

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

## Fairy Plants in an Enchanting Woods

By: Ellen Mahany, Master Gardener

Jackets zipped or buttoned, hoods up, and hands in pockets, ten or so nature lovers breathed in a mixture of pine, pennyroyal and many other fragrant plants as we walked through the chilly, wet pine flatwoods at Brooker Creek. Our guide was James Stevenson, Extension Program Specialist.

During the February botany walk, there was so much to see. James frequently pointed out various wonders, among them a magical quartet of tiny to small plants hidden from unobservant eyes. Their names were as intriguing as their fairy plant appearance: Yellow Hatpins, Candy Root, Zigzag Bladderwort and Pink Sundew. The latter two of these innocent-looking flowers are carnivorous.

**Yellow Hatpins (*Syngonanthus flavidulus*):** At James's direction, we looked down at the side of the path to see a white-button flower head with yellow bracts atop a slender stalk. This monocot can grow in colonies, but an individual flower is tiny enough to fit into fictional detective Hercule Poirot's treasured lapel flower holder.

**Candy Root or Batchelor Button (*Polygala nana*):** This cluster of yellow-green racemes, each measuring  $\frac{3}{4}$ -inch to two inches long and  $\frac{3}{8}$ -inch to  $\frac{1}{2}$ -inch wide, forms clover-like heads surrounded by a rosette of six-to-eight inch basal leaves. This member of the Milkwort family derives its name from its fragrant roots.

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A colony of Yellow Hatpins. Photo Credit: Southeastern US Plant Identification.



Left: Individual Hatpin. Photo Credit: Southeastern US Plant Identification Resources.

Right: Zigzag Bladderwort. Photo credit: Loret.



Left: Pink Sundew. Photo Credit: Noah Elhardt.

Right: Candy Root. Photo Credit: Craig Huegel.



**Zigzag Bladderwort (*Utricularia subulata*):** We stooped to peer more closely at 1/8 to 1/16-inch, two-lipped, yellow-lobed blooms held by a thin, smooth stem that zigzags when under the weight of profuse blossoms. This wee plant belongs to the carnivorous Bladderwort family. Its ground level, bladder-bearing leaves work in conjunction with a root system that opens and closes to capture hapless bugs.

**Pink Sundew (*Drosera capillaris*):** A beautiful, dewy, pink rosette of glistening leaves secretes a sticky solution that traps and dissolves tiny insects. The leaves fold around the victims. The more food, the more flowers. Safely above this killing machine, bees pollinate the butterfly-like white flowers sitting atop a one-to-two-inch stalk, growing from the center of the basal leaves. This member of the carnivorous Sundew family is a relative of the Venus flytrap.

The wet flatwoods offer the ideal conditions for the lovely, fairylike flowers James found for us.

The wonders we saw in our two-hour exploration are there to view whenever we can take the time to indulge our love of nature. James kindly offers to identify pictures of native plants and wild flowers that you send to his e-mail address: [jstevenson@pinellascounty.org](mailto:jstevenson@pinellascounty.org)

Brooker Creek Preserve provides a variety of guided walks, including botany, forestry, photography and bird watching. A nature walk begins each Saturday at 9 a.m. Check the Brooker Creek Preserve website (<http://www.brookercreekpreserve.org/>) for all walks, classes and special events.

## Everyone Can Garden

By Debi Ford, Master Gardener

Do you want to have a garden but feel pressed for time or have limited space? Container gardening should suit you well. In fact, container gardening is a great way to overcome poor soil conditions in our growing zones. You can design your containers around many different types of plants—annuals, perennials, bulbs, vines, succulents, and even some small shrubs and trees. You can grow fruits and vegetables and who doesn't love an herb garden! Let your growing conditions and imagination guide you to create a great container garden. Start with a few pots, or sprinkle containers throughout your landscape.

Some basic gardening principles still apply. You need to choose the right plant for the right place and provide the correct light and irrigation. In addition, choose the correct growing medium. It should be loose enough to allow for drainage, but substantial enough to support plant root balls.

Potting mixes are available commercially or you can blend your own using the following chart as a guide.

### Potting Soil Recipes You Can Make At Home

#### Foliage Plants

2 parts peat moss;  
1 part perlite;  
1 part coarse sand  
OR  
1 part peat moss;  
1 part pine bark;  
1 part coarse sand

#### Succulents

2 parts soil;  
1 part peat moss;  
1 part perlite;  
1 part coarse sand

#### Bromeliads

1 part peat moss;  
1 part bark;  
1 part coarse sand

#### Seedlings

2 parts compost;  
2 parts peat moss;  
1 part vermiculite (pre-wet)

Source: [solutionsforyourlife.ufl.edu](http://solutionsforyourlife.ufl.edu)



The formulas vary depending on the type of plants you choose to grow, so choose the appropriate mix for your plants. Be sure to use fresh potting mix each time you plant so you don't carry forward any diseases or soil pathogens from season to season.

