



Sorting Out Caterpillars The Good, the Bad, and the Ugly

By Norma Kisida, Master Gardener 2012

(Top photos University of Florida, bottom photos by N. Kisida)



Puss Caterpillar



Io Moth Caterpillar



Saddleback Caterpillar



Hag Caterpillar



Gulf Fritillary



Zebra Longwing



Queen and Monarch



Giant Swallowtail

As a gardener, you are likely to encounter caterpillars of various shapes, colors, patterns, and sizes. Some are smooth while others have hairs or tufts. How do you determine which to leave alone and which to remove or beware of? Some of the ugliest caterpillars can turn into the most beautiful butterflies or moths! Some do damage to food crops and ornamentals. And a few rarely encountered ones - such as those pictured above in the top row - could send you moaning in pain to the emergency room! (This is why it is ALWAYS wise to wear gloves when gardening, as you could accidentally have contact with a stinging insect or plant.)

When trying to identify a caterpillar, a big clue is the kind of plant it is on. Many butterfly and moth caterpillars use a very specific species of plant. Look to see if there are signs of chewing or frass (little pellets of poop) that would indicate the caterpillar is using the plant for food and not just traveling through.

How many caterpillars are present? You may also find some eggs, usually on the bottom of the leaves, and these may be spaced out or in clusters. Note the main body color and pattern, any hairs or tufts, and distinct features such as horns or tails. If you are able, take a close up photo. I have had good luck identifying caterpillars by putting as much information as possible into a search engine (e.g., "orange caterpillar with black hairs on passion vine").

There are sites that use keys to help identify caterpillars such as <http://www.discoverlife.org/mp/20q?guide=Caterpillars>. Manatee County Master Gardeners are also a great resource. Call us with a description of the caterpillar and kind of plant it was found on; bring in the caterpillar, or a photo; or send a photo and information via email to ManateeMG@gmail.com. Now that you have identified the caterpillar, you will need to

make a decision about what to do. If the caterpillar is munching away on your tomato plant (likely a tomato hornworm) or other vegetable, you may need to remove and destroy it. If it is on an ornamental, assess the damage and number of caterpillars.

An example is the oleander caterpillar, a bright orange caterpillar with tufts of long black hairs that, in sufficient numbers, can cause considerable defoliation but will not kill the plant. This is the caterpillar for the polka-dot wasp moth. Another common ornamental caterpillar is the snowbush spanworm, the adult of which is the white-tipped black moth. Again, this caterpillar will strip - but not kill - your snowbush.

There are many natural enemies of caterpillars, such as birds, [predatory stinkbugs](#), parasitic tachinid flies and wasps, and fire ants, which might take care of the problem. You can also prune off the affected portion of the plant if the damage is not too extensive. As a last resort, apply "Bt" (*Bacillus thuringiensis*), a bacterium that kills caterpillar larvae and has no toxicity toward adult insects. It is readily available at garden supply stores. Use it very selectively as it will kill all caterpillars (including butterfly larvae) that consume treated plants.

Whether to remove or treat caterpillars depends on your tolerance for the damage and how much you appreciate the moth or butterfly. Some of us plant caterpillar host plants, such as parsley, dill, fennel, passionvines, pipevines, wild lime, or sennas (formerly cassias), specifically to attract and provide food for the beautiful butterflies common in our area, and we don't mind the munching.

For more information see: Stinging and Venomous Caterpillars <http://edis.ifas.ufl.edu/in014>, Caterpillars in Your Yard and Garden - <http://extension.missouri.edu/p/IPM1019-8>, or Butterfly Gardening in Florida - <http://edis.ifas.ufl.edu/uw057>.



Cherries of Florida

By John Dawson, Master Gardener 2007

When I first arrived in Florida, I overheard a conversation about growing cherries and plums. It wasn't long before I realized they were talking about tomatoes. The cherries I grew up north and the ones from the store (mostly from Michigan) will not fruit here.

Cherries (genus *Prunus*) including sweet cherries (*Prunus avium*) require a rest period (dormancy) during winter. Sweet cherries require 700 to 800 chilling hours to produce fruit. A chilling hour is each hour of temperature between 32 to 45 degrees F. Ten years ago, the average number of chilling hours for this area was 240. Depending on which part of the county you live in, this number may have gone down due to the last three warm winters. So, if you really want to grow cherries here, what can you do? Try these:



There are two low-chill sweet cherries 'Royal Lee' and 'Minnie Royal' that claim to fruit with only 200 to 300 chill hours. You will need both for cross-pollination. They are not available locally and I have not known anyone who has tried them. I have my doubts they will do well here, but if you live in the NE part of the county and it doesn't get any warmer, you might get lucky. Let me know if you succeed!



