



Florida Master Gardener Awards of Excellence Entry Form

ENTRIES MUST BE RECEIVED BY AUGUST 1, 2015.

County	Manatee	Project Name	Newsletter
Project Start Date	Ongoing	Project End Date	Ongoing
Project Master Gardener(s)	Carol Ann Breyer (now deceased); Dan Charvat; Joy Derkson (co-editor); John Dawson; Nancy Hammer; Norma Kisida; Nancy Porter; Betty Ann Price; Amy Stripe (co-editor).		

CATEGORY: Indicate only one category per entry form. You must assign your entry to a specific category to be considered for an award in that category. Entries are limited to the categories indicated below.

<input type="checkbox"/>	Beautification	<input type="checkbox"/>	Personal Communications
<input type="checkbox"/>	Demonstration Garden	<input type="checkbox"/>	Service to 4-H and Other Youth
<input type="checkbox"/>	Educational Materials Development	<input type="checkbox"/>	Diversity
<input type="checkbox"/>	County Displays/Exhibits	<input type="checkbox"/>	Communications
<input checked="" type="checkbox"/>	Newsletter	<input type="checkbox"/>	Outstanding Master Gardener Team
<input type="checkbox"/>	Outstanding Master Gardener**	<input type="checkbox"/>	

Review the applicable category entry form for exceptions to the general submittal rules above.

Below completed by the County Master Gardener

I approve the submittal of this project: Newsletter		
Lisa Hickey		7-24-2015
Master Gardener Coordinator Printed Name	Master Gardener Coordinator Signature	Date

Please complete and return this entry form in PDF form by **August 1, 2015** to Wendy Wilber.

Florida Master Gardener Awards of Excellence: Newsletter

- **Summary (5 points)**

A descriptive summary of your project. Your application will NOT be judged without this summary included.

The Master Gardening Bench is a monthly newsletter written and edited by Master Gardeners (with occasional contributors such as agents and people involved in urban horticulture.) It targets Manatee County home gardeners and the general public, and is intended to impart timely, useful, and in-depth information on gardening topics - supported by University of Florida research - that promotes Florida-friendly landscaping principles. The newsletter also informs the public about Extension programs and classes. The tone of the newsletter is entertaining as well as informative; we strive for a balance between practical and technical information.

Provide a list of all Master Gardeners who participated in this project and their roles.

Master Gardeners who regularly participated between July 2013 and July 2015 included writers Carol Ann Breyer, Dan Charvat, John Dawson, Nancy Hammer, Nancy Porter and Betty Ann Price; Norma Kisida was staff photographer as well as writer; and Joy Derksen and Amy Stripe were co-editors.

- **Scope of Project (20 points)**

Explain the purpose of the newsletter. Who were the target audiences who might benefit from this project? List community partners if applicable. Provide the budget for the project. Indicate the number of newsletters distributed and how often.

The target audience is the general public and as such we gear our articles to educate Manatee County residents. The newsletter is an additional venue to advance Florida-friendly horticulture and provide timely gardening information, as well as to promote and inform the public about the Extension's monthly gardening programs and classes.

An electronic link is e-mailed to over 3,700 recipients each month, an increase of over 40% increase since July 2013. In addition to individuals, organizations such as the Manatee County Rare Fruit Council, gardening clubs and homeowners associations in turn forward the newsletter link to their own membership, thus increasing the distribution throughout the county. For the convenience of people accessing the Manatee County Extension Service website, issues of the newsletter are posted at http://manatee.ifas.ufl.edu/lawn_and_garden/master-gardener/newsletter.shtml. In calendar year 2014, the site has had over 14,000 unique hits (not associated with e-mailed links or repeated visits by the same IP addresses.) About 300 paper copies per issue (monthly) are made available in public libraries, at Master Gardener tabling events and the Master Gardener Plant Clinic.

There are few out-of-pocket costs associated with production of the newsletter, with the exception of printing paper copies described above. This is funded by monies raised through Master Gardener fundraising activities.

- **Accuracy and Clarity (20 points)**

Project is clear and accurate and citations provided. Copyright provided for pictures in the project.

Newsletter articles adhere to standards that include:

- Citing University of Florida / EDIS sources.
- Inclusion of scientific names whenever specific plants, animals, or insects are featured.
- The newsletter is edited for accuracy by our Master Gardener coordinator, Extension Director, and two Master Gardener co-editors.
- Photos are always credited especially if not obtained a University of Florida site (Floridata.com or any other .edu sources.) We also have our own staff photographer.

- **Educational Value (20 points)**

How was the educational message used in the horticulture program? How many times was the educational message used (examples: copies distributed, website page views)?

Please review "Scope of Project" above, for data on distribution. Our goal is to be both educational and entertaining in delivery of the information. Note that most articles are a page long, or longer, providing enough detail to impart truly useful information. In order to address the areas of interest to our readers, we cover cultural practices, plant selection, pests and wildlife, feature local gardening clubs, and news that impacts gardening in Manatee County, such as fertilizer ordinances. Each issue includes the county Extension calendar of events.

- **Format, Logos, and Branding (20 points)**

Is the graphic design well thought out and have an original design and theme? Identity standards for UF/IFAS, Florida Master Gardener Program, and county Extension programs are followed appropriately.

The newsletter adheres to the style guide issued by the state Master Gardener Coordinator's office, and includes all logos, trademarks, and registration marks of the UF/IFAS, Florida Master Gardener Program, as well as county's logo. Where the style guide is silent on spellings and usage, we utilize the Associated Press Stylebook.

Our layout and graphics are designed to appeal to the bulk of our audience who access the newsletter electronically. Therefore, we design to online standards, including full use of color graphics and photographs, and navigation that makes reading easy. Our photographs carry captions as appropriate.

- **Outcome (10 points)**

How many people participated in the project and what were their duties? Describe the publicity received. How was the project distributed? What was the potential impact on the community or audience? How did you evaluate this program?

Please review "Summary" above for a list of regular Master Gardener participants. In addition, we had editorial contributions from agents and program assistants including Lisa Hickey, Kathy Oliver, and Michelle Atkinson; and other state agencies including Andrew Derksen of Plant & Industry, Jake Edwards of FFWC, and Eric Rohrig of FDACS. Master Gardeners Carol Davis and Mairyann Wrentmore also contributed articles during the judging period. A benefit for Master Gardener contributors to the newsletter is that they receive CEU credits for article research.

- **Learnings (5 points)**

Describe any challenges you encountered or things you might change if you were to do the project again.