Almost any type of container can become part of your container garden plan as long as it provides sufficient room for the plants and allows for drainage. Plastic pots retain water whereas unglazed clay pots dry out faster. There are widely available pre-made containers that have automatic watering control systems.

For larger containers, you'll want to use lightweight filler material to fill some bottom space so you won't need as much potting mix. Packing peanuts, pinecones, and even plastic bottles can fill spaces. They have the additional benefit of reducing the weight of the containers. Containers with casters or movable trays are also available.

Planting a container is not much different from planting in the ground. Place the plants first to check your design plan. When you do plant, be sure to place the plant so that 10% of the root ball is higher than surrounding soil. The final level of potting soil should be one to two inches below the rim of the container to allow for watering.

Color, balance, symmetry, rhythm, and proportion are basic elements of designing a container garden. Currently, a popular style of container gardening is the "Thriller, Filler, Spiller" formula. A *thriller* is usually an upright plant that adds drama and height. White Fountain grass, Dracaena, and Caladiums fit that description. A *filler*, either flowers or foliage, adds mass to the container. Some good examples are Coleus and Petunias. *Spillers* flow over the edges of the container. Some good choices are Sweet Potato Vine, English Ivy, Creeping Jenny, Sweet alyssum, or Dichondra.

For more information on container gardens, look up "Container Gardens for Outdoor Spaces."

<http://edis.ifas.ufl.edu/ep326>

Happy Gardening!



A variety of container plantings. Photo Credits: Creative Commons.

## Crops N' Kids: A Growing Process of Beauty

By: Ryan Farley, Master Gardener

Have you ever noticed the look on a child's face after pulling his or her first carrot? The ecstatic expression of success and accomplishment can bring joy to anyone who observes it. While some may assume that our young people are indifferent and unmotivated, I can tell you that, with a little soil, those assumptions are untrue.

In my work as a Youth Service Coordinator at the Cops N' Kids youth program, we offer after school as well as holiday care for the at-risk youth of Tarpon Springs. In the winter of 2013, we built our youth garden. Since the garden's beginning, we have experienced a growing process of beauty. The kids engage with the garden.



Photo Credits: Ryan Farley

Gardens have both an identity and purpose. Since I work with children and teenagers, the garden's identity is "Crops N' Kids". The purpose of the garden is to give the youth hands on healthy eating habits, a chance to cultivate and watch things grow, and perhaps spark a sense of wonder that they can apply to their everyday life. A seed and a child are both full of unlocked potential. We must nurture that potential by instilling something vital in our youth. Why not gardening? Watching the youth come and go each day, I've noticed that they always seem to stop and look at the garden with the same look as pulling their first carrot.





Young gardeners in the Crops 'N Kids Program. Photo Credits: Ryan Farley



## Going Native

By: Barb Stauffer, Master Gardener

Have you considered "going native", that is choosing Florida native plants to enrich your landscape?

A Florida native plant refers to a species occurring within the state boundaries prior to European contact. They occur in natural associations in habitats that existed prior to significant human impacts and alterations of the landscape. Florida native plants include both indigenous and non-indigenous species.

Why should you go native? The use of native plants creates "Real Florida" landscapes and:

- Supports wildlife that depend on and are sustained by their interrelationships
- Expresses the uniqueness of their locality
- Reduces the use of fertilizer and pesticides, thus reducing pollution
- Prevents deterioration of natural areas and wildlife species
- Prevents encroaching invasive species of animals, plants and diseases

There are a number of misconceptions about the use of native plants. For example, it is untrue that most Florida native plants will grow throughout the state. Some are coastal plants; some will not tolerate salt. Some need moist conditions; others want dry environments. It is also untrue that all native plants need no care or that they are completely pest free. While they significantly reduce maintenance, they do not eliminate it.

A gardener can create a complete garden of native plants. Other gardeners combine natives and exotic plants.



Florida Native Plant Garden at the Palm Harbor Library. Photo used with permission of Palm Harbor Library.



You can see an example of a native garden at the Palm Harbor Library. In 2008, the library began inside and outside renovations. The outside focus was on:

- Landscaping to support wildlife and humans
- Creating a new look for all green spaces
- Using native plants
- Combining edible and native plants

While the library provided funds to purchase plants, volunteers did the planting and mulching. If you are in North Pinellas County, the Palm Harbor Library is a wonderful resource for a first-hand experience of native plants. While there, you can also check out a book about native plants to browse and decide if you'd like to go native!

