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New Master Gardener Class by Terry DeValle

If you have an interest in gardening and serving your community, this class may be for you. Master Gardeners receive in-depth training in horticulture and in exchange agree to give 75 hours of volunteer service helping their local county extension office.



Training will include topics such as basic plant science, entomology, plant pathology, nematology, vegetable gardening, fruit culture, woody ornamentals, lawn management, plant propagation, Florida-Friendly Landscaping, and more. Classes are on Wednesdays from 9:30am to 3:30pm, starting on July 20 through October 5. Most classes are at the Duval Extension Office except two held in Nassau County. You must live in Duval County to apply; if you live outside of Duval County, contact your County Extension Office. The cost to attend is \$100. If you are interested, email or call Sarah to request an application form at sfreeman@coj.net or 255-7450. The deadline to return your completed application is June 20th.

Upcoming May/June Classes

Canning Classes \$20 per person, pre-registration & pre-payment required. Call Jeannie @ 255-7450. Saturday, May 14, Chicken-in-a-Can, 9am—noon; Monday, May 16, Mango Chutney, 9am—noon; Saturday, June 11, Blueberry Lemon Jam, 9am-noon; Monday, June 20, Vidalia Onion Relish, 9-noon

May 24 from 6pm to 8pm, Spring Landscape Class featuring Landscape for Wildlife and Attract Beneficial Insects to Your Yard @ Highlands Branch Library, 1826 Dunn Ave. No fee for this class but please call 255-7450 to register.



May 21 from 9 to 11am, Urban Gardening Open House, see page 8 for details.

May 26 from 9:30 to 11am, Termite Workshop, see page 4 for details.

May 31 from 6pm to 8pm, Heat Tolerant Vegetables and Composting @ Highlands Branch Library, 1826 Dunn Ave. No fee for this class but please call 255-7450 to register.

June 27, 29 and July 1, Camp Florida-Friendly, a fun, educational camp for adults only. Class time is 9:30 am to 2:00 pm. Bring a bag lunch. Light snacks and drinks provided.

- June 27: Fertilizer Basics, Container Gardening, Growing & Using Herbs. \$10 fee. Deadline June 22.
- June 29: Water Conservation, Rain Gardens, Rain-barrel Make and Take. \$50 fee or \$5 for class without make and take project. Registration and payment required by June 24.
- July 1: Get Wild Day featuring Managing Wildlife, All About Snakes, Going Batty, Bat House make and take. \$15 fee. Registration and payment required by June 27.

Things to do in May/June By Terry DeValle

Flowers



Aphids on stem of Gaura

- **Prune back** tall growing perennials to control height. This also helps to remove aphids on plants; plants like gaura will flush back out and rebloom.
- **Cut back** petunias and snapdragons and follow with a fertilizer application to encourage new growth and another bloom flush.

Fruits and Nuts

- ◆ **Harvest blueberries** in

May and June. Visit some of the U-pick growers if you are not growing your own. Refer to <http://www.pickyourown.org/FLnorth.htm> to find local growers.

- ◆ **Harvest peaches, nectarines, plums and strawberries** as soon as they are ready to beat the birds and other critters.
- ◆ **Fertilize citrus** with a citrus fertilizer and provide water during dry weather to prevent splitting once the rains return. Using a citrus fertilizer will insure that the plants are getting the right micronutrients.

Lawns

- **Plant/plug lawns now** to fill in cold damaged areas. Go to <http://edis.ifas.ufl.edu/lh013> for info. Do not plant new sod on top of old sod. This is a bad practice that will lead to disease problems.
- **Calibrate the sprinkler system** to water between 1/2" and 3/4" each time you water. Follow guidelines: odd # addresses on Wednesday & Saturday; even # addresses on Thursday & Sunday. No watering from 10am to 4pm.
- **Check brown spots in lawns** for irrigation problems or chinch bugs. Yellow areas could indicate take-all root rot.
- **Mow at the appropriate height** to help control weeds and develop a deep root system. Mow Bahia at 3-4", Bermuda at 0.5-1.5", Centipede at 1.5-2", St. Augustine standards at 3.5-4", St. Augustine dwarfs at 2.0-2.5" & Zoysia at 1.0-3.0".
- ◆ **Stay ahead of the weeds** by hand pulling or spot treating as needed. For information on weed control, go to <http://edis.ifas.ufl.edu/EP141>.

