

A quarterly online magazine published for Master Gardeners in support of the educational mission of UF/IFAS Extension Service.

Resolved: Focus on Pollinators

By Ellen Mahany, Master Gardener Volunteer

This year I am making a New Year's resolution that I think will be much more fun than my traditionally dreary ones such as eating healthily, being better organized, or any other self-improvement promise (never kept).

Instead, I resolve to learn more about pollinators and the pollinator plants in my yard. I have already begun by being involved in a Master Gardener pollinator project and by perusing *Attracting Native Pollinators: Protecting North America's Native Bees and Butterflies*, a book by the Xerces Society. I plan to modify my gardening habits based on advice I have read in this pollinator guide.

First, I will spend less time pulling weeds, purposely leaving some behind, especially in more hidden areas near the fence lines. Pollinators appreciate nectar and pollen provided by a number of weeds. *Bidens alba*, both a nectar and larvae plant, ranks at the top. The Zebra Longwing butterfly, for instance, has a prolonged life span of six months because it ingests pollen along with nectar and this plant is one of its favorites.



Left: *Bidens alba*. Right: Zebra Longwing. Photo credits: UF/IFAS

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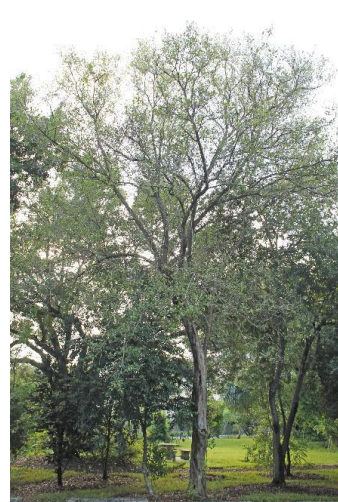
Second, I will slow down and “bee” more observant of pollinators while I am gardening. In addition, I will sometimes use a magnifying glass and binoculars along with a picture guide to try to identify various bees, butterflies and other pollinators. Perhaps someday I will be able to distinguish between the two-winged Hoverfly and a bee. Hoverflies look like bees and are significant pollinators.

Third, I will do research to discover plants that appeal to more than one pollinator. I have learned, for instance, that wild coffee (*Psychotria nervosa*) and fiddlewood (*Citharexylum spinosum*) are favorite nectar flowers of both the Atala butterfly and some species of bees. Perhaps I will discover even more pollinators attracted to these species.

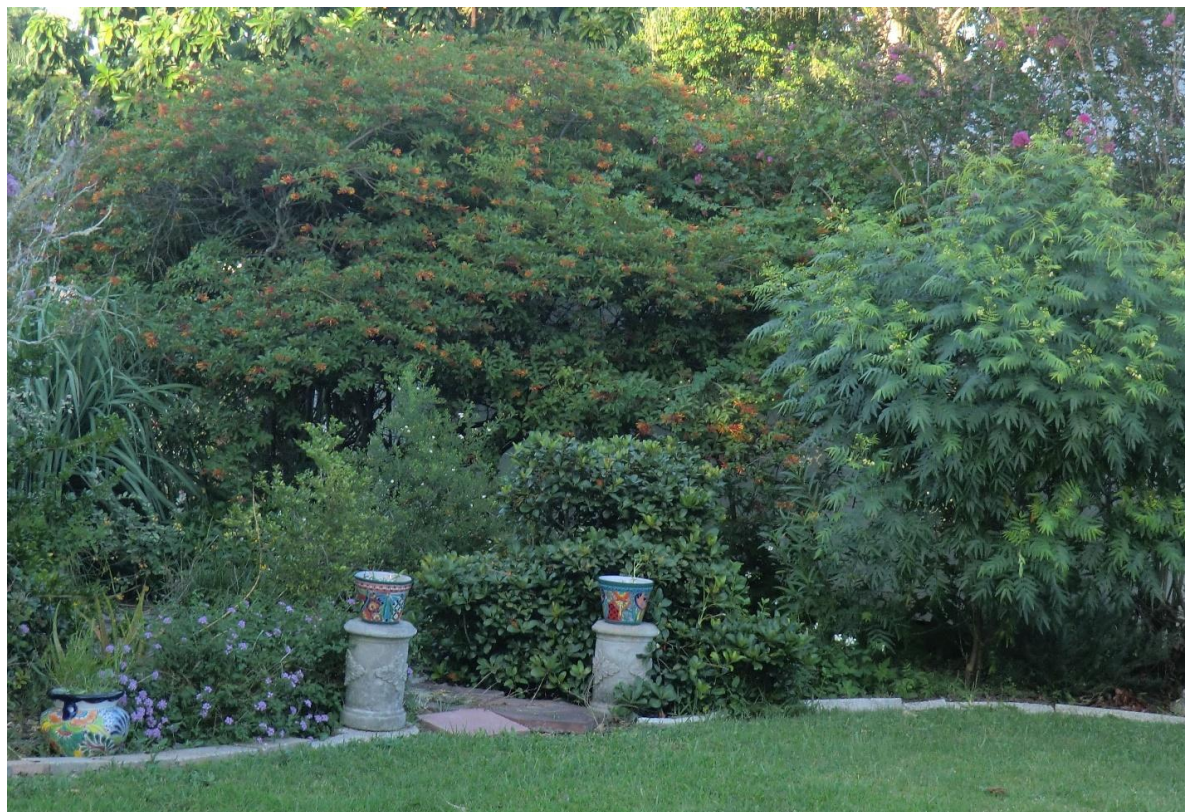
Fourth, I will introduce new pollinators to my garden. The once-endangered Atala butterfly is again in central Florida due to a concerted effort to plant its host plant, the Coontie. I now have four Coontie



