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Extension Update by Larry Figart

Save the date!!! Saturday, April 2nd from 9 am to 2 pm is the Duval County Master Gardener Plant Sale and Gardening Expo.

Shop for plants that are adapted to our area while attending seminars and visiting with Master Gardeners at educational displays. Bring soil samples to drop off for pH testing and any gardening images and questions to ask Master Gardener Volunteers at the "Plant Doctor" Booth. Please do not bring samples of sick plants.

A few of the plants for sale include native milk-weeds, Nun's orchids, baby sunrose, African blue basil, orange bulbine, holly fern, pink muhly grass, stoke's aster, dotted horsemint, slender blazing star, wild coffee, coral bean, jacobinia, hardy red gloxinia, Mexican sunflower, pink salvia, marigold red knight, lemon balm, Cuban oregano, Louisiana iris, Sleeping hibiscus, red buckeye, shrimp plant, firecracker plant, sungold tomatoes, datil peppers, roselle, purple coneflower and much more!

In addition we will be having "Plant Chats" in one of our classrooms. The topics include: Growing Edibles Indoors, Monarch-Milkweed Initiative, and Nothing Pretty Grows in the Shade!

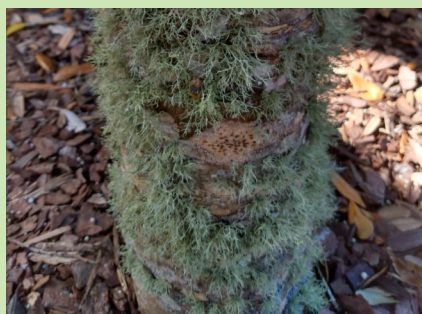
We will be accepting cash, checks, or credit cards.

What's That?

Organism on tree bark



Organism on tree bark



Organism on tree bark



All images by Candace Barone



Around the Yard by Tonya Ashworth

Birds Need Our Help

Do you notice that there are fewer birds around the yard than there were when you were younger? If you have thought this to be the case, you are correct and there is research to back it up. Over the last 50 years, bird populations have decreased dramatically. There are nearly 3 billion fewer birds in North America than there were in 1970. Sadly, our “common” birds are bearing the brunt of this. According to birds.cornell.edu, “More than 90% of the losses (more than 2.5 billion birds) come from just 12 families including the sparrows, blackbirds,



Bidens alba with bee, picked by my daughter. Image by T. Ashworth

warblers, and finches.” Why is this happening? Declining numbers of insects for the birds to eat and feed their young. Doug Tallamy and W Gregory Shriver published a study in *Ornithological Applications* that makes the issue clear. “...birds for which insects are an essential source of food have declined by 2.9 Billion individuals over the last 50 years, while terrestrial birds that do not depend on insects ...have gained by 26.2 Million...a 111-fold difference.”

Unfortunately, our quest for perfect landscapes has taken a toll on insects and birds, which are just one link up in the food chain. Florida alone has 4 million acres of land devoted to managed turfgrass. Additionally, we have planted (myself included) landscape beds full of non-native plants. This leaves little room for biodiversity. Most non-native plants do not support large populations of insects— which is good for a perfect looking yard but bad for birds. This is because insects have life cycles that are often very specifically tied to certain plants. Fortunately, there are several things we can do in our landscapes to help.

1. **Freedom Lawns** - Unbeknownst to me, I have had a freedom lawn all of my life. This refers to the practice of simply mowing whatever happens to grow in your yard. In my backyard freedom lawn, I have *Bidens alba*, Florida betony, and basketgrass all growing of their own accord. Most would consider them weeds. But a weed is just a plant whose virtue has yet to be discovered. I have discovered their virtues and call them weeds no more. *Bidens alba* is a fantastic bee magnet, and is the host plant for the dainty sulphur butterfly larvae. Florida betony has attractive purple flowers, good for pollinators, can withstand mowing, and all parts are edible. They have an interesting white tuber you can dig and eat early in spring. I hear they are like a crunchy radish. Basketgrass makes a dense low-growing groundcover, meaning less frequent mowing for you, and birds eat their seeds.

2. **Turf alternatives** - Try growing sunshine mimosa or frogfruit as a more tidy look than a freedom lawn but with many of the same benefits. Sunshine mimosa, or powderpuff, is a spreading, native groundcover that can withstand a mower and sends up cute little pink balls of flowers. Frogfruit is another native groundcover that can be used as a turf replacement. The small purple and white flowers provide nectar for pollinators, and it can be mowed. Three different species of butterfly larvae can use this plant.



