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PINELLAS MASTER GARDENER MAGAZINE

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Happy Spring!

There have been some lovely, cool days in April still! Enjoy while you can – summer is coming! This issue of The Dirt has some great articles. Check out the information on white twine vine milkweed from the Safety Harbor Garden Club. More support for butterflies is always a good thing.

'The farm is my classroom' -- Meet Master Gardener Volunteer Susan Gutierrez

By Amy George, Master Gardener Volunteer

Photos reprinted with permission of Woodlawn Community Academy's 4-H Facebook page: https://www.facebook.com/wca4h?mibextid=ZbWKwL

It's been nearly 10 years since Susan Gutierrez first volunteered at Woodlawn Community Academy in Clearwater. At the time, she could not have foreseen what an impact the school would have on her. Perhaps even more significant, however, was the impact she herself would have upon the students she taught and loved throughout that time.

Susan's son, who has autism, was enrolled in the private school, which aimed to provide a top quality, individualized education to all students, regardless of economic background or intellectual disability. Susan is no stranger to overcoming challenges herself. Susan is deaf in









one ear and hard of hearing in her other ear. Additionally, like many of her students, Susan is neurodivergent.*

Susan's mission at WCA began in 2015, when she volunteered to help start a Garden Club, which ultimately became an official 4-H club. "We were strictly a garden in 2017 and it progressed to a full-fledged farm," said Susan.

The program grew under her leadership, and in 2018, she enrolled in the Master Gardener class because of her desire to share the most accurate and updated gardening knowledge with her students.



Susan Gutierrez and one of her young students showing off his chicken picture after learning about the life cycle of chickens, including how eggs form and hatch.

The list of projects and accomplishments the club achieved is profound. They cleared more than 200 Brazilian Pepper trees, which was "a constant battle" according to Susan. They achieved the status of becoming a licensed nursery and were able to plant 20 fruit trees, thanks to the assistance of the UF/IFAS Extension, Pinellas County in securing a grant from IDEAS For Us.

The 4-H farm grew to include chickens, rabbits, ducks, geese, and a pig. They hosted an annual Open House for the public and sold eggs and chickens. The students played an active role in every aspect of this program and enjoyed caring for the animals and the garden.









Susan's students helped move mountains of mulch last year at their licensed nursery at the Woodlawn Community Academy Garden.

To help keep this program running and expanding, Susan eventually found herself spending seven days a week at WCA – and every one of those hours were on a volunteer basis.

"I am considered a teacher," she explained, "but I am not a paid employee. I have an office and the farm is my classroom."

In late February of this year, Susan learned some devastating news, which she reported in a post on the 4-H Club's Facebook page:

"We had some sad news last week. The result is that Woodlawn will no longer be open after June 1. We do have high school finishing up next year but the property has been sold to a new school. We are going to be closing the farm as the new school doesn't want to continue the farm at this time."

Her heart heavy, Susan has now begun the process of "undoing" the farm she created.

"We have to re-home multiple animals," she wrote. "The kids have been working hard to help move the process along. This gives them closure as well. They built this farm with me, and they get to say goodbye as well."

She has so many memories at Woodlawn, but several stand out.

"The students overcame their fears of animals. They learned to work with tools and use a lawnmower. The first year, we grew so much lettuce we couldn't even give all of it away!"

She is also proud to note that many of her students have gone on to work at area nurseries and farms.









The youngest members of the WCA 4-H Club – the Cloverbuds – enjoyed meeting the bunnies one day last year. Kids in this nature club learned how to safely and sanitarily interact with farm animals as part of the curriculum. It also increased their understanding of how farms work, infection control and mitigation, as well as safety with farm animals.

"This has been an amazing journey," she reflected, "and I'm so grateful for every minute I had with these kids and this farm. The school was absolutely wonderful and supportive. It's a huge loss for the kids and I'm sad its ending."

