UF IFAS Extension UNIVERSITY of FLORIDA
FLORIDA MASTER GARDENER VOLUNTEER

Garden Scoop

Issue 13 June-July 2020

POLLINATORS

By K.S. Kennen, MGV

National Pollinator week is June 22-28 and is a time to recognize the importance of pollinators. Pollination is the first step in producing seeds, fruit, and plants. Pollination can happen through wind, water, self -pollination, or with insects and animals. It occurs when the pollen is moved within the flower or from flower to flower. The pollinators that move pollen are birds, bats, butterflies, moths, flies, beetles, wasps, small mammals and bees. It is important to know that over seventy percent of the world's flowering plants need help with pollination. It is the work of the pollinators that service more than 1,200 crops and help provide the food we need.

Pollinators are necessary to keep life as we know it. Besides an essential part for the food we eat, they help maintain a healthy ecosystem that gives us clean air, stabilize soils, protect from severe weather, and support other wildlife. Unfortunately, bees and other pollinators are on decline worldwide. There are five considerations for decline. Habitat loss is occurring daily with increased agriculture, mining, and development. Increase in the amount of concrete, cement, and metal surfaces replacing vegetative, nesting, and foraging areas. Introduction of non-native plants is also a cause for concern since they compete with natives. Natives are necessary to provide specific nutrition and larval habitats for pollinators. Pesticides are another factor for decline. Pesticides can remain for a long time and affect generations of pollinators. The pesticide can also contaminate the pollen grains which are pollinator food sources. Climate change along with parasites and diseases are the final two area that can cause trouble for pollinators. Climate warming causes flowering plants to grow further northward and confounds the synchronization of bloom time causing migration and displacement of pollinators. Finally there are diseases and parasites the reduce numbers of pollinators. An example of a harmful parasite is, *Ophryocystis elektroscirrha* (see the Oct 2019 issue for more info).

Gardeners can play a role in improving the life of pollinators. First, have both blooming plants and larval food plants to help create diversity in your garden. Be sure that your Florida friendly plants include natives. Do not use pesticides. Use natural remedies such as horticulture oil or insecticidal soap. Provide habitat such as bee houses, bird houses, bat houses, dead falls, etc.. Be sure to have water for birds and other wildlife in your garden. All these can help the pollinators of our world.

INSIDE THIS ISSUE

Lake County MGV Mission Statement

The mission of UF/IFAS Lake County Master Gardener Volunteers is to assist extension agents by providing horticultural education programs and current research-based information to the public through plant clinics, community outreach and Discovery Gardens.

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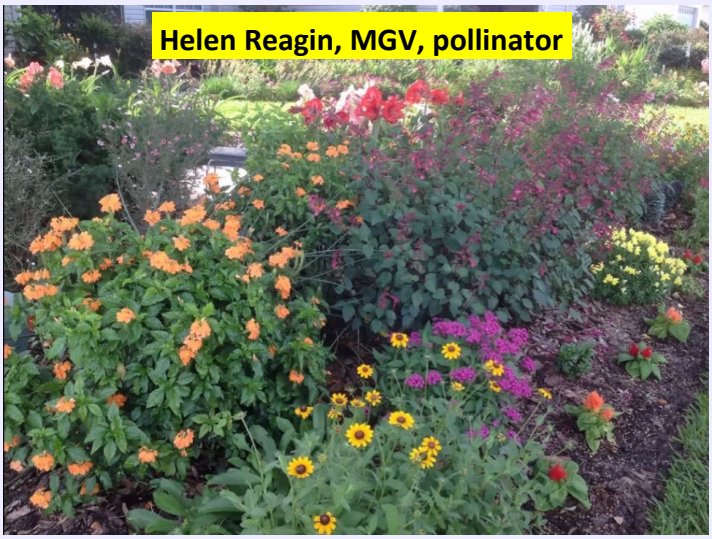
K.S.Kennen, MGV

A pollinator garden has plants that are attractive to all types of pollinators and provide adult food, larvae food, water with mud spots, nesting materials, and protection. Use of native plants is always a plus since they will grow well without need for fertilizer or pesticides. Plants need to be varied in size, shape, and color so the garden will attract a wide range of pollinators.

