



TRASH Bugs and Green Lacewings STRANGE Relatives

By Norma Kisida, Master Gardener 2012



Lacewing Eggs



Green Lacewing Larva



Adult Green Lacewing



Trash Bug Larva



Trash Bug on Milkweed

In the insect world it is not unusual for immature stages to look totally different from the adult and this is certainly true for the green lacewing (*Chrysoperia spp*). Considered one of our most beneficial insects, the adult lacewing feeds mostly on pollen, nectar, and honeydew. There are 58 North American species of lacewings and they get their name from the transparent wings with many veins.

Lacewings go through a complete metamorphosis from egg to larva to pupa to adult stage. Lacewing eggs are laid on stalks to protect them from predators and to keep them from devouring each other as they emerge. The larvae, which look very different from the adults, are ravenous, devouring up to 200 adult aphids or eggs per week. They feed primarily on aphids, mealy bugs, and small caterpillars as well as leafhoppers, whiteflies, thrips, mites, and other insects. They are in fact often called "aphid lions" because of their fondness same.

A particular curiosity is one larval stage of lacewings. It looks like a small clump of trash on legs, thus its name "trash bug," "junk bug," or "garbage bug." Larvae feed by stabbing their soft bodied prey with a pair of hollow sharp mouth parts and sucking out the soft inside. They then place the remaining bug parts onto their back using hair-like projections to secure them in place.

In addition to insect parts, the trash bug may also place bits of debris such as leaves, dirt, or lichen onto its back. Apparently the trash serves as a camouflage to protect it from predators as well as help it sneak up on prey.

Lacewings are great to have in your garden if you have pests and can be purchased as larvae or eggs. It is recommended to hand sprinkle at least 500 to 1,000 eggs in the average sized yard. They may be stored in the refrigerator for a few days before releasing. For information on mail ordering beneficial insects see, "Mail Order Mania Meets Pest Predators" in our July issue.

Post Note: After writing this article I walked outside to check the garden and what did I see but a trash bug on one of my milkweeds. Just goes to show if you are not aware of something, you will likely miss it.



Fertilizer Primer

By Amy Stripe, Master Gardener 2008

Photo credit: Sally Scalera, UF/IFAS Extension Brevard County

As of September 30th, the county ban on nitrogen (N) fertilizer is lifted. Did you miss it in your landscape this summer? I certainly didn't! Nitrogen comprises 78% of our atmosphere. Photosynthesis, rainfall, and lightning strikes recycle nitrogen around us all the time. If you have experienced a huge boost in plant (and weed) growth during the summer, it is probably due to nitrogen delivered via rainfall.

Autumn is a good time to apply fertilizer. Heavy summer rains have leached the soil of other vital nutrients and we are approaching our dry season, usually December through May. Any fertilizer you apply now should be time-released (the N must be 50% time-released) and balanced.

Balanced fertilizers are those that contain the right mixture of macronutrients and micronutrients to ensure they don't work against each other. A heavy-handed application of a single nutrient might cause nutrient stress in another area. This is why - unless you aced Chemistry in college - it's best to leave the science to professionals and not attempt to correct a specific nutrient deficiency by applying the "missing" ingredient.

For an example, refer to Nancy Hammer's article on palm nutrition in this issue: an overabundance of nitrogen, which spurs growth, can cause a deficiency in potassium (K) because K has not been supplied in compensatory

proportions. And in some ways, low K is worse, since deficient yellow leaflets will never come green again. So skip the Epsom salts (a commonly applied home remedy for magnesium deficiency) and reach for the balanced fertilizer instead.

Before applying any fertilizer, it is a good idea to get your soil tested for pH (which rates soil on a scale of acidity to alkalinity). The ability of your plants to take up nutrients is hugely influenced by soil pH. A plant living in alkaline soil, for example, will not be able to take up iron (Fe) as well as one living in more acidic soil. So no amount of iron you throw at it (which influences color, among other things) will solve an iron deficiency problem unless you use a foliar spray or plant plants that tolerate alkaline soils. Correction of the soil pH may be in order.