The newsletter is ongoing. However, learnings along the way include holding quarterly editorial meetings with the newsletter staff to determine and assign upcoming articles, as well as to establish deadlines. Master Gardeners who are uncomfortable with deadlines are encouraged to "just write" and then their articles can be slotted in as appropriate. Newsletter staff "recruitment" from among other Master Gardeners and Master Naturalists has resulted in excellent contributions to the newsletter.

The Master Gardening Bench

The Manatee County Master Gardener Newsletter
December 2014 - Volume 13 – Issue 12

Mangrove Trimming: Regulations You Need to Know

By Betty Ann Price, Master Gardener 2012

Waterfront homeowners are frequently perplexed by rules and regulations governing mangroves along their shoreline. From permits to "PMT" to "riparian mangrove fringe," the language can be a bit overwhelming. Let's wade through the regulatory swamp with a glossary of definitions intended to protect a precious natural resource, while preserving valuable waterfront property views.

1996 Mangrove Trimming and Preservation Act: (aka the 1996 Act) regulates alteration and trimming of mangroves statewide in Florida. The Florida Department of Environmental Protection provides oversight for the 1996 Act.

Alteration of Mangroves: Any human-induced removal, defoliation, or destruction of mangroves requires a permit (refer to special conditions within). Herbicides that will defoliate or destroy mangroves are prohibited. **Note:** Removal of a dead mangrove tree is considered alteration, and prohibited without a permit. Alterations include cutting mangrove roots or trimming a mangrove that is more than 24 feet tall.

Homeowner Exemption: Within specific parameters, homeowners may trim riparian mangrove fringe (RMF, see definition below) on their property without obtaining a permit. (When the pre-trimmed mangrove height is greater than 6 feet and less than 10 feet tall, the homeowner may trim mangroves on their property back to 6 feet tall. Homeowners may *maintenance trim* mangroves that have been previously trimmed in accordance with an exemption or prior authorization, provided the trimming does not exceed the height and configuration previously attained. When the shoreline is greater than 150 feet in length, only 65% of the mangrove trees along the shoreline may be trimmed. **Note:** the services of a professional mangrove trimmer (PMT) are required if the mangroves are between 10 feet and 24 feet in height.

Mangrove Permits: Permits are required for alteration of

mangroves and situations that do not qualify under the homeowner exemption. General permit applications require a thirty day notice to the Florida Department of Environmental Protection before beginning any work. Permit application: www.dep.state.fl.us/water/wetlands/forms/mangrove/trimapp.doc.

Professional Mangrove Trimmers (PMT): These are persons certified through a variety of professional arboriculture, wetland, environmental, ecology or landscape societies and recognized by the Florida Department of Environmental Protection. PMT services are required to supervise and/or trim mangroves when pre-trimmed height is between 10 to 24 feet tall. A list of PMT for our region may be found at the following link: www.dep.state.fl.us/water/wetlands/mangroves/docs/pmt-swd.pdf

Riparian Mangrove Fringe (RMF): A shoreline band of mangroves no more than 50 feet deep from the most landward to waterward trunks. Only an owner of RMF property may trim or authorize trimming of mangroves within parameters of the 1996 Act.

Trimming: Includes cutting a portion of mangrove branches, limbs, twigs and a portion of foliage. Trimming is intended to shape and preserve the mangrove tree specimen. While the term pruning is not used in the 1996 statute, it may be considered a synonym for trimming. Mangrove trees with pre-trim height over 16 feet tall must be trimmed so that no more than 25% of the leaves are removed annually.

A variety of mangrove trimming styles can offer the waterfront homeowner satisfying shoreline vistas. For mangrove trimming style suggestions, check out the following IFAS publication: www.dep.state.fl.us/water/wetlands/mangroves/index.htm, or contact the Manatee County Extension office, (941) 722-4524.

For more mangrove information visit: http://manatee.ifas.ufl.edu/lawn_and_garden/master-gardener/gardening-manatee-style/m/mangroves.pdf or <http://www.dep.state.fl.us/water/wetlands/mangroves/index.htm>.



Photo credit: Florida Dept. of Environmental Protection, Mangrove Trimming Guidelines for Homeowners

Proper Spacing for Planting Shrubs and Trees in the Yard

By Carol Davis, Master Gardener 1997



When planting shrubs and trees next to or near a building, planning is especially important. People want the landscape to look finished but they often fail to consider what the trees and shrubs will look like in a few years.

Shrubs tend to be planted too close to the walls of buildings because they are usually planted when they are immature. Unfortunately, these shrubs soon grow much bigger and outgrow their space. Then, the homeowner is faced with the constant task of pruning to keep the shrubs away from the walls. This is especially the case during the summer when it is way too hot to be outside pruning!

There is a formula for figuring out how far away from the wall to plant a shrub. Find out the mature width of the shrub, divide that in half, add a foot to that and that's how far from the wall to plant the shrub. For example, if a shrub has a mature width of 4 feet it should be planted at least 3 feet from the wall ($\frac{1}{2}$ of 4 = 2 + 1 = 3). Keeping shrubs away from the walls gives room for painting, tenting, and air circulation, all-important to proper home maintenance. It also cuts down on some of the problems caused by moisture, ants, termites and other bugs. Another consideration is the mature height of the shrubs. Planting shrubs that will soon cover windows, reach

above the roof or outgrow the desired height will cause a need for frequent pruning especially during the hot summer. Research into shrubs' mature width and height can help homeowners minimize some of the necessary maintenance.

Trees are all too often planted where they will require extensive pruning in the future. Tree roots usually spread out at least three times the width of the crown. Therefore, trees should not be planted any closer to the building than $\frac{1}{2}$ their spread at maturity.

Some good guidelines are to plant at least 15 feet from light poles, utility poles and fire hydrants and at least 5 feet from driveways. If planting near poles, use a tree that matures at 20 feet or less. Be sure to look up and avoid planting trees under wires. A small tree could be planted under wires but they tend to have a shorter life span. Trees whose mature height is 30 feet or less should be planted at least 10 feet from the building. Medium trees that get up to 70 feet should be planted at least 15 to 20 feet away. Large trees that get 70 feet or more should be planted at least 20 – 35 feet away. Following these guidelines should significantly reduce tree problems in later years.

For more information, visit <http://edis.ifas.ufl.edu/ep112>.



Bumble Bee Bungalows

Article and Photographs by Lisa Hickey, Urban Horticulture Extension Agent

Did you know pollinators are responsible for pollinating 87% of flowering plants? (Ollerton, 2011) What is a pollinator and what is their job? Pollinators carry pollen from a male flower part to the female flower part in order to fertilize the flower, which subsequently produces a fruit of some type.

