

## Simplifying Measurements

By John Dawson, Master Gardener Volunteer

Gardening chores requiring mixing and measuring of chemicals can be challenging. To make things more difficult, some directions are in metric, some are in capfuls, others in liquid and dry measures. A "gallon" flowerpot only holds 0.734 gallons of potting soil and will not hold one gallon of water. A teaspoon of dry fertilizer is not the same as a teaspoon of liquid fertilizer, so be careful not to get them mixed up.

Sometimes a work-around using simple math and simple substitution will help. You will have to know a few basic equivalencies and conversions going forward. An excellent source is from the University of Georgia\*:

<https://extension.uga.edu/publications/detail.html?number=B931&title=Conversion%20Tables,%20Formulas%20and%20Suggested%20Guidelines%20for%20Horticultural%20Use>.

**Problem 1:** A slow-release dry fertilizer calls for spreading one capful per 2-gallon plant pot (a diameter of 8.75.") You want to know how much to use on your 1-gallon pot with a diameter of 6.5" (not half of the 2-gallon, as you expect, given the nomenclature!!) Fortunately, the directions state that 1 capful = 3 tablespoons. The math:

6.5" dia (1 gal.) / 8.75 dia (2 gal.) = 0.74, or roughly three-quarters of one capful.

**Problem 2:** You have five tomato plants that need treatment. The liquid product you plan to spray requires mixing 1.5 teaspoons per four gallons of water and applying until thoroughly wetted. Logically, it shouldn't take four gallons to soak five plants until they drip. Determine how much liquid you really need to soak your five plants. Fill your sprayer to the one-gallon mark with water. Spray your plants thoroughly (top and bottom of leaves) until they are sufficiently soaked. Measure the remainder of water in your sprayer in ounces and subtract from one gallon (128 oz); this is how much water you need to mix by the proper ratio with the liquid treatment.

In this example, you have determined that you used 40 ounces of water in the above exercise. To keep the math simple, convert all measurements to ounces. Four gallons = 512 ounces, and 1.5 teaspoon = 0.25 ounces of liquid. (Again, refer to the conversion charts above.) The math:

$0.25/512 = X/40$ ; solving for X (how much product we need);  $X = (40 \times 0.25)/512$  or 0.02 oz. product mixed with 40 ounces water placed back into the sprayer and sprayed onto your plants.

**Always** follow directions. More is not better and less may not be effective. It is always advisable to mix only enough for one-time use and follow all safety precautions.

# FROM DELIGHTFUL TO DISGUSTING: HOW ORCHIDS USE SCENT TO ATTRACT POLLINATORS

By Maureen Hirthler, Master Gardener Volunteer

Orchids often form exclusive relationships with their pollinators and have evolved many ways to attract them using complex and often deceptive strategies. Shape, color, pheromones, sweet nectar, traps, triggers, and fragrance can mimic the needs of orchid pollinators. (These pollinators include bees, wasps, flies, moths, butterflies, fungus gnats, or birds.) *Bulbophyllum Jan Ragan* even has a “trampoline” that bounces its loaded pollinator against the stigma and pistil (female parts of the flower).

Darwin’s orchid, *Angraecum sesquipedale*, is the most famous example of shape adaptation to its single pollinator, *Xanthopan morgani praedicta*. The orchid has a very long tube to match the very long proboscis (tongue) of the moth. Another example of orchids using shape is *Coryanthes*, which has a bucket-shaped flower that traps the pollinator. The only escape route covers the insect in pollen. *Ophrys apifera* has a lip resembling a female of the pollinator bee species.