Trees & Shrubs

- **Prune and fertilize** spring flowering trees and shrubs after bloom if needed.

- **Scout plants frequently for pest problems.** Check plants for aphids, thrips, scale, lace bugs and spider mites. Lace bugs, thrips, and spider mites are problems during hot, dry weather. Now is a good time to treat for scale as crawlers emerge to feed on new plant growth. Because of the mild winter, pest problems will likely be worse. Plants and pests problems are about 2 weeks ahead of schedule this spring.



Eastern lubber grasshopper nymphs congregate to feed

- **Fertilize palms with a palm fertilizer** that has an 8N-2P-12K +4Mg with micronutrients. 100% of the N, K and Mg should be in a water-insoluble form. Broadcast one pound of fertilizer per 100 square feet of canopy area.
- **Control lubber grasshoppers** when they are young. At this stage, they will congregate on a plant and can be handpicked and dropped into soapy water or rubbing alcohol. Several different pesticides are also effective during the early nymph stages. Once they reach adulthood, physical control is the only solution.

Vegetable Garden

- **Scout vegetables for insects frequently**- especially caterpillars. See page 6 & 8 for more info.
- **Use low volume irrigation** like soaker hoses to supply water during fruit production. This will help to conserve water, adhere to irrigation guidelines and reduce disease problems.
- **Harvest onions** as tops fall over. Lift from the ground and place in a shady, cool, dry location. Once dry, remove roots and clip tops back to 1 1/2 inches above the bulb. Store in a cool, dry location. If onions flower, they can be eaten, but not cured for storage.

What to Plant in May/June By Terry DeValle



Coleus 'Pineapple Splash'

Replace cool season plants with others that can take the heat.

Annuals for May include blue daze, calliopsis, celosia, coleus, crossandra, exacum, gaillardia, gazania, hollyhock, impatiens, kalanchoe, marigold, milkweed,

nicotiana, ornamental pepper, pentas, portulaca, rudbeckia, salvia, thunbergia, torenia, verbena, vinca (periwinkle) and zinnia. Plant the underlined plants before June. To keep annuals blooming, fertilize monthly with a standard fertilizer containing nitrogen and potassium, but low phosphorous (middle number), or use a slow release fertilizer that will last all summer into fall. Many flowers benefit from removing spent blooms, especially if they are forming seeds.

Coleus is an excellent selection for hot weather and will provide color from now till the first frost. Try using those with variegated leaves and planting them with flowers that will enhance the color or other coleus with solid colored leaves.

For adding easy color, don't forget perennials.

Salvias, coneflowers, bulbine, stokesia, gaura, porterweed, plumbago, firecracker plant, firebush, firespike, verbena, lantana and many others are great at providing color that require less maintenance than many annuals. There is a nice selection of salvias and angelonias on the market now. My angelonias are on their 3rd year in my landscape so I consider them a perennial.

Bulb-type plants for May include achimenes, allium, alstroemeria, Aztec lily, begonia, blood lily, caladium, daylily, gladiolus, kaffir lily, moraea (African lily), spider lily, tiger flower, walking iris, and watsonia. Plant those that are underlined before June, and for June add butterfly lily to the list.



Caladium

Vegetables to plant include lima beans, eggplant, mustards (May only), okra, peanuts, southern peas, and sweet potatoes. For a list of recommended varieties, go to <http://edis.ifas.ufl.edu/VH021>. Side-dress vegetables with a 6-6-6 or 10-10-10 to keep them productive by placing fertilizer in a band 1" deep and 6" to 8" away from plants. Cool season vegetables like lettuce and spinach will flower with the hot weather even those that are reported to be 'heat

Pineapple Guava By Terry DeValle

This evergreen shrub just blends into the background except when it comes into bloom or bears fruit. Then the interest arises. Previously named *Feijoa sellowiana*, the new name change is *Acca sellowiana*. Even without the flowers or fruit, it is an attractive shrub in its own right. Leaves are a fuzzy grey underneath and upper surface has a bluish cast.

