



BUTTERFLY BEHAVIOR – FLYING WITH A PURPOSE

TEXT & PHOTOS BY NORMA KISIDA, MASTER GARDENER VOLUNTEER

Observing butterflies in my garden, it often looks as if they are just flying around randomly, wasting energy. Sometimes they are alone but often with other butterflies of the same species and occasionally a different species. However, I know there must be a reason, focusing on their essential needs for survival, reproduction or feeding.



Black Swallowtails Mating

One of the reasons butterflies fly about is looking for a mate. Males spend considerable time patrolling areas where females may be present. Some male species perch and fly out to check out passing objects hoping to find a receptive female. Males recognize females by color and scent, and if they find a female of same species, courtship begins. The males release pheromones to attract the female and often engage in dance-like moves with the male hovering over the female.

Another reason to fly aggressively is that they are territorial and to chase away other species or even others of their own species. They are also able to evade predators by their quick flights and turns. When on the hunt for food or in the case of the female to lay eggs, they will fly around and may land on various plants as they search for the correct one. Other behaviors are basking to rest or to warm their wings, congregating at a damp site to get water and minerals (puddling), and egg laying.



Butterflies Puddling

Although it may be difficult for us to tell exactly what the butterflies have in mind when they appear to be randomly flying around, it is not without purpose. I also like to think that they are just flying for the joy of flying.



Tiger Swallowtail Feeding

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In-person visits are welcome at:
The UF/IFAS Extension Manatee County Office
1303 17th St. W., Palmetto, FL 34221

SCREW-PINE

BY WAYNE TALCOTT, MASTER GARDENER VOLUNTEER

In the Pandora landscape at Animal Kingdom in Walt Disney World, you will find *Pandanus utilis* - commonly called the screw-pine. (Often also called screw-palm, it is neither a pine nor a palm, but a member of the old-world genus *Pandanus*.)

The tree has an other-worldly appearance. Although it is not a true pine, it has whorled foliage with a screw-like pattern. The screw-pine, originally from Madagascar, is now seen across the tropics. It does best in USDA hardiness zones 10 and 11.

The slow- to-moderate growing tree can reach heights of up to 30 feet but can also be used as a container plant. Full sun to part shade are best and it is moderately drought tolerant. The screw-pine with its adventitious roots, blooms in the fall but the real distinctive feature is the large 9-inch-wide fruit that's rounded like a pineapple on the female plant. *P. utilis* is a distinctive accent plant for your consideration.

<http://bit.ly/44fZaW7>
<http://bit.ly/44r7Wla>
<http://bit.ly/465YVzk>



Screw-Pine

MINT: USE IT FRESH OR DRIED

BY CYNTHIA OLCOTT, MASTER GARDENER VOLUNTEER

As one of the easiest herbs to grow, mint can be a potential problem. It rapidly sends out runners everywhere and becomes weedy when left unchecked. Good advice: plant it in containers!

Mint belongs to the Lamiaceae family with sage, basil, thyme, rosemary, and oregano. Of the actual *Mentha spp.*, there are 19 or so distinct species and many crosses. Two of the most popular are peppermint (*M. piperita*) and spearmint (*M. spicata*). But others exist. Consider apple, English, orange, and (yes) chocolate!

Mint grows best in soils that retain moisture and prefers light or partial shade in Florida. Space plants at least 12 inches apart to give them room to spread and grow. Plants are easily propagated by either cuttings or division.

Leaves can be harvested as needed. Fresh leaves and flowers can be used or stored for later use. Mint is considered a tender-leaf herb, meaning the leaves have a high moisture content and need to be dried in darkness and low humidity or the leaves will turn dark and moldy.

Mint plants are known for their distinctive aroma, which is due to the presence of essential oils like menthol. Their small flowers can be off-white, bluish, or violet. Both the leaves and flowers can be added to dishes.

As a cooking ingredient, mint is used fresh or dried in desserts, beverages, meat, salads, jellies, boiled potatoes, sauces, teas and infusions. Its essential oil is used in many products, including toothpaste, gum, and candy. Medicinally, mint has a history of aiding digestive issues, soothing cold symptoms and alleviating respiratory issues.



Mint

Pimm's Cup

(alcoholic fruit salad in a glass)

- 3T Pimm's liqueur
- Spear of English cucumber
- Thick slice of orange
- Long peel of lemon
- Tall sprig of mint
- Ginger Ale
- Ice to fill high ball glass

Relish

(NEVER buy mint jelly again)
 Excellent on lamb chops!