Pollination can be wind or animal driven. There are various types of animal pollinators including insects, spiders, bats, and birds. My favorite pollinators are the bees, particularly bumble bees, also known as carpenter bees. Bumble bees are one of the most effective pollinators. (USDA, 2006)

Our five native bumble bees in Florida are known for their distinct yellow and black coloration. (Stange, 2011) Bumble bees are large, hairy insects that are semi-social in their nesting behavior. As the bumble bee roams for nectar, pollen collects on its hairy body. Like honeybees, they have large corbicula, structures on their legs that hold pollen.

Pollen is used to feed the young. They prepare nests to lay their eggs in the ground, in abandoned rodent nests, old logs, or other wooden structures (like the eaves of homes). When their nests are disturbed, they will defend it; otherwise, they are not aggressive insects.

Attracting bumble bees to my yard has been a hobby for many years. Plants with high nectar content attract pollinators. If you are not sure what plants have high nectar content, watch flowering plants

from mid-morning to early afternoon. The plants with high insect traffic and an assortment of pollinators are likely to have an excellent source of nectar.

Consider plants like salvias (I haven't found a *Salvia* yet that hasn't attracted a bee), flowers in the aster family (think daisies or Spanish needle), goldenrod or sweet almond bush are a few good choices. Using native flowering plants attracts native pollinators.

Bumble bees are active from February to November. Queens who have mated hibernate in the winter and begin early spring in search of a nesting area to lay eggs and start their colony.

The bumble bee bungalow pictured is a great nesting area for bumble bees. It was created with $\frac{3}{4}$ " diameter bamboo shoots seven to eight inches long. If hung near the plants that attract them, you may see visitors beginning this time of the year. Watch out for unwanted visitors which can be discharged by a strong spray of water from the hose.

My personal message on attracting pollinators: Pesticide usage or drift from other applicators in the area is a concern when attracting pollinators. Pesticides are picked up on pollen and then carried back to the nests of the pollinators. An informative link on bumble bees in Florida is <http://edis.ifas.ufl.edu/pdf/IN/IN20700.pdf>.

Bloom Where You Are Planted (Florida Alternatives to Northern Favorites)

By Norma Kisida, Master Gardener 2012

If you are still yearning for those northern favorites after reading the North vs. South article in the November issue, here are more colorful and climate friendly alternatives for some of the plants you left behind.

While you may have enjoyed Chinese wisteria (*Wisteria sinensis*) in a previous climate, it is an exotic invasive in the Southeast and can grow so rapidly that it shades out other desirable plants and disrupts ecosystems and is therefore not recommended.

Queen's wreath (*Petrea vovubilis*) is a beautiful vine with similar outstanding features, it grows well here, and is not known to be invasive. The purplish blue star-shaped flowers are similar to wisteria and cover the vine for several weeks in the spring and may bloom several times a year. It is cold hardy in zones 10B through 11. There is a specimen covering an arbor in our educational garden at the Manatee County Extension office.

Although I still miss the Eastern Redbuds (*Cercis canadensis*) blooming along with the dogwoods in the spring, there is a pink blooming tree in our area which is equally attractive. The **pink Tabebuia** (*Tabebuia heterophylla*), also known as the pink trumpet tree or lavender trumpet tree, blooms in early spring and into summer with pink bell-shaped flowers followed by seedpods.

It is a medium size tree which grows 20-30 feet tall with a spread of 15-25 feet. It grows at a moderate rate and is semi evergreen as it may lose its leaves briefly as it flowers and the new leaves emerge making it beautiful year round. It is hardy in zones 10A-11 and grows best in full sun in well drained acidic soil, and has high drought tolerance and moderate salt



Queen Wreath (*Petrea vovubilis*)

Photo by S.H. Brown, UF



Pink Trumpet Tree (*Tabebuia heterophylla*)

Photo from <http://neighbourhoodnursery.com>



Thryallis (*Galphimia glauca*)

Photo by Norma Kisida, Master Gardener, Manatee Co.

tolerance. It is gaining in popularity as it does not have an aggressive root system and is suitable as a patio shade tree and in confined areas.

When I lived in North Carolina and Georgia, I looked forward to the bright yellow blooms of Forsythia as it was one of the first signs of spring, but it only bloomed for a short period. After living in Manatee County for a few years, I have come to appreciate **Thryallis** (*Galphimia glauca*) as much or more because it has showy yellow flowers throughout most of the year. It is a medium sized shrub which is hardy in zones 9B-11. Left unattended it can reach nine feet and is low maintenance except for an occasional pruning to keep it lower and shape it. It actually benefits from being cut back hard in the spring. It thrives in a variety of landscapes and does best in full sun.

For more information, refer to these publications:

- Petrea vovubilis*, Queen's wreath:
http://hort.ifas.ufl.edu/database/documents/pdf/shrub_act_sheets/petvola.pdf
Tabebuia heterophylla, Pink Trumpet Tree
<http://edis.ifas.ufl.edu/st616>
Galphimia glauca, Thryallis
<http://stlucie.ifas.ufl.edu/thryallis.html>

CARPENTER ANTS

By Dan Charvat, Master Gardener 2010

To start out, remember, ALL ANTS BITE. Carpenter ants do NOT sting and contrary to their name, they do not eat wood as many believe. They use their carpentry skills to hollow out wood (logs) for their nesting area.

There are two primary species found in Florida: Florida carpenter ant (*Camponotus floridanus*) found in most of Florida, and the Tortuga carpenter ant (*Camponotus tortuganus*) found in South Florida. Both are the largest bi-colored ants in Florida. There is a wood damaging black carpenter ant (*Camponotus Pennsylvanicus*) located in Florida's Panhandle and other southern states,



The carpenter ants account for 20% of homeowner complaints in metropolitan areas. Generally, they are night foragers. There are 24 pest carpenter ant species in the U.S. What are some of their common traits?

The queen is the largest while the male is the smallest. Like fire ants, the reproductive ants grow wings and fly off to mate and find a new home. The male dies; the female loses her wings and lays a few eggs. She cares for them until they become adults - called *minims* - who then care for the queen so she can spend her time laying eggs. Nests can populate to several thousand. Ants go through a complete metamorphosis, that is, egg, larva, pupa, and finally adult worker or reproductive. When a nest is disturbed, the white items they are carrying around are not eggs, but pupae in cocoons.

Carpenter ants seek existing voids created by other causes such as termites or rotting wood. They do not touch sound wood. Frass is debris as they clean house.

Winged reproductives are often confused with termites. Ants have constrictive narrow waists while termites have broad waists. Bring samples to us for identification if you are not sure.

Carpenter ants like sweets (soda machines), flowers, and honeydew from aphids, scale and mealybugs. They also eat other insects, both living and dead.