Plants can be used in a multitude of ways. They make an excellent dense evergreen hedge and can be shaped or allowed to grow naturally. Another option is to use it as a patio tree. It requires less maintenance than the popular ligustrum that is frequently seen in area landscapes. Mature size is 10 to 15 feet tall with a matching width, and the plant shape is round to oval. Plant in full sun to partial shade. Once established, pineapple guava is very drought tolerant and will also withstand salt spray.

Flowers are striking with white to soft pink petals and burgundy stamens. The petals are actually edible and have a sweet taste. Petals can be used in salads, to adorn a plate, or in other dishes. Plants begin flowering in April and continue into May.



In August and September, check plants for oval shaped guava-like fruit. When ripe they turn a reddish color and will quickly fall to the ground. Eat the fruit fresh by cutting in half and scooping out the flesh or make into a jelly.



If grown as a tall hedge or patio tree, it is a good example of a FL-friendly plant.

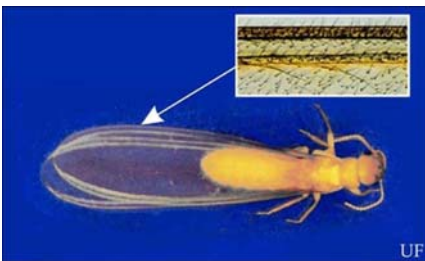
Formosan Termites

by Terry DeValle

Because of the recent news stories regarding the Women's Club building on the Cummer property, we have had numerous questions regarding Formosan termites. They are not new to the area. According to Dr. Koehler, Urban Entomologist with UF/IFAS, Formosan termites were first found in Jacksonville in 2005. The first finding was in the western part of the county near I-295 and I-10 but since then they have been found in many areas including the Northside, Southside, and Riverside.

Formosan termites are a type of subterranean termites meaning they live underground and often go unnoticed. They likely originated in China and over time have been slowly making their way around the globe. Formosans were first reported on the USA mainland in the 1960s and in Florida in 1980. There is cause for concern because the colonies are much larger than the Eastern subterranean termites that we are more accustomed to. Think of a single colony composed of several million termites versus the native subterranean colony which is composed of several hundred thousand termites. To make matters worse, Formosan termites forage up to 300 feet in the soil presenting a serious risk to structures that are close-by.

Formosans have larger colonies with huge territories, infest a wide assortment of structures, and because of their huge numbers consume wood at a very fast pace making them a formidable foe. This is one reason it is extremely important to inspect your home frequently and know the signs of termite infestations.



Most people first notice that they have termites when the swarmers (alates) emerge. The swarmers are the winged reproductive stage that move to a new area, find a

mate, and then create their new home in a moist, suitable area. The king and queen form a new colony composed of a caste system: soldiers, workers and alates. The colony usually lives underground and forms tunnels as they search for food. Unlike native subterranean termites, the Formosan workers form carton nests made of soil, chewed wood, feces and other materials to build their nests and can be quite

Termite Workshop

May 26th 9:30-11:00 am
@ Duval Extension Office, 1010 N McDuff Ave.

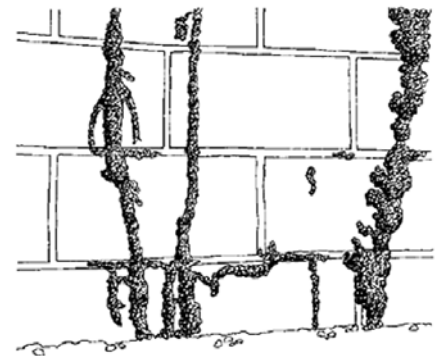
Learn how to identify termites and termite damage, tips on how to avoid getting termites plus control options. \$5 fee to attend.

Register by calling 255-7450 or go online @ http://termites_may2016.eventbrite.com

large. There are exceptions to underground nests. Nests may be built above ground if there is a water source from plumbing leaks, rooftop gardens, gutters that hold water, or AC units.