- 1 C minced fresh mint (4 oz.)
- 1/2 C sliced almonds, toasted & chopped fine
- 1/3 C extra-virgin olive oil
- 1/4 C red currant jelly
- 2 2/3 T red wine vinegar
- 1 1/3 T Dijon mustard
- Kosher salt and pepper

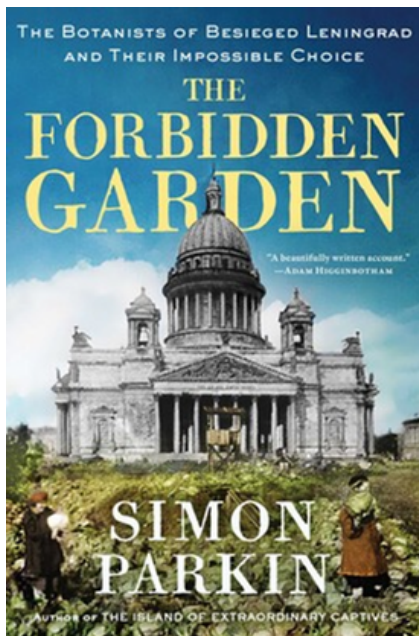
Combine ingredients in a bowl. Season with salt and pepper to taste. Let rest at least 1 hour before serving.

For more information, visit:
<http://bit.ly/449IAZ3>

SUMMER READ REVIEWS FOR NATURALISTS AND GARDENERS

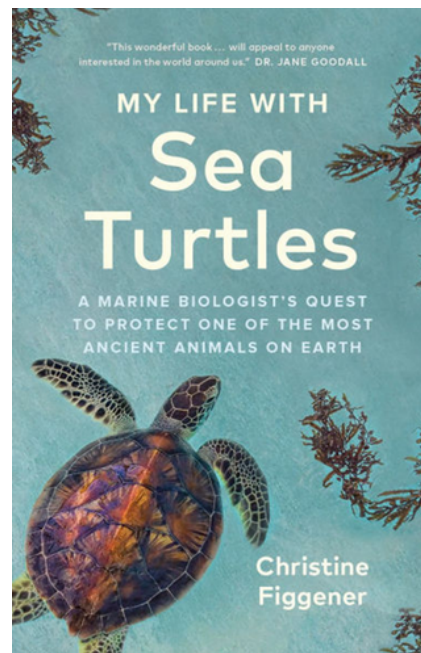
BY AMY STRIPE, MASTER GARDENER VOLUNTEER

The Forbidden Garden by Simon Parkin (Scribner, 2024) is the harrowing and heroic true story of Leningrad (today's St. Petersburg) botanists at the world's first and largest (at that time) seed bank during Nazi Germany's siege of that Soviet Russian city. During this longest blockade in recorded history, millions starved. The Leningrad botanists, protecting a precious collection of domesticated and wild seeds from around the world of important food crops including oats, potatoes, rice, fruits, wheat, groundnuts, rye, forage grasses, tubers, and vegetables, made a pact to sacrifice their lives rather than consume their precious edible stock to keep themselves alive. Half of these botanists starved to death. I was left wanting more horticultural details; but this is a cautionary tale of government corruption and scientific mis-information.

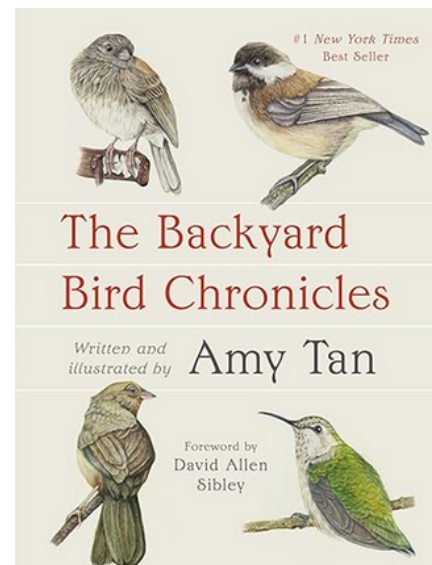


My Life With Sea Turtles by Christine Figgener (Greystone Books, 2024) is at times a delightful, educational, and cautionary account of this marine biologist's encounters with sea turtles.

