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THE

GARDEN BENCH



The Manatee County Master Gardener E-Newsletter

September 2021 - Volume 20 - Issue 8



BUGS: MOSTLY GOOD!

By Jim Haupt, Master Gardener Volunteer



There are over one million insect species worldwide, and 12,000 of those species are found in Florida. They are ever-present in the landscape, but not all of them are bad.

Ninety-nine percent of all insects are harmless or beneficial. Unfortunately, it's the 1 percent that gets most of the attention because of the damage they cause to crops, lawns, and gardens. Mealybugs, aphids, scales, whiteflies, termites, chinch bugs, fire ants, and others seem to take center stage, overshadowing the good bugs that work day and night providing valuable pest management.

Beneficial insects come in all shapes and sizes. They not only kill pests, but pollinate our crops, help reduce nitrogen runoff in water bodies, enrich our soil, recycle nutrients by feeding on dead and decayed matter, produce silk and textiles, and manufacture honey. According to the UF Thompson Earth Systems Institute, if a dollar amount could be placed on all the services insects provide, "it would equal **70 billion dollars** in the U.S. alone."

Ladybugs and green and brown lacewings are two of the most important beneficial insects in the state. One ladybug larva will consume as many as 500 aphids. Green lacewing adults do not feed on aphids, but the brown lacewing does, and both have predatory larvae. Green lacewing larvae, called "trash bugs," put dead exoskeletons of prey on their backs. In the case of aphids, just a few ladybug or lacewing larvae can tip the scales against needing insecticides.

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LACEWING LARVAE (TRASH BUG)

Photo: UF/IFAS Blogs



GREEN LACEWING

Photo: UF/IFAS Blogs



LADYBUG

Photo: UF/IFAS Blogs



Some beneficials, like minute pirate bugs, assassin bugs, big-eyed bugs, ladybug and lacewing larvae, earwigs, syrphid fly larvae, and dragonfly nymphs may be less familiar to the Florida gardener and often

mistaken for pests. In turf, **earwigs** prey on chinch bugs, mole crickets, and sod webworms. **Dragonfly nymphs** are aquatic and eat mosquito larvae before they can become biting adults. **Big-eyed bugs**, about 1/8" in length, feed on chinch bugs, caterpillars, and soft-bodied insects found on the surface of soil. **Assassin bugs** possess needle-like beaks that inject venom into unsuspecting flies, mosquitos, and aphids. **Syrphid fly larvae** resemble leaf-munching caterpillars, but they actually devour aphid pests.

Landscapes can be modified to attract beneficials, but unless you provide something for them to eat, they will fly away. Plants with small flowers and high quantities of nectar that bloom throughout the year are good choices. Many native flowers are adapted to attract beneficials for their own protection. Certain ones, such as coreopsis, beach sunflower, gaillardia, and coneflowers, all have flat surfaces that pollinators use as landing pads. Some native shrubs, like yaupon holly and Walter's viburnum, are loaded with pollen.

Passionflowers and elderberries have nectar glands on their stems that attract beneficial insects. Plants in the carrot family, *Apiaceae*, including caraway, coriander, dill, and fennel, will attract beneficial parasitic wasps. Remember, beneficials get thirsty. A shallow water container, such as a ceramic saucer with pebbles, will give them a place to rest and drink.

If you have a rose bush infested with aphids or other soft-bodied pests such as whiteflies, a simple trap can be made by painting a 3' X 36" mailing tube with "Safety Yellow #7543." Place the tube near the infested plant. The trap will attract ladybugs and increase their numbers 2-5 times.

Coping with pests can be frustrating, but when managed in a sound manner, we can **rely less on harsh chemicals**. Select pest-resistant plants and place them in suitable locations. Scout and monitor on a regular basis to catch potential problems before conditions get worse. When problems do arise, pick off pests by hand; prune, snip or hose off infested sections; or spot treat using insecticidal soap or horticultural oil. **Blanket spraying with pesticides kills pests and the ones that work on your behalf**. So, protect them, entice them into your garden, and allow them to do their job.

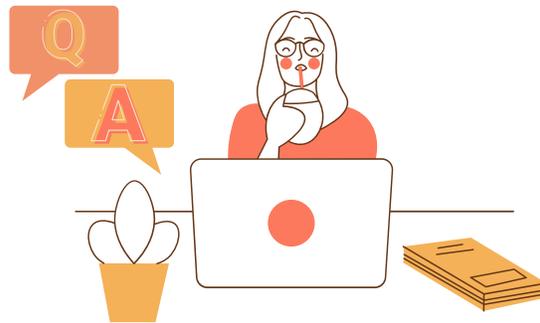


FIND OUT MORE!