Nest sites are close to moisture and food sources, safe from predators (birds and lizards) while safe from flood and heat. Sites are easy to reach for them, but inaccessible for pest control managers.

To kill them, you have to follow a trail back to the nest for treatment and kill the queen. Direct treatment of a nest is a must. Follow the directions as excessive treatment will only cause the nest to move to another location.

Use sugar water or other sweeteners to attract the ants and follow them back to the nest. If you cannot find the nest, insecticidal bait MAY work.

Eliminate all possible bridges to the building from trees, caulk around wires, spray electric boxes, meters, or timer boxes.

When all else fails, call a professional pest control manager and get a guarantee. For more information, go to <http://edis.ifas.ufl.edu/in455>.



Geraniums

By John Dawson, Master Gardener 2007

Geranium is a genus of over 400 species of flowering plants that are commonly known as cranesbills. Confusingly, "geranium" is also the common name of members of the genus *Pelargonium* (sometimes known as storksbills). Both were originally included in one genus, *Geranium*, but they were later separated into two genera in 1789. The term "hardy geranium" is often applied to geraniums to distinguish them from pelargoniums which are often termed "scented geraniums."

The shape of the flowers offers one way of distinguishing between the two genera. *Geranium* flowers have five very similar petals which are radially symmetrical, whereas *Pelargonium* flowers have two upper petals which are different from the three lower petals. Geraniums will grow in any soil as long as it is not soggy. There are many varieties of geraniums with various flower colors and scents that can be grown in beds or as potted plants. They usually require six hours of full sun, but will tolerate some shade. Red geraniums are best at attracting butterflies and hummingbirds to the garden. Dead blossoms should be removed regularly to promote continued flowering.

Geraniums bloom nearly year round in our area but they slowdown in the heat of summer and do best in cooler weather. Planting in the landscape should be done from October to about March. They do best in well-drained soil and fertilized at regular intervals. Yellowing leaves are normally a sign to fertilize or water. Geraniums used as bedding plants can be spaced 12 to 24 inches apart to form

a solid, colorful ground cover.

Geraniums are normally propagated by cuttings, but can be grown from seed. Cuttings need at least three nodes (the part of the stem where leaves grow) and are usually taken in late summer/early fall. Remove the lower leaves, leaving only a small tuft of leaves (no flowers) at the top of the cutting. Geranium cuttings dusted with a rooting hormone will root well in any loose soil. Seeds germinate in one to three weeks at soil temperatures between 70-75°F.

Geraniums sold as 'scented geraniums' are actually *Pelargonium* species. Their scent comes from their leaves, not the flowers. They have glands at the base of their hairy leaves, where the scent is formed and can be detected as the plants transpire. Brushing against or crushing the leaves also releases the oil and the scent. There are numerous varieties whose scents mimic everything from roses to citrus to citronella. Most scented geraniums are not frost tolerant, but can be overwintered as house plants. *Pelargoniums* prefer drier conditions and less fertilizer than geraniums.

For more information, please visit:

Pelargonium x hortorum Geranium
<http://edis.ifas.ufl.edu/fp458> or

<http://gardeningsolutions.ifas.ufl.edu/plants/ornamentals/geraniums.html>.



Saints, Statues, and Symbols: Stories Behind Some Yard Art

By Amy Stripe, Master Gardener 2008

My green-thumb mom always wanted St. Fiacre in her garden. For many years I assumed she meant St. "Francis" who is, after all, always charmingly draped in songbirds and small woodland animals.

A true gardener knows Mom was right. While St. Francis (12th Century Italian) was busy loving nature, St. Fiacre (7th Century Irish) was actually gardening: collecting seeds, tilling the soil, and planting. Francis is a much more benevolent piece of garden art; Fiacre is wielding a shovel. But Fiacre is the actual patron saint of gardeners. His depiction is harder to find and he is decidedly less attractive.

Beyond obvious Christian symbols, there are many other cultural representations seen displayed in yards and gardens. Among Eastern traditions, we find Buddhas (meditation), Namaste monks (welcome) and Quan Yins (solace).

Gnomes, elves and fairies are well represented in the fantasy category. The garden gnome originated in 19th Century Germany where they were known as garden dwarfs. They have so successfully gained popularity that there are several organizations now devoted to their "liberation," (e.g., the Garden Gnome Liberation Front). Gnome liberationists operate under the cover of darkness to restore gnomes to their native woodlands, a practice called "gnoming." (Or, as I call it, "theft.") Serious gardeners have been known to snub the gnome; it is not allowed at the U.K.'s Chelsea Flower Show, for example. (See plastic yard flamingo.)

Florida presents challenges for some yard art. Many homeowners enjoy the tinkle of water from a garden fountain; here, this is often accompanied by the cacophony of frogs.

Practical applications of yard art include bird feeders and baths, which may also attract unwanted critters, including squirrels (feeders) and mosquitoes (baths).

Curiously related to Florida is the plastic yard flamingo. The classic pair of flamingoes (one dipping its head as if feeding, one standing straight up) was the creation of Don Featherstone (no pun intended) of the Union Products Company in 1957. This company was not Florida-based; nor was the flamingo a common Florida sight. But neither of these facts prevented this yard art from becoming iconic of Florida. Call it "kitschy," cute, or cool, many Florida homeowners' associations actually do prohibit this plastic pair from being displayed in your yard.

The concrete yard jockey is also (like the Namaste monk) a symbol of welcome popular in many parts of the country. He extends a hand as if to take the reins of an arriving horse. Whilst these days most yard jockeys are white, there is actually rich historical lore behind the African-American version that revolves around heroic references of this jockey in both the Revolutionary and Civil wars. On the other hand, the concrete burro with basket panniers appears to be just a fanciful planter.

There are literally hundreds of other manifestations of yard art, from disused toilets to expensive sculpture. Just make sure they are weatherproof (can hold up to our fierce sun and driving rains), aren't banned by your homeowners' association, and are in the proper context of your house and garden. For more information on landscaping with yard art, visit edis.ifas.ufl.edu and enter "landscape design" into the search box.