Frogfruit: Image by L. Figart

3. **Native Plants** - I am not prepared to wholesale rip out every non-native ornamental plant in my landscape, but, I now look for ways to include natives in my planting plans. There are so many great options in Florida to use, and they are getting easier to source. Our Master Gardener plant sale will have several native plants available.

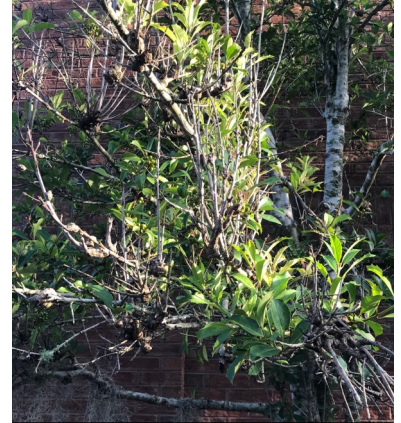
4. **Oaks** - If you have room, planting an oak tree may be the best way to help your feathered friends. Oak trees support hundreds of species of insects.

For more information, surf over to homegrownnationalpark.org, where Doug Tallamy, professor of Entomology and Wildlife Ecology at the Univ. of Delaware, is organizing a grassroots effort to address this issue.

Out on a Limb by Larry Figart

There are diseases in the landscape that are spread by the very tools that we use to take care of them. When we prune out diseased limbs and branches we could be moving the disease from sick plants and spreading it to healthy plants. In this article we will discuss some of these diseases as well as how to clean our tools.

Sphaeropsis Gall is a disease that has been slowly increasing in our landscapes. It is a disease that affects hollies. The reason for the increase is not that the disease is changing, it is that we are starting to use more and more holly in the landscape. Most of our hollies are susceptible. The disease is first noticed when the leaves at the end of branch tips turn yellow. Then as the disease progresses, the branches start to become thicker than the surrounding tissue. In advanced cases a witches broom forms on the diseased branch. Eventually, the diseased branches will die. While this disease can be spread naturally with rain splashed spores, transmission from tree to tree can be reduced by ensuring our pruning tools are clean.



Credit: Larry Figart UF/IFAS



Credit: Monica Elliott UF/IFAS

Fusarium wilt in Queen and Mexican Fan Palm was first noticed in Northeast Florida around 2008. It is a devastating disease that can kill a seemingly healthy palm in a few weeks. The symptoms start in the lower fronds and quickly move up the crown until all the fronds are dead. The disease is so quick, the palms often look “freeze dried”, meaning the dead fronds do not droop. Like Sphaeropsis Gall, this disease can naturally spread as spores are carried on windblown rain. However, it is typically spread within landscapes through the use of contaminated pruning tools. There have been many instances where a homeowner loses all of their Mexican fan, or queen palms within six to eight weeks of pruning them. Using clean equipment is key to keep from spreading this disease.

The fungi that causes **Botryosphaeria Canker** is considered an opportunistic fungi. That means it looks for the “opportunity” to affect a stressed or weakened plant. It is typically described as a weak

pathogen. Think of it as the predator that looks to take out the old and diseased plants. So the best way to prevent it is to keep our shrubs and trees healthy and vigorous. Part of that is to prune out any diseased branches. However, if we do not sterilize our tools, we run the risk of spreading this fungus to healthy portions of the plant.

Other diseases that are commonly spread by infected pruning tools include fire blight, and tobacco mosaic virus.



Credit: Dennis Hamilton , Phillips Garden Center

So far we have read about **why** we sterilize pruning tools, now we will discuss the **how**. There have been several studies to determine what works best. Diluted alcohol, a 10% bleach solution, trisodium phosphate, and Lysol all work well. One of the studies also found that Lysol was least corrosive and bleach was most corrosive. The method that is recommended is to have a small bucket of solution nearby and two pruning tools. Alternate pruning tools, leaving one to soak, and switch them when moving to the next plant. Some folks carry spray bottles with the solution in it spraying the tools between cuts. By disinfecting our tools we can avoid spreading disease in our landscape. For more information go to: <https://gardeningsolutions.ifas.ufl.edu/care/>

Spring Vegetable Garden Pests by Beth Marlowe

Ahhh....feel that lovely spring sunshine on your face! It makes you want to get out in the vegetable garden and hunt for pests! Wait, what? Not what you had in mind? Well, like it or not, learning to identify and manage pests is a critical part of vegetable gardening in Duval County. Early spring is the perfect time to brush up on your identification skills, take measures to prevent problems and develop plans to intervene if necessary.

