



Photo credit: Jared C. Daniels UF



ZEBRA LONGWINGS

BY MACK LESSIG, MASTER GARDENER 2015

One of the more routine butterfly visitors to Florida gardens and landscapes is the zebra longwing (*Heliconius charitonia*). The zebra longwing is common throughout the state in areas with deep or dappled shade. It is especially frequent in gardens/landscapes that include firebush (*Hamelia patens*) and its host plants, the corky stem passion vine (*Passiflora suberosa*) and purple passion flower (*P. incarnata*.)

The zebra longwing has also been the Florida State Butterfly since 1996! But that is not the only special designation belonging to *H. charitonia*. Zebra longwings, along with the *Heliconius* genus, are unique amongst butterflies for their consumption of pollen as well as nectar.

While feeding on nectar, the butterfly also collects pollen on its proboscis. It then secretes a cocktail of salivary enzymes that breaks the pollen down into a rich protein drink. This process, by nature of

better nutrition, extends the life span of Zebra longwings by several months. Compared to other butterflies, that's a tremendous expansion.

Longwings also exhibit a behavior called "trap-lining." Once a food source is located, the butterfly takes a "mental" note of the plant, pollen content, and nectar value. This information is imprinted, and the zebra longwing adds this food source to its unique daily foraging route.

After a long day of foraging, the butterfly displays another special attribute by roosting communally in the same place every night. These nightly gatherings can range from a small family group of three to a huge community of up to 60 butterflies! The zebra longwing butterfly may be a common sight, but it is most definitely not a typical butterfly.

For more information, visit
<http://edis.ifas.ufl.edu/in805>.