The only true cherry that does well here is the black cherry (*Prunus serotina*), which is native to North America and can be grown in areas of Florida north of Lake Okeechobee. It can get to be 60 feet tall, but can be kept pruned down to 12 feet. The fruit is quite small with more seed than cherry, not all that sweet, and mainly used to make jams and jellies.



The Barbados cherry (*Malpighia glabra*) is not a true cherry (the early Spanish explorers named fruit after what they were familiar with) and can be grown here as a hedge or small tree. The tree provides fruit ten months out of the year and has pretty pink-purple flowers. The fruit has a very high Vitamin C content and can be quite tart if not totally ripe (cherry red). Very easy to grow and maintain.



The cedar bay cherry (*Eugenia reinwardtiana*), a native of Australia, is a slow growing shrub and can be grown in pots. The fruit is sweet with soft flesh and may appear the first or second year after planting. It is also known as the beach cherry, so it may be quite salt tolerant.



The cherry of the Rio Grande (*Eugenia involucrate*) looks the least like a cherry but has the closest flavor to a sweet cherry. It can be kept as a hedge, shrub or grown in pots. Easy to maintain and the hardiest of all the tropical cherry substitutes, it can withstand temperatures to 0°F. Birds love them, so as with all cherries, you will need to net them, which is easiest when the plant is kept small.

Got Shade?

By Nancy Hammer, Master Gardener 2014

Perhaps your home is situated so that one side gets little or no direct sun, or you have a canopy of live oaks which create so much shade you can't (or don't want to) maintain a lawn. How about a shade garden? If you follow the Florida-Friendly Landscaping™ first principle of "Right Plant, Right Place," your shady landscape will be beautiful, while also requiring less maintenance. There are a variety of shade loving shrubs, ground covers, ferns, tropical perennials (often used as houseplants), woodland, and bedding plants that will thrive in our Florida climate.

However, there are considerations when planning your shade garden. For instance, how dense is your shade? Plant tags often list light requirements such as full, partial sun, partial shade, and/or shade. Shade conditions can change depending on the time of year and as plants mature. If planting near trees, there may be competition with tree roots for moisture, while some shade plants are drought resistant. Here are just a few plants that may be appropriate for your shady landscape.

Beautyberry (*Callicarpa americana*) is suitable for partial shade, has an open, spreading habit, and matures to 3-8 feet. This drought resistant native shrub boasts stunning purple berries in the fall which attract birds. (A variety with white berries is equally eye-catching.)

Firebush (*Hamelia patens*) is a shrub suitable for partial shade. This native grows to 6-12 feet with a spreading habit and is drought resistant once established. It has orange-red tubular flowers year-round and is a butterfly and hummingbird magnet.

Wild coffee (*Psychotria nervosa*) is a native shrub that can reach 4-10 feet and spreads 4-8 feet. It is moderately drought tolerant and suitable for partial- to full-shade situations. It has attractive glossy dark green, puckered leaves, white flowers, and small red fruit that looks like a real coffee bean. There is also a velvet leaf variety.

Liriope (*Liriope* spp.) makes an attractive groundcover with grass-like leaves and small violet flowers in summer. It thrives in partial to full shade, is drought tolerant, and grows well under trees.

Caladiums (*Caladium x hortulanum*) make striking and colorful additions to partial and full-shade gardens.

Ferns such as leatherleaf (*Rumohra adiantiformis*), autumn (*Dyopteris erythrosora*), and cinnamon (*Osmunda cinnamomea*) ferns are naturals for shady areas.

For comprehensive information on plants suitable for shady areas in the Florida landscape, refer to:

<http://edis.ifas.ufl.edu/ep457> "Landscaping in Florida Shade,"
http://orange.ifas.ufl.edu/Res_Hort/pdf/files/Factsheets/013%20Plants%20for%20Tropical%20Shade.pdf "Creating A Tropical Shade Garden," and
<http://conference.ifas.ufl.edu/gardener11/presentations/Mon>
"Florida Gardening Made in the Shade."