Left: Hoverfly.
Right: Fiddlewood.
Below Left: Atala
butterfly.
Below right: Wild coffee.



Fifth, in addition to food and larva plants, pollinators need water and shelter. I will add these. There is so much to learn. The more I know about pollinators, the better I can care for those dependent on my garden to make their new year happy.



Among pollinator plants in this fenced-in corner of my yard are Firebush (*Hamelia patens*), Privet Cassia (*Senna ligustrina*), Tickseed (*Coreopsis* spp.), Trailing Lavender Lantana (*Lantana montevidensis*), White Indigoberry (*Randia aculeata*), Blue Porter Weed (*Stachytarpheta jamaicensis*), Snowbush (*Breynia disticha*), American Wisteria (*Wisteria frutescens*), Little Strongback (*Boussieria cassinifolia*), Indian Hawthorn (*Rhapheolepis indica*), Spiderwort (*Tradescantia ohiensis*), Crape Myrtle (*Lagerstroemia indica*), Bulbine (*Bulbine frutescens*), and Spanish Needles (*Bidens alba*).

Photo credit: Ellen Mahany.

Safety in the Garden

By Debi Ford, Master Gardener Volunteer

Gardening is a wonderful activity—exercise, fresh air, and of course, a beautiful landscape. However, gardening is not without hazards, so we need to be mindful of safety issues ahead of time to prevent injury or illness.

Tools

Sharp tools are essential for both the health of the plants and the safety of the user. A sharp tool will make a cleaner cut that will mean less chance for disease or insects to harm to the plant. A sharp tool is also a safer tool—a dull blade can shift or slip during the cutting. Even though it's dull, it can still cut your skin! You can sharpen your blades yourself or take them to a specialty shop to get a nice sharp edge. Of course, keep your blades in a cover or sheath to protect anyone from injury while reaching for a sharp tool.

Hoses

We all use hoses in our gardening chores. Most hoses are green. I guess manufactures think they blend in with the grass or other plants. The problem with green is that it blends too well and can be a trip hazard! You can use some bright color spray paint to spray stripes along the hose length at regular intervals to make the hose more visible to passersby. Store hoses carefully so they're out of the way of foot traffic. You can buy a special storage rack or simply coil the hose in an out of the way area.

Visibility

As gardeners, we use a variety of tools while working in the landscape. Many of the tools are in colors found in nature such as brown or green. These can easily “get lost” in the landscape and cause tripping hazards as well as the possibility of stepping on or falling over a tool with sharp prongs or edges—OUCH! Use some spray paint in a bright color to mark your tools so you'll be more likely to spot them before you step on them. Nobody likes to have a rake handle fly up and hit them in the head. A few moments spent marking the tools to make them more visible will help prevent mishaps in the future. You may be able to purchase tools that have bright handles already! Also, while working, make sure to firmly place the edges or prongs of any sharp surfaces securely in the soil or plants so they're not facing up!

Protection for you

As gardeners, we use a variety of preparations and apply different materials around our landscape. Exercise caution and wear the proper clothing and safety equipment! Long pants, long-sleeve shirts, socks and sturdy

closed-toe shoes will help protect you from scratchy thorns, scrapes from branches, and other hazards in the yard. Wear goggles or safety glasses when using any type of power equipment to protect you from flying debris. Ear protection is important to protect your hearing from the loud noises blowers, chain saws, mowers and other power equipment produces. You may also wish to use some type of mask or respirator to protect you from inhaling any chemicals or dust from preparations or landscape materials you use.

Gloves are another helpful item to protect your hands from not only scratches from plant material but also from coming in contact with various garden materials such as mulches, fertilizers and other garden preparations for insects and weeds. You may not find out that you're allergic to something until you wind up in the emergency room! Better to protect yourself ahead of time.