What's next for Susan? "I probably will take a vacation! Working seven days a week for many years is a challenge. I'm also studying to be a clinical herbalist, so I'll focus on that after a little rest."

*The terms neurodivergent and neurodiverse refer to people whose thought patterns, behaviors, or learning styles fall outside of what is considered "normal," or <u>neurotypical</u>. Neurodivergence embraces the idea that differences in the human brain are natural and, in many cases, can lead to meaningful and positive insights and abilities. (Source: <u>Neurodivergent: Definitions</u>, <u>Examples</u>, and <u>Support (verywellhealth.com)</u>







White Twine Vine Milkweed

By guest author Ken Fisher, President, Safety Harbor Garden Club, Photo credits Ken Fisher.

White twine vine milkweed, *Sarcostemma clausum*, is Florida's only vining milkweed. Growing 10 to 30 feet, this vine needs a trellis or fence to grow on. Its clusters of blooms are very fragrant. This milkweed is a host plant to and preferred by the Queen (*Danaus gilippuss*), Monarch (*Danaus plexippus*), and Soldier (*Danaus eresimus*) caterpillars.

White twine vine milkweed prefers moist soil, but also does well in pots and along fences. It gets long runners that can be trained. It blooms any time of the year and is a great plant for the Monarch lover since it is a fast grower. This plant will help prevent running out of host plants as compared to other slower growing milkweed varieties. If you move your third instar stage (final stage of larval development) caterpillars to this vine you can allow your other native milkweeds to fill back in.

Monarch butterflies and queen butterflies will also lay



eggs on it. The intertwining vines make a nice, protective shelter for the caterpillars.

At Folly Farms Nature Preserve, the Safety Harbor Garden Club propagates, pots, and sells plants throughout the year. Master Gardeners are present monthly at the plant sales and clinics, known as the Folly Faire, on the second Saturday of each month. Visitors can participate in classes on starting and developing butterfly plants or can purchase 'Butterfly' pots to take home.



Monarch butterfly



Queen butterfly



Soldier butterfly

The garden club supports "Pollinator Pathways." White twine vine milkweed plants help butterflies in the pathways that are being developed by other similar clubs and other organizations throughout the United States. Information about Pollinator Pathways is available at Folly Farms. Master Gardeners are available to answer questions.

Visit https://www.safetyharborgarden.club/home, or send an email to SafetyHarborGardenClub@gmail.com for additional information.











The Weedon Island Native Plant Garden

By Truddie Reif, Master Gardener Volunteer. Photo credits Trudie Reif.

In 2020, the Weedon Island Preserve staff contacted the Pinellas County Master Gardener Volunteer (MGV) program to restore the native garden. Wildflowers used to bloom in this garden opposite the history center. Eventually, ferns and other non-native plants took over. A group of MGVs agreed to restore it. Our primary focus was pollinator plants, which we planted in March 2022. The area was already home to beach creeper (*Ernodea littoralis*), blue porterweed (*Stachytarpheta jamaicensis*), sunshine mimosa (*Mimosa strigillosa*), dotted horsemint (*Monarda punctata*), crinum lilies (*Crinum spp.*), green eyes (*Berlandiera subacaulis*), beautyberry (*Callicarpa americana*), and partridge pea (*Chamaecrista fasciculata*). In addition, we added Simpson stopper (*Myrcianthes fragrans*), shiny coffee (*Psychotria nervosa*), gray leaf tea bushes (*Melochia tomentosa*), pennyroyal (*Mentha pulegium*), red salvia (*Salvia coccinea*), coreopsis (*Coreopsis spp.*), Elliott's lovegrass (*Eragrostis elliottii*), and sneezeweed (*Helenium autumnal*). The garden is in partial shade and has no irrigation. The soil is sandy and filled with roots. We tested the soil and watered it as recommended for first-time plantings.