Beautyberry

Photo credit: Larry Korhnak, UF



Firebush

Photo credit: Vic Ramey, UF



Wild coffee

Photo credit: UF/IFAS Extension Charlotte County



Liriope

Photo credit: Alicia Lamborn, UF



Caladium

Photo credit: UF/IFAS

Gulf Coast Research & Education Center



Cinnamon fern
Osmunda cinnamomea
Photo by Ann Murray
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The Mexican Sunflower

*"Más que un año"**

A Showstopper that Keeps Performing

By Jim Haupt, Master Gardener 2015

"El girasol Mexicano," the Mexican sunflower (*Tithonia* spp.), native to Mexico and Central America, not only catches a gardener's attention, but also attracts the attention of butterflies, honeybees, birds, and - get this - eggplant and pepper growers of Florida. This beauty belongs to the Asteraceae, a family of familiar annuals that includes zinnias, coreopsis, rudbeckia, asters, and others.

Mexican sunflowers attract migrating Monarch butterflies. It is one of their favorite flowers and is still in bloom as pass through Florida on their annual trek to Mexico. In addition, these beauties are important summer nectar and pollen-rich plants for bees.

T. rotundiflora and *T. diversiflora* can be incorporated in the home landscape as a groundcover, in a butterfly garden, as a screen, as a see-through plant, and it can be used for cut flowers. They are extremely easy to propagate since they self-sow. In addition, both species are drought resistant and flourish in Florida's brutal summer heat.

What's more, both species can complete two generations in a single year. In the southern part of the United States, seeds planted in March and April will produce plants that flower and go to seed in June. Those seeds will fall to the ground, germinate, and

produce a second generation of flowers.

T. rotundiflora can grow to a height of 5-6 feet. 'Torch', an "All-American Selection" and the most popular of this particular species, boasts spectacular orange-red and orange-yellow blossoms. Dwarf varieties, such as 'Goldfinger' and 'Fiesta Del Sol', grow to a height of about 3 feet.

The other species, *T. diversifolia*, also called "Bolivian sunflower" or tree marigold, is a perennial in Mexico, Central America, and south Florida. It can grow to a height of about 16 feet and 12 feet across. It can be a bit of a bully and take over. However, it is relatively easy to control with a heavy pruning hand. The flowers smell like honey, and since the seeds are small, they can ride the wind for several feet.

Research conducted at the University of Florida has shown that certain plants, both cultivated and wild, are hosts to beneficial insects. For example, *T. diversifolia*, planted next to pepper fields, serves as a refuge for the minute pirate bug, a predator of destructive thrips insects.

*"More than a year" in Spanish, indicating the perennial nature of this plant.



Snap, Crackle, and Pop: Trees and Hurricanes

By Joy Derksen, Master Gardener 2004

Surprisingly soon, hurricane season will be upon us once again. Due to the large number of hurricanes in 2004 and some in other years, the University of Florida has real life situations to study that can guide us in planning our landscape for hurricane safety.

Snap: You don't want your trees to snap in two during a windstorm. So the first suggestion is to plant wind-resistant trees, especially near your home! Fortunately many of our native trees are on the "good" list. Southern magnolia (*Magnolia grandiflora*), live oak (*Quercus virginiana*), baldcypress (*Taxodium distichum*), pondcypress (*T. ascendens*), sea grape (*Coccoloba uvifera*), and mahogany (*Swietenia mahagoni*) are all on the wind-tolerant list.

Many familiar palms are also on this list. Pygmy date palms (*Phoenix roebelinii*) are the most wind resistant of all the palms studied by the University! Cabbage palms (*Sabal palmetto*); Florida silver (*Coccothrinax argentata*), Florida thatch, (*Leucothrinax morrisii*), and royal (*Roystonea elata*) palms make the list. These are all palms that evolved in our hurricane state. But adonidia (*Veitchia merrillii*), bottle (*Hyophorbe lagenicaulis*), spindle (*H. verschaffeltii*), areca (*Dypsis lutescens*), pindo palms (*Butia capitata*), and other date palms (*Phoenix* spp) are also survivors.

Queen palms (*Syagrus romanzoffiana*) and Washingtonians (*Washingtonia. robusta*) - which are frequently used in landscape - do NOT do well in high winds. Other trees that are likely to fail in high winds are *Ficus benjamina*, laurel oak (*Q. laurifolia*), and the prohibited invasive Australian pine (*Casuarina equisetifolia*). These trees should not be planted where they could cause damage by falling on a home. Proper pruning by an arborist and removal of damaged trees can also help keep your home safe.

CRACKLE: Look up to see if trees are going to impinge on electrical wires. You don't want to hear the crackle of a downed power line! Pruning and tree removal may be the solution here. Don't plant tall trees under electrical wires. Downed electrical wires during a storm are inconvenient and can kill. Visit <http://hort.ifas.ufl.edu/treesandpowerlines/> for trees and shrubs suitable for planting near and under power lines.