There are two categories of pollinators, generalists and specialists. The honey bee is considered a generalists because it feeds on a wide range of plants. The monarch butterfly is considered a specialist since the larvae will only feed on milkweed.

Avoid hybrid plants and plants from large garden centers. Hybrids are sometime bred for showy blooms and often sacrifice scent and or pollen production for the blooms. Garden centers may purchase their plants from growers that use systemic pesticides or neonicotinoids that can stay in the plant for up to seven years and pollinators can transfer pollen from treated plant to untreated plant and possibly affect that plant. The new studies say neonicotinoids do not obliterate bee colonies outright, but instead kill them over extended periods of time.



Another important consideration for the pollinator garden is to plan to have several plants in bloom at different times. With varied bloom times, your garden will have food available for pollinators that appear in early spring and those that appear in mid-summer. Coreopsis and black-eyed Susan for spring blooms; sometimes they will even last through the summer. Marigolds and zinnias are for summer blooms; they attract pollinators and don't mind the heat. The below garden picture has both coreopsis and black-eyed Susan along with pentas, parsley and milkweed not yet in bloom.

Avoid use of landscape fabric since many bees nest in the ground and need to excavate the soil. Planting close together will help with weed control and also allow the pollinators to easily forage for food. Another advantage of no landscape barrier is to allow your flowers to naturally self-seed.

Useful resources: Gardening for pollinators |

By K.S. Kennen, , MGV

Attracting pollinators to your garden is ecologically beneficial. One easy way to attract them is by planting a bush that is known to provide nectar for them. Following are four easy to grow, proven bushes for pollinators.

Hamelia patens, firebush, is a Florida, native, perennial shrub that has red-orange tubular blooms. When this bush blooms from spring to the first frost, hummingbirds and butterflies find it irresistible. This is a large shrub and can reach 10 to 15 fifteen feet but it can be trimmed to keep it under control. This native likes full sun but will grow in partial shade. It will also grow in a wide range of soils and is disease and pest resistant. The only negative is that it can freeze and will die back, but will return in the spring.

Golden dewdrop, *Duranta erecta*, is a small shrub that has many names: pigeon-berry, honey drops, and sky-flower. It is a ast growing shrub with light-green foliage and long, graceful branches. Its blue and white, spring bloom attracts butterflies and especially is liked by the carpenter bee. It will grow in full sun and partial sun.

Simpson stopper, *mycianthus frangens*, is a Florida native also known as twinberry. It can be used as a shrub or small tree. Its fragrant flowers appear in April and May. The red berries produced attract buntings, cardinals, blue jays, and the mockingbird. It is drought tolerant and can grow in full sun or partial shade. It is listed on the Florida Department of Agriculture threatened list.

Walter's viburnum, Viburnum obovatum, is a Florida native evergreen, woody shrub that can be trimmed to a shape or grow to a small tree. Its cluster of small, white flowers attract pollinators and when they become red berries attract birds and other wildlife. This shrub will grow in full sun or in shade. Once established, it is drought tolerant and low maintenance.

Photos: UF/IFAS

Plant Clinic Chatter

By Reggie D., MGV

Dear Master Gardener,

Why are there so many mosquitos after rain? How do I control them? What are blind mosquitos?

Dear Homeowner,

In any geographic region, mosquito season depends on two factors: rainfall and temperature. Mosquito eggs are laid in bodies of water, surfaces that will flood or any type of container holding water. Egg rafts of individually-stuck-together eggs float on water surface then hatch into aquatic larvae that breathe air.

Blind mosquitos or aquatic midges are not real mosquitos as they don't bite/suck blood or transmit viruses. When midges emerge from their habitat, they come off in swarms, which can be a nuisance. Their occurrence and survival in certain polluted waters often indicates pollution of aquatic habitats. The larvae are abundant in small and large natural lakes, waste water channels, sewage oxidation and settling ponds, and residential-recreational lakes.