### Resources

Florida Association of Native Nurseries (FANN): <http://www.afnn.org/>

Florida Native Plant Society (FNPS): <http://www.fnps.org/>

Florida Native Plant Society: <https://youtu.be/Vz2HfhvhH0M>

Florida Native Plants: [http://edis.ifas.ufl.edu/topic\\_native\\_plants](http://edis.ifas.ufl.edu/topic_native_plants)

Florida Wildflower Foundation: <http://flawildflowers.org/>

Native Landscape Plants for South Florida:

<http://ufdcimages.uflib.ufl.edu/IR/00/00/17/47/00001/EP22200.pdf>

Native Plants: Overview <http://edis.ifas.ufl.edu/ep297>

Pinellas Chapter of the Florida Native Plant Society: <http://pinellas.fnpschapters.org/>



Left: Florida State Wildflower—Coreopsis. Photo Credit: UF/IFAS. Right: Native Plant Garden. Photo Credit: Dianne L. Fecteau.





## Challenges of Living on a Storm Water Pond:--Azolla

By: Barbara Salazar, Master Gardener

In 2003, I became a brand new homeowner living on a lake. After going to a homeowner association meeting, I found myself in charge of a three-acre lake owned by 35 private homeowners. Clueless as to what this involved, I did a Google search, enrolled in classes and eventually earned the titles of Florida Wetland Naturalist and Master Gardener. Equipped with this knowledge, I was ready to introduce myself to my lake neighbors and develop a shared plan for our shorelines, not on a lake, as it turns out, but a storm-water pond.

All went well for a decade until the nutrient rich pond was invaded by water fern—Azolla (*Azolla filiculoides*). The floating invasive, thinly layered over 75% of the surface, was our first major challenge. Because Pinellas County is so heavily populated, many of our lakes function essentially as storm water ponds. Run-off from lawns and other surfaces often contain pollutants and nutrients that trigger invasive blooms



Azolla Bloom. Photo credit: Barb Stauffer.



Four months earlier, the spraying company hired to control invasive plants had abruptly stopped spraying because of personal issues within the firm. Since each homeowner owns a portion of the lake, we, the homeowners, were responsible for dealing with this problem without the help of outside resources. Estimates from four maintenance companies to treat and manually remove the biomass, ranged from \$10,000 to \$20,000. To avoid that expense, as well as to limit the use of chemicals, our neighborhood decided to manually remove the Azolla on a volunteer clean-up day.

Almost 20 neighbors came together with rakes, screens from pool enclosures, canoes, and kayaks. Two boaters would stretch a rope linking pool noodles, loaned to us from the “Keep Pinellas Beautiful” branch of “Keep America Beautiful”, and corral the floating lacy plant to the shoreline. Those with rakes would scoop the Azolla onto screens in order to drain the water. Two or three people would then drag the load to areas under

trees, hedges, or flowerbeds, providing a natural mulch and fertilizer. Other teams of volunteers supported the workers with hydration and snacks. In the morning, they provided coffee and donuts; at lunch, there were sandwiches. The day started at 8am and ended at 4pm. We removed over eight tons of biomass.

Of great help was the Water Hippo. Its inventor, John Allan, volunteered his invention and time to skim our floating invaders with his vacuum motor floating near the shoreline. For others who might need help, John's number is 727.412.4323.

The result was our lake was back in balance without the use of chemicals. By volunteering together, we saved money. We also benefitted from a community event full of good spirits and teamwork. We can once again enjoy our lake full of wildlife with its healthy equilibrium.



Top Row Left and Center: Neighbors working together. Top Right: The Water Hippo. Bottom Row: Before and After Pictures. Photo Credits: Barbara Salazar

## April is Water Conservation Month!

By: Brian Niemann, UF/IFAS Extension Pinellas County, Florida-Friendly Landscaping™ Agent

With summer heat right around the corner and very low average rainfall totals, April is Water Conservation Month in Florida. It is important to conserve water during our typical spring dry season. The old saying of April Showers Bring May Flowers is indeed true, but our showers are rare.

You can conserve outdoor during our dry season with the following steps:

- If you have a sprinkler system, conduct a visual inspection by turning on each zone for a few minutes and observing the sprinkler heads. Look for and correct any broken or misdirected heads.
- If you have a sprinkler system, test your rain shutoff device to ensure that it is functioning properly. Legally, these are required on all in-ground irrigation systems, regardless of water source. The basic models only last one year before they lose effectiveness.
- If it rains at least 3/4" the day before your watering day, skip your day. Your landscape doesn't need that much water.
- Wait to install new landscaping until the summer rainy season.
- Install a three-inch layer of organic mulch in your plant beds. This will keep the roots cool and retain moisture in the soil.
- Mow your grass at the highest possible setting on your mower. This helps increase root depth, making grass more drought tolerant.
- Use a hose nozzle when hand watering or washing your car to keep the water from running constantly.