POP: No matter the type of tree, flooding during hurricanes can cause roots to pop out of the ground. Some trees take flooding in stride if they have plenty of space for their roots. A live oak will hold as long as its roots are widely spread. A live oak with little root space, stuck in a tiny median in a parking lot will probably fall. And a live oak whose roots have been cut so as not to disturb a sidewalk is likely to give way on the root cut side. If you are in an area prone to flooding choose trees that do well in wetlands.

Here are some publications that will help you with hurricanes and trees:

<http://edis.ifas.ufl.edu/pdf/files/FR/FR17500.pdf> Page 12 has a list of suitable trees.

<http://edis.ifas.ufl.edu/pdf/files/FR/FR17400.pdf> has all sorts of information and another list of coastal trees that are suitable for hurricane prone areas.

An excellent book available at Manatee County Public Libraries:

Stormscaping: Landscaping to Minimize Wind Damage in Florida by Pamela Crawford with contributions by numerous Florida Extension Agents, 2005, Color Garden, Inc.

Coontie – An Oldie But What A Goody!

By Norma Kisida, Master Gardener 2012



Male coontie cone



Female cone and seeds



Coontie plant

(Photos: N. Kisida)



L to R: Florida red scales and hemispherical scales, long-tailed mealybugs on cycad leaf, and mealybug (left in photo) being consumed by mealybug destroyer (Photos: Lyle Buss, UF/IFAS)

Since moving to Florida I have admired coontie (*Zamia floridana*) and planted many of these natives in my landscape. But it was not until I read [A Land Remembered](#) by Patrick D. Smith that I appreciated the importance of this plant to the indigenous people and early settlers of Florida. Known as "Seminole bread" or "Florida arrowroot," it was a major source of starch for flour. Although it is toxic in its natural state, it can be processed to make an edible starch. (Warning: this is a complicated process and best not to attempt it at home!) In addition, the seeds, although attractive, contain a carcinogen and should not be handled without protection.

Coontie also has a great ecological importance as the host plant for the atala butterfly (*Eumaeus atala*). This butterfly, once thought extinct from depletion of coontie for starch production, has rebounded and now is present in several southern counties of Florida. It is not usually seen as far north as Manatee County. Coontie seeds are an important food source for some birds and small mammals.

Coontie is a member of the cycad family which includes the commonly seen landscape plants such as the cardboard plant (*Zamia furfuracea*), queen sago (*Cycas circinalis*), and king sago (*C. revoluta*). Cycads are considered living fossils as they can be traced back to the Dinosaur Age. Due to their palm-like appearance they are often mistaken for palms. Of these cycads cited above, the UF/IFAS Assessment of Non-Native Plants in Florida lists cardboard plant as caution for central Florida. And the sagos are susceptible to cycad aulacaspis scale, a very

serious pest that severely damages and ultimately kills the host plant.

Coonties, however, make excellent landscape plants as they have a tropical look with their bright green palm-like leaves. They work well as a specimen or container plant, in masses for a 3-foot ground cover, or as border plants. They are cold hardy and drought resistant and will take full sun although they prefer some shade. They are very slow growing so tend to be expensive. And keep in mind that installing a coontie (from pot to landscape, say) is a delicate process. They have a taproot and many sensitive feeder roots that do not respond well to change. When buying one in a nursery, ensure the taproot is not coming out of the bottom of the pot. Try to conserve as much of its surrounding pot soil as possible and don't plant any deeper than the level it was in the pot.

Once established, coontie is a very hardy plant well-adapted to its native Florida. While relatively pest-free, the most common pest problems are Florida red scale and long-tailed mealy bugs. A black coating (sooty mold) on the leaves is a sign of these insects. Before treating, look for mealybug destroyers, which may be sufficient to control the pests without chemicals. If badly infested, first prune off affected plant parts and apply a fine high-grade horticultural oil, making sure to get the top and bottom of the leaves. A repeat application in ten days may be needed. Any sooty mold, although not harmful, may be removed with a sharp stream of water.



Setting a Landscape Budget

By Amy L. Stripe, Master Gardener 2008

I sat down recently with Manatee County Extension Agent Michelle Atkinson, who is responsible for training and advising professional landscapers in our county. My line of inquiry concerned how a homeowner should go about apportioning a budget for landscaping.

"Soil is the first priority," Michelle said. "You cannot go back once plants are installed and fix poor soil!" She is dead right; most of our soils are nutrient poor and possibly full of builder's waste.