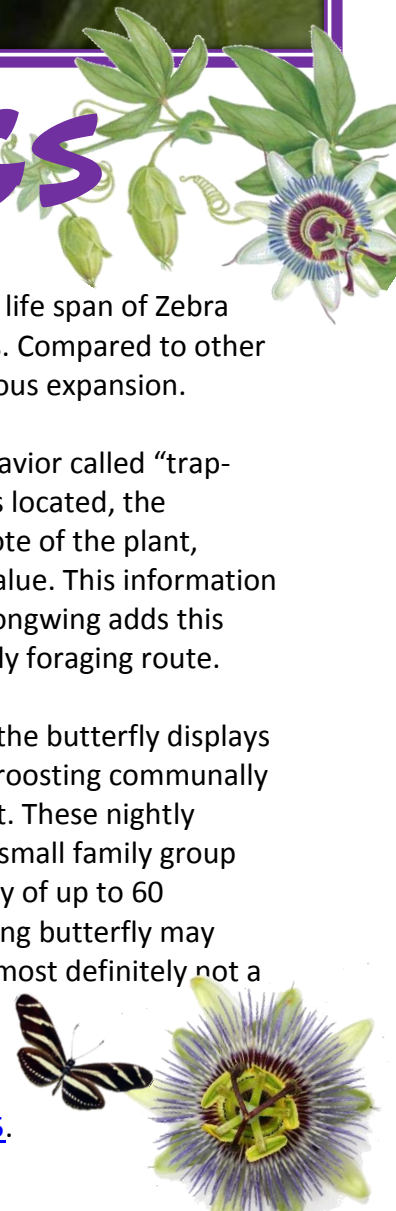




Photo Credit: James Castner, UF/IFAS

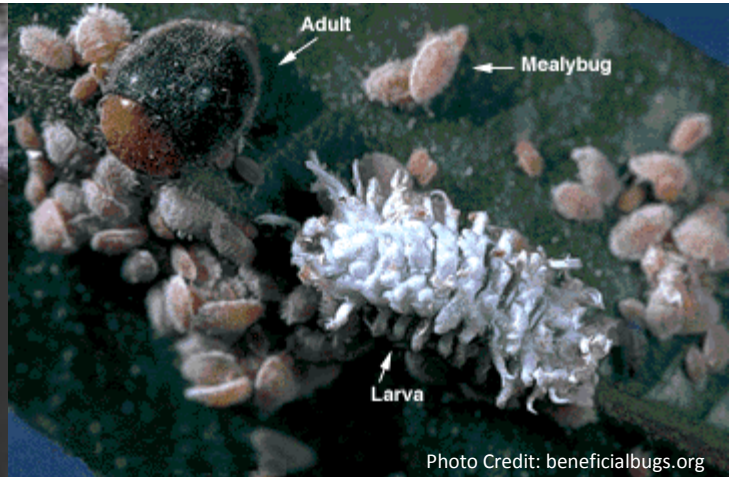


Photo Credit: beneficialbugs.org

Mealybug vs Mealybug Destroyer

By Nancy Hammer, Master Gardener 2014

Have you ever seen what looks like spots of powdery cotton on protected areas of the leaves, buds, or stems of your landscape plants or houseplants? You may have been eyeballing mealybug colonies. The name mealybug is derived from the powdery or mealy wax that covers the body.

Mealybugs (Pseudococcidae) are 1 to 4 mm-long, soft-bodied scale insects that pierce and suck the juices from plants. Most females lay between 100 to 200 eggs. The newly hatched nymphs, called "crawlers," do just that until they settle down to feed. Adults can also move, but do so slowly.

Feeding is most common on new plant growth, and can result in yellowed spots on leaves, leaf curling, distortion of growth, and premature leaf drop. Mealybugs feed on a wide array of plants, including coleus, amaryllis, citrus, hibiscus, gardenia, oleander, orchids, and many others. They secrete a waste product, charmingly called "honeydew," which can result in the growth of sooty mold fungus that affects photosynthesis and the appearance of the plant. Ants feed on honeydew, so if you see ants on your plants, take a closer look.

Mealybugs are mobile, but move slowly. If you spot mealybug colonies, and then also see what appears to be a larger mealybug which seem busier than the others, you may have spotted the hero of our story, the mealybug destroyer. More precisely, this is the larval stage of the mealybug destroyer. (*Cryptolaemus montrouzieri*). The immature stage looks

completely different from the adult stage (complete metamorphosis).

The larva looks like a more robust and speedier version of the mealybug with its white, waxy coating. Try not to confuse one for the other as the destroyer is your gardening friend. One larva can consume up to 250 young mealybugs in a lifetime. The larva will become a lady beetle although unlike the bright, multicolored Asian lady beetle, it is a muted brown with a tan to orange head. The adults move quickly when disturbed, and so are not often seen. Both the larvae and beetles are masters at consuming large numbers of mealybugs. Adults and young larvae prefer eggs, while older larvae are not particular.

For more information on control of mealybugs, contact the Master Gardeners at the Extension office, (941) 722-4524 or refer to the following:

Scale Insects and Mealybugs on Ornamental Plants, University of Florida/IFAS by Eileen A. Buss and Jay Cee Turner - http://manatee.ifas.ufl.edu/lawn_and_garden/master-gardener/gardening-manatee-style/s/scale-insects-mealybugs-ornamentals.pdf

Pests of Homes, Structures, People and Pets, University of California IPM by M.L. Flint, Extension Emerita, Department of Entomology, UC Davis - <http://ipm.ucanr.edu/PMG/PESTNOTES/pn74174.html?src=blog20481>



Photo credit Norma Kisida, Master Gardener

Angelonia (Summer Snapdragon)

By Norma Kisida, Master Gardener 2012

If you are looking for a great summer annual that tolerates our heat and flowers well, consider angelonia (*Angelonia angustifolia*). It is an erect annual that blooms over a long period in summer and may perform as a perennial in zones 9-11. Shearing the plants back to 50 percent in midsummer may stimulate new flowers and extend the bloom period.

Angelonias perform well in landscape borders and beds as well as in containers and make excellent cut flowers. Flower colors range to white, pink, violet, and blue. Some cultivars include 'Alba,' which has white flowers; 'Blue Pacifica,' which has two-toned flowers in white and indigo blue, and 'Angelmist' series available in six colors.

There are many more patented and unpatented cultivars. 'Archangel Dark Purple' was featured in the 2014 FNLGA trials at Epcot and was found to have large blossoms that thrived in heat, humidity, and drought.