Figgener's video of the removal of a plastic drinking straw from the nostril of a sea turtle quickly went viral and led to the ban of plastic straws by fast food joints around the world. She interestingly describes the many species of sea turtles and their habitats and her travels to document them. She also spills a lot of ink on being a woman discriminated against in a man's world, by which she means, I guess, science. (That bored me. This has not been my experience.)



The Backyard Bird Chronicles by Amy Tan (Knopf, 2024) is a diary, lavishly illustrated by the author herself, of "ordinary" birds she's observed in her own yard over a period of many years. This beloved author began to document the behavior of birds visiting (or not) her feeders, their interactions with one another as a single species and then as different ones. Her observations are insightful and delightful. Her illustrations are amazing. This book gets best as a slow read, savored a chapter at a time. Tan herself enjoys her birds the same way.



Night Magic by Leigh Ann Henion (Algonquin Books, 2024) is, I suppose, about how we are destroying nighttime habitats with artificial light and/or failing to appreciate wildlife that emerges after dark. There are priceless nuggets of information in this book about salamanders, owls, bats, and moths. But I struggled to get through Henion's amateur, disorganized writing style and her focus on disaster scenarios with no presentation of concrete proof of the harmful effects of streetlamps, stadium lights, and flashlights on man nor beast. She quotes studies with no footnotes. The topic is worthy of a more disciplined writer.



LOCUSTBERRY: QUITE THE CHARMER

TEXT & PHOTO BY SALLY HERB, MASTER GARDENER VOLUNTEER

Looking for a showy, large specimen shrub? The locustberry (*Byrsonima lucida*) is a terrific choice, blooming late winter into early summer with fruit ripening late spring to summer. This evergreen thrives in Zone 10A-11 in full sun and is drought tolerant. The clusters of small flowers are a delight, starting out white, changing to pink then pale red. Because they don't all bloom at the same time, the display is eye-catching. There are oil glands on the underside of the flowers that also change from green to yellow. Bees use this oil to construct nests. Birds and other wildlife enjoy the berries and it is the larval host for the Florida duskywing skipper. The larvae of the duskywing protect themselves by making a shelter from a few leaves held together with silk, so don't remove these.

Interestingly, the size of this plant depends a lot on the soil. In the pinelands where soil is nutrient poor it may only grow to 1 foot and in richer hammock soil may reach 8-10' feet! Locustberry has an irregular growth pattern making it a nice complement to denser shrubs. Berries were traditionally used for food and can be used to make juice and wine. The bark has been used as a dye and to treat bronchial issues. The locustberry is one of those sneaky natives that appear relatively non-descript until you see their delightful flowers! This charmer is listed as "Threatened." Be sure to source it from a reliable native plant nursery.

For more information, visit:
<http://bit.ly/4k4yXzI>
<http://bit.ly/3I6eih9>



Locustberry

Editor's note: I installed one as a "bold experiment" in my landscape. The foliage is attractive, but it does need FULL sun in order to thrive and produce blossoms. Mine survived brackish water inundation during Helene.

NEWEST PEST: TWO-SPOT COTTON LEAF HOPPER

BY MAUREEN HIRTHLER, MASTER GARDENER VOLUNTEER

The Florida Department of Agriculture and Consumer Services (FDACS) Division of Plant Industry has issued a new invasive pest alert: the two-spot cotton hopper. (*Amrasca biguttula*).

It was originally detected in the Caribbean attacking vegetable crops like okra, eggplant, and sunflowers. In south Florida, the two-spot cotton hopper has already been sighted on okra and eggplant.



Two-Spot Cotton Leaf Hopper
 Photo credit: UGA Cooperative Extension

Leafhoppers are insects in the family Cicadellidae (Order: Hemiptera). All members of this group use piercing-sucking mouthparts to suck out plant sap. They excrete honeydew, a shiny, sticky waste product that attracts ants.

Like similar leafhoppers, the cotton hopper feeds on the lower surface of leaves, causing yellowing, reddening, then browning of leaves – a syndrome called "hopperburn." Two-spot cotton hoppers are so tiny the severe damage is likely to be noticed before the leafhoppers themselves.

Currently, the important action is surveillance. If you think you have this pest, send a sample of your plant to www.fdacs.gov/DPIsamples for identification.



Two-Spot Cotton Leaf Hopper
 Photo Credit: University of Maryland Extension

The University of Florida scientists are studying this pest and working on ways to prevent its spread. The cotton hopper does have some natural enemies, which include spiders, lady beetles, ants, and green lacewings. Still, it may present a major risk to commercial crops if its spread is uncontrolled.

