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October 2023 Issue

This is such a fantastic issue! We had lots of contributions for the October 2023 **The Dirt**.

Read about gardening tips for seniors, improving indoor air quality, the differences between live oaks and laurels oaks, mosquito control from a specialist at Pinellas County Mosquito Control and so much more. Enjoy!

The Beneficial Great Black Wasp Controls Pests and Pollinates Plants

By Ellen Mahany, Master Gardener Volunteer

Months ago, I sent this photo of an unknown insect in my garden sipping nectar from bee balm (*Monarda punctata*) to *inaturalist* but failed to receive a response. Intrigued by this yellow-splashed iridescent black beauty, I recently renewed my search online. I happened upon a photo of the *same* insect, on the same plant, featured as the Bug of the Week by the bug guy, entomologist Michael J. Raupp. The title of his article, “The Great Black Wasp Turns Yellow,” pointed to the obvious truth.



A Great Black wasp. Photo Credit: Ellen Mahany

*“Pollen had collected on this all-black wasp (*Sphex pennsylvanicus*) as it moved downward among multiple arrangements of petals, bracts, leaves, antlers and stigmas to sip nectar. In the process it shook flowers, spilling pollen from the antlers onto its body. Its movements also bent the stigma above it to connect with the pollen clinging to its back and head, completing the pollination.”*

The Master Gardeners of North Virginia (MGNV) website specifically explains the pollination process: “In native *Monarda punctata*, two fertile stamen and a style/stigma are tucked under the upper petal lip. When the anthers are mature with pollen, they become visible and dispense pollen on the visiting insects.”

The female great black wasp should enjoy her refreshing nectar break as she labors to provide food and shelter for her offspring. In the late summer, when the adult wasps emerge from their pupae in deep underground nests, they mate. After that, the male hangs out, with no duties other than procreating.

Meanwhile, the solitary female spends the rest of her life, 12 to 18 days after mating, completing her daunting task alone. She expertly uses her body parts as tools. Her strong mandibles aid her in subduing prey and excavating a foot-deep hole with several tunnels, each to house one egg. Her mouth moves soil; her legs serve as rakes.



A Great Black wasp drags a katydid to her nest. Photo Credit: What's That Bug

After she has structured her nest, she hunts for katydids, crickets and grasshoppers, all members of the Orthoptera order. She stings these insects and drags their paralyzed bodies to each tunnel. Birds may steal her prey during her return trip to the nest. Another wasp may enter her nest to take her prey while she is hunting.

She lays an egg on one of the paralyzed insects in each tunnel and then seals it. She must gather enough insects to sustain each larva for ten days, fully developed at 1.2 to 1.4 inches, before weaving its cocoon. The larvae remain in their tunnels in the pupa stage until they break out of the nest as adults the following summer.

The Great Black wasp was first identified by John Bartram, a renowned Colonial American botanist. This species was described by Peter Collinson in the first accepted account of a New World insect to the Royal Society in London in 1749. Centuries later, it is considered a beneficial insect even by pest control companies. In its labor-intensive efforts to provide for its larvae, a single wasp can kill as many as 16 grasshoppers in a day. This wasp's high energy level, dependent on sugary nectar, insures its role as an important pollinator. Finally, a third benefit for a gardener is a beautiful insect on a beautiful plant.

Hacks for Senior (75+) Gardeners

By Jay Gould, Master Gardener Volunteer. Photos by Cynthia Gould.

Here are some hacks I've developed to enrich my on-going gardening enjoyment. They are organized by physical changes. If you're still gardening, your mental health will be good.

VISION

Some of us have already had our cloudy lenses replaced via cataract surgery, and may even have gained improved vision. But eventually, your vision will decline.

I've found that a lack of contrast is a major challenge to finding that pair of clippers I just used. Paint the handles of hand tools white to help find them. Black-handled tools just disappear. You can also use anything that is white, such as a section of cardboard to lay your tools/screws, scissors, etc., on.