Before renovations



After renovations

In 2023, there was a long drought, scorching temperatures, and saltwater inundation, and most of the existing plants died. The saltwater flooding devastated many yards in Pinellas County, influencing us to incorporate saltwater-tolerant plants into our garden, including colorful pollinators. This year, a group of four MGVs planted sea grapes (*Coccoloba uvifera*), Adams needle (*Yucca filamentosa*), salt bushes (*Baccharis halimifolia*), scorpion tails (*Heliotropium angiospermum*), blue porterweed, dotted horsemint, salvia, and coreopsis. Also, we noted that many of the previously existing plants and seedlings have self-seeded. The green eyes seem particularly suited to this garden. We hope to find beautiful pollinator plants that have adapted to this environment yet require little care.









Master Gardener Volunteers Sue Fraser, Vicki Critchlow, Vida Kluko, Truddie Reif Thanks to the Friends of Weedon Island for buying the plants!

Editor's note regarding saltwater inundation: See the June issue of The Dirt for more information on saltwater tolerant plants.

Washington D.C. & Wabi-Sabi

By Melinda Moreschi, Master Gardener Volunteer. All photos by Bianca Moreschi, March 2024, except where noted.

It's cherry blossom season in Washington D.C.!

Everywhere you look, you see cherry blossoms, but the one place most associated with the cherry blossoms, where you can snap iconic and memorable photos is along the Tidal Basin, a ten-foot-deep reservoir between the Washington Channel and the Potomac River.







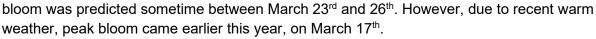


These magnificent cherry trees are bursting with delicate, papery white and pink blossoms. They adorn the edge of the two-mile long Tidal Basin Loop Trail and at certain points along the way, they share their splendor with backdrops of the Washington Monument, the Jefferson Memorial, and the Martin Luther King Jr. Memorial, to name a few.

A few weeks ago, I had the good fortune to travel to D.C. I was hoping to experience the cherry trees in bloom, a goal on my bucket list. The adventure required predicting the perfect time to arrive to see the cherry blossoms in bloom. Timing can be tricky.

Depending on the weather there is typically a two-week viewing window from open blossoms to falling petals. The last week of March through the first week of April is the most likely time to observe peak bloom.

National Park Service arborists use the term "peak bloom" in their predictions. This is when 70% of the Yoshino cherry (*Prunus x yedoensis*) blossoms have opened. This year, peak



The ideal time to view the cherry blossoms is four to seven days after peak bloom. If weather conditions are perfect, blossoms can last for 14 days. I arrived in D.C. on March 23rd, six days after peak bloom, and I was able to experience a magnificent display.













The preoccupation with timing is a perfect reminder of the deeper meaning behind the origins and traditions of the cherry blossoms.

In 1912, during the presidency of William Howard Taft, the mayor of Tokyo gifted 3,020 cherry trees to the nation's capital, as an act of friendship between Japan and the United States. This gift has resulted in Washington D.C. celebrating the arrival of the cherry blossoms for over a hundred years.

In Japan, the custom of viewing the cherry blossoms goes back 1,200 years, during the Nara period (710-794). This centuries old practice is called Hanami or "flower gazing." Initially used to forecast the coming harvest, today, the Hanami season is celebrated as a time of rebirth and







renewal. In Japan, both the school year and the fiscal year begin in April, coinciding with the arrival of the cherry blossoms. April is considered the best time of the year, as feasts and parties are held under the blooming Sakura (cherry blossom) trees, where family, friends and co-workers all compete for prime picnic spots.



Andō Hiroshige (1797–1858). <u>Sumida tsutsumi hanami no zu</u> (Viewing cherry blossoms along the Sumida River), from the series *Tōto meisho* (Famous views in the Eastern Capital), between 1848 and 1854. Color woodblock print. Prints and Photographs Division, Library of Congress (030.00.00)

The celebration of the cherry blossoms has deep and layered roots in Japanese culture. The momentary beauty of the blossoms represents the Japanese philosophy of wabi-sabi, the acceptance of impermanence and imperfection. These radiant and fragile blossoms mirror the fragility and fleeting nature of human life.