Formosan alates are distinct in that they are yellowish-brown in color and have many small hairs on the wings that are easily seen with a microscope. The soldiers that defend the colony have orange-brown heads that are oval in shape with curved mandibles and a whitish body color.

Termites may enter the home through a crack in the slab, wood that is touching the ground or by forming soil tubes that are about 1/4 to 1/2" in diameter. These tubes are a conduit for the workers to enter the home that connects them to the food source. These tubes are one of the primary things that termite companies look for when conducting an inspection.



Treatments for Formosan termites are the same as for other subterranean termites. During construction, the traditional treatment is to treat the soil before the slab is poured thus creating a barrier. Once plants are in place around the foundation, treat the exterior again. Most pest control companies also use a bait-monitoring program that is checked during monthly inspections.

For more info: <https://edis.ifas.ufl.edu/mg064>.

Mosquito Tips by Terry DeValle



Credit: J Newman UF/IFAS/FMEL
Aedes aegypti (left) & *A. albopictus*
implicated in transmission of Zika virus

With Zika virus taking center stage in the news and mosquito season upon us, it's time to gear up to reduce mosquito habitats in our landscapes. The two species of *Aedes* mosquitoes

implicated in the transmission of Zika virus are common Florida residents. Both are found in every county in Florida with the exception of *A. albopictus* which is not found in the Florida keys. *A. aegypti* is referred to as the yellow fever mosquito. *A. albopictus* (Asian tiger mosquito) and *A. aegypti* also vector dengue and chikungunya viruses.

Both are considered container mosquitoes. Any objects that hold water around the home are suitable breeding sites. Gardening containers, bird baths, tires, bromeliads, rain-barrels, etc., are all ideal. Standing water is required for mosquito larvae and pupae development. Adult mosquitoes feed on nectar (flowers, honeydew, fruit juices) to get energy for fly-

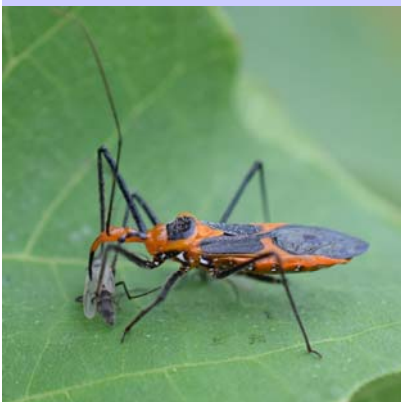
ing. After adult females enjoy a blood meal, they rest for several days to digest the food in a protected area. Adult mosquitoes frequently nest in plant material around the home.

Here are a few tips to reduce mosquito numbers.

- Flush out birdbaths, bromeliads, tree holes and other containers every three to four days during summer months.
- Get rid of cans, bottles, pots, tires, wheel barrels, or other receptacles that collect water.
- If rain water is collected for irrigation purposes, place a screen on the top to keep mosquitoes out and/or treat water or rain barrels with a larvicide. *Bacillus thuringiensis israelensis* (Bti) is a great larvicide available in granules, bits or dunks.
- Clean roof gutters so water can drain properly.
- If there is standing water on the property, treat with Bti as mentioned above.
- For ornamental and fish ponds: aerate water and stock with fish that eat larva.

References and for more info: <https://edis.ifas.ufl.edu/in1120>, <http://edis.ifas.ufl.edu/in1045>.

Milkweed Assassin Bug by Terry DeValle



Although this insect may look intimidating, he is one of the good guys that everyone welcomes to their garden. *Zelus longipes* is called the milkweed assassin bug because it resembles the milkweed bug that feeds on the flowers of the milkweed plant. It

feeds on various soft bodied insects like mosquitoes, caterpillars, flies, etc. In this photo, it is feeding on a blind mosquito. Although it is a generalist feeder, it is especially important in feeding on fall armyworm and the Asian citrus phyllid.