It's easier to find the tool you want when you lay everything out on a white background.

Consider buying a shorter shovel. (See shovel at the top of the above photo.) When I first saw this, I thought this was a children's play tool, but it's one of my most used implements. It's so much easier to shovel small scoops.

Vision is a critical factor in detecting and avoiding falls in the garden. That six-inch irrigation head will trip you up again and again. Drive a three-foot section of PVC next to it as a visible reminder of the hazard.



PVC pipes can be driven into the ground to alert you to garden hazards.

Add a colorful pot on the top of stakes or tie a yellow ribbon so you don't stab yourself.

Cover any trip hazard like an irrigation hose, lip in pavers, or curb with an old section of carpet. Your wheelbarrow will also appreciate the covered obstacle.



A carpet remnant will help you to better recognize small changes in elevation.

Even weeding can be challenging with limited vision. Develop your other senses to compensate. You can identify the round stems of purslane. Or pinch a leaf and you'll separate the arugula and leave it alone.

Can't read that measuring tape when placing your seedlings in a square foot gardening schema? Make planting poles with PVC. Mark six-inch increments on the PVC and leave the tape measure in the shed. Notice the white pot covering the stake end.



Use a PVC pipe marked in 6-inch increments.

Be kind to your knees. Many rolling garden seats are available. Kneeling pads are available at the dollar store. They'll also keep your knees cleaner.



STRENGTH & STAMINA

By now, after decades of gardening, you know what works for the best effect. Now is the time to enhance your efficiency and use your energies wisely. Consider NOT rototilling/turning bed soil with shovels. Many studies have documented that soil structures are destroyed by flipping the topsoil. Simply clear off last year's vegetation, add an inch of compost and other amendments and plant the current season's crops. Try it.

Similarly, my collection of kitchen utensils makes transplanting, cutting, potting, pruning, and other tasks much easier. A bread knife removes banana fronds as quick and easier than swinging that machete. Also, it's a lot safer for you and others near you.



Your kitchen is a great source of small gardening tools.

If you like constructing wooden garden projects, raised beds, trellises, etc., consider transitioning to exterior screws instead of nails. They hold better, can be more easily removed and you never hit your finger with the hammer! If you leave the head of the screw slightly above the board, you can more easily find it when you want to remove the screw. Your sense of touch will find the screw even in the dark.

BALANCE

Watch out for that ladder! Consider dwarf varieties whenever possible. Tall papayas can be topped to keep the fruiting branches closer to the ground. My banana patch has a variety that barely reaches ten feet.

HEAT, HUMIDITY & HYDRATION

Yes, we all know about the precautions to take. Avoid those HOT hours of the day and replace liquids. Your body is not as efficient as it once was. Give it some assistance.

Plan your gardening tasks so that you remain in the shade. Use the house to cast a shadow. Waterline repair men erect an umbrella over their work site. So could you.



MEMORY

Even young gardeners can benefit from good record keeping, plant labeling, and other memory aids. Use a soft pencil because those “permanent” markers are NOT permanent in our Florida sun. Write large. Write on white backgrounds like window blinds/slats. Add labeling tags to all spray bottles that contain liquid fertilizers, pesticides, etc. Don’t trust that memory.

With some thoughtful interventions, you can extend your gardening experiences for many more years.

Enjoy your gardening!

A “Beautiful” Treat

By Marianne Martin, Master Gardener Volunteer. Photo by Marianne Martin.

The Beautyberry (*Callicarpa americana*) is now flush with colorful purple berries just ripe for harvesting if you can beat the birds to them. While you can’t eat them directly off the plant, the berries make a very tasty jelly if you are willing to do a little work. It is a challenge separating the berries from the small stems that attach the berries to the clusters of fruit. Having said that since you will be filtering the cooked berries with several layers of cheese cloth, I may have made the task more arduous than was necessary when I made my first batch.

Before you begin to cook your berries, you will want to sterilize your jars and utensils needed for the canning process. Also measure and set aside ingredients you need to add to the berry extract.