They are a reminder that "life is breathtakingly beautiful yet tragically short. We must remember to live in the present, to appreciate and celebrate every moment of existence."

If you decide to go, be sure to get up early to catch the sunrise as it illuminates the cherry blossoms along the Tidal Basin. Also, be prepared, it gets crowded. This year the National Cherry Blossom Festival runs from March 20 - April 14, 2024. You won't be disappointed.









There is more information about the origin story, as the first shipment of trees in 1910 had to be destroyed due to insect infestation. For a more in depth timeline visit:

https://www.nps.gov/subjects/cherryblossom/history-of-the-cherry-trees.htm#:~:text=The%20planting%20of%20cherry%20trees,rich%20meaning%20in%20Japanese%20culture.

This NPS website is a good resource for tracking the blooms: https://www.nps.gov/subjects/cherryblossom/bloom-watch.htm

References

Admin. "Cherry Blossom Quotes and Captions: Capturing the Beauty and Symbolism of the Sakura Season." thatonerule.com, https://thatonerule.com/rule/cherry-blossom-quotes-capturing-the-beauty-and-symbolism-of-the-sakura-season/. Accessed 6 April 2024.

Details Flowers. "History of the Cherry Blossom Tree." blog.detailsflowers.com, https://blog.detailsflowers.com/blog/history-of-cherry-blossom-tree . Accessed 6 April 2024.

Library of Congress. "Sakura: Cherry Blossoms as Living Symbols of Friendship." https://www.loc.gov/exhibits/cherry-blossoms/cherry-blossoms-in-japanese-cultural-history.html . Accessed 6 April 2024.

National Park Service. "Bloom Watch." nps.gov, https://www.nps.gov/subjects/cherryblossom/bloom-watch.htm. Accessed 6 April 2024.

National Park Service. "Hanami." nps.gov, https://www.nps.gov/articles/hanami.htm . Accessed 6 April 2024.

National Park Service. "History of the Cherry Trees." nps.gov, https://www.nps.gov/subjects/cherryblossom/history-of-the-cherry-trees.htm . Accessed 6 April 2024.

National Park Service. "Tidal Basin, Washington D.C." nps.gov, https://www.nps.gov/articles/dctidalbasin.htm . Accessed 6 April 2024







Parks of Pinellas

By Linda Smock, Master Gardener Volunteer

Whether in South, Central, or North Pinellas, a park is near you! Over 20,000 acres of land in our county are maintained as parks and preserves, with many opportunities for guests to learn about our native habitats.

What is so special about our Pinellas parks? Why are they important to us? Unless we go on a day when the public is invited to do a task such as clearing out invasives, we don't go to a park to work; we go to enjoy nature, watch children play, exercise, or absorb the fresh air. We may aim to learn about our native habitat and come away with a renewed appreciation for the people who lived off the land before us.

Our state, county, and city parks offer a variety of activities by which we can relax. If you are looking for a beach, A.L. Anderson Park in North County, Sand Key Park, and Ft. DeSota are county parks that fit the bill. Honeymoon Island and Caladesi Island are local state parks providing beaches and wonderful exploration opportunities. The fauna of these parks is different from our inland parks and gives you an opportunity to look at native plants that do well in sandy soil as well as tolerate salt.