Plant it in moist well-drained soil in full sun and fertilize lightly. Once established, it is usually drought tolerant, especially if planted in organic material and mulched. It is relatively pest free although it may get aphids or powdery mildew.

Visit

http://hort.ifas.ufl.edu/floriculture/pdfs/crop_production/Angelonia.pdf for more information.



Photo by: Forest and Kim Starr

Angel Pink Mist



Photo credit: Floridata.com

What's New in Mangos?

By John Dawson, Master Gardener 2007

People often ask me, "What's the best mango?" I simply answer, "It's the one you like."

Unfortunately, some folks may have only tasted the mango (variety unknown) they bought at their local supermarket. If you are one of those and didn't care for it, try again elsewhere. There are many more out there you may like!

Each year, many new varieties of mangos (*Mangifera indica*) come on the market, mostly new hybrids that have been growing for several years. Some never produce an exceptional mango that would be commercially saleable, and some become the next "got to have" variety. And among mango fanciers, each has his/her own favorite. A small number of lucky folks who know mango breeders may get a chance to try new varieties before they become commercially available.

Growers often host a tasting among fellow growers and friends. Often names are given to new hybrids which suggest what that mango may taste like, such as 'Coconut Cream,' 'Peach Cobbler,' 'Lemon Zest,' 'Fruit Punch,' or 'Pineapple Pleasure.' Sometimes the subtle mango flavors live up to their names, but at times you may wonder if the breeder got a bit too whimsical in naming their hybrid.

Last year, a public Mango Festival in Miami offered over 240 varieties of mangos. Mango festivals can be found throughout Florida almost all summer long. My taste buds wear out after about ten different tastings. If you eat more than taste, you will never make it to ten. They may all seem good, but one or two may stand out above all the others. If you plan to plant a tree or two, these may be the ones to consider.

Mangos are classified as either early season, mid-season, or late season. A favorite in each classification can provide you with mangos for most of the year. If you are buying a mango



tree and the variety and seasonal classification information are not available (as in most big store garden centers), just what are you buying? Why wait three to four years to find out that the mango you bought is one that you now don't like? Please, please, try before you buy!

At a recent Manatee Rare Fruit Council meeting, a mango grower provided the results of a tasting he had recently held on some of the newest varieties (some may not be available until next year). The tasters rated the mangos on a scale of 0 to 5, with 5 being the best. Here are the results: 'Sunrise' (3); 'Marly's,' 'Juicy Peach' (3.5); 'Sweet Tart,' 'Fruit Punch,' 'Lemon Zest,' 'Venus,' 'Ugly Betty,' 'Maha Chinuk,' 'Coconut Cream,' 'Pineapple Pleasure' (4); 'Kathy K 3,' 'Harvest Moon,' 'Edgar,' 'Peach Cobbler' (4.5); and the winner was 'Pina Colada' (5).

Tastes are subjective, so do not be swayed by the taste preferences of others. If you happen to be lucky enough to find any of these at a local mango festival, try them. If you save a seed from any hybrid, don't plant it and expect that mango to be there ten to twelve years later. Only seeds from polyembryonic mangos will come true to seed, and most hybrids will not. Grafting is the only way to ensure true cloning. If you have a friend that has a mango you like, ask for some scion wood and try a graft. If you are grafting novice, keep an eye out for one of our grafting classes coming up at the Extension Office. For information on growing mangos, visit: <http://edis.ifas.ufl.edu/mg216>.



Liquidambar styraciflua
'Rotundiloba': Sweetgum

Photo credit: Ed Gilman, UF/IFAS



Example of tree planted too close to pavement

Photo credit: UF/IFAS



Highrise live oak

Photo credit: UF/IFAS

Selecting Canopy Trees for Manatee County

By Norma Kisida, Master Gardener 2012

Tree canopies provide many benefits such as shade, energy savings, increased air and water quality, increased beauty, and higher property values. However, trees planted in the wrong space can be problematic, resulting in expensive mitigation.