For more information, visit:
<http://bit.ly/4kNDEyU>
<http://bit.ly/3T11Qlh>

MULCH MYSTERIES

BY JENNIFER TONGE-MARTIN, MASTER GARDENER VOLUNTEER

Mulch! This is number 4 of the 9 Principles of Florida-Friendly Landscaping™, and one of the easiest ways to spruce up your garden. Or, maybe not? Social media has been circulating confusing information about mulch that may be “fake news”. Before you grab just any bag labeled “mulch” get the facts from the UF/IFAS experts.

Anything spread over bare soil meets the basic definition of “mulch”. But what mulch is best? Organic mulches, that is, those made from natural materials that will biodegrade into the soil, provide many more benefits than synthetic or inorganic mulches. Gardeners will get the “biggest bang for their buck” from plant products such as bark, chipped or shredded wood, leaves, straw or pine needles. IFAS research found that the longest-lasting products are pine bark, maleluca mulch, cedar and eucalyptus mulches. Cypress mulch, which often comes from wild trees and thus contributes to deforestation, is not recommended. Nor is chipped or shredded, then dyed wood which can come from contaminated scrap-wood products.

Short-lived mulch offers several advantages over long-lasting mulch. Shredded leaves, pine-straw, grass clippings and compost provide nutrients and micro-organisms that benefit plants. Slower decomposing mulches prevent plants from accessing important nutrients like nitrogen, requiring the use of extra fertilizer. Plus, a lot of these short-lived mulches are free. Free mulch is attractive to budget-minded gardeners but consider the source carefully. Pesticide-treated grass clippings on a vegetable patch? No way!



Mulch

Does mulch have a downside? Does it attract unwanted pests or carry pathogens? The termite question has received close scrutiny. The findings are that termites will munch mulch but they don't survive in it. There is no evidence that termites can be introduced to an area by any mulch product. Malealuca mulch is the least attractive mulch to bugs, but there is no evidence that it actually repels them. The You Tubers claiming these magical benefits are sadly wrong. Also, there is no evidence that adding borate pesticide to mulch will make it bug-free or be safe to use.

Mulch can carry a big problem for plants, if it has been stored improperly. If left wet, in bags lying on the ground, it will start anaerobic fermentation that produces sulfurous chemicals which stunt or even kill smaller plants. Other than that, mulch is not a reservoir for plant diseases and does not need to be removed regularly, just refreshed.

Mulch goes to the “dark side” when it is applied too thickly or up against plant stems, tree trunks or house foundations. Organic mulch is great for retaining moisture and regulating soil temperature. Too much moisture, though, suffocates roots, encourages molds and mildews and promotes rot. Too thick a layer of mulch provides a cool, moist covering where ants, cockroaches and, yes, termites can hide and travel undetected. A good rule is to keep mulch away from walls, tree trunks and plant stems, and lay only about 2-4 inches of mulch on your soil.

This, year, when choosing your mulch, remember that the best one—is the one you'll use!

For more information, visit:
<http://bit.ly/3TEfivr>

PLANT DEFENSES

BY JOHN DAWSON, MASTER GARDENER VOLUNTEER

All living things strive to survive. Plants have evolved various mechanisms to defend themselves from predators and competitors. Some have thorns, while others develop bitter or toxic substances in their leaves to deter herbivores and insect pests. All plants need sunlight, water and nutrients to survive and grow. Most likely by random occurrence they find themselves surrounded by members of their own species or amongst a mixture of others, all vying for available resources. Some successful survivors grow fast and tall shading out competitors. Others develop root systems that are symbiotic with soil biota making them more efficient in harvesting nutrients from their neighbors.