Several of our county parks and preserves are flush with forestland. Boardwalks and trails provide safe walking conditions through native vegetation. In addition to our native plants (and some invasives also!), you will see pollinators native to the area buzzing from flower to flower. Walsingham Park, just south of the Florida Botanical Gardens, provides a trail through the upland pinelands and scrub oaks. Saw palmettos grow abundantly, providing an ideal location to view some of the bees native to Pinellas. Just a few miles southeast of Walsingham is Lake Seminole Park, with a two-mile paved trail allowing you to view the plants that border it. A less traveled path closer to Lake Seminole provides opportunities to see wildflowers of central Pinellas wetlands. Further southeast, bordering I-275, is Sawgrass Lake Park. You can listen online to an audio tour as you walk the boardwalk. The audio provides information about the park's trees and vegetation. Depending on the time of year you visit, you can see a wide variety of migratory birds and year-round birds. You may see the nests of hawks, swallowtail kites, herons, and other large birds. Alligators often sun on the banks of the canal, and turtles can be viewed from the tower on the edge of the lake.

Educational experiences abound at two of the four Pinellas County Preserves, Brooker Creek and Weedon Island. Visit the Education Centers at both locations for background information that prepares you to learn and appreciate each trail you explore. Take advantage of the guided tours and learn about various topics that benefit us as master gardeners. Topics are often related to the plants but also may be about the insects, birds, amphibians, and mammals that visit the plants.

It's spring, so it's a wonderful time to explore a park or preserve you have never visited before. Check the website for Pinellas County Parks and Recreation (https://Pinellas.gov/parks) to locate those closest to you or those you've never visited, and plan for an afternoon of relaxation while learning and enjoying the great outdoors – where pulling weeds is not part of your volunteer work!







Easy Herbal Salad Dressing: One Recipe, Three Varieties!

By Debbie Ingram, Master Gardener Volunteer

If you have an abundance of fresh herbs and need some fresh ideas for using them, here is one easy salad dressing recipe with three different flavor varieties. Simply blend all the ingredients and store in the refrigerator for up to a week.

- For a Southwestern style salad, use fresh cilantro over a salad of greens, black beans, corn, peppers, tomatoes, and avocado.
- For a Ranch style dressing, use fresh dill and serve over any of your favorite saladmixings, such as greens, tomatoes, peppers, carrots, beets, kidney beans, and cucumbers.
- Finally, go Italian with fresh basil dressing over tomatoes, cucumbers, cannellini beans, and artichoke hearts.

Note: This recipe uses cashew nuts instead of oil to add fiber and protein, and reduce fat calories. You can substitute ½ cup plain yogurt or avocado for the nuts.

Easy Oil-Free Herbal Dressing

Ingredients:

Add to blender:

1/2 cup milk of your choosing, dairy or plant-based

1/2 cup raw cashew nuts, *pre-soaked in warm water

for 15-20 minutes (discard soaking water)

- 1/2 teaspoon salt
- 1/4 teaspoon pepper
- 1/4 teaspoon garlic powder
- 1/4 teaspoon onion powder
- 1/2 tablespoon lemon or lime juice
- 1/4 cup chopped herbs of choice

Instructions:

Blend until smooth. Add more milk if it's too thick. Store in glass jar and use within one week or freeze in ice cube trays and use as needed.

*Soaking the cashews in warm water for 15 minutes or longer will help them to blend smoother.













FBG Tour Guide: Is it Right for You?

By Debra Kramer, Master Gardener Volunteer. Photo credit Debra Kramer.

Do you ever wander around the botanical gardens wishing you could share what you observe with the visitors? You can easily do this by becoming a tour guide (docent) at the Florida Botanical Gardens (FBG). I have enjoyed this opportunity for over five years, and have developed some tips for success. In general, if you have a love of plants and a sense of wonder, you would be a terrific tour guide.

There is no specific way to be a docent, and each person develops a unique style. If you are curious but unsure, consider tagging along on a tour that is already scheduled. This will give you an idea of what is involved, and whether it is a volunteer activity that is right for you. Most tours are scheduled ahead and last between 1-2 hours. Depending on the group size, there will usually be more than one guide so the group can be divided into manageable numbers.