Whether landscaping a new property, changing an existing one, or removing problem trees in a residential area, there are landscape and screening standards to be aware of in Manatee County. The Manatee County ordinance provides guidelines for placement and species of trees which are permitted in residential areas as canopy trees. In addition, some homeowner associations have additional requirements which must be met.

Canopy trees (or "street trees") permitted by Manatee County include live oak, (*Quercus virginiana*), cathedral live oak, highrise live oak, red maple (*Acer rubrum*),

and sweetgum (*Liquidambar styraciflua* 'Rotundiloba' seedless). Southern live oaks have traditionally been the major tree planted in communities. This is a massive tree with a very large canopy when mature and huge root system which can uproot sidewalks and driveways as well as encroach upon utility lines if not given adequate space.

'Highrise' and 'Cathedral' are cultivars of live oak which have a smaller more upright and uniform shape. Although the canopy is smaller, these cultivars have an aggressive root system and still require eight to ten feet between the curb and sidewalk. 'Cathedral' is reported to be wider spreading than 'Highrise'.

Our native red maples are usually found in wet areas and may need irrigation if planted in dry sandy areas. Improved

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varieties that are suited for Florida and have the best fall color are 'Florida Flame' and 'Summer Red'. Red maples are also large trees (height: 60 to 75 feet, spread: 25 to 35 feet) and can form large surface roots so adequate space is needed.

When I think of sweetgum trees I think of those prickly balls which are so hard to deal with. There is one cultivar 'Rotundiloba' that is suitable for home landscapes as it is seedless and has no gumballs to deal with. It matures into a more narrow pyramidal shape with a height of 50-70 feet and a spread of about 35-45 feet. 'Rotundiloba' is fast growing, deciduous, has good fall color, and is tolerant of soil conditions but also has large aggressive roots so needs plenty of room.

For proposed lots with less than 60 feet of frontage, smaller maturing canopy trees or understory trees may be used (see ordinance for list). There is also a procedure for email notification for removal of trees if certain conditions are met.

For further information see the following references:

Conditions for Email Notification of Street Tree Removal and Replacement:

<https://www.mymanatee.org/home/government/departments/building-and-development-services/environmental-review/articles/citizen-sfl-trp-conditions.html> ,

Sidewalks and Tree Roots: A little flexibility needed:

[http://collier.ifas.ufl.edu/CommHort/CommHortPubs/Sidewalks%20and%20Tree%20Roots%20NDN%20article\[1\]\[1\].pdf](http://collier.ifas.ufl.edu/CommHort/CommHortPubs/Sidewalks%20and%20Tree%20Roots%20NDN%20article[1][1].pdf),

Quercus virginiana: Southern Live Oak:

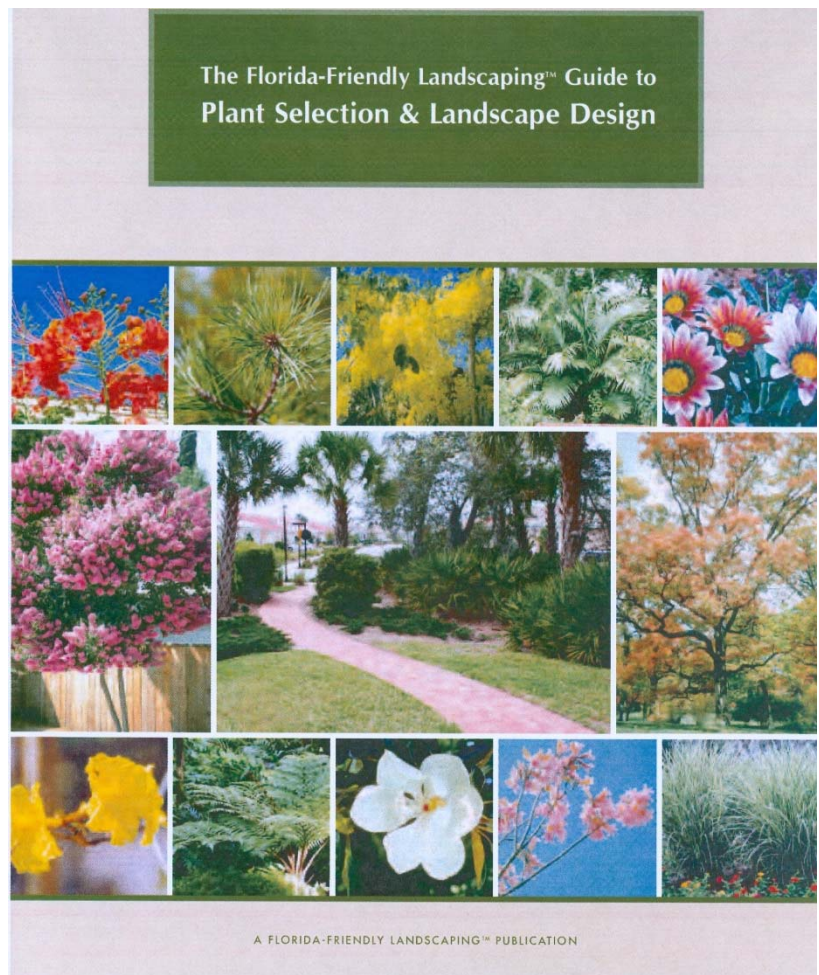
<https://edis.ifas.ufl.edu/pdf/ST/ST56400.pdf>,