December Calendar of Events

(c) Shirley Denton, 2009

Date	Time	Event
2 nd & 4 th Saturday	10:00 a.m.-1:00 p.m.	Ask a Master Gardener – Rocky Bluff Library – 6750 US Highway 301 N., Ellenton. Visit the Extension Master Gardener information table and get answers to your gardening questions.
2 nd Saturday	10:00 a.m.-1:00 p.m.	Ask a Master Gardener – South Manatee Library – 6081 26 th Street West, Bradenton. Visit the Extension Master Gardener information table and get answers to your gardening questions.
December 13	9:00-11:00 a.m.	Extension Master Gardener Plant ID Tour - Riverview Pointe Preserve - Stroll through De Soto National Memorial and Riverview Pointe Preserve to learn more about Florida's native plants and inhabitants of a coastal habitat. Suitable for all ages. The hike begins in the parking area of the De Soto National Memorial Park and enters into the Riverview Preserve at 8250 De Soto Memorial Highway, Bradenton. Call the Master Gardeners at (941) 722-4524 to register.
December 17	9:00-11:00 a.m.	Compost Happens – Home Composting Workshop Learn to turn your kitchen scraps and yard waste into useful soil amendments, along with details on how to set up a home compost bin. Fee for compost bin. Register online or call the Extension Master Gardeners.
December 20	9:00-11:00 a.m.	Extension Master Gardener Plant ID Tour – Emerson Point Preserve - Stroll through Emerson Point Preserve to learn more about Florida's native plants and inhabitants of a coastal habitat. Suitable for all ages. Tour begins in tower parking area at 5801 17 th Street West, Palmetto. Call the Master Gardeners to register at (941) 722-4524.
December 21	9:00-11:00 a.m.	Extension Master Gardener Plant ID Tour – Robinson Preserve - Stroll through the Robinson Preserve's salt marshes to learn more about Florida's native plants and inhabitants of a coastal habitat. Suitable for all ages. Tour begins in parking area by main entrance at 1704 99 th Street Northwest, Bradenton. Call the Master Gardeners at (941) 722-4524 to register.
December 24 & 25	County Offices Closed	In observance of Christmas Eve and Christmas Day
January 15-25	Various Times	"Put Some AG in Your Culture" - Come visit the Master Gardeners in the Extension educational gardens for the county fair and receive one free plant seedling. Visit the website at www.manateecountyfair.com for more fair information.

UF IFAS Extension
UNIVERSITY OF FLORIDA



University of Florida IFAS Extension - Manatee County

1303 17th St. W., Palmetto, FL 34221 Telephone: (941) 722-4524

Web site: <http://manatee.ifas.ufl.edu> E-mail: ManateeMG@gmail.com



The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information, and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions, or affiliations.



The Master Gardening Bench

The Manatee County Master Gardener Newsletter
March 2015 - Volume 14 – Issue 3



Florida avocados



California avocados

Avocados

By John Dawson,
Master Gardener 2007

Photos taken from: <https://www.wikipedia.org/>

The avocado (*Persea americana*) is a fruit which arrived in Florida in 1833 and comes in four regional types: Mexican, Guatemalan, West Indian, and Complex Hybrid. All but the Mexican variety do well in our area.

In our area, you will want to grow “cold tolerant” varieties. In the U.S. we generally categorize avocados as California (Haas – small with dark pebbly skin) or Florida (larger with green to purple smooth skins).

Avocados are highly nutritious, a good source of potassium, Vitamin A, and heart healthy monounsaturated fats. Florida varieties have less total fat per ounce than California varieties.

Avocado flowers are bisexual; however, the female and male flower parts function at different times of the day. Varieties are classified into A and B types according to the time of day when the female and male flower parts become reproductively functional.

The Type A flower blossoms on the morning of its first day, functioning as “female,” and after a few hours it closes. On the afternoon of the second day, the flower reopens, functioning as “male.” After a few hours, it closes permanently.

The Type B flower opens the afternoon of the first day, functioning as “female,” then closes, reopening the morning of the second day, functioning as “male” before it closes permanently. You may want one of each or have an opposite type nearby in the neighborhood.

New evidence indicates avocado flowers may be both self- and cross-pollinated under Florida conditions.

Self-pollination occurs during the second flower opening when pollen from the anthers is transferred to the stigma of the female flower parts. Cross-pollination may occur when female and male flowers from A and B type varieties open simultaneously. Self-pollination appears to be primarily caused by wind, whereas cross-pollination is caused by large flying insects such as bees and wasps.

Many people try to grow avocados from seed, which is very easy to do, but these seeds will more often than not produce a poor tasting avocado. After waiting six to eight years for fruit, it is very disappointing to have something you don't want to eat. So buy grafted trees from a reliable source. Grafted trees should produce fruit in two to three years.

Avocado trees can be kept pruned to a size of 12 feet and there are some dwarf varieties available. Left unpruned, some varieties can grow to 65 feet. Fruit will fall off when ripe (very soft) or ripen after picking.

Grow avocados on large mounds, because they do not like “wet feet” and separate them by at least 23 to 30 feet. To promote growth and regular fruiting, avocado trees should be periodically fertilized and watered and insects, diseases, and weeds controlled on an as needed basis. See Avocado Growing in the Florida Home Landscape, <http://edis.ifas.ufl.edu/mg213>.

Like many fruit trees, avocados are susceptible to disease and insect pests. The easiest method for avoiding disease and pest problems is to grow scab resistant varieties, planting trees in well drained soils, and monitoring the tree (leaves and fruit) frequently throughout the year. Another good source for learning more about avocados (including videos) is FruitScapes, <http://trec.ifas.ufl.edu/fruitscapes/>.

What's This? Witch's Broom

By Norma Kisida,
Master Gardener 2012



Witch's broom on Brazilian pepper
Photo D.H. Habeck



Witch's broom fungus on Oleander
after pruning with contaminated tool
Photo Dan Culbert UF/IFAS



Witch's broom on "Nellie R. Stevens" holly
Photo UF/IFAS

If the ends of your woody ornamental branches suddenly look like they belong on the end of a broom, you are on the right track for the diagnosis. Witch's broom is a general term which describes a proliferation of shortened stems forming a tight cluster on terminal branches. The name comes from medieval times when unexplainable occurrences were often blamed on witchcraft and brooms during this time were made of bundles of twigs.

The culprit may be viruses, mites, fungi, mistletoe, insects, or nematodes. Common in our area is a fungal infection called *Sphaeropsis tumeficiens*, which can affect many varieties of trees and shrubs such as oleander, bottlebrush, citrus, crape myrtle, wax myrtle, ligustrum, and even the invasive Brazilian pepper tree. This disease may also be present as a knotty gall rather than the witch's broom effect.