No matter what, we always want to build a good foundation for vegetable garden health with cultural practices that will discourage pests as much as possible. We want to plant the right crops at the right time and in the right place so they will be healthier and less attractive to pests. We want to choose varieties that are known to do well in our climate and that have resistance to common pests, if possible. We want to rotate where we put crops from the same family in our garden from season to season. And we want to water and fertilize appropriately—not too little and not too much. Strong and happy plants are our first line of defense against pests.

Preparing ourselves by knowing what to look for and what to do when we find an issue is the next step. So, what can we expect in the spring? Growth of pest populations and timing of problems depends on many factors, such as whether they overwinter here or repopulate from areas further south; whether our winter and spring are cold or warm, wet or dry; and whether we are surrounded by hosts for them, or by hosts for pest predators. Regardless of the specifics, there are several that we usually see, so being ready for them is a wise idea.

APHIDS



If you see a bunch of squishy-looking, pear-shaped insects on your crop leaves that aren't moving very fast, you probably have aphids. If you want to be sure, get out a hand lens or use the magnifier function on your smart phone to get a close-up look. If you see two little lines sticking out the back end like dual exhaust pipes, they're aphids. They can be many different colors, but they all have those structures, called cornicles, which excrete "honeydew" after they use their syringe-like mouthparts to pierce and suck fluids out of your plants. If there are only a few, you can spritz them off the leaves with a hose. If you need to go further, you can usually control them with a horticultural soap or oil. (Photo credit: Unknown author is licensed under [CC BY-ND](#).)

WHITEFLIES



These tiny white flies build up their populations throughout the spring and summer, peaking around August. I had hoped our freeze at the end of January might slow them down this year, but I have already seen a couple in the garden. Look for whiteflies on leaves or at tender new growing points. They often fly up as you are watering. You can also monitor for their presence with yellow sticky cards. Like aphids, white flies are insects that pierce the plant with their mouthparts and then suck out fluids for food. Unfortunately, they also transmit plant viruses as they feed. For this reason, whiteflies need to be controlled. Regular scouting is key. They can be treated with horticultural soaps and oils, as well as neem oil and pyrethrins. A non-chemical approach is to put reflective mulch around your seedlings when you plant. UF research has shown it reduces their numbers on crops. (Photo credits: MREC, UF/IFAS)



SQUASH BUGS



These bugs love plants in the cucurbit family. They damage plants because the saliva they inject as they feed on plant sap is toxic. You can hand pick them off your plants and "squash" them, or put them in a bucket of soapy water. Nymphs are smaller and grey and hang out in groups, especially on the undersides of things. You can place a board just above the soil near your squash and pick the off the underside after they congregate. Pyrethrins are a chemical option if necessary.

(Photo credit: John Capinera, UF)

Spring Vegetable Garden Pests, Cont'd.

PICKLEWORMS



This is another common pest on cucurbits. The adult is a nocturnal moth that lays eggs on the plant, the larvae then hatch and tunnel into developing squash or cucumbers. Once there, they can't be sprayed because they are inside the fruit. Plants can be covered at night to keep the moths out, but they must be uncovered during the day to allow bees to pollinate the flowers. Another option is planting resistant varieties, such as Seminole pumpkin that is not typically bothered by them. (Photo credit: John Capinera, UF)

STINKBUGS AND LEAF-FOOTED BUGS



These large flying bugs are shield-shaped and faster than you might think. Adults are impervious to many chemicals, but neem and Spinosad can be effective on younger stages. Capturing by hand or by net and putting them in a bucket of soapy water is relatively easy. You can also plant



trap crops, such as sunflowers, along the outer edges of your garden. These are sometimes preferable to your vegetables, and once they congregate there you can capture or spray them, lessening the impact on your crops.

(Photo credits: James Castner and John Capinera, UF)

ARMYWORMS



These larvae come in a variety of colors from brown, to grey, green and yellow-striped. Eggs are laid on leaves of many vegetables, and the larvae hatch out and begin feeding in large groups. If caught early they can be hand picked off or sprayed with Bt (*Bacillus thuringiensis*), a bacterium that causes them to stop feeding immediately after it touches them and causes death within a couple of days. Spinosad works on larger armyworms. (Photo credit: Lyle Buss, UF)

Growing in the Garden by Beth Marlowe

Wow! Does our demonstration garden get busy in March! We are finishing up harvests of our collards, kale, cabbage and chard. We are removing some from the beds we need to repair or replace. We are also filling beds with more bed mix and organic matter as needed. Once we finish those tasks, and we're certain we won't have any more frosts or really cold nights, we are ready to plant spring crops. The race between vegetables and insects/disease is on!