Liquidambar styraciflua 'Rotundiloba': Sweetgum:
<https://edis.ifas.ufl.edu/pdf/ST/ST36200.pdf>.

Other considerations such as water and soil requirements, pest and disease susceptibility, salt tolerance, and sun exposure are addressed in the photo-illustrated "Florida Friendly Landscaping Guide to Plant Selection and Landscape Design," downloadable free:

- Visit: **WaterMatters.org**
(also Southwest Florida Water Management District)
- Select Documents & Publications (on left)
- Click on Free Publications
- Under "View by subject" click on "Florida-Friendly Landscaping"
- Scroll to Florida-Friendly Landscaping Guide to Plant Selection and Landscape Design
- Download or add to cart.

This publication encourages a mix of native and non-native species appropriate for regional growing conditions (Central for Sarasota and Manatee counties; South for Charlotte County).



Five Tips for Starting a Fall Vegetable Garden

By Kathy Oliver, Urban Horticulture Program Assistant



It is the off-season for vegetable gardening in Florida so take some time to ponder your next plantings. A little planning goes a long way toward success in the garden. Here are five tips to help you get started:

1. Test soil pH. The pH is a measurement of the soil's acidity or alkalinity. Most vegetables grow best in acidic soils with a pH range of 5.8-6.3. Testing your soil before planting will help determine which types of soil amendments and fertilizers to apply. Collect a sample and mail to University of Florida's Extension Soil Testing Lab (ESTL) for pH and lime requirement, plus nutrient testing if you would like customized fertilizer recommendations. Lab forms and sampling instructions are on the ESTL website <http://soilslab.ifas.ufl.edu>. When soils are unsuitable due to high pH or poor drainage, consider using raised beds with commercially prepared soil mixes. Low pH soils may be adjusted with dolomitic lime two to twelve weeks before planting.

2. Add organic matter. Our sandy soils benefit from any added organic matter such as compost, rotted leaves, old hay, or animal manures. Organic matter adds nutrients, improves soil texture and water holding capacity, and it creates a favorable environment for beneficial insects. Composted materials can be added at planting time but un-composted ones should be tilled or turned into the ground at least a month in advance. Work raw animal manures into the soil at least 90-120 days prior to harvesting any vegetables.

3. Decide what to grow. Think about what you and your family like to eat, then decide which months are best for growing them. Have warm season crops such as tomatoes, squash, peppers, eggplant, beans, and cucumbers ready to

go in September. Save the cool season crops such as broccoli, carrots, cabbage, radish, and lettuce for later plantings in October and November. For guidance on planting dates and other handy tidbits such as spacing and recommended varieties, refer to the Florida Vegetable Gardening Guide put out by the University of Florida <http://edis.ifas.ufl.edu/pdf/files/vh/vh02100.pdf>. The guide will also help you decide whether to purchase seed for sowing directly in the garden or to use transplants.