Ingredients: 4 cups beautyberries in
5 1/3 c water

**To be added to the 2 1/2 cups of
extract:**

1 box of sugar pectin
2 TBSP lemon juice
3 cups of sugar

Here are the directions I followed which were compiled from several online recipes. Begin with 4 cups of washed berries. Cover and cook in 5 1/3 cups of water. Boil for about 20 minutes, stirring constantly. Mash the berries against the side of the cooking pot as the liquid boils.

Place three layers of cheese cloth in a wire strainer and slowly pour the cooked berry mixture into the lined strainer. Use a large spoon to force the liquid through the cheesecloth and to scrape excess berry skins and debris from the





cheesecloth. Doing this several times as you drain your cooked mixture will help you maximize the available liquid to use as the extract for your jelly.

Once you have filtered your cooked berries you will have 2 ½ cups of extract. If you have more, you can save it for another batch of jelly. Heat the 2 ½ cups of extract to a boil and then add 1 box of regular sugar pectin, 2 TBSP of lemon juice and whisk in 3 cups of sugar. Bring to a rolling boil for exactly 1 minute while stirring constantly, then remove mixture from the stove. Quickly remove the foam that forms on the top of the liquid with a spoon.

Fill your jelly jars to about ¼ inch of top, seal with a canning lid and screw the top on firmly. Return the filled jars to the water bath and boil them for 10 minutes or more until all jars are sealed airtight.

My efforts took about 4 ½ hours from start to finish (not counting the harvesting of the berries from the bushes) and for my reward I had 8 jars of jelly that tasted like red raspberries. It was a wonderful treat and made a popular gift. Enjoy the fruits of your labor from this unassuming shrub.

Interpretation Presentation

Submitted by Jan Rosser and Margaret Gates, Master Gardener Volunteers

The Interpretive Plan Committee of the Florida Botanical Gardens Foundation, most of whom are Master Gardeners, will be presenting at the January 9th MGV monthly meeting. The topic, of course, will be about the concept of interpretation and interpretive elements in gardens, parks and other natural areas. We will share the committee's progress over the last 18 months towards understanding this topic and also applying it in the gardens. It is safe to say that no member of the committee will look at signage in the same way again!

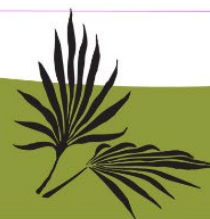
We will explore the nature and value of interpretation for projects both big and small to include signage, guided walks, interpretive charts, brochures, and websites, and will end the session with a walk along the Wetland Walkway, where new interpretive signage has been installed.

Our session is planned to be both practical, enjoyable and enlightening so do join us!

"Through interpretation, understanding; through understanding, appreciation; through appreciation, protection." Freeman Tilden (known as the Father of Heritage Interpretation) 1958.

January 9, 2024, 10am-noon, Magnolia Room, Topic: "Interpretation - Provoking thought and stewardship."

Welcome to the Wetlands Walkway

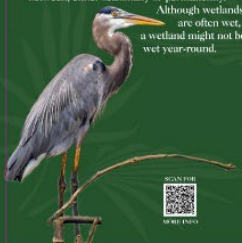


Experience the beauty and uniqueness of a Florida wetland as you stroll the raised walkway through this wetland area. Six signs along the way explain about wetlands and their importance to our clean water.

So, what is a Wetland?

A wetland is a place in which the land is covered by water, salt, fresh, or somewhere in between, either seasonally or permanently.

Although wetlands are often wet, a wetland might not be wet year-round.



Florida's Wetlands

Wetlands were long regarded as wastelands. Today, however, we know their importance. Often called "nature's kidneys", they play an important role in filtering and purifying water before it enters our rivers and aquifers, our two main sources of drinking water.

Florida is known for its abundance of natural wetlands. The majority of these are freshwater wetlands, while the remainder are saltwater and brackish marshes. The Everglades, Florida's best-known wetland, spans two million acres across central and south Florida.