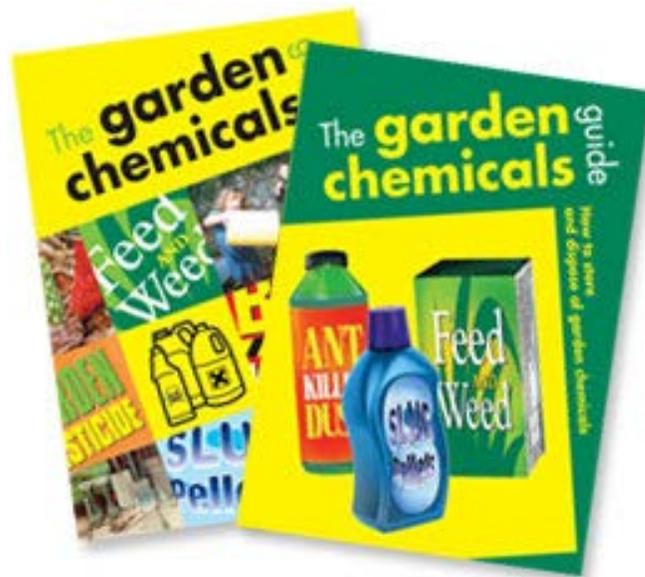
Our Florida hollies have been badly affected by this disease, also called stem gall, which is usually fatal. Since no effective fungicides are available, the best treatment is to prune the branch back to at least six inches below the affected area. Examine the cut end of the stem and remove more if discoloration is present.

To avoid spreading the disease with pruning tools, dip them in a 10% Clorox solution or rubbing alcohol for at least thirty seconds before cutting, between cuts, and when finished. Remove any severely affected plants from the landscape and destroy.

For more information:

Sphaeropsis Gall of Holly and Other Landscape Ornamental Plants: <http://mrec.ifas.ufl.edu/jos/Sphaeropsis.htm>

Sweep up Witch's Broom: <http://okeechobee.ifas.ufl.edu/News%20columns/witches.broom.htm>



Proper Storage of Garden Chemicals

By Dan Charvat, Master Gardener 2010

Many folks are unaware that some commonly used garden chemicals, including herbicides, fertilizers, fungicides, and insecticides, have a limited shelf life and may break down, be rendered ineffective or become dangerous if exposed to moisture or extreme temperatures. The first thing to remember is to use common sense and **READ THE LABEL!** The "Storage and Disposal" section of the product's label will give specific instructions.

Overall guidelines for safely storing garden chemicals include:

- Do not store near any food stuffs, including animal feed.
- Weed killers (herbicides) should not to be stored near plants or seeds.
- The flooring upon which chemicals are stored should be non-absorbent.
- All chemicals should be kept out of reach of children or under lock and key.
- Store products only in their original containers.
- Keep products in a cool, dry place out of direct sunlight. This is particularly relevant to Floridians: you may need to store chemicals somewhere other than the garage or garden shed in humid summer heat. Dry

products, such as granules, can be wrecked with moisture.

- Conversely, don't allow products to freeze. Both very cold and very warm temperatures can cause chemical changes.
- Buy the smallest amount of product you need for the job at hand; or, if you are combining product with water, mix up only what you need for a specific job that day.
- As a rule of thumb, do not keep product for more than two years.

Remember, all pesticides are designed to **KILL** a pest. Avoid exposure to bare skin and eyes. Wear long sleeved shirts, long pants, gloves, goggles and hat. **READ THE LABEL!** After using, wash all exposed skin areas, arms, legs, face, neck and hands.

Lastly, dispose of any expired or leftover product according to the label. Never pour it down a sink or storm drain or anywhere else where it can get into groundwater, water supplies, or adversely impact our environment in any way. Again, **READ THE LABEL!**

For more information, go to <http://edis.ifas.ufl.edu>, or <http://extension.missouri.edu>, or <http://web.extension.illinois.edu/state/index.cfm> and enter "chemical storage" in the search bar.

Manatee County Watersheds

By John Dawson, Master Gardener 2007



Major Watersheds

- Tampa Bay/Anclote River 3
- Little Manatee River 6
- Manatee River 7
- Southern Coastal 8
- Myakka River 9
- Peace River 10

What is a watershed? A **watershed** is an area of land where all of the water that is under it or drains off of it goes into the same place. Here in Manatee County and several of our neighbors, we share overlapping major watersheds. So what does this mean for the average homeowner? Everything we do to our lawns, landscapes, roadways, storm drains, retention ponds, etc. ends up in a major water system. It affects our drinking water and all the wildlife that live in and around our major waterways.

Our main watershed, the **Manatee River Watershed** is located almost all within Manatee County and spans 351.4 square miles. The watershed contains 25 named lakes/ponds, 39 named rivers/streams/canals and two named bays/bayous. For a complete list, go to: <http://www.manatee.wateratlas.usf.edu/watershed/waterbodylist.asp?wshedid=3100202>.

A watershed's boundaries are typically formed by a geographic barrier or divide, such as areas of higher elevation which means water flow in that area generally remains within the boundaries of a particular watershed. As water flows over or leaches into the ground it can pick up nutrients, sediment, and pollutants. Along with the water, these particulates are transported towards the outlet of the watershed, and can negatively affect the ecology within the flow path, as well as in the receiving water source.

For example, inappropriate usage of fertilizers, especially those containing high levels of nitrogen and phosphorus, have caused changes in our water

chemistry supporting algae blooms which cause destruction of plant and aquatic life and reduce food sources for those wildlife that feed upon them.

The Manatee County Fertilizer Ordinance <http://www.mymanatee.org/home/government/departments/parks-and-recreation/natural-resources/new-fertilizer-ordinance-root.html> along with similar efforts by other counties in our area have taken steps to control the amounts, contents and application timings of fertilizer. Homeowners need to familiarize themselves with the new ordinance, which can be enforced with fines.

The Manatee County Agriculture & Extension Service, <http://manatee.ifas.ufl.edu> and (941) 722-4524, has personnel available to assist you and your neighbors with understanding the Fertilizer Ordinance and teaching you how to protect your local watershed.

Homeowners, HOAs, community groups, garden clubs, etc. can make a big difference in the quality of our water by becoming more educated and active in efforts to reduce pollutants and becoming involved in restoration efforts.

For more information on watersheds and links to various resources please go to:

<http://www.swfwmd.state.fl.us/education/watersheds/>

<http://www.tampabay.wateratlas.usf.edu/watershed/?wshedid=7>

<http://www.protectingourwater.org/watersheds/>

The Olive, Queen of Trees

by Amy L. Stripe, Master Gardener 2008



Olive trees have been cultivated by mankind for at least 6,000 years, producing one of the world's most important oil crops, and gracing our orchards and landscapes with their beautiful silvery-gray foliage and twisted trunks.

There are hundreds of cultivars of *Olea europaea* Lucca although its specific origin is unknown. Native to the Mediterranean region, edible olives are now commercially grown in China, Australia, South America and South Africa, in addition to the traditional Mediterranean areas of Europe, Africa, and the Middle East. Yet Spain, Italy and Greece produce upwards of 60% of the world's olives.