Adult milkweed assassin bugs are distinctive in color

(orange and black). Both the adults and nymphs have a pear shaped head with a three segmented beak that is a piercing and sucking mouthpart. When they are not feeding, the beak is bent and folds under the thorax (mid-section) in a groove. Young go through five instars which undergo subtle changes. Initially they are light brown in color with no wing pads. They look a lot like leaf footed bugs when young and also cluster together when they first hatch out.

Milkweed assassin bugs trap their prey using the "sticky trap method." The insect hides with its forelegs held in the air. The legs have a sticky material that traps their meal. Next, it inserts its stylet into the prey to paralyze it. Then releases enzymes to break down the tissue. It sucks up the food like drinking with a straw.

Info from: <https://edis.ifas.ufl.edu/in883>.

Watch for Pests in the Garden By Mary Puckett

Unfortunately we have already been battling a growing population of army worms, stink and leaf footed bugs in the garden. As we were weeding in the potato plot, one of our Master Gardeners discovered a cluster of leaf footed nymphs on our potato plants at our demonstration site. The blessing in that is that he readily made a pitcher of soapy water and dropped the grouping into the container eliminating at least 10 at fell swoop.



Leaf footed bug nymphs

Leaf footed bugs are related to stink bugs but are longer (closer to 1" long), have dark brown bodies, a narrow cream colored stripe across the back, and flattened, leaf-like hind legs. All adult stink bugs are shield-shaped, 1/2" to 3/4" long, and release an offensive odor when handled. Beans, cowpeas, sorghum, eggplant, potato, tomato, peach, strawberries, okra, and watermelon are a few of the leaf footed bug's host plants.

Because stink bugs and leaf footed bugs have many hosts and are very mobile, there are very few pest control options for the home gardener. Pyrethroid insecticides (a group of synthetic insecticides) is that is available. Thorough weed control to reduce overwintering populations is another. Natural enemies include parasitic wasps which attack the eggs and parasitic flies attack the nymphs and adults. The bugs can also be removed by hand or with a butterfly net and dropped into soapy water. A trap invented by Russell F. Mizell exploits the visual behavior of the bugs and monitors the population. Refer to "Monitoring Stink Bugs with the Florida Stink Bug Trap" http://ufinsect.ifas.ufl.edu/stink_bugs/stink_bugs.htm.



Leaf footed bugs

Another proven practice in monitoring and managing ipests is growing trap crops, an Integrated Pest Management (IPM) technique that uses plants attractive to pests to lure them away from your crop. University of Florida researchers tackled stink bug management by exploring a mixture of plant species as trap crops. Sunflower and buckwheat make for good trap crops during our spring and into the fall. The sunflower "Giganteus" has been an excellent sunflower variety to use as a trap crop for leaf footed bugs. Once the stink bugs are attracted to the trap crop, we can better control them by spraying only the trap crop or hand collecting.

Armyworms are caterpillars that feed during the daylight hours, primarily in the morning and evening. During the heat of the day, you may find them curled at the base of leaves. They seem to appear all at once, eat everything and then disappear. There are four major species in Florida:



Fall Armyworm: Appears each spring and continues with new generations every 30 to 40 days. Feeding continues into fall. Has a wide range of hosts. Among vegetable crops, only sweet corn is regularly damaged, but others are attacked occasionally.



Beet Armyworm: The beet armyworm adult and the egg masses are smaller than the southern armyworm. Pepper is the preferred host and they may feed on buds, make leaves stick together with a silk-like web, or even bore into fruit. The beet armyworm is more difficult to control than the southern armyworm. It is active year round but is usually more abundant in tomatoes and peppers during the warmer months of spring and fall.

Improve the Planting Site, Not the Hole by Larry Figart



Newly planted tree declining
Photo: Larry Figart, UF/IFAS

We have all heard the statement “don’t put a \$100 tree in a \$5 hole.” Well what exactly does that mean? I recently went to a large development where they had planted hundreds of large high quality, expensive trees. The trees were root pruned, hardened off, balled and burlapped. Soon the owners started to notice that their trees were dying back. There was so much attention put on purchasing large high quality trees and very little attention given to the site where they were expected to grow. Remember the goal is to have the tree become established as quickly as possible. Here are the steps in creating a quality planting site.