This Wetland

In the late 1990s McKay Creek, to the west, was straightened and its banks were built up, allowing the creek to retain more water during storm events and prevent flooding upstream.

This wetland area was reinforced to process runoff. Cleansed water from the wetland empties into McKay Creek, which eventually empties into the Gulf of Mexico.

The World's Wetlands

Wetlands exist in many kinds of climates, on every continent except Antarctica. Major wetland regions of the world include the Amazon River in South America, the Okavango Delta in Africa, and the Yangtze River Deltas in China.



Words to know

Groundwater is water that exists underground in saturated zones beneath the land surface.

Surface water is water found in streams, rivers, lakes, reservoirs, and wetlands.

Source water - The region's drinking water is blended from three different sources: groundwater, surface water and desalinated seawater. Tampa Bay Water is the only water utility in the United States to take advantage of these three sources of water combined.



Sign 1 of 6 along the Wetland Walkway

Improving Indoor Air Quality

By Marianne Martin, Master Gardener Volunteer

Two programs sparked my interest in sharing the information in this article. First was an excellent program on 9/12/23 entitled "Toxic Plants and Your Pets" and the other was a program on *The Peoples Pharmacy* which was broadcast on 9/23/23 entitled "Revisiting Ventilation to Avoid Airborne Germs."¹

Perhaps you have wondered how you can get your indoor air to be as fresh as what you have been enjoying outside the past few days. Opening windows and doors for a cross breeze and use of fans can get the air moving but often the weather forces us to rely on the ventilation system of our homes. The podcast touched on the use of a carbon monoxide filter as a tool to determine how effective your ventilation system is working. Outdoor carbon dioxide levels run 400 ppm (parts per million). You should begin to get concerned if your indoor reading is 800-1000 ppm or higher. The podcast described a filtration system (the Corsi-Rosenthal box) which can be constructed for approximately \$100. You may be interested in this system, if you have special concerns about the adequacy of your ventilation, particularly in relation to airborne transmission of infections.

As a gardener and plant lover, I thought of another way to enhance the indoor air quality of my home. That is by remembering some basic plant physiology learned many years ago. Photosynthesis is the process whereby plants take up carbon dioxide and give off oxygen. So



having an indoor garden can increase the level of oxygen in and decrease the amount of carbon dioxide in our homes.

Please bear in mind that plants can be toxic to children as well as pets so I wanted to share a list of some plants that have been determined to be safe. Suggestions from UF/IFAS for classrooms include African Violets, Birds Nest Fern, Bromeliads, Christmas Cactus, Coleus, Polka-dot plant and Spider plant.² Some popular plants that are toxic to children and pets include golden pothos (*Epipremnum aureum*), peace lily (*Spathiphyllum* spp.) (any lily family members), and members of the *aglaonema*, *dracaena*, and *dieffenbachia* genera.

It pays to do your research to provide safety for children (or the elderly) and for our pets to avoid accidental toxic plant exposure. A word of caution, I found in doing my research for this article, you need to be observant and cross reference material. Now that AI is used in search engines, result lists are pulled from multiple sources, and some information is not accurate. There was a list supplied from "UF IFAS " which identified several toxic plants as safe for humans and pets.

1. Link to podcast [the peoples pharmacy podcasts - Search \(bing.com\)](#)
2. [Houseplants for Classrooms - University of Florida, Institute of Food and Agricultural Sciences \(ufl.edu\)](#)

Southern Live Oak vs. Laurel Oak

By Linda Smock, Master Gardener Volunteer

Florida is home to many different oak trees. Some prefer well-drained soils, including many scrub oaks, and others prefer moist soils. Whether massive like the live oak or tiny like the smallest scrub oaks, they provide wildlife habitat, including homes for insects, amphibians, birds, and mammals of varying sizes.