In the United States, California, Texas and Arizona are commercial producers of olives; Florida's production is just getting started. Comprised of mostly small farms in northern counties of central Florida, the first commercial millings of olives for oil have been in very recent years.

This is not to say that olive trees are new to Florida. Many early settlers from Europe brought trees to install on private property, largely for ornamental purposes. Some cultivars you may have heard of that can be grown in Florida include 'Arbequina' (usually used for oil), 'Manzanilla' (a table olive usually served green), and 'Sevillano' and 'Mission' (sometimes ripened or brined and served as black table olives).

There are key factors to achieving fruit production of olive trees:

Weather

I have often heard an olive tree will not produce fruit in Florida south of Orlando. Indeed, weather that is too warm throughout the year will not provide the dormancy the tree needs to flower. Frequent temperatures below 55°F in winter are required. I live in zone 9b (coastal) and my young 'Arbequina' fruited like mad last year. Maybe

her northwest location in my yard helped!

By the same token, sustained cold (four continuous hours or more) below 20°F can cause serious damage to olive trees.

Pollination

Many olive trees will self-pollinate, but other varieties may require cross-pollination from a different cultivar in order to produce quality (or any) fruit. I chose the 'Arbequina' for its self-fertilization.

Sunlight

A minimum of 6 hours of direct sunlight is required of olive trees. They will tolerate containers, but not indoors unless the location gets full sun.

Water

Contrary to popular belief, olive trees prefer moister (not soggy) rather than drier conditions. Extremely drought resistant once established, they nevertheless need regular irrigation to thrive. This is especially true in Florida, where porous sandy soils prevail.

Pruning

Fruit develops growth from the previous spring and summer, so don't prune for aesthetic reasons; removing dead or diseased branches is a good idea, however. Some cultivars develop very thick canopies, so thinning to allow better air circulation and sunlight penetration may also be advisable.

Cultivar

'Arbequina' is an example of an early producer of fruit, (usually at three years old). Others will not produce until they are from 5 up to 12 years old.

Olive trees are relatively pest free* (armored scale insect may be the most prevalent problem); they are moderately salt tolerant, grow from 15 to 40 feet tall, and can live up to 1,000 or more years.

For more information, visit <http://floridaolivecouncil.org> and <http://solutionsforyourlife.ufl.edu> (enter "olive trees" in the search box).

***The olive fruit fly has decimated olive production in the Mediterranean and California in the last two years, but has yet to be documented in Florida.**



February 2015 blooms *Olea europaea* 'Arbequina'

Feral Hogs

By Joy Derksen
Master Gardener 2004



Photo: <http://ufwildlife.ifas.ufl.edu>

Feral hogs are becoming more of a homeowner problem in the last few years as we start to build our homes on areas the hogs think of as their habitat. Hogs can destroy landscaping and lawns with their rooting behaviors. If you are unlucky, you can wake up one morning and look out on a lawn that looks as if small tractors and plows have run across the yard.

Hogs have been in Florida for a very long time. Although there were no native pigs in what became the United States, early Spanish explorers Hernando de Soto and Ponce de Leon brought swine to provision a colony at Charlotte Harbor in Lee County in 1521 and 1539.

More pigs were brought by settlers over the next 400 years. During these times, pigs were raised in semi-wild conditions. They were allowed to roam freely, feed off the land, and fend for themselves. The pigs were rounded-up when meat was needed. Free roaming hogs were allowed until the mid-1900s. Obviously, some of these hogs escaped into the wild and established feral hog populations.

Later in the 1900s, private landowners and the state of Florida released hogs and European boars in certain areas of the state for the purpose of recreational hunting. Some of these hogs and boars also escaped the hunters and interbred with the earlier feral hogs. These feral hogs, now numbering around a half million, have adapted very well to Florida's climate and terrain.

Wild hogs prefer to live in large tracts of forest with abundant food, access to water, and dense undergrowth. Their favorite food is acorns! This could describe many of

the eastern county areas where new homes have been built. Humans are now the main predator of feral hogs, although bear, panther, and alligator kill them. Piglets are sometimes taken by foxes, coyotes, and bobcats.

Feral hogs are omnivorous. They eat both vegetation and small animals. Grass, shrubs, roots, tubers, leaves, seeds, fruits, and mushrooms are all things pigs like to eat. They will also eat a variety of small animals including worms, insects, crustaceans, mollusks, baby turtles, small birds, mammals, reptiles, and amphibians. When humans are around, they do most of their eating at night and take it easy in meadow areas during the day.

What can you do if your neighborhood and your yard are having a hog problem? Trapping and hunting are both methods of controlling the feral pig population. Trapping is probably the only way to manage the hog problems in suburban communities. Nocturnal hunting may be more efficient, but is not allowed in some neighborhoods. Fencing is also a method of keeping them out of a garden or lawn area.

The University of Florida recommends burying chain-link or heavy gauge hog wire at least 12 inches underground or the use of multi-stranded electric fencing for the best results.

Like much of Florida's wildlife, we need to figure out ways of living with these animals as neither of us is going away.

Florida Fish and Wildlife rules for hunting hogs: <http://myfwc.com/hunting/by-species/wild-hog/>

University of Florida: "Wild Hogs in Florida: Ecology and Management": <http://edis.ifas.ufl.edu/uw322>

👣👣👣👣 The Back Ten Feet 👣👣👣

Text and Photos by Norma Kisida, Master Gardener 2012



You do so much for your lawn - feeding, watering, weeding, mowing, applying herbicides and pesticides, leaf blowing – but what does your lawn do for you and the community? Yes, a healthy lawn can reduce soil erosion, filter storm water runoff, cool the air, and reduce glare and noise to some degree, but it can be boring, wasteful, create harmful runoff, and offer little for wildlife. Planting just a portion of your yard with native and Florida-friendly wildflowers, grasses, vines, shrubs and trees brings life to your landscape and makes it more enjoyable and earth friendly.



While it can seem overwhelming to convert your lawn from turfgrass to landscape plants that benefit the environment, you can start small. There is a movement started by Sue Scott of Lee County, Florida called “The Back Ten Feet”. The idea is to start with the back ten feet of the property (or whatever amount can be managed), replacing turf with drought tolerant, pesticide free, fertilizer free, and wildlife friendly plants. This not only reduces water and chemical applications but also protects the waterways. While one yard may not make a huge difference, many yards in a community could create greenways for wildlife throughout the area.

A chemical-free and muscle friendly method to remove grass is to cover the area with cardboard or thick layer of newspaper and mulch heavily. It works best if kept watered and wait three to six months before planting.