Some tips on how to be an effective docent:

- 1. Start the tour by confirming the finish time and meeting place. Your group will get restless if you run late and they miss some of their lunch or travel time! It also helps to know a little about the background of the group and who has visited before.
- 2. Figure out what you want to say, and then eliminate half of it. Because of your gardening background, you will want to tell the group everything you know. Don't. If you talk constantly, the participants will lose interest. I usually think of a theme for the tour depending on the group's background. For example, focus on the five senses, or tips for home landscaping, or how plants adapt to their environment. Leave out everything else.
- 3. Do not walk and talk. Walk to your next POI (point of interest), stop, wait for the group to gather, face the whole group and then speak. There will always be a few stragglers and sometimes you have to start speaking without them. Then walk along quietly to your next stop. This gives the participants time to talk amongst themselves.
- 4. You do not need to know the name of every plant. At the beginning I felt unqualified if I was unsure. I have since learned that "I don't know" is a valid answer. Ask the participants if anyone has a plant ID app and encourage them to use it and report back to the group.
- 5. If a question is asked, repeat it back to the group. Answer briefly. If it is not applicable to the group, tell the participant you will answer their question after the tour. Hopefully they will forget the question by then!









Most importantly, maintain a sense of humor. Plants can be funny! The Old Man palm has a hairy trunk with some braids. Weird! There is a cactus called the Road Kill Cactus. Hilarious! Let your inner stand-up comedian shine through. The group will see and appreciate your love of all things living and green. They might not remember the three facts about succulents that you explained, but they will remember your sense of fun and wonder. We want them to return to the gardens again and again to experience that for themselves.

For more information on becoming a tour guide, contact Allie Fisher at allieflbgfoundation@gmail.com. She can assist in getting you started as a docent.

Pollination

By Linda Smock, Master Gardener Volunteer

A walk through a garden or patch of wildflowers allows observers to see several kinds of pollinators besides the two most well-known, the European honey bee and the butterfly. All pollinators are very important to society. Without them, our food source would be greatly reduced, with fewer fruits, vegetables, and seeds. In addition, these foods, and thus the insects that pollinate them, impact our economy. Pollination also provides new plants essential for clean air and a healthy environment.

What is a pollinator? It is anything that assists in transferring the pollen from the stamen to the pistil of plants. This is essential for plants to produce fruits and seeds and for most plants to produce new plants.

Wind is one method of pollination; it carries the pollen from the male flowers to the female flowers of a few plants. Corn is a good example of this, and it always needs to be planted in parallel rows. The plants are close together, and even a gentle wind can loosen the pollen from the tassel that has the stamen so that it falls from the top of the plants to the silks or pistils.







Self-pollination is the second method. Tomatoes, for example, produce blooms that are able to self-pollinate because they have both the stamen and the pistil. They still benefit from insects that shake the pollen loose from the stamen so it can fall onto the pistil, however.

Seventy-five percent of plants need more than wind or themselves for pollination. Insects are the most common method, although birds and bats can also provide the service. Some of the insects that provide pollination services include native and non-native bees, moths and butterflies, wasps, ants, male mosquitos, and flies.

When assistance is needed to pollinate plants, a small paintbrush can be used. Touch the paintbrush to the pollen on the stamen and transfer it to the pistil of the female flower by gently brushing it on. Watch the plant for a few days to check to see that the plant is preparing to produce fruit. If not, you may repeat the process.

Protection of pollinators is becoming an important issue as more and more herbicides and pesticides are used. Herbicides may kill the plants that insects need to survive when vegetables and fruits are not available, thus causing them to die. Pesticides will kill the insects. So how can we protect them?

Avoid using powder pesticides and select sprays instead. Powders are more likely to stick to the hairs on the insect's body and be transferred to their nest or hive.

If pesticides are essential, use them only in the late evening when honey bees and many other insects are less active. Realize that moths and some other beneficial insects may be endangered.

Avoid spraying flowers; skip the blooming time because this is when the most beneficial insects visit your plants.