Whether using reclaimed water, well water, or potable water for landscape irrigation, conserving water is everyone's responsibility. For more information on Florida-Friendly Landscaping™ and a list of upcoming classes, visit: <http://pinellascountyextension.org>.



Photo Credit: UF/IFAS



## Weed Control in Established Lawns

By Jane Morse, UF/IFAS Extension Agent, Pinellas County

It is important to know that weeds don't create a void, they *fill* a void. If weeds are a recurring problem in your lawn, follow these steps to have a healthy, thick lawn that will out-compete most weeds:



**Right Plant, Right Place.** Bahiagrass is drought-tolerant and best suited for sandy, acidic soils. St. Augustinegrass is salt-tolerant and better suited for mildly acidic to alkaline soils that are moist. In addition, choose grasses based on the amount of care that you are willing to provide. Bahia has a low maintenance level, St. Augustine a moderate level, and Zoysia and Bermuda have a high maintenance level. For areas of dense shade choose a shade-tolerant ground cover or use mulch.

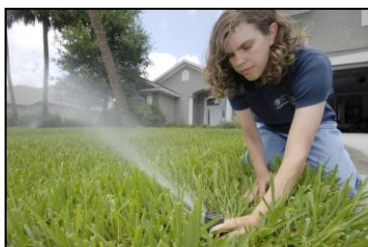
If you are thinking of raising the canopies of your trees to allow more light, remember that trees need 2/3 of their height covered with leaves. Improper thinning results in leaf canopy only at the edge of the crown (lion-tailing). This situation can make trees more likely to have wind damage and other stresses.



**Mow at the right height.** Set those mower height adjustments high for St. Augustine and Bahiagrass. Mowing should be at a height of 3.5 to 4 inches. Dwarf St. Augustinegrasses (Captiva, Delmar, and Seville) have a proper mowing height of 2 to 2 ½ inches. Mow to a height of ½ to 1 ½ inches for Bermuda and 1 to 2 inches for Zoysia. Proper mowing height and frequency will get rid of many annual weeds.

**Mow often.** Only remove 1/3 of the leaf blade each time you mow. Repeatedly removing more than 1/3 of the grass blade will eventually kill the grass. Keep the mower blades sharp for the best cut. Mow when grass is dry.

Did you know? Lawn mowers and other small-engine equipment can emit at least 10 times the amount of smog-causing gases as a typical car. Cleaner options include propane, solar or electric equipment, or new cleaner gasoline equipment entering the marketplace. Regular engine maintenance cuts down on emissions. Preventing gasoline spills and overfills is an easy and effective way for power equipment owners to prevent pollution. Even small gasoline spills evaporate and pollute the air. Noise pollution is another consideration.



**Water only when grass shows wilt.** When 30-50% of the lawn starts to show symptoms of wilt (i.e. folded leaf blades, bluish-gray color, foot-prints that last for more than a few minutes, and the soil is dry), water the grass (unless rain is expected in the next 24-hours). Apply ½ to ¾ inch of water each time the lawn is

watered. Constantly wet lawns promote sedges, spurge and dollar weed, as well as root rots. Watering and mowing correctly promotes a deep root system making grass more tolerant of drought. To reduce disease development, water plants in the early morning when dew is still present (after 2 AM).



**Fertilize correctly.** Over-fertilizing lawns (especially with quick-release fertilizer) results in grass more prone to getting chinch bugs, brown patch, grey leaf spot, pythium blight, powdery mildew and thatch. Under-fertilized lawns are prone to getting take-all root rot, dollar spot and rust. If insects or diseases attack the lawn, large areas may die off, leaving a perfect place for weeds to sprout. Follow the University of Florida fertilizer recommendations for your type of grass (local ordinances may prevent this). Ask your Extension Service for a copy of the publication, or see this website for

information: <http://yourfloridalawn.ifas.ufl.edu/>

**Scout.** Watch the lawn closely for symptoms of disease or insect attack. Keep track of any problems on a calendar and note the location where symptoms first appeared. Knowing when to expect a certain disease or insect (i.e., chinch bugs, brown patch, etc.) will help to catch problems early before too much damage takes place. Proper maintenance can greatly reduce or prevent pest problems. Using these steps will lessen the need for pesticides (pest killers) and help to keep our environment clean.