Then there are those that exude phytochemicals into the soil to deter growth of competitors. They are known as allelopathic plants. Not all allelopathic plants affect all plants equally. Some are specific to certain species and others can be beneficially used as weed controls and companion plants. Do you ever wonder why some of your plants do poorly no matter how well you pamper them? You may have inadvertently planted them together with an allelopathic rival. Allelopathic plants usually effect seed germination or growth development. Knowing which plants do well together and which do not, can make your garden more productive. Here are a few of our local allelopathic plants:

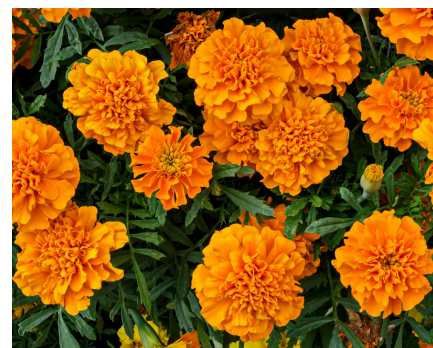


Asters



Southern Magnolia

- Mango (*Mangifera indica*): The leaf litter deters germination of surrounding plants but not its own, which are eventually shaded out by the mother tree.
- Southern magnolia (*Magnolia grandiflora*): It produces phytochemicals to suppress competitors.
- Pines (*Pinus spp.*): They produce volatile organic compounds from their roots and needles making it a good landscape mulch to suppress weeds.
- All plants in the aster (*Asteraceae*) family tend to inhibit seed germination.
- Plants in the genus *Solidago* such as goldenrod and sunflowers inhibit the germination of lettuce and radishes and inhibits the growth of maples and annual red clover. Sunflowers however, are one leg of the Native American “Three Sisters” planting technique along with pole beans and melons, illustrating “helping others while deterring others”.
- Herbs are great, but beware: oregano (*Origanum vulgare*), rosemary (*Salvia rosmarinus*), thyme (*Thymus vulgaris*) and hyssop (*Hyssopus officinalis*) are all allelopathic. Fennel inhibits growth in plants like beans, tomatoes, and cabbage, causing them to struggle.
- Vegetables, too, can be problematic. All of the onion genus (*Allium spp.*) exude sulfur compounds that can inhibit growth, affecting both roots and shoots of peas and beans. Corn pollen has negative effects on several plants, including wildflowers, ornamental trees, and melons. Cucumbers and lettuce do not mix. Brassicas need to be rotated because their leftover debris and phytochemicals remaining in the soil can inhibit the growth of future crops.
- French marigolds (*Tagetes patula*) planted in advance of other crops can be effective in controlling root-knot nematode buildup. They need at least a year for the roots to release their toxic compound.
- Other notable allelopathic plants include invasive species such as Brazilian peppertree (*Schinus terebinthifolia*)
- Of course, black walnut (*Juglans nigra*) is the stuff of nightmares, inhibiting turfgrass and tomatoes amongst many other plants.



Marigolds

As a gardener, become knowledgeable of what are the right plants to be planted in the right place and next to, or in close proximity of others.

For more information, visit:

<http://bit.ly/4kLX8E6>

<http://bit.ly/4kaTCC6>

BLACK AND BLUE: OUR FAVORITE FLORIDA SNAKES EASTERN INDIGO OR SOUTHERN BLACK RACER?

BY JOY DERKSEN, MASTER GARDENER VOLUNTEER

This is the time of year that we start to see snakes in our yards. The other day I was reaching down to move a black hose off the front sidewalk and was startled to find out that I had picked up a large black snake instead. The snake was as surprised as I was and quickly disappeared into the garden. What snake did I disturb? We have two likely candidates: the Southern black racer (*Coluber constrictor priapus*) or the Eastern indigo snake (*Drymarchon corais couperi*). The black racer is active during the day and thrives in suburban environments where it eats rats and mice, frogs and toads, lizards, birds and other snakes, including rattlesnakes. It likes to live in hedges and undergrowth.



Adult Southern Black Racer Snake



Eastern Indigo Snake

My other candidate is the Eastern indigo snake. It has a blue sheen to its smooth scales which is how it got its name. The blue color is most intense right after it sheds the old skin; most of the time you will see it as blackish-blue. Some of them have red chins and faces; others are just all black. The Eastern indigo is one of the longest American snakes, and can grow a little past 8 feet in length. It has the same diet as the black racer, however it likes to live in burrows in cold weather which it shares with armadillos, gopher tortoises, and other snakes. Because it is an easy-going snake and easy to tame, it became a favorite in the pet trade and was often worn by women who danced in carnival side show acts! Between habitat destruction and over collecting it is now considered an threatened species which is illegal to be captured, owned or sold commercially.

Several conservation programs are raising these snakes and returning them to the wild. The Nature Conservancy (TNC) in Florida, the Central Florida Zoo & Botanical Gardens' Orianne Center for Indigo Conservation (OCIC) and partners recently released 41 young Eastern indigo snakes at TNC's Apalachicola Bluffs and Ravines Preserve (ABRP).