To learn more about the names and identities of beneficials, go to "Natural Enemies and Biological Control", Hugh A. Smith (<https://edis.ifas.ufl.edu/publication/IN120>)

To learn more about attracting beneficials, go to <https://nwdistrict.ifas.ufl.edu/phag/2014/12/19/tools-for-trapping-pests-and-attracting-beneficial-insects/>

ASK A MASTER GARDENER VOLUNTEER



Q Would you be able to help me with identifying this flower? Could it be *Vernonia angustifolia* (ironweed)? *B.L., Bradenton*



PHOTO SUBMISSION: IRONWEED

Photo: B.L., Bradenton

A Yes, I believe your identification of **ironweed** is correct. However, based on location, I would say the proper species is ***Vernonia gigantea***. Ironweed is a great Florida native, attractive to hummingbirds and nectar-feeding pollinators. According to the Atlas of Florida Plants, *V. gigantea*, giant ironweed, is found in our area and *V. angustifolia*, tall ironweed, is more North Central Florida. *Karen Holleran, MGV Volunteer*

FIND OUT MORE!

<https://florida.plantatlas.usf.edu/Plant.aspx?id=3255>

<https://florida.plantatlas.usf.edu/Plant.aspx?id=3272>

The following links are to information about Ironweed for your reference.

<https://gardeningolutions.ifas.ufl.edu/plants/ornamentals/ironweed.html>

Master Gardener Volunteer **Karen Holleran** answers your email questions. Send questions and/or photos for identification or for diagnosis of residential gardening problems to ManateeMG@gmail.com. Or call us during office hours 9:00 A.M. to 4:00 P.M. at 941-722-4524 and ask for a **Master Gardener Volunteer**.



Master Gardener Volunteer Amy Stripe & Joy Dersken, Co-Editors
Contents reviewed & edited by
Alyssa Vinson, Extension Agent



WHAT'S THIS?: RATS

By Maureen Hirthler, Master Gardener Volunteer

Overnight destruction of fruit on your citrus tree may be the work of **roof rats**. *Rattus rattus* was common on early sailing ships and arrived in this country by that route. This rat has a long record as a vector of the fleas harboring the plague, aka the “black death.”

Roof rats are climbers and enjoy a semi-tropical climate. They prefer to nest in palm trees but can be found elsewhere, including attic crawl spaces, false ceilings, and cabinets, where they can gnaw on wires and cause short-circuiting of electrical devices. They may be detected by fruit and vegetable destruction (their primary source of food), noise, droppings, and, of course, by sight.

RAT FEEDING DAMAGE ON ORANGES

Photo: University of Florida



To control the problem, we follow the Integrated Pest Management (IPM) program. The first step is identification. Roof rat coloration ranges from black to silvery gray to tan with a light belly. The tail is longer than the combined head and body. Adults weigh from one-half to one pound. Their droppings are up to 1/2 inch long and spindle-shaped.

Next, make your yard as uninviting as possible. Remove fruits and nuts from the ground, keep garbage containers covered, and clean up pet waste promptly. Harvest fruit wholly and early. Store pet foods and bulk foods in sealed containers. Stack firewood, lumber, and other materials at least one foot away from walls and fences and at least 18 inches off the ground



ROOF RAT

Photo: University of California

Rats are a food source for many predators, especially snakes. Owls and other birds of prey also hunt rats. Predators provide biological control but are overwhelmed; roof rats live about one year and reach sexual maturity in three to five months. They have six to eight young per litter and up to six litters per year.

Humane trapping (death without suffering) is an excellent way to control rats around your home. Large mouse snap traps, baited with nuts, work well. (My father told me to place the trap in a paper bag, so I didn't have to see the results!) Poison baits must be used with extreme caution. They contain warfarin (a blood thinner) and are toxic to children, pets, livestock, and wildlife. Outside, you must use tamper-proof traps. Even when used carefully, these baits can lead to secondary poisoning of beneficial wildlife such as owls. As such, they are not usually recommended.

FIND OUT MORE!