It sounds complicated, but solutions are readily at hand. Bring your soil for testing to our Plant Clinic (pH costs \$3.00) and keep in mind the key Florida-Friendly Landscaping™ principle: right plant, right place!

Visit: <http://edis.ifas.ufl.edu/SL266/MG488> about soil and fertilizer; visit <http://edis.ifas.ufl.edu/ENH1255/EP516> for palm fertilizer information; visit <http://edis.ifas.ufl.edu/SL411/SS624> on fertilizer management, but only if you're a geek like me!

Master Gardener

ANNUAL PLANT SALE OFFERS SAVINGS AND SELECTION

Do you have a spot in your yard where you would love to have a butterfly garden, or does your landscape need a little splash of color? Interested in growing more Florida natives? Manatee County Master Gardeners have the answer!

Saturday, October 1st from 8:00 A.M to 1:00 P.M., the Manatee County Extension Master Gardeners will be holding their annual plant sale fundraiser at the Manatee County Agriculture and Extension Office located at 1303 17th Street West in Palmetto. These plants have been raised by the Master Gardeners themselves and include a wide array of natives, perennials, shrubs, and ornamental grasses all priced to sell. Gardening accessories will also be on sale.

Plant Fair

Many sought-after plants on offer include sea grapes, orchids, vegetables, herbs, bromeliads, wild coffee, stoppers, groundcovers, and butterfly plants.

Come early for the best selection and bring along your own wagon or garden cart to stock up. We accept cash or personal checks ONLY. The first fifty customers will receive a free native plant seedling.

All proceeds from this event go to the operation and maintenance of the Master Gardeners' Educational Gardens and Greenhouse, and to support Master Gardener educational and outreach programs. Get a Good Thing Growing!



Photo credit: C. Mozeleski



The Versatile Crape Myrtle:

“Lilac of the South”

By Jim Haupt, Master Gardener 2015

The crape myrtle (*Lagerstroemia indica*) is one of the most colorful, versatile, and dominant plants throughout the state of Florida. As a prolific summer bloomer, this show stopper can cheer up any heat weary gardener. Crinkle-petaled blossoms, resembling crepe paper, are prolific during the summer months in shades of lavender, pink, purple, red, white, and both bi-colors and mixed colors.

It can grow successfully in any soil type, even compacted and poorly draining soils. They have a high tolerance to salt spray, drought conditions, and air pollution. The crape myrtle is appropriate for urban and suburban areas, used both as a container plant and placed strategically as a specimen plant in the home landscape.

Although relatively disease tolerant, if planted in shady, moist areas, it is susceptible to powdery mildew. Crape myrtles need to be planted in full sun and in areas with good air circulation.

Most crape myrtles planted in Florida are hybrids of *L. indica* or *L. fauriei* (Japanese crape myrtle). In fact, it is one of the first Asian plant introductions to America that proved adaptable to our hot, humid southeastern climate. Because of its upright form,

smooth flaky, cinnamon bark, and resilience to powdery mildew, the U.S. National Arboretum collected seeds from the *L. fauriei* and crossed these seedlings with the popular *L. indica*. This resulted in many cultivars, all of which were given Native American names, including ‘Arapaho,’ ‘Hopi,’ ‘Natchez,’ and ‘Zuni.’ All have enhanced cold hardiness and grow from 8 to 25 feet tall.

Since the crape myrtle is a deciduous plant, the leaves fall off during the winter, but leave a living sculpture. The trunk and branches have an attractive, gnarled, and twisted characteristic, with smooth bark varying from a light straw color to a deep rich brown. Patches of bark will fall leaving virgin bark with a light pink to a pale green color.

Single-trunked or multi-trunked, the crape myrtle makes an excellent shade tree. It has a symmetrical vase-shaped canopy of with a spread of 15 to 25 feet.

Over the last 30 years, breeding programs have resulted in many beautiful forms, and a wide range of sizes, growth habits, flower, and bark colors. The National Gardening Association lists well over 400 crape myrtle cultivars.