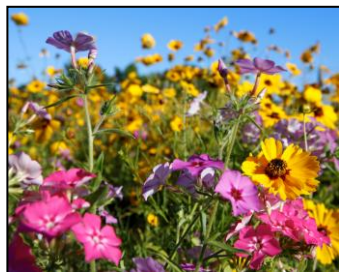
**Herbicides (plant killers).** If crabgrass or other weeds have taken over your lawn, early to mid February is the time to apply a pre-emergent herbicide. Better control of weeds is usually obtained with pre-emergent (before weeds appear) herbicides rather than post-emergent (after weeds appear) herbicides. Pendimethalin (sold as Pendulum®, Pre-M®, Turf Weedgrass Control®, Halts Crabgrass Preventer®), dithiopyr (sold as Dimension®), or benefin + oryzallin (sold as XL®) provide excellent control of crabgrass and are safe at the recommended rate on mature, actively growing grass (Bahia, Bermuda, St. Augustine and Zoysia). Apply a pre-emergent herbicide when daytime temperatures reach 65 to 70 degrees Fahrenheit for four to five days in a row, or usually about the same time that azalea plants start blooming in the spring. Follow up with another treatment 6 to 9 weeks after the first treatment.



For broadleaf weed control use a three-way herbicide mixture such as Trimec®, Ortho's Weed-B-Gon®, or Spectracide Weed Stop®. Effective weed control usually requires repeating treatments 10 to 14 days apart. Follow the label directions exactly when using any pesticide. Make sure the product label specifies that it is appropriate for your type of grass.

Sedges, rushes and dollarweed thrive in soils that remain wet for long periods because of poor drainage, excessive rainfall, or over-watering. Sedge, rush and

dollarweed control starts with decreasing the soil wetness. Cut back on watering or provide proper drainage in non-watered wet areas.



**Other choices:** Instead of a high maintenance lawn that uses lots of water, fertilizer, chemicals, energy and time, try increasing the size of planting beds, growing a native wildflower meadow, or just mowing the lawn and not worrying about “weeds” (because it is all green anyway). Many beautiful native wildflowers have been labeled lawn weeds. While native wildflowers provide food and nectar for insects such as butterflies and bees and naturally thrive in Florida’s climate, lawns do not.

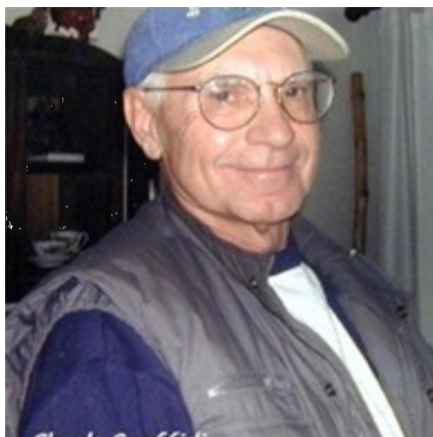
The following publications provided the information in this article:

- “Weed Management in Home Lawns” found at <http://edis.ifas.ufl.edu/EP141>.
- “Let Your Lawn Tell You When to Water” found at: <http://edis.ifas.ufl.edu/EP054> .
- “Pruning Landscape Trees and Shrubs” found at: <http://edis.ifas.ufl.edu/MG087> .

“Your Yard and Clean Air” found at: <http://www.epa.gov/otaq/consumer/19-yard.pdf>. You can also get copies of these publications from your local Extension Service



## Remembering Chuck Scaffidi by Donna Zacharczyk, Master Gardener



Chuck Scaffidi graduated from the State University of New York, Buffalo, with a BS in Electrical Engineering and began a long career with NASA. After retiring, he moved from Maryland to Florida with his wife Joan.

He became a Master Gardener in 2000, eventually becoming chair of the Master Gardener Association as well as president of the Florida Botanical Garden Foundation. He was editor of the Master Gardener newsletter, the Green Leaf. Master Gardening was a job for him and he put in extensive hours. At the Extension Service, he had many duties assisting staff. When it was time to leave Extension, he became MG Emeritus.

Chuck and Joan were active, involved in exercise classes at the VA and Tai Chi classes in St. Petersburg. He continued to socialize with his many friends in the Master Gardener community. Chuck's wife, four children, and many friends will miss him. The Extension Service is planning to establish an MG scholarship in his name.

## Send your Articles and Photos

**The next Issue of *The Dirt* is July 2017. The Deadline for articles is June 25th.** 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.

I would like to start a photographer's gallery within the newsletter so if you take photographs of plants or trees, send them in 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](mailto: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.

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