The University of Florida has more information at <https://edis.ifas.ufl.edu/publication/dh044>

LANDSCAPE RECOGNITION

The home landscape of Master Gardener Volunteer intern **Tanya Larsen** was recently recognized by the Extension's Florida-Friendly Landscaping™ program. Landscapes that use sustainable practices include minimizing potable water for irrigation, avoiding runoff of excessive fertilizers and pesticides, and providing habitat for wildlife and are eligible for receiving a silver or gold level recognition. To get your landscape recognized, go to <https://ffl.ifas.ufl.edu/about-ffl/landscape-recognition/> or call Susan Griffith at 941-722-4524, Ext. 1825.



TANYA LARSEN

Photo: Charlotte Reed



MOBILE PLANT CLINIC

Photo: Dorinda Maben

MASTER GARDENERS COME TO YOU

Master Gardener Volunteers **Tom and Karen Eckert** operate a “mobile” Plant Clinic at the Lakewood Ranch Farmers’ Market the first and third Sunday every month, from 10:00 A.M. to 2:00 P.M. For locations and schedules of other mobile Plant Clinics in the area, contact Master Gardeners at 941-722-4524.

SPEAKERS COME TO DEL WEBB LAKEWOOD RANCH

In July, Master Gardener Volunteer (MGV) Amy Boohaker coordinated with **Del Webb’s Butterfly Garden Group** for a presentation on butterfly gardening. MGV Norma Kisida gave her highly popular presentation. If you are interested in having a member of our speakers bureau present to your group, contact Program Assistant Kathy Oliver at 941-722-4524. We have a wide range of gardening topics to offer.



(L TO R) MGV AMY BOOHAKER AND NORMA KISIDA; CARRIE MUELLER, DEL WEBB GARDEN GROUP

Photo: Amy Bookhaker



REGENERATIVE AGRICULTURE - IT'S ALL ABOUT THE SOIL

By Norma Kisida, Master Gardener Volunteer



Most people are familiar with agricultural terms such as organic and sustainable, but a newer concept that has received recent press is “**regenerative agriculture.**” This concept is highlighted by a recent film “Kiss the Ground” (see non-profit site <https://kisstheground.com>) as well as by other organizations. Although there is no one definition for regenerative agriculture or gardening, it is focused **not only on rebuilding the soil but improving it.** Some methods which can be applied to home gardens include low or no tilling to lessen soil disturbance, using compost for enriching the soil, crop rotation and the use of cover crops (applies to vegetable gardens), and reducing the use of pesticides and synthetic fertilizers.

After years of overcultivation and poor land management coupled with drought in the 1930s, the devastating Dust Bowl in the Midwest brought attention to land management. The Soil Conservation Service, now the Natural Resources Conservation Service, was created and measures were instituted to prevent such disasters. Unfortunately, widespread modern farming methods such as aggressive soil tilling, crop monocultures, extensive use of herbicides and pesticides, and factory farming of animals have depleted much of our farm soils, resulting in extensive use of synthetic fertilizer. Home gardeners can learn valuable lessons from these practices.

No till or low till planting minimizes disruption to the soil ecosystem and keeps plant roots connected to microorganisms such as mycorrhizal fungi, beneficial bacteria, and earthworms. Tilling releases carbon dioxide into the atmosphere and speeds up moisture loss from the soil. **Amending soils with organic matter** such as compost adds and holds nutrients, adds beneficial organisms, prevents erosion, holds carbon, and lessens the impacts of both flooding and drought.



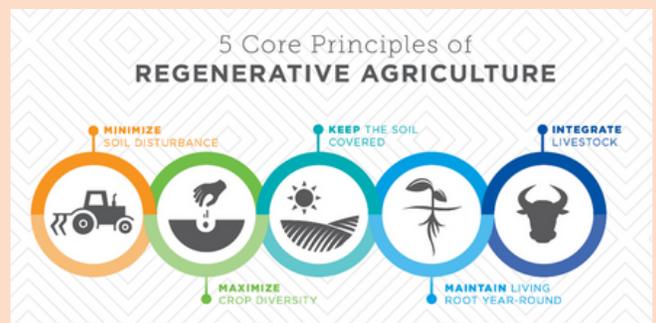
HEALTHY SOIL

Photo: Unsplash

You can make your own compost or use commercial products. If you keep backyard livestock, rotating your animals throughout different areas of vegetation provides fertilization and natural weed control.