4. Draw a garden plan. A 300-500 square foot garden is about right to feed a family of four but if you are new to vegetable gardening, consider starting with a smaller space. Think in size increments of one hundred as many fertilizer and amendment recommendations are based on 100 square feet. Run rows north and south and place taller plants on the north side for optimum sun exposure. If you are gardening in a space used previously, rotate crops so that the same plants (or plants in the same family) are not placed repeatedly in the same area. Did you know that tomatoes, potatoes, peppers and eggplants are all in the Solanaceae (tomato family) and cabbage, collards, broccoli, cauliflower, kale and turnips are in the Brassicaceae (cabbage family)? Having a garden plan and basic notes on varieties used and successes/failures will help with decision-making later on.

5. Attend classes at the Extension Service. Get to know the people and resources here to get help with all your horticulture questions. A Plant Diagnostic Clinic manned by Master Gardeners is open every weekday except Wednesday from 9:00 a.m. to 4:00 p.m. Most of the classes offered by Extension are free of charge and our Fall Vegetable Gardening class is coming up on August 10. See the calendar of events on the back page for more details.

August

CALENDAR OF EVENTS



Date	Time	Event
3 rd Tuesday of each Month	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 Master Gardener Plant Diagnostic Clinic (941) 722-4524.
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.
Wednesday August 10	9:00 a.m.-Noon	You Can Grow Your Own – Fall Vegetable Gardening 101 - Explore the basics of successful fall vegetable gardening. You will learn where to locate the garden, how to prepare the soil, what vegetables to plant, and how to deal with carrot snatching wildlife. Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners (941) 722-4524.
Wednesday August 10	10:00-11:30 a.m.	Rain Gardens 101 - Rain gardens are an important part of the Florida-Friendly Landscaping™ concept and serve multiple functions. We will provide information to help you design, install, and maintain your very own rain garden. Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners (941) 722-4524.
Wednesday August 10	1:00-3:00 p.m.	Tillandsia “Make and Take” Wreath Workshop - Learn about these lovely epiphytes that only require air and water to live. This is a "make and take" workshop where you will create a wreath using Tillandsia plants. \$35 for materials is by due August 5th and guarantees your spot in class. Cash or check only, checks made payable to Friends of Extension. Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners (941) 722-4524 to register.
Saturday August 13	10:00 a.m.-Noon	Gardening for the Pollinators - If you plant it, they will come! Those attending this workshop will learn how to identify and attract local pollinators like bees, butterflies, and hummingbirds. Information will be provided on plants with pollen, nectar, or plant resources that attract pollinators. Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners (941) 722-4524.
Saturday August 13	1:00-3:00 p.m.	Orchid Care and Repotting - Learn the proper way to care for and propagate several varieties of orchids. Bring your orchid and pruners for a hands-on exercise of dividing the orchid. Registration and advance payment of \$15 for materials is due by August 5th and guarantees your spot in class. Cash or check only, checks made payable to Friends of Extension. Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners (941) 722-4524.
Tuesday August 23	1:30-3:30 p.m.	Irrigation with Water Conservation in Mind - This class satisfies the irrigation educational requirement for the Manatee County Outdoor Water Conservation Rebate Program. Topics will focus on how to adjust your in-ground sprinkler system to conserve water, how you can repair parts, and the benefits of installing smart irrigation devices. Register online at http://manatee.ifas.ufl.edu or call Joann (941) 722-4524.
Thursday August 25	1:30-3:30 p.m.	Landscape Tips for Water Conservation - This class satisfies the landscape educational requirement for the Manatee County Outdoor Water Conservation Rebate Program. Topics will focus on Florida-Friendly Landscaping™ tips such as right plant vs right place, watering efficiently, and the benefits of mulch. Register online at http://manatee.ifas.ufl.edu or call Joann (941) 722-4524.
Saturday August 27	10:00-11:30 a.m.	Stormwater Ponds - Learn why stormwater ponds are important to Florida's unique ecosystems and their relationship to Florida-Friendly Landscaping™. Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners (941) 722-4524.

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