Dwarf varieties, called "myrtlettes," with heights of less than 4 feet, are ideal as groundcovers, perennial bedding plants, on slopes, or in heights of less than 12 feet. They have an open elliptical growth

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growth habit and excellent powdery mildew resistance.

An intermediate-sized crape myrtle, like 'Apalachee,' grows to a height less than 20 feet. 'Apalachee' has dark green leaves, a dense canopy, and excellent bark color. 'Natchez,' with white flowers and cinnamon bark, can grow to a height greater than 20 feet. 'Townhouse' grows greater than 20 feet in a vase shape and has white flowers and mahogany red bark. Dr. Russell F. Mizell, an UF/IFAS Extension entomologist, cites crape myrtles as important to pollinating insects, including a number of native bee species as well as honeybees.

In the spring, the crape myrtle flower begins to harbor a relatively harmless pest, the crape myrtle aphid. Although unsightly, be patient! These aphids attract several varieties of beneficial insects such as lady beetles and their larvae, green lacewings and their larvae, hoverfly maggots, and parasitic wasps. Attracting these beneficials into your landscape can create a biological control system to curb pest populations in your ornamental and vegetable gardens.

Records from Mount Vernon show that the ship *George Barclay* landed in Philadelphia in 1799 bringing crape myrtle seeds for George Washington's plantation. With all its versatility and history, crape myrtles are worth a serious consideration.

For information on the availability of cultivars and characteristics, refer to:

<http://edis.ifas.ufl.edu/mg266>,

<http://edis.ifas.ufl.edu/ep399>,

http://leon.ifas.ufl.edu/News_Columns/2007/021507g.pdf,

<http://blogs.ifas.ufl.edu/smallfarms/2015/10/16/bankerplants/>.



Nutrient Deficiencies in Landscape Palms

By Nancy Hammer, Master Gardener 2014

Nutrient deficiencies in landscape palms are common, including nitrogen, potassium, magnesium, iron, manganese and boron. Deficiencies are most often identified by visual symptoms on leaves, or by leaf analysis. In a series of articles we will explore these deficiencies, and discuss how to prevent, identify, and treat them.

Nitrogen (N) deficiency is *occasionally* seen in palms growing in native Florida soils. It is more often observed in containerized palms, and those recently planted in the landscape, until roots are established. It first appears on the oldest (bottom of the canopy) leaves as a uniform light green color. As it progresses, all the leaves will become light green, except the spear leaf, and will show a greatly reduced growth rate. Nitrogen deficiency can be confused with iron or sulfur deficiency, although those deficiencies tend to occur on the newest leaf growth (top of the tree). Palms can survive for an extended period of time with nitrogen deficiency.

Nitrogen deficiency in landscape palms is readily prevented, and treated with 100% controlled release fertilizers formulated specifically for palms. Unlike some other deficiencies, with proper fertilization, nitrogen deficient palms will often regain their normal green color in a month or two.

More detailed information may be found in the online UF/ IFAS publication, "Nitrogen Deficiency in Palms" by Timothy K. Broschat.

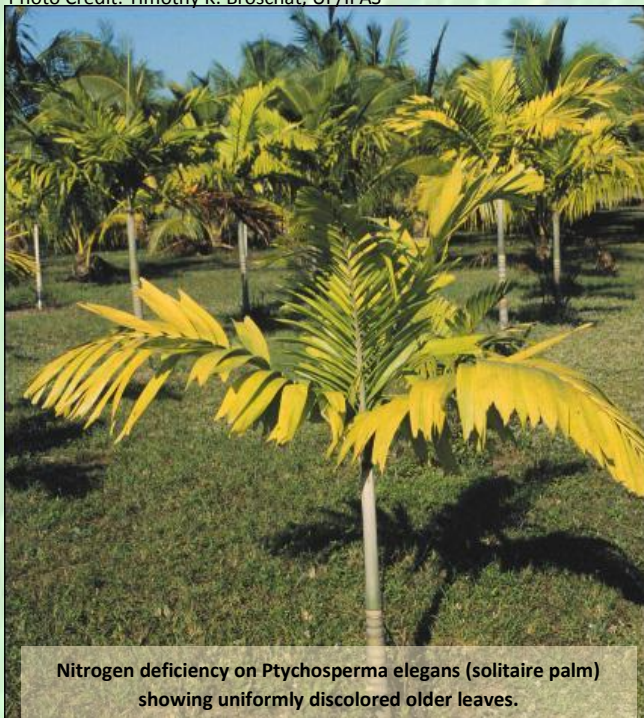
Potassium (K) deficiency is a *frequent* problem in Florida palms. It is usually caused by lack of potassium in the soil and can be made worse by high nitrogen fertilization. Potassium is easily leached from our soils by rainfall or irrigation. The symptoms vary among species of palms, but consistently appear on the oldest leaves first. In some palms, leaflets will be mottled with translucent yellowish spots, while others will have brown, dying tips and edges with little yellowish spotting. The leaf tips may be withered and frizzled, but the stems remain green.

