to avoid when composting would be applying a compost topdressing to low lying lawn areas with a history of brown patch disease problems. Compost does contain microbes that help fight brown patch. However, since compost is spongy by nature, it will hold more moisture than is ideal in low areas. For this reason, it is best to re-grade low lawn areas by raising them with sandy loam topsoil so that excess water can spread out rather than sitting in the low areas causing oxygen deficient conditions that are conducive to brown patch growth. Once the low areas have been raised so that they are level with the surrounding lawn areas, then you can go ahead and add a topdressing of compost about two to three weeks after re-grading to give your existing grass or new sod a chance to come out of shock and start actively growing.

Keep in mind when re-grading low lawn areas, you can sprinkle sandy loam topsoil down at a thickness of up to 3/4 of an inch without smothering existing grass. For areas that need to be raised more than 3/4 of an inch, you are probably better off removing any existing grass and then raising the area with sandy loam topsoil, compacting the area and then re-sodding with the sod you removed or new sod.

Yours in gardening,

Mark Bowen

FROM OUR READERS:

Bryan Treadway had this picture to share of
"25 monarch caterpillars on one fennel plant"
after they previously "took out six milkweed plants."

Thanks for sharing Bryan!

Be sure to check out our new gardening blog at www.lazygardenerandfriends.com to get more of your gardening questions answered and to interact with other gardeners. Send any non-gardening questions to me at markbowenhoutx@gmail.com.




NATURE'S WAY
RESOURCES
an organically based service company
<http://natureswayresources.com/>


Wabash
Antiques & Feed Store
Houston's Organic Gardening Headquarters
<http://wabashfeed.com/>

 **The Arbor Gate**
<http://www.arborgate.com/>

JOIN OUR MAILING LIST!



Save 20%: Redeem this coupon for a big discount on Nature's Way Resources Fresh Double Ground Mulch! Please note: this offer is for bulk purchases of mulch by retail customers only at Nature's Way Resources, located at 101 Sherbrook Circle, Conroe TX.

Offer Expires: 4/1/13