Either variety of snake is welcome in my yard to keep rodents and poisonous snakes under control. Let's learn to share our space with these animal helpers.

More information on the Eastern Indigo Conservation project:
<http://bit.ly/467n0FS>

A guide to Florida Snakes:
<http://bit.ly/3ZKXvGC>

A guide to living with snakes:
<http://bit.ly/3FOEtBK>

CLUSIA IMPOSTER: A CORRECTION

BY AMY STRIPE, MASTER GARDENER VOLUNTEER

In the May 2025 issue of The Garden Bench I tried to point out a difference between “pitch apple” *Clusia rosea* (the true native) and “small leaf clusia” *C. guttifera*. Turns out, the *Clusia* confusion continues. Our UF state botanist Marc S. Frank says “There is no such thing as *Clusia guttifera*!... It is a made-up name used by the nursery trade...”

There are two species that you might find in garden centers: *C. flavia* or *C. fluminensis*. Marc promises an article soon to help us sort this out. But suffice it to say, *C. rosea* remains the true native. Unfortunately, my imposter *Clusia* hosts a number of lubber grasshoppers!



Clusia sp.

A MESSAGE FROM THE RESIDENTIAL HORTICULTURE TEAM BY MACK LESSIG, RESIDENTIAL HORTICULTURE AGENT

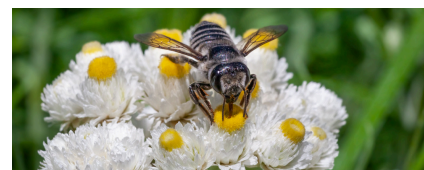
Integrated Pollinator and Pest Management (IPPM) is a holistic approach for managing pests in your yard while also supporting beneficial insects like pollinators. Instead of just spraying to kill pests, IPPM focuses on creating a balanced and resilient ecosystem in your garden.

The main idea is to build a healthy landscape that naturally keeps pest populations in check.

An important step is to create a diverse habitat by planting a

variety of native and Florida-Friendly flowers and shrubs that provide food and shelter for both pollinators and natural enemies. This encourages a thriving population of beneficial insects that can naturally suppress pests.

If you do notice a pest problem, IPPM encourages a careful, targeted approach. First, identify the pest and assess the damage. If intervention is necessary, start with the least disruptive methods, such as hand-picking pests or pruning.



Leaf cutter bee

If you must use a pesticide, choose a biorational product with a low impact on beneficial insects and apply it when pollinators are not active, such as in the evening. This approach protects the functional biodiversity in your yard, creating a beautiful and sustainable landscape that supports both pest control and pollination.

ASK A MASTER GARDENER VOLUNTEER

Dear Master Gardener Volunteer, I hope you can identify this weird plant with a pod hanging on it, growing along our fence line. Perhaps it's always been there, and we never noticed these weird pods. Do you recognize it? We're so curious because it looks like something otherworldly.

Dear Resident, This is the seed pod of *Allamanda cathartica*, yellow allamanda. Inside the pod are many winged seeds that disperse when the pod dries and breaks open. This plant is native to South and Central America and is rated a "High Invasion Risk" by the University of Florida. All parts of the allamanda plant are poisonous. The plant produces milky sap that, if handled, can cause skin irritation.



Photo Courtesy of Resident

The following link is to information about Allamanda for you to refer to.
<https://bit.ly/4iHxO0z>

A PUBLICATION OF THE MANATEE COUNTY RESIDENTIAL HORTICULTURE MASTER GARDENER VOLUNTEERS

The Garden Bench Newsletter is a publication of the University of Florida/IFAS Extension Manatee County Master Gardener Volunteer Program, with Amy S. and Joy D. serving as Co-Editors. All content is reviewed and edited by Extension staff to ensure accuracy.

The Master Gardener Volunteer Program, an integral part of the Residential Horticulture Program, helps Extension Agents deliver research-based horticulture education to Florida residents.

They also lead preserve and garden tours, organize children's programs, host public workshops, and operate the Plant Diagnostic Clinic.

Also under the Residential Horticulture Program, the Community Gardens Program, established in 2015, focuses on horticultural education. It provides hands-on workshops and information on planting, variety selection, and proper fertilizer and pesticide application.

For more information on becoming a Master Gardener Volunteer, joining a Community Garden, or subscribing to the newsletter, please email Mack Lessig, Residential Horticulture Agent at mlessig@ufl.edu