Two of the most common oaks in central Florida are the southern live oak (*Quercus virginiana*) and the laurel oak (*Quercus laurifolia*). For the casual observer, they look similar. A closer examination makes it clear that they are two different trees. Both can grow to 60 feet high, although the live oak may grow to 80 feet. The live oak will generally have a much wider spread than the laurel oak: up to 120 feet vs. 45 feet.

Southern live oaks are slow-growing; laurel oaks are fast-growing. Both have alternate leaf arrangements with simple leaves. Both have pinnate venation. Leaf blade length differs, with the laurel having three to five inches and the live oak two to five inches. The live oak leaves do not change color in the fall. Laurel oak leaves turn yellow and brown. They are both semi-evergreen.



Live Oak Leaf. (IFAS photo)



Laurel Oak Leaf (IFAS photo)

The live oak and the laurel oak have one trunk; neither has thorns. The live oak is showier, with drooping limbs and a wider spread than the laurel. The laurel oak bark is grayer than the live oak, which has more of a reddish-brown hue. Limbs of the laurel oak are more likely to break than those of the live oak.

Both the laurel and the live oak bloom in spring. The male flowers are both yellow-green catkins. The female blossoms are green to reddish spikes that emerge from leaf axils. Neither is showy. For the casual observer, it would be difficult to tell the laurel from the live oak by the blooms.

The fruits differ in shape. The live oak has an elongated oval acorn, while the laurel has a round or oval one. The live oak acorns are a darker brown than those of the laurel. Both have a cap covering the top part of the fruit, with the live oak cap covering about a quarter and the laurel about a third.

Space is needed for both trees, with each having root systems that can spread up to two to three times the width of the canopy. Both can have surface roots. Both can have roots that cause concrete sidewalks and driveways to rise off the ground, creating tripping hazards.



Quercus virginiana: southern live oak. (IFAS photo)



Quercus laurifolia: Laurel oak. (IFAS photo)

Southern live oaks can live for 300 or more years, while laurel oaks only live for 50 to 70 years. The laurel oak is easily damaged by pruning, mowers, and accidental nicking, allowing rot to start. It is common for laurel oaks to have hollow centers that create a risk of the tree falling.

The laurel and the live oak are both native to northern and central Florida. They provide shelter, food, and habitat for wildlife. They add beauty to the landscape. They provide shade for homeowners. They both can be messy, with leaves and acorns collecting under the canopy and blowing into the landscape. Careful consideration and research can lead homeowners to the best choices for their landscape.



The stump of this laurel oak reveals a hollow center, which is common with these trees. (Photo by Linda Smock)



Fight the Bite!

By Kailey Travis, Environmental Specialist, Pinellas County Mosquito Control

Due to Florida's climate, it is always a good time to talk about mosquitoes! Pinellas County Mosquito Control wants residents to remember to prevent and protect against this pesky insect. The mosquito is still the world's deadliest animal, capable of spreading various mosquito-borne illnesses.

In Florida, the threat of Eastern Equine encephalitis, St. Louis encephalitis, West Nile virus, and travel-related introductions of malaria, dengue, chikungunya, yellow fever, and zika still exist today. The mosquitoes capable of carrying these illnesses live here in our own county, such as these two:



Culex quinquefasciatus, adult, resting; this is a main vector of West Nile virus in Florida. (Courtesy of CDC)



Aedes aegypti Adult, freshly emerged; this is a main vector of dengue, zika, chikungunya, and yellow fever. (Courtesy of CDC)



While vigilance is key to protecting against mosquito-borne illness, it is important to remember that not all mosquitoes are the same. We have over 80 mosquito species throughout Florida, each with unique biology. However, the one characteristic all mosquitoes share is they spend a portion of their life in water. Mosquitoes undergo complete metamorphosis, with the larval and pupal stages being aquatic, where we concentrate our mosquito control efforts. Our control program is based on integrated pest management to help us eliminate mosquitoes before they become adults capable of biting and spreading disease. Gardeners can help here by monitoring standing water in pots and containers and dumping it after a rain to prevent eggs from developing.