Now is the time to get tomato, pepper and eggplant seedlings in the ground or outdoor beds and containers. Remember that large-fruited tomato plants generally can't set fruit once night temperatures are somewhere between 70-80°F., so try to pick varieties that will provide a good harvest before the end of June. Cherry and grape tomatoes often keep producing all summer.

We can also direct seed beans, corn, cucumbers and squash in March. These crops don't transplant as easily

as some, so we plant the seeds right where they will grow.

In April, we'll begin planting crops like sweet potatoes and okra that need warmer weather and soil, and that will grow and produce happily through the summer heat.

Don't forget those pollinator plants and hosts for beneficials. Having flowering plants at all times makes sure we have nectar and pollen for pollinators. In the spring we like to plant basil, zinnias and sunflowers. And larval host plants ensure that beneficials can complete their life cycles in our gardens. Good ones to try in early spring are fennel and dill, along with passionvine and milkweed.

And finally, try a new herb for enhancing your veggies. Oregano, rosemary, thyme and marjoram are perfect for starting now and pairing with tomatoes and peppers.

What to Plant in March and April

Annuals: Angelonia, Alyssum, Aster, Blue Daze, Gailardia, Milkweed, Ornamental Pepper, Verbena, Salvia, Wax Begonia, Coleus and Zinnia .

Bulbs: Achimenes, Allium, Dahlia, Kaffir, Canna, Blood and Gloriosa lily, Calladium and Louisiana Iris

Vegetables: Beans, Tomatoes, Squash, Eggplant, Okra, Southern peas, Peppers, Sweet Potatoes, Pumpkin, Watermelon and Corn.

Herbs: Edible Ginger, as it gets warmer try Basil, Oregano, Sage, Mexican Tarragon, and Rosemary

Now is a great time to plant perennials such as Beach Sunflower, Blackberry lily Bulbine, Bush Daisy, Chrysanthemum, Cigar Flower, Coneflower, Stoke's Aster, Firebush, Firespike, Firecracker plant, Flax lily

Upcoming Classes

Date, Time, Cost	Event & Registration	Location
March 21 11 am - 12 pm	Gardening for Monarchs (Attracting Monarchs) Register via Eventbrite: https://www.eventbrite.com/e/272343977167	Duval Co. Extension 1010 N McDuff Ave.
March 24th 2-3:30 pm \$5.00	Backyard Hen Training Register via Eventbrite: https://www.eventbrite.com/e/276764077807	Duval Co. Extension 1010 N McDuff Ave.
April 2 9 am - 2 pm	Master Gardener Plant Sale	Duval Co. Extension 1010 N McDuff Ave.
April 4th 11 am - 12 pm	Gardening for Monarchs (Rearing Monarchs) Register via Eventbrite: https://www.eventbrite.com/e/272343977167	Duval Co. Extension 1010 N McDuff Ave.
April 6 11:30 am - 1:00 pm Free	So You Want to Start A Community Garden? Register on Eventbrite: https://www.eventbrite.com/e/so-you-want-to-start-a-community-garden-tickets-294013180337	Online
Canning Center Classes - call (904) 255-7450 or go to: https://FRMParks.eventbrite.com for more information		
March 26th 9 am - 12 pm	Lemon Curd Starts at \$25.00 https://www.eventbrite.com/e/lemon-curd-tickets-240106032607	Canning Center 2525 Commonwealth Ave.

What's That? Answer! By Candace Barone

Lichen (pronounced lie-ken) gets a bad rap based on its appearance alone. Lichen textures range from flat (Crustose), leafy (Foliose) and shrubby (Fruticose). It is commonly found on tree trunks throughout the Southeastern United States.

Nature has found ways to use lichen for more than just a deer and insect food source too. Ruby-throated hummingbirds, Tits, Tree finches and spotted nutcrackers incorporate lichen into their nests. The pygmy owl and mournful sphinx moth (Enyo ocypte) uses lichen covered branches as camouflage from predators.

Does lichen kill trees? The answer is no. Some tree species are hosts for lichen, so it is only natural they appear. In most cases, lichen arrives on plant material that is currently not achieving it's full potential. It is a clue to investigate and diagnose/treat why your tree is in decline. For more info: <https://edis.ifas.ufl.edu/pdf/EP/EP48500.pdf>



Lichen on a metal sign
Photo Credit: Larry Figart