Using **cover crops** in your fallow landscape bed or veggie patch allows for water and carbon to be absorbed by the soil, helps prevent erosion, and adds nutrients to the soil. Sunn hemp (*Crotalaria juncea*), black-eyed peas, sorghum, sunflowers, or marigolds are recommended for the summer while hairy vetch (*Vicia villosa*), winter pea, or rye grass could be used for winter cover. **Rotating crops** improves soil health, enhances biodiversity, and helps with weed, disease, and insect control. Synthetic fertilizer discourages plants from sending roots further into the soil and working with microbes for nutrition. Chemical pesticides also have an adverse effect on soil microbial activity and can contribute to pollution.

Institutions such as the **University of Florida** and the **US Department of Agriculture** offer educational opportunities in regenerative agriculture. As more farmers learn to use these practices, they are finding they can turn a profit and improve their land. Adopt them in your own landscape. It is time for us to stop treating our living soil like dirt!



REGENERATIVE AGRICULTURE GRAPHIC

Source: General Mills

FIND OUT MORE!

For an interesting introduction to regenerative agriculture see this Groundswell video:
https://www.youtube.com/watch?v=Uj_RgbhJ7XM

THE SNOW BIRDS THAT CAME AND STAYED

By Robert Hinz, Master Gardener Volunteer



CANADA GOOSE

Photo: Jan Hinz

Perhaps the most widely recognized migratory bird is the Canada goose (*Branta canadensis*), winging overhead in v-shaped formation calling honk! honk! honk! Before the 1960's, an estimated 47,000 migratory Canada geese wintered in Florida. That number has **dropped to 1,000 today** since the birds are not flying as far south anymore. However, to help restore a dwindled population of one subspecies (*B. maxima*, the giant Canada goose), birds were introduced to Florida in the 60's and 70's. By 1986, a breeding population of this non-migratory (resident) goose was established in Manatee County.

Sporting a large brown body, black neck, and striking white chin strap, the giant Canada goose weighs 9-20 pounds and lives up to twenty-four years. They live and nest in a variety of habitats around bodies of water and in urban and suburban areas such as golf courses, airfields and lawns. Resident geese adapt well to neighborhoods, whereas the migratory geese prefer more rural belts. These areas have a wide variety of food plants for the birds such as fescue (*Festuca spp.*), cordgrass (*Spartina spp.*), cattails (*Typha spp.*), clover (*Trifolium spp.*), corn (*Zea mays*) and saltgrass (*Distichlis spp.*). The geese also eat a variety of insects, small fish, leaves, roots, and aquatic plants.

Canada geese mate for life. However, during the first three years after fledging, while looking for a mate, they may consort with a number of the opposite sex. Nests are usually in elevated areas near water. Resident geese generally have two clutches of four to six eggs, while the migratory birds have only one clutch. The young birds (called goslings) stay in the nest for one to two days and fledge at about 10 weeks. They stay with their parents for about a year. Occasionally, there will be "gang broods" where a single female cares for numerous goslings from different clutches.

Foxes, raccoons, bobcats and coyotes prey on both young and adult birds. Resident geese have less predation since they tend to live in urban areas where there are fewer predators.

Canada geese can become a nuisance and may pose health problems for humans. Goose droppings may contaminate waterways, golf courses, and neighborhood lawns. Larger populations can be a danger to airfields, causing planes to make emergency landings like the U.S. airliner that landed in the Hudson River in 2009. During breeding and nesting, birds can become aggressive, hissing and biting the unsuspecting passer-by.