Evaluate the drainage where the trees are to be planted. Is it poorly drained or well drained. If it is poorly drained then the trees may need to be planted on a berm. Sometimes auguring through the “hardpan” will improve the site drainage allowing water to percolate better.

Look for construction debris. On many sites there is construction debris in the planting site. This debris often includes gravel, concrete and limerock. Remove as much of the concrete and gravel as you can. If there is limerock or shell in the soil, test the pH to make sure it is not too high. In many cases the limerock in the soil alters the pH so much that extensive soil replacement is warranted. This may seem like overkill but it is next to impossible to alter the pH enough to make a difference. Replacement of the soil ends up being more cost effective.

Add organic matter. You are probably wondering if I have lost my mind right now. For years we have said “do not to add anything but the native soil to the planting hole.” Well, I am not suggesting adding organic matter to the hole. I am saying that organic matter should be added to the planting site. The organic matter should be well composted. This can be done in several ways. The best way is to incorporate it into the site before the tree is planted. Till or mix in organic matter to as much of an area around the tree as you can. This will improve drainage, reduce compaction, and improve the soil biology. Vertical mulching is the addition of organic matter by placing composted organic matter in 6 inch wide holes dug to a depth of 6-9 inches. These holes should be spaced 2-3 feet apart in the planting bed. Vertical mulching can be done after the tree has been installed. Radial trenching is the addition of organic matter to a planting site by creating trenches 5-6 inches wide and 8-12 inches deep in a pattern like the spokes of a wheel around the tree. The trenches should then be filled with composted organic matter. The benefit to radial trenching is that it creates pathways for roots to grow out from the tree.



Radial Trenching.
Photo: American Nurseryman.com

Dig a hole 1-2 inches shallower than the root ball and much wider than you need. Remember “plant it high and it wont die”. The hole should be shaped like a saucer (getting shallower as you go away from the tree) and 2-3 times the size of the root-ball. This will allow for the root ball to quickly expand 150 to 400% before it will come in contact with the “site soil.” Another way to accomplish the same thing with less effort is to dig the hole twice the root ball width with the typical vertical sides. Then with a shovel cut the sides of the planting hole to form the saucer-shape planting hole three times the root ball diameter. On extremely compacted soil it is recommended to roto-till up to 5 times the root ball diameter after the tree is installed. While purchasing a quality tree is important, it is equally important to create a space where the tree will become established and thrive.



Planting hole widened into saucer-shape during the backfill process. From: <http://www.ext.colostate.edu/mg/notes/633.html>

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Watch for Pests in the Garden By Mary Puckett

(Continued from page 6)

Southern Armyworm: The southern armyworm is active all year, but primarily in the warmer months. Egg masses contain 100-200 per generation.

Yellow-striped Armyworm: In North Florida, yellow striped armyworms are active beginning in the spring and populations are greatest in the fall. The caterpillar has a pair of triangular black spots on most of its body segments and often has a bright orange stripe just outside these spots on each side.



Southern Armyworm

As a first line of defense, consider horticultural oils, such as Neem, and insecticides containing *Bacillus thuringiensis* Bt for smaller armyworms or use *Spinosad* for larger ones. Insecticides should be applied during feeding times, in the morning or evening.

References:

IFAS/Extension: solutionsforyourlife.com
SARE: www.southernsare.org
Horticultural Sciences at University of Florida:
<http://hos.ufl.edu>

**Urban Gardening Open House
Saturday May 21st 9am-11am**

**Tour our garden site to see new varieties
and learn gardening techniques**

Call Jeannie @ 255-7450 to RSVP

Physically located behind 1007 Superior St.

Once you have read this newsletter, turn "A New Leaf" and pass this information on to a friend.

Terry B. DeValle

Extension Agent-Environmental Horticulture

For individuals requiring special accommodations, please contact our office (904-255-7450) within a minimum of 5 working days of the program. For persons with hearing or speech impairments, when contacting our office please use the Florida Relay Service at 1-800-955-8771 (TDD).

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