Avoid pesticides altogether if possible. Rely on neem oil first and foremost if a pesticide seems unavoidable.

Insects, birds, and small mammals, such as bats, are important to the survival of many plants. As master gardeners, we can help others understand these creatures' important role so that they become more valued by our society.

Native Bees: Pollinator Champs

By Ellen Mahany, Master Gardener Volunteer

Widely recognized as the best of all native insect pollinators, native bees have special characteristics that account for their great success.

First, pollen clings to their hairy bodies during their search through flowers, easily transferring it from anthers to stigma to complete the pollination process. Second, bees recognize ultraviolet rays that contrast colors in some flowers to create a clear path to the nectar center. Third, accumulated positive charges on bees result in pollen being deposited on oppositely charged flowers through electric static discharge. Most importantly, native bees are the only pollinators that collect pollen to feed their offspring. For this purpose, female bees possess a special body









part to collect and transport pollen and nectar to their nests. Depending on the species, native bees have one of three types of carriers.

Most bees collect pollen in a **scopa**, a dense patch of long, branched hairs, either on the hind legs or on the abdomen. The **longhorn bee** (*Melissodes spp.*) has a scopa on only the tibia of the hind legs. The scopa of **leafcutter and mason bees of the** *Megachile* **family** is located on their abdomens.



Pollen-filled scopa on green sweat bee (Agapostemon) (Photo: honeybee Suite.com)





Scopa on tibia of long-horned bee (Photo: Bug Guide) Abdominal scopa on Leafcutter bee (Photo: The Spruce)

The Pollen basket or corbicula, a cavity surrounded by a fringe of hair on the tibia of the hind legs, is the carrier for both the bumble bee (*Bombus*) and the orchid bee (*Euglossa dilemma*). This form is also found in the non-native honeybee (*Apis mellifera*).

The **crop**, a special compartment within the stomach, is the pollen collector of **yellow-faced** bees, the *Hylaeus* subfamily of the polyester bee family (*Collectidae*). When the bee







returns to her nest, she regurgitates a mixture of pollen and nectar in each egg cell to provide nutrition throughout the larva stage.





Bumblebee corbicula (Photo: Featured Creatures) Hylaeus Crop (Photo: U.S. Forestry Service)

In contrast, 25 percent of female native bees lack a pollen carrier. These **kleptoparasites or cuckoo bees** must resort to stealing well-provisioned nests. While the nest owner is absent, the klepto bee lays an egg on the pollen stored in each cell. Typically, after the intruder egg hatches, it kills the rightful egg or larva and takes its place. The presence of thriving cuckoo bees indicates a healthy bee population.



Nomada Fervida, the largest genus of cuckoo bees (Photo: Amber Reese, Featured Creatures)

Despite the superior pollination of native bees, many plants thrive from pollination by a variety of insects. We also need lesser pollinators — wasps, butterflies, moths, beetles, flies — all making essential contributions even beyond pollination. Numerous insects not classified as pollinators do their bit to help. Ants, for instance, pollinate small ground covers. All kinds of beneficial wildlife, interacting with one another, are necessary for a healthy ecosystem.

Note: All bees pictured in this article are among the 320 species residing in Florida.









Submit Your Articles and Pictures to The Dirt

The Dirt is published January, April, June, and October for Master Gardeners by Master Gardeners. The deadline for the next issue is **June 11**. If you would like to submit an article or photo feature, see the following guidelines:

- Articles should be 250 to 300 words.
- NOTE! All images must be open source i.e., your own work, photos from UF IFAS, or an image for which you have been granted permission.
- The topic can be anything you would like to share to educate your fellow gardeners.
- You may send pictures, poetry, or garden-related articles.
- Submit only Word documents, not PDF, so that edits are possible.
- Send tips or information about a community or Master Gardener project for a potential article.
- Include proper attribution for photos/images.
- Send submissions to Susan Ladwig at ladwig.susan@gmail.com

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