Homeowners with property bordering waterways may have concerns about blocking the view of the water. This objection can be overcome by planting Florida-friendly ground covers such as perennial peanut, sunshine mimosa, and beach sunflower. Native wildflowers can be low-growing, as are many ornamental grasses. In addition, the backyard is usually less subject to neighborhood HOA rules and is commonly the area bordering our many ponds and waterways. Check your HOA regulations and city and county ordinances before installing a new landscape. A wildlife friendly landscape can be attractive if properly planned and maintained.

The Manatee County Agriculture and Extension Service also has a Florida-Friendly Landscape Assistance Program as well as Master Gardeners available to assist homeowners.

For more information:

The Back Ten Feet with Sue Scott:

<http://www.backtenfeet.com/p/what-is-back-ten-feet.html>

Landscaping for Wildlife:

http://livinggreen.ifas.ufl.edu/landscaping/landscaping_for_wildlife.html





March Calendar of Events



Date	Time	Event
2 nd & 4 th Saturday	10:00 a.m.-1:00 p.m.	Ask a Master Gardener - Rocky Bluff Library - 6750 US Highway 301 N., Ellenton. Visit the Extension Master Gardener information table and get answers to your gardening questions.
2 nd Saturday	10:00 a.m.-1:00 p.m.	Ask a Master Gardener - South Manatee Library - 6081 26 th Street West, Bradenton. Visit the Extension Master Gardener information table and get answers to your gardening questions.
Monday March 9	10:30 a.m.	Faerie Gardening with Friends - This is a fun workshop to do with your family or friends. Bring a container no bigger than a gallon size and leave with a magical garden! Learn all about setting up and tending your tiny garden as well as adding decorations. You are encouraged to bring small plants and other natural and man-made miniature items to share. Location: Lakewood Ranch Town Hall, 8175 Lakewood Ranch Blvd. \$15 materials fee, cash or check only.
Saturday March 14	9:00-11:00 a.m.	It's Fun to Grow Roses in Florida - Come meet Philip Paul, American Rose Society, Vice District Director, Deep South District, and learn the basics of growing roses from pruning, pest problems, watering, and fertilizing. Register online at http://manatee.ifas.ufl.edu or call the Master Gardeners at (941) 722-4524.
Saturday March 14	9:00-11:00 a.m.	Extension Master Gardener Plant ID Tour - Riverview Pointe Preserve - Stroll through De Soto National Memorial and Riverview Pointe Preserve to learn more about Florida's native plants and inhabitants of a coastal habitat. Suitable for all ages. The hike begins in the parking area of the De Soto National Memorial Park and enters into the Riverview Preserve at 8250 De Soto Memorial Highway, Bradenton. Call the Master Gardeners at (941) 722-4524 to register.
Saturday March 14	1:00-3:00 p.m.	Tillandsia Wreath - Learn about these lovely epiphytes that only require air and water to live. This is a "make and take it" workshop where you will make a wreath out of Tillandsia plants. An award winning wreath will be on display as well as other mounted Tillandsias. Bring wire cutters and pliers. Registration and advance payment of \$35 for materials due by March 6 th . Check or cash only – make checks payable to Friends of Extension. Register online at http://manatee.ifas.ufl.edu or call the Master Gardeners at (941) 722-4524.
Sunday March 15	9:00-11:00 a.m.	Extension Master Gardener Plant ID Tour - Robinson Preserve - Stroll through the Robinson Preserve's salt marshes to learn more about Florida's native plants and inhabitants of a coastal habitat. Suitable for all ages. Tour begins in parking area by main entrance at 1704 99 th Street Northwest, Bradenton. Call the Master Gardeners at (941) 722-4524 to register.
Saturday March 21	9:00 a.m.-Noon	Propagation Workshop - Learn several ways to propagate plant material, proper timing of propagation, and materials that are needed to have successful propagation. Techniques demonstrated include seeding, cuttings, and air layering. Attendees will receive one cutting that will be potted by you to take home to propagate. Register online at http://manatee.ifas.ufl.edu or call the Master Gardeners at (941) 722-4524.
Saturday March 21	9:00-11:00 a.m.	Extension Master Gardener Plant ID Tour - Emerson Point Preserve - Stroll through Emerson Point Preserve to learn more about Florida's native plants and inhabitants of a coastal habitat. Suitable for all ages. Tour begins in tower parking area at 5801 17 th Street West, Palmetto. Call the Master Gardeners to register at (941) 722-4524.
Wednesday March 25	1:30-3:30 p.m.	Worm Composting - Vermicomposting - Find out how to use worms to turn food scraps and other waste into compost. Now you can compost in an apartment, condo, or mobile home. Worms can be maintained indoors or out! Register online at http://manatee.ifas.ufl.edu or call the Master Gardeners at (941) 722-4524 to register.
Island Library March 25	2:30-4:30 p.m.	Landscape Tips and Smart Irrigation - This class satisfies the irrigation and landscape educational classes for the Manatee County Outdoor Water Conservation Rebate Program. Two classes in one! Workshop topics will include: Florida-friendly landscape tips; how to adjust your in-ground sprinkler system to conserve water; and the benefits of installing smart irrigation devices. Register online at http://manatee.ifas.ufl.edu or call Joann at (941) 722-4524.
Rocky Bluff Library March 26	1:30-3:30 p.m.	
Thursday March 26	1:00-3:00 p.m.	Coyote Awareness - Come learn the history of coyotes in the United States and Florida, the coyote's behavior and habitats, and how they interface with our life style. Can we live in harmony with the coyote? Are there precautions for homeowners to reduce coyote encounters? Yes! Lisa Hickey, certified Master Naturalist, will discuss these subjects. Location: South Manatee Library; 6081 26th Street West; Bradenton. Register online at http://manatee.ifas.ufl.edu or call the Master Gardeners at (941) 722-4524.
Friday March 27	8:00 a.m.-5:00 p.m.	Green and Growing Youth Field Day - Get the scoop on Green and Growing by attending a day-long field trip to learn about horticulture production and research. The day will be spent at University of Florida's Gulf Coast Research and Education Center (GCREC) in Balm and then we visit a nursery where we will learn what it's like to be a farmer. Open to youth 8-13 years of age as of September 1, 2014 and costs \$15.00. The fee includes group transportation and lunch. Register by March 23rd. For more information, contact Martha Glenn at (941) 722-4524 or by e-mail: mglenn7@ufl.edu .



University of Florida IFAS Extension - Manatee County
 1303 17th St. W., Palmetto, FL 34221 Telephone: (941) 722-4524
 Web site: <http://manatee.ifas.ufl.edu> E-mail: ManateeMG@gmail.com