Lake County has a mosquito control department that begins spraying when the rains start. You can see when your area is scheduled by going to the interactive map. There are various chemicals approved by the State of Florida for the use for mosquito adulticiding. The two most often used by Lake County are Malathion (Fyfanon) and Permethrin (Permanone 31 -66). Malathion is applied as a straight formulation and Permethrin is mixed with a diluent at a 4 to 1 ratio.

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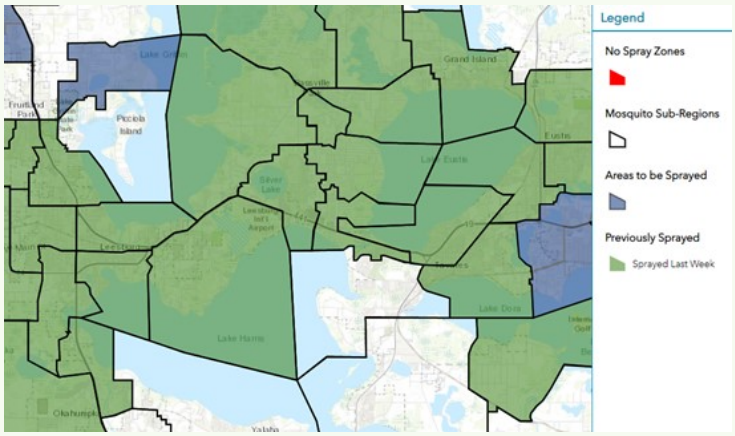


Dear Master Gardener,

I see those love bugs all over the place, especially when driving. Is it true that the University created them and how do I get them off my car?

Dear Homeowner,

The *Plecia nearctica* Hardy or "lovebug" appear in excessive abundance throughout Florida as male-female pairs for only a few weeks every April-May and August-September. They are a nuisance to many, but drivers are especially annoyed by the macerated bodies all over the front of their cars. The front of a vehicle can be protected by coating it with car wax, baby oil or WD40 and removing the lovebugs within 24 hours. Research has found that macerated lovebugs have a pH of 6.5 but become acidic at 4.25 within 24 hours. However, this, coupled with Florida's humid weather does not damage the paint—that usually happens when we scrape them off!

Photos: UF/IFAS

MYTH: Lovebugs Escaped after University of Florida Researchers Brought them into Florida

Lovebugs are not native to most of the southern United States (Hardy 1945). Since 1940 *Plecia nearctica* has extended its range from Louisiana and Mississippi across the Gulf States, reaching Florida in 1949. In the late 1960s, it became established entirely across north Florida. Its movement may have been accelerated by prevailing winds, vehicle traffic, sod transport, increased habitat along highways, and expansion of pastures but not by UF researchers.

EDIS articles | Gardening Solutions | Car nuisance

Native Bees

K.S. Kennen MGV

The pollinator that most people think of first is the honeybee that provides us with sweet, flavorful honey. The honeybee is a pollinator but not native to Florida. There are over 20,000 species of bees; 700 of those are in North America. Florida has 315 species of which 29 are endemic. Our native bees have a range of sociability, foraging, and nesting choices. They are effective pollinators even though they do not provide honey of any worth. Seventy percent of the bees nest underground by excavation and 30 percent above ground in existing cavities or in cavities they make. They are basically central location foragers and do not migrate. Many native bees are solitary but a few live in very small colonies but do not have a division of labor like honey bees.

Bumble bees (*bombus* sp) are large, fuzzy, noisy, early-rising bees that pollinate via sonication also known as buzz pollination. The bees are able to grab onto the flower and move their flight muscles rapidly, causing the flower and anthers to vibrate, dislodging pollen. They make their nest underground or in wood cavities. They do have a primitive social structure and the queen will produce honey to feed the brood.