During the summer, it only takes seven days for mosquitoes to develop in standing water, quickly going from the egg to adult life stage. (Photo courtesy of Pinellas County Mosquito Control.).

Our decision-making at Mosquito Control starts with data from a network of mosquito traps, sentinel chicken coops, and inspections. In partnership with the Florida Department of Health, we monitor sentinel chickens for the mosquito-borne illnesses West Nile virus, Eastern Equine encephalitis and St. Louis encephalitis, alerting us if these viruses are present in our community. There is no need to worry about our chickens, though! Although they produce detectable antibodies, they do not experience illness and cannot transmit the viruses to uninfected mosquitoes. We focus our mosquito control efforts on preventative larviciding and education. Rest assured, all treatment products used are rigorously tested, registered and routinely re-evaluated by the Environmental Protection Agency (EPA). When used according to the label, these products do not pose an unreasonable risk to human health or the environment.



Sentinel chickens serve as an early warning for the presence of certain mosquito-borne illnesses in our community. (Photo courtesy of Pinellas County Mosquito Control.)

To protect yourself from mosquitoes, we recommend practicing the three Ds:

- **Dump** standing water every week.
- **Dress** in long, loose-fitting clothing.
- **Defend** by applying an insect repellent with a CDC-recommended active ingredient.

Please know we are here to help! If you are having a mosquito problem, contact us for a free service request at (727) 464-7503 or mosquitocontrol@pinellas.gov. For more information, please visit [Pinellas.gov/mosquito](https://pinellas.gov/mosquito).



Applying Florida Friendly Landscape Principles Abroad

Marianne Martin, Master Gardener Volunteer. Photos by Marianne Martin.

On a recent vacation to the British Isles, I toured the Centre for Alternative Technology in Wales. While the Centre did provide information on how to adapt to climate change and make your home carbon neutral and energy efficient, I was delighted to see their many displays of organically grown produce (which they served up in the cafeteria at the Centre). As I walked around the site, it occurred to me that I could see most of the Florida Friendly Landscape (FFL) Principles applied despite the vastly different location. I thought you might like to see how these principles were demonstrated in this vastly different landscape.

The two photos below show the initial site 50 years ago and same site now. The home was built to show how to reduce energy expenditure and reduce carbon emissions.



Site of the Centre for Alternative Technology



Building now on site. This area 50 years ago is marked on image above with red dot.

The Centre is built on the site of an old slate quarry and is 50 years old this year. To reach the site, you ride up an incline. The cable cars are moved up and down by filling a reservoir tank in the bottom of the vehicle with water until the weight is enough to provide a counterweight to raise the lower car to the top of the hill. No energy is expended to move the cable cars, as the water is readily available from the hill side by gravity and the water in the base of the lower car is emptied and channeled by gravity to a nearby lake.

The first two principles of FFL are **right plant in right place** and **water efficiently**. This was demonstrated at the Centre by placing plants which could tolerate wet conditions near the base of downspouts. Rapid runoff causes flooding and erosion in this hilly country, thus directing the water into garden beds where it can be slowed and absorbed serves a dual purpose. Rain barrels are also used to collect rainwater. In another garden area, they were experimenting with food crops that can tolerate the hot, dry spring and summer time and be able to survive the cold wet wintertime. The last two FFL principles are to **reduce stormwater runoff** and **protect the waterfront**. Here at the Centre, control of water flow is to prevent erosion rather than prevent damage to waterways.



Flowers are planted among the vegetables to bring in pollinators and make the garden more attractive.