An insect repellent may also be helpful to spray or wipe on before you garden. Some are even available with sunscreens so you get double-duty protection. If you're planning a long landscape work session, it's a good idea to keep cool water available to prevent dehydration in our warm climate. Sunscreen is also useful—you don't want a nice gardening session ruined later by sunburn. Keep a small first aid kit with some antiseptic wipes and bandage strips handy so you can attend to injuries quickly.

Even with all the protection you can avail yourself of ahead of time, a thorough hand washing with hot water and soap will wash away the inevitable dirt and grime that can still make its way through gloves and clothing. A good nailbrush will help remove any debris from your hands and under fingernails. Carefully launder any clothing to remove any chemicals or other materials that may have gotten on your clothing during your work session.

With a little planning and forethought, you can accomplish your gardening chores safely!



Photo credits: Creative Commons.

On the Shelf

By Debra Kramer, Master Gardener Volunteer

Reading the recently published book *Flora: Inside the Secret World of Plants*, reinforces what Master Gardener Volunteers already know—that the world of plants is the most fascinating natural feature of our planet. The Smithsonian Institute and the world-renowned Kew Royal Botanical Gardens in London collaborated to produce this book in 2018. The pairing of these two plant powerhouses results in a book that is top notch from start to finish.



The book divides sections by plant anatomy. You begin your reading journey in the ground at the roots and work your way towards the sky by way of stems, branches, leaves and flowers. You gradually return to the ground with the last section on seeds and fruits. Every set of pages features a combination of drawings and photographs. The exquisitely detailed drawings are often difficult to distinguish from the photographs. The pages encourage leisurely perusal dominated as they are by the visual impact of the stunning beauty of the botanical world. Information provided is brief, logical, and clear. The emphasis is on botanical art with added information about artists who have focused their work on the intricacies of plants. In addition, the book catalogs the more than 70 significant plant families.

This is a large and relatively heavy book. It requires you to get a beverage, settle down in a comfortable chair, prop a few pillows on your lap to support this hefty tome, and spend time engaging with the amazing world of plants. Like a box of fine chocolates, this is a book to savor and absorb a little at a time. You will be drawn to the discoveries in this book again and again.

Note: There are two copies of this book available for loan in the Pinellas County library system.

Growing with our New Vegetable Beds Location

By Denise Hawks, Master Gardener Volunteer

After many roadblocks, delays, and two lost growing seasons, the vegetable beds once tended by Master Gardener Volunteers at the Florida Botanical Garden have landed at the 4-H Chester Ochs Educational Center.

Our new raised beds are in Rubbermaid horse troughs. Each Master Gardener Volunteer is responsible for two beds. The volunteers constantly test the types of dirt used, soil amendments, the proper amount of irrigation, and the seeds that provide the greatest yield. The 4-H gardeners have provided a wealth of information from their 20 years of gardening experience at this site. Their plantings have been in the ground so it will be interesting to see how our raised beds fare in comparison once we are fully established.

Some of our crops have done well but others have lagged dramatically compared to prior plantings. We have had some mishaps. For example, we discovered one volunteer was turning off water to their beds because of the soil holding excess water while another was turning it back on.



Photo credits: Denise Hawks

This is square foot gardening at its best. The planting area is more compact than the raised beds that we used at the Botanical Garden. We are putting companion veggies to the test with their closer proximity to each other.

Despite the benefits of the new location, we do miss being at the Florida Botanical Garden. We miss the interaction we had with a greater number of visitors—both adults and children—who asked us so many questions. We miss the proximity of the horticulturists, Andy and Bob, who always had quick answers to our "What kind of bug is this?" and "Why is my stuff wilting" types of questions. As with every new change, we are undergoing growing pains, learning what we can and cannot do at our new location, and what our tasks are to keep the area looking great. We hope that by the end of our second season here we will have ironed out our kinks.

Be sure to visit us in our new location. We are only a five-minute drive from the Botanical Garden. You can visit on Monday mornings from 8 AM to 10 AM. Our address is 14644 113th Ave. N in Largo, FL.

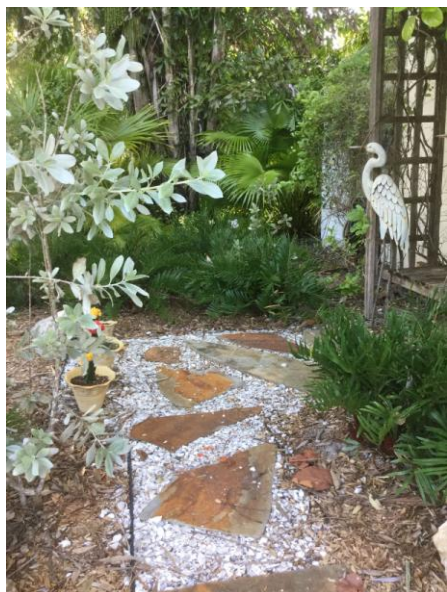


Master Gardener Volunteers at the vegetable garden. From left to right, Cat Stillwagon, Sue Edwards, and Cheryl Schultz.