Sweat bees are very important pollinators for many wildflowers and crops, including stone fruits, pomme fruits, alfalfa and sunflower. They like to nest underground. This solitary bee is attracted to the salt in human sweat. It has brilliant iridescent colors of either green, red, blue, or brown.

The leafcutter bees look like small bumblebees. They cut rounded pieces of leaves from plants such as roses and azaleas. The bees use the pieces of leaves as a lining and plugs for their egg cells.

This cellophane bee is appropriately named because their nests are lined with a cellophane-like substance that they produce. This fuzzy bee is similar in size to a honey bee. They like areas free of vegetation near riverbanks and cliffs.

Long-horned bees tend to be large and hairy, with especially hairy hind legs for collecting pollen. Most species have black abdomens that are striped with white or pale yellow hair. Males boast the most distinctive feature of this group — long antennae that often exceed the length of their bodies. Some common names are sunflower bee and squash flower bee.

Useful Links: Native Bees | EDIS ENY2042 | EDIS Native Bees | Gardener's Best Friend |

Figure 1: (L to R) Chamberbitter, Pusley, Sedge, Kyllinga & Oxalis. Credit: Stephen H. Brown, UF/IFAS Ext. Lee

Daily rainfall and humid temperatures give summer weeds a boost. Chamberbitter, Florida pusley, sedge, dollarweed/pennywort, and oxalis are just some examples of the many weeds that are exploding across landscapes. The time for per-emergent herbicides (February/March) is past but you can control them by hand pulling or mowing. You also might choose to use post-emergent chemicals. Finally, you can do what I do; leave them alone if it's green! Yes, if a weed is green, I leave it.

In my nice green lawn I found 30 summer weeds – all green! So, do I spray? Nope, I leave it be cause it's green.

The top summer weeds in Florida are black medic; Florida pusley; woodsorrel; bull thistle; broadleaf plantain, crabgrass, nutsedge, dollarweed, chickweed, beggarstick, and spurge. I have nine of these and a LOT of long-stalked phyllanthus (which lubbers love)!

See our April\May 2019 Garden Scoop for types of weeds.

More info: Common Weeds | Preemergence & Post-emergent herbicide | Summer Annuals | Turfgrass pest control | FL weeds | Weeds ID and other books on weeds from UF/IFAS bookstore | Guide to FL Weeds | Weed ID guide | EDIS | Herbicides | FL Weeds guide |

Photos: R. Doherty, MGV

Weeds from my yard:
Alligator weed, Beggarstick, Bengal dayflower, Chick-weed, Cuban purple wood-sorrel, dollarweed, drymaria, FL betany, hyssop spurge, Mexican prickly poppy, FL pusley, morning glory, pink purslane, globe nutsedge, roundleaf spurge, shiny cudweed, phyllanthus, Virginia creeper and yellow nutsedge

Pollinator-Friendly Yards

by: R. Doherty, MGV

I recently read a great article from Audubon on how to create a Pollinator-friendly yard. Here are the main topics:

* Choose native plants
* Plan your pollinator habitat
* Prepare your garden/planting area
* Plant
* Maintenance/care for your garden

Honeybee on African Blue Basil

Remember, what's good for birds is also good for people. Here are some possible impacts of your native plant garden:

⇒ **557:** Varieties of butterflies and moths supported by native oak trees, as compared to only 5 butterfly and moth species supported by non-native ginkgo trees.

⇒ **96:** Percentage of land birds that rely on insects to feed chicks.

⇒ **1,200:** Number of crops that depend on pollinators to grow.

⇒ **40 million:** Acres of lawn in the U.S. currently.