Every 3-month application of 100 percent of controlled-release palm maintenance fertilizer will prevent and treat mild cases of this deficiency. Severe deficiencies necessitate applications of controlled-release potassium and magnesium fertilizers. Treatment may take one to two years since all the leaves need to be replaced. Regular removal of affected leaves is not recommended as it can hasten the decline of a palm with this deficiency.

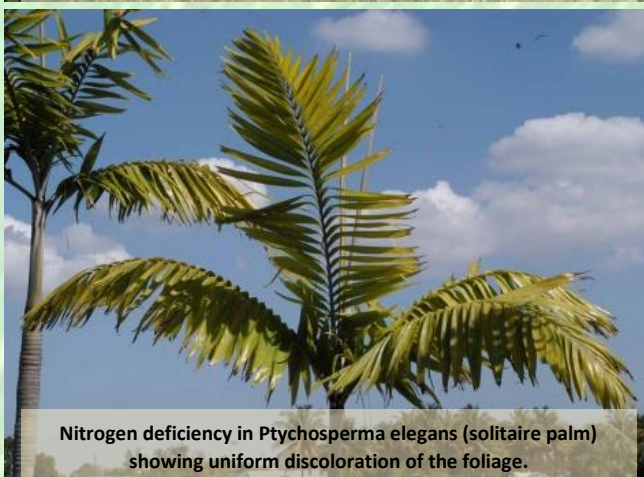
In future articles, we will discuss additional nutrient deficiencies of palms. In the meantime, please call our Master Gardener Plant Diagnostic Clinic at (941) 722-4524 with any questions.

For more detailed information, visit:

Nutrient Deficiencies of Landscape and Field-Grown Palms in Florida, by Timothy K. Broschat, University of Florida, IFAS
<http://edis.ifas.ufl.edu/ep273>, Nitrogen Deficiency in Palms, by Timothy K. Broschat, University of Florida, IFAS
<http://edis.ifas.ufl.edu/pdf/EP/EP26800>, or Fertilization of Field-Grown and Landscape Palms in Florida, University of Florida, IFAS
<http://edis.ifas.ufl.edu/ep261>.



Nitrogen deficiency on *Ptychosperma elegans* (solitaire palm) showing uniformly discolored older leaves.



Nitrogen deficiency in *Ptychosperma elegans* (solitaire palm) showing uniform discoloration of the foliage.



Potassium deficiency in *Phoenix roebelenii* showing leaf discoloration and tip necrosis.



Potassium-deficient older leaf of *Dictyosperma album* (hurricane palm) showing translucent yellow-orange spotting.



Poisonous Plant Alternatives

By John Dawson, Master Gardener 2007



Florida is home to numerous poisonous plants, many of which find homes in our landscapes and inside our homes. Some may cause skin irritation if contacted, some can make you very sick if eaten, and some can kill you. If you have small children, grandchildren, or pets, you need to be able to identify by name those plants in your landscape which could cause harm or death if accidentally ingested.

The Poison Center (1-800-222-1222) will need this information to make a rapid identification, assess the situation, and provide medical advice. Most plant poisonings do not require hospitalization, and callers will receive all the help they need over the phone. Please do not induce vomiting unless told to do so.