Coonties

By Dianne L. Fecteau, Master Gardener Volunteer.

A Florida native, the coontie plant (*Zamia floridana*) has a long history. It's a cycad—a "living fossil." While modern cycads have evolved over the last 12 million years, the original cycads date back about 280 million years, long before dinosaurs walked the earth. With its green, leathery foliage, it is an attractive evergreen, offering a tropical look to our landscape. Growing to about three-feet high, it can serve as ground cover or a small hedge plant. The fruit is a rusty-reddish color, two to seven inches long, rising from the center of the plant.



Left: Coonties in a garden. Right: Fruit.
Photo credits: Dianne L. Fecteau

Coonties tolerate full sun but also do well with some shade. They like a well-drained soil. Watering needs are minimal once the plant is established. Besides the red scale, they have few pests and no major diseases.

Naming has caused confusion in the past. The IFAS publication, *Florida Coonties and Atala Butterflies*, tells us that while some botanists say there is only one species in Florida (*Zamia*

floridana), other botanists have suggested additional ones such as *Z. integrifolia*, *Z. pumila*, and *Z. umbrosa*. They have proposed these names based upon subtle differences in leaflet size and shape as well as in differences in native ranges.

Why did the taxonomist Carl Linnaeus call these plants *Zamia*? In the book, *Florida Ethnobotany*, Daniel Austin wrote that Linnaeus found that Pliny the Elder had called a pinecone *zamia* and pine nuts *azaniea nueces* (dried up nuts). He added, "In Linnaeus's usual delight for multiple meanings, the genus could either mean their cones looked dried up (they do), or come from the Latin *zamia* or *samia* (to hurt or damage)" (Austin, p. 723). The hurt or damage would be the result of toxins in the plant.

The name coontie comes from the Seminole phrase, 'conti hateka', meaning white root or white flour. These Native Americans used the root as food, removing the toxins through their elaborate preparation process. After cutting the stem into pieces, they pounded them into a white powder. They would then wash this powder several times, each wash removing more of the poison. After draining the water, they placed the mixture in a vat and allowed it to ferment for a week. Once fermentation was complete, they dried the mixture in the sun. They used the resulting flour for bread or a stew. White settlers observed this process and established coontie-processing businesses. Eventually, coonties almost became extinct because of these businesses.

The Atala butterfly almost became extinct as well. Coontie is the only larva host plant for the Atala butterfly. While the plant toxins do not affect the larvae, they incorporate those toxins into their tissues. As a result, they are not palatable to birds and other predators. The bright colors of the larvae are a warning that they are toxic.

Using the native coontie plant in your landscape will add beauty with a low-maintenance plant that will attract pollinators. It can easily replace non-native relatives such as the invasive cardboard plant, the King Sago (*Cycas revoluta*), and the Queen Sago (*Cycas cirinalis*).

References

Austin, A. (2004). *Florida Ethnobotany*. CRC Press.

Florida Coonties and Atala Butterflies

<https://edis.ifas.ufl.edu/mg347>

Zamia floridana Coontie <https://edis.ifas.ufl.edu/fp617>



Atala butterfly larva. Photo credits: UF/IFAS

The Winning Team

At the Florida Master Gardener Volunteer Conference on October 22, Pinellas County won the Award of Excellence in the category of Educational Display or Exhibit. This award recognizes those volunteers who "go above and beyond in their volunteering capacity". Anne Swain, Penny Cathy, and Jeanne Jones, pictured left to right in the picture below, created the display case in the Florida Botanical Garden main lobby that provides educational materials to visitors at the garden.





Send your Articles and Photos

The next Issue of *The Dirt* is April 2020. The deadline for articles is April 3. Share your passion for gardening with your fellow Master Gardeners by writing an article for *The Dirt*. Include images where possible. However, if you include images they must fall under one of the following guidelines:

- your own
- UF/IFAS image
- open access image, as in wiki-commons, where all rights are open and the photographer is credited
- used with the express permission of the photographer

When you do send images, please do not embed them within the article. Include them separately. Please send all files as Word files. I cannot edit .pdf files.

Do you like to photograph plants or trees but don't like to write? Send me your photos with a description, even without an accompanying article, and I'll publish them with the description as well as a credit to you, the photographer.

Send your articles, images, and your photos to Dianne Fecteau at dianne@kendiacorp.com. My phone number is 727.366.1392.

All articles are subject to editing. In addition, Theresa Badurek, Urban Horticulture Extension Agent and Master Gardener Coordinator, reviews and approves all articles prior to publication.

The Dirt

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