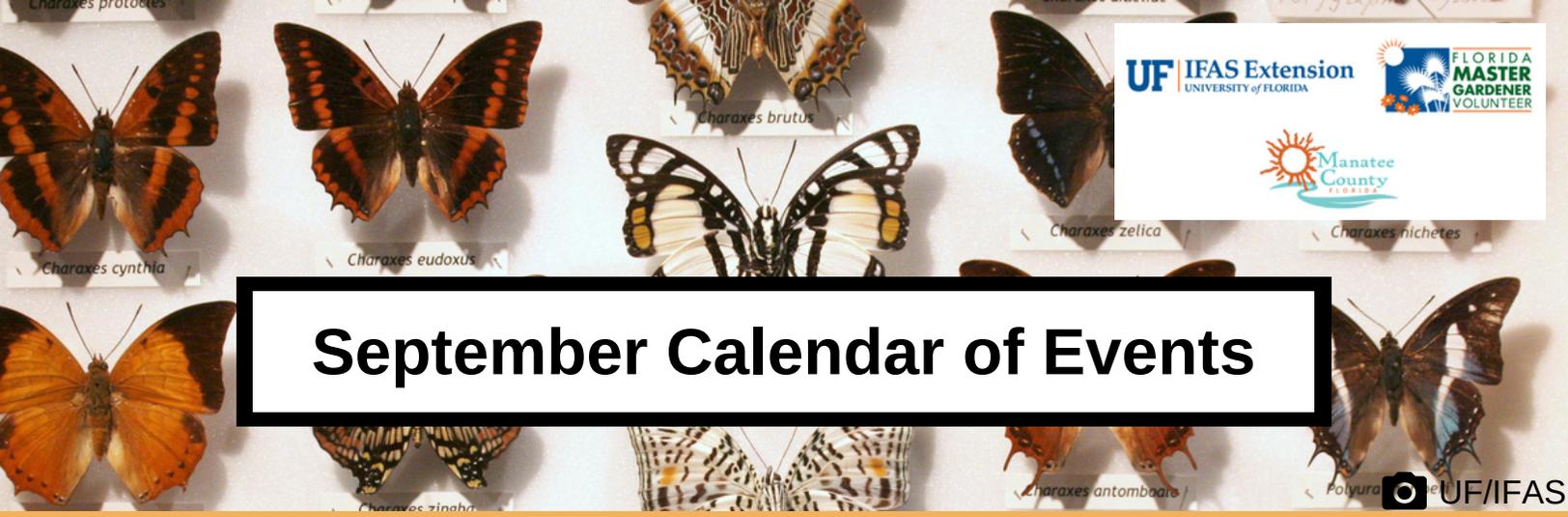
The Federal government and the Florida state government protect Canada geese. They can be hunted, but only with appropriate licenses and permits. Landowners who are in danger of losing commercial crops may remove eggs and nests from their properties if they hold the proper permit. Likewise, the "Nest/Egg Depredation Registration" allows landowners, homeowner's associations, and local governments to remove eggs and nests. General management of these geese may include refraining from public feeding, changing habitat so that it is not as attractive to the birds, training dogs to chase the birds, and using chemical repellents. Scaring the birds away with loud noises and using the "Goosinator," which is an electronically controlled device that produces loud sounds, flashing lights, and a scary face, may also work.

Canada geese are striking birds that live among us and give us the opportunity to watch nature up close. Their distinctive honking is something that is never forgotten.

REFERENCES

<https://myfwc.com/wildlifehabitats/profiles/birds/waterfowl/canada-geese/>
<https://myfwc.com/wildlifehabitats/wildlife/waterfowl/nuisance/canada-geese/>

Editors' note: The author, our beloved friend and colleague Rob, passed away on August 9th. His inquisitiveness and love of nature – especially birds – will be missed.



September Calendar of Events

DATE	TIME	EVENT
Tuesday 09/07/21	11:00AM	<p>Organic Gardening - Getting Started: Focusing on vegetable gardening, this series kicks off with a look at organic methods and materials, soil building, fertilizing, and sourcing plants and seeds.</p> <p>https://ufl.zoom.us/webinar/register/WN_BI1QphMnRWONE9S4In3aHQ</p>
Monday 09/13/21	11:00AM	<p>Organic Gardening - Pest and Disease Management: Keep on top of insects, diseases, and weeds using scouting, Integrated Pest Management, and environmentally-friendly products.</p> <p>https://ufl.zoom.us/webinar/register/WN_MpDKGuWgQ_elo3nXdNuh5A</p>
Monday 09/20/21	11:00AM	<p>Organic Gardening - Veggies/Herbs for Health: Organic produce contains important vitamins, minerals, antioxidants, and fiber. Learn the benefits of incorporating vegetables and herbs into your diet for a healthy lifestyle.</p> <p>https://ufl.zoom.us/meeting/register/tJcuc-mtrjluE9Cc28UCBcabcdkIDYQPymh1</p>
Friday 09/24/21	10:00AM	<p>Nature Journaling Palmetto Library: Learn about the health benefits of nature journaling, it's role in history and literature and how it can be used to make you a more observant and careful gardener.</p> <p>https://manateelibrary.libcal.com/event/8142721</p>
Tuesday 09/28/21	10:30AM	<p>Compost Happens- Home Composting: Learn how to turn your kitchen scraps and yard waste into useful soil amendments, helping to divert compostable materials out of landfills by setting up your own home compost bin.</p> <p>https://ufl.zoom.us/webinar/register/WN_CQy6szVcTkyeStdQHVUoeg</p>

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