Two of the more dangerous plants common in Florida are shown below, along with their benign look-alikes, should you wish to replace them.

Oleander (*Nerium oleander*) is the most common of accidental plant poisonings in Florida for both pets and humans and has caused death. All parts of the plant are very poisonous. Ingesting even a small amount of any part of this plant can result in nausea, vomiting, stomach cramps, dizziness, low blood pressure, slow pulse, and seizures.

Lemon bottlebrush (*Callistemon citrinus*) is a non-toxic alternative to oleander in both use and appearance. Both reach similar mature heights, flower about the same time, and have long, lance-shaped, grayish-green leaves. Like oleander, the lemon bottlebrush flowers come in several colors. Lemon bottlebrush, with bright red blooms, attracts bees and hummingbirds.

Castor plant (*Ricinus communis*) grows wild in many places in the state and ornamental cultivars appear in our homes and landscapes. Its seed (the castor bean) is the most poisonous seed on the planet. The oil from the seed has numerous non-toxic uses, but the seed itself is deadly if accidentally chewed and swallowed.

Fatsia (*Fatsia japonica*), a non-toxic alternative to castor, is an evergreen foliage plant with a very tropical appearance. Fatsia typically grows 6 to 10 feet tall by 6 to 10 feet wide, but can be pruned smaller and does well in shade. A few cultivars have variegated leaves.

Other common toxic plants include: angel's/ devil trumpets, allamanda, amaryllis, azalea, Brazilian pepper, buttonbush, caladiums, crotons, crown of thorns, delphiniums, dumb cane (*Dieffenbachia*), elephant ear, foxglove, four o'clock, glory lily (*Gloriosa*), golden dewdrop, holly berries, hydrangea, jatropha, lantana, lupine, peace lily, philodendron, pothos, podocarpus, rosary pea, and star of Bethlehem.

However, before you go digging up and discarding any plant, research the type and level of its toxicity; simply donning a pair of gardening gloves can provide adequate protection. Master Gardeners are available to help you identify the plants in your home and landscape and suggest non-toxic alternatives.

For more information about the poisonous plants of Florida, go to: <http://floridapoisontcontrol.org/wp-content/uploads/2014/11/Poisonous-Plants-of-Florida.pdf>.

Example: Oleander vs. Lemon Bottlebrush



Example: Castor Plant vs. Fatsia



September

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.
Saturday September 10	9:00-10:30 a.m.	Rain Barrel Workshop - Learn how to install, paint, and maintain a functional rain barrel. Rain Barrels cost \$40, check or cash only. Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners (941) 722-4524.
Saturday September 10	10:00-Noon	Wild about Wildflowers - This workshop will focus on specific native wildflowers that grow in our area, basic information on starting a wildflower garden in your backyard, instructions on cultural needs for the plants, and the wildlife value. Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners (941) 722-4524.
Saturday September 10	1:00-3:00 p.m.	Orchid "Make and Take" Workshop Learn about these beautiful epiphytes and how they can enhance your home and landscape. Registration and advance payment for materials due day of class (cash or check only, payable to Friends of Extension). Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners (941) 722-4524.
Saturday September 24	10:00-11:30 a.m.	Compost Happens – Home Composting - 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. \$40 fee for compost bin. Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners (941) 722-4524.
Saturday October 1	8:00 a.m.-1:00 p.m.	Save the Date! Saturday October 1st the Manatee County Extension Master Gardeners will be holding their annual plant sale fundraiser at the Manatee County Agriculture and Extension Office located at 1303 17 th Street West in Palmetto! Come early for the best selection. First 50 customers receive a free native plant seedling!

2016 Master Gardener Plant Fair

Saturday, October 1 - 8:00 A.M. to 1:00 P.M.

STOCK UP and SAVE on plants!
Natives - Shrubs - Trees - Vines - Herbs
Orchids - Butterfly Plants - Vegetables
Groundcovers and more!

GET A
GOOD
THING
GROWING!

All proceeds from this event go to the operation and maintenance of the Master Gardeners' Educational Gardens and Greenhouse, and to support Master Gardener educational and outreach programs.



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