FFL principles 3 and 4 are to **fertilize appropriately** and to **mulch**. They do not use any commercial fertilizers in the gardens at the Centre. They use compost (FFL principle 7 – **recycle yard waste**) and this makes a rich soil that is conducive to healthy plant growth. They grow many plants in containers and the bottom of the containers contain compost. They make their own liquid fertilizer in the following way: They cut the base of a clear liter plastic bottle about 2 inches above the bottom and $\frac{3}{4}$ of the way around and then place the bottle upside down into a plastic milk jug. This liter container is secured to a post in the sun near the herb garden. They put crushed Comfrey (*Symphytum officinale*) leaves into this container and, in not too much time, they have an effective homemade fertilizer that can be diluted or used full strength depending on the need. I did not see any use of mulch. The soil in this part of Wales is quite different from the sandy soil we have here in Florida, and the gardens are in a woodland environment.

FFL principle 5 is to **attract wildlife**. At the Centre, they plant flowers with their crops to attract pollinators as well as make the garden more attractive. They placed bird houses on the sides of their buildings to provide nesting for swifts. They provide information and resources for those living in the area to help increase the population of these birds.

FFL principle 6 is **manage yard pests responsibly**. In the damp climate of the Centre, they have an issue with garden slugs. They have an easy, nonchemical way to deal with them. They place a board flat in the garden and the slugs love to congregate under the board. Each



morning they lift the board and dispose of the slugs attached. (They flick them into the wooded area away from the flowers and food crops they are growing). They also use copper legs to raise pots off the ground. The copper gives the slugs a shock, so they don't get into the raised pots.



A board placed in garden to attract slugs to surface in contact with the soil.



Copper legs are used under planters to deter slugs from climbing into the pots.



What a nice surprise to find that my visit to the Centre for Alternative Technology had a heavy focus on gardening. What serendipity that a walk around this Centre brought the Florida Friendly Landscape Principles to my mind and demonstrated their applicability in such a vastly different garden environment.

Horticulture and Gulfport Flooding

By Priscilla Kidder, Master Gardener Volunteer Trainee. Photos by Priscilla Kidder.

The city of Gulfport experienced flooding in the downtown Waterfront District when hurricane Idalia passed by in the Gulf on August 30th, 2023. The high water inundated the downtown area including the planters that line Beach Blvd.

I live within shouting distance to the downtown and after the surge subsided, I observed many plants and trees did not seem to survive and some died entirely. The Washingtonia (*Washingtonia robusta*) palms along the waterfront planters were in good health before the storm, but now seem to be struggling.



Washingtonia palms along the Gulfport waterfront

The most profound loss would be the oaks that are now browning out along Beach Blvd. Most that experienced a full day of saltwater flooding are struggling. Live oaks (*Quercus virginiana*) are salt tolerant, but laurel oaks (*Quercus laurifolia*) are not. They may experience a period of browning but will recover in the long term. I observed that two next to one another were mismatched. One oak thrived, the other is browning out. The one that was fine had Ixora (*Ixora*



coccinea) shrubs around the base. Ixora was one of the plants that seemed unaffected by the saltwater flooding, and I am wondering if it was able to take up some of the saltwater surrounding the oak and spared the oak's life.



Live oaks affected by saltwater flooding

Many of the Indian hawthorn (*Raphiolepis indica*) and dwarf shefflera (*Shefflera arboricola*) died, but not all. Some of these specimens still have signs of life, but I think that must be due to the overall health of the plant at the time of flooding or drainage near the surviving plant was good.

The clear survivors were Ixora, as I mentioned before, and boxwood (*Buxus sempervirens*) Another survivor was the Geiger tree (*Cordia sebestena*) and also some saw palmettos (*Serenoa repens*) survived the flood.



Ixora exhibited little saltwater damage

Gulfport has a full-time horticulturist on its staff, and she has been working tirelessly to include more natives and more salt tolerant plants in the downtown landscaping. I hope to be able to interview her at some point and write another article detailing her observations on the after-effects of saltwater flooding.

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 **January 8**. If you would like to submit an article or photo feature, see the following guidelines:

- Articles should be 250 to 300 words.
- 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.
- Send photos as attachments and include proper attribution.
- Send submissions to Susan Ladwig at ladwig.susan@gmail.com

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