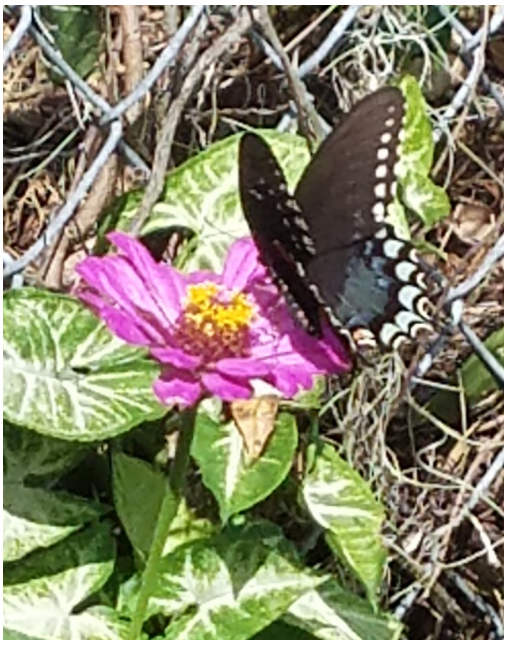
⇒ **80 million:** Pounds of pesticides applied to lawns in the U.S. annually. Native plants, on the other hand, support a balance of predator and prey and thrive without pesticides.

⇒ **800 million:** Gallons of gas used annually by lawn mowers. This produces significant amounts of carbon dioxide and other greenhouse gases driving climate change.

A little food for thought…

Related links: Make a birdhouse | Landscaping for wildlife | Pollinators | Audubon Native Plants | Forest Service Pollinators

Photos: Reggie D., MGV



Spicebush Swallowtail

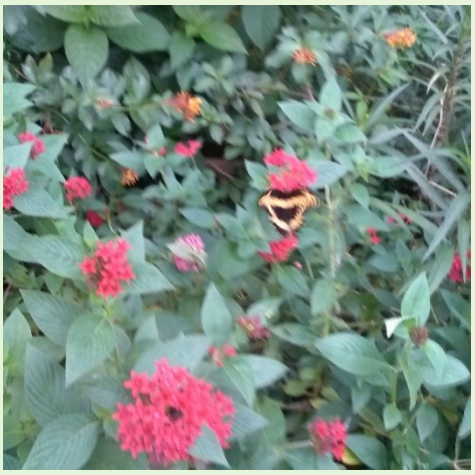
Due to COVID-19 restrictions, all events are virtual or postponed. To see our online opportunities, please visit https://lakegardeningprograms.eventbrite.com.

Be sure to catch our monthly *From the Extension* articles in the *Daily Commercial* *Lifestyle Home & Garden* *section*

- **6/26 (*tentative*):** The UF/IFAS Extension, Lake County Office's weekly Virtual Gardener FREE webinar on

"I was out roaming my yard with my camera (as I often do) and heard the distinct buzzing of the *Apis* or honeybee. I quickly turned to my African Blue Basil and there they all were!"

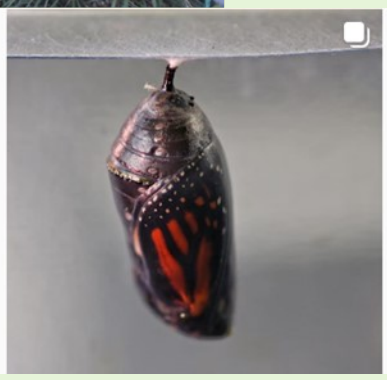
Then on April 5th I saw our first Ruby-throated hummingbird (*Archilochus colubris*) at the feeder! I just boil water and mix in sugar (a 4:1 ratio), let it cool down, fill my feeders, and they come! No need for food coloring or anything else.



Elaine Staudt, MGV, sent in a photo of an Anise swallowtail on her salvia and a quote from an unknown author, "Kind hearts are the garden, kind thoughts are the roots, kind words are the blossoms, kind deeds are the fruit".

Sandy Czekanski's Oakleaf Hydrangea

"To plant a garden is to believe in tomorrow."
Audrey Hepburn



Mike Duval, MGV, captured the birth of a Monarch.

"Butterflies are self-propelled flowers."
— Robert A. Heinlein

"A power of Butterfly must be -
The Aptitude to fly...Meadows of Majesty concedes
And easy Sweeps of Sky -" — Emily Dickinson