Before installing plants, get your soil tested for pH (\$3 at the Extension) and test for water drainage (dig a hole 18" deep, fill with water, and see how long it takes to drain.) Do this during our rainy season (June through November) for a more realistic reading.

You may need to add soil amendments to assist with drainage, such as top soil or processed manure, to any ornamental landscape bed before you install plants.

The next consideration is the balance between turfgrass and landscape beds. "Plant material is more expensive to buy per square foot than turfgrass, but turfgrass requires more inputs such as fertilizer, water, and pesticides," Michelle said. "So consider the ongoing maintenance of the plants you choose."

Turfgrass always needs supplemental irrigation, which means a sprinkler system and rain sensor, and frequent mowing, whereas drought-tolerant, low maintenance plants do not.

Michelle also recommends setting aside a portion of your budget for mulch; there are many options, but perhaps the most economical is small nugget pine bark in terms of longevity. A combination of mulches also works well, such as pine nugget on top of pine straw.

Lastly, we discussed the choice of landscape plants. Michelle pointed out that while you want a balanced landscape plan, you should not rely on only a few plant selections.

"Monoculture - the selection of only one type of hedge, for example - sets you up for potential failure," she said. "Should a pest or disease take hold, you've lost the whole bunch. Better to diversify your plant material; it increases your odds, and the beauty of your landscape."

Michelle recommends homeowners create a master plan for their landscape and go about executing it a bit at a time. Make sure you are aware of easements on your property, consider the mature size of plants you install, and always keep maintenance in mind.

May CALENDAR OF EVENTS

Air Potato Leaf Beetle

Date	Time	Event
1 st Saturday	10:00 a.m.-1:00 p.m.	Ask a Master Gardener – Island Library – 5701 Marina Drive, Holmes Beach. Visit the Extension Master Gardener information table and get answers to your gardening questions.
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.
Saturday May 6	10:00 a.m.-Noon	Creating Mobile Container Gardens – A Hands-on Workshop – The \$15 materials fee (payable by cash or check only) includes all supplies necessary to grow a summer vegetable of okra, sweet potato, or black eyed peas. Everyone will be supplied tools; however, you may bring your own if you feel more comfortable. We will use a hand drill with a ¼” bit along with the next bit size down, a 1” door-hole saw blade, and a 3 ¾” hole saw blade. Come join the construction crew and take home a mobile vegetable garden. Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners at (941) 722-4524.
Saturday May 13	9:00-11:00 a.m.	Extension Master Gardener Plant ID Tour - Riverview Pointe Preserve & DeSoto National Memorial - Stroll through 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 DeSoto National Memorial Park and enters into the Riverview Preserve at 8250 DeSoto Memorial Highway, Bradenton. To register call the Extension Master Gardeners at (941) 722-4524.
Tuesday May 16	10:00 a.m.	Monthly Guided Tours of the Master Gardener Educational Gardens - Join us for a guided tour lasting about one hour. The gardens illustrate a variety of garden styles and techniques, demonstrate Florida-Friendly Landscaping™ principles, educate residents about plants that perform well in Florida landscapes, and inspire garden visitors to follow recommended gardening practices at home. Register by calling the Extension Master Gardener Plant Diagnostic Clinic (941) 722-4524.
Saturday May 20	9:00-11:00 a.m.	Extension Master Gardener Nature Tour – Rye Preserve - Take a hike through upland habitats along Rye Branch and learn about Florida native plants, natural history, and early settlement of the area. Drinking water, sturdy shoes, and hiking sticks are recommended. Visitor Center open 9 a.m.-noon and 1:00-4:00 p.m. Call the Extension Master Gardeners (941) 722-4524 to register.
Saturday May 20	10:00 a.m.-Noon	Worm Composting – Vermicomposting – Find out how to turn food scraps and other waste into nature’s perfect compost! This workshop will teach you how to assemble a bin and includes each step of the process to take the mystery and fear out of what you’ll find to be a most rewarding “hobby” that supports a philosophy of reducing, reusing, and recycling. Worm bins can be purchased after class, payable with cash or check. Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners at (941) 722-4524.
Wednesday May 24	10:00-11:30 a.m.	Salad Table Gardening – Are you tired of bending over your garden or getting down on your sore knees to weed your garden? Then STOP by and learn how to build a “salad” gardening table or a raised garden that requires limited bending and is wheelchair accessible. Wheels can be added to make the table mobile. Instructions will be given at the workshop. Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners at (941) 722-4524.