Most of us purchase orchids in our favorite colors, so it’s no surprise that pollinators have favorites too. Hummingbirds and butterflies like red or orange flowers and night-flying moths are attracted to green or white fragrant orchids. (See “Orchids for the Senses” by John Dawson, Jul/Aug 2018.)  
[https://sfyl.ifas.ufl.edu/media/sfylifasufledu/manatee/docs/pdfs/master-gardeners/newsletters/July\\_August-for-Print\\_Online.pdf](https://sfyl.ifas.ufl.edu/media/sfylifasufledu/manatee/docs/pdfs/master-gardeners/newsletters/July_August-for-Print_Online.pdf)

One of my favorite orchids to grow is *Bulbophyllum*, which has unusual and gorgeous flowers. Some of its pollinators are flies and carrion beetles because the flowers have the scent of rotting flesh. Orchid expert Tom Mirenda says history records the stench of *B. phalaenopsis* as reminiscent of a thousand dead elephants rotting in the sun. This orchid in bloom once closed the Smithsonian greenhouse for several days.



Maureen Hirthler, MGCV

*Bulbophyllum Jan Ragan*

Other *Bulbophyllums* that you may not want to buy include the species *beccarii*, which smells like decaying animals; *echinolabium*, which smells like dog droppings; *orientale*, which smells like rotting apples and bananas; *carunculatum*, which smells like rotting brie cheese; *psychoon*, which smells like rotting fish or pond scum.

I have *B. Wilbur Chang*, a beautiful yellow and red flower that smells like a dead rat, but only up close! Luckily, most *Bulbophyllums* are unscented, so we can enjoy their odd flowers.

*Bulbophyllums* are not alone in the stink department. *Satyrium pumilum*, a South African orchid, smells like roadkill. The scent of the Yosemite Bog-orchid, *Platanthera yosemitensi*, is reminiscent of body odor.

Orchids, especially *Cattleya* species, are sought out for their heavenly fragrance, and we forget that orchids are like every other flower. They adapt in whatever way attracts their pollinators, even if that means they smell like stinky feet!

Master Gardener Volunteer Karen Holleran is the recipient of the 2021 statewide Florida Master Gardener award for Personal Communications. She answers your email questions. Send questions and/or photos for identification or for diagnosis of residential gardening problems to [ManateeMG@gmail.com](mailto:ManateeMG@gmail.com). Or call us at 941-722-4524 weekdays from 9:00 A.M. to 4:00 P.M. and press 1 to speak to the Master Gardener Diagnostic Plant Clinic.

## ASK A MASTER GARDENER

By Karen Holleran, Master Gardener Volunteer



Resident Submission

Slender amaranth (*Amaranthus viridis*)

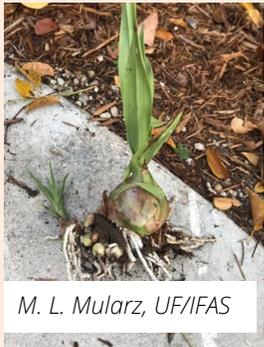
**Q:** Can you identify this please? It grew from a pack of seeds labeled simply, wild flowers.

**A:** I believe this plant is *Amaranthus viridis*, slender amaranth. Depending on local culture, it may be considered a weed, an ornamental plant, or an edible. We don't usually consider it ornamental in our landscapes. There is not much information on the web about it. The following link is from Purdue University, and you can find general information at Wikipedia.

[https://www.purdue.edu/hla/sites/famine-foods/famine\\_food/amaranthus-iridis/](https://www.purdue.edu/hla/sites/famine-foods/famine_food/amaranthus-iridis/)

## WHAT'S THIS?: CHINESE CROWN ORCHID

By Norma Kisida, Master Gardener Volunteer



M. L. Mularz, UF/IFAS



Chinese crown orchid (*Eulophia graminea*)

There is a relatively new orchid in town and, although pretty, it is not a nice player. The Chinese crown orchid (*Eulophia graminea*) is a terrestrial orchid native to tropical and subtropical Asia that arrived in south Florida in 2007. Although first appearing in mulch it has now spread to diverse habitats and has been found in at least 13 Florida counties, including Manatee County. It will likely continue to spread north, maybe as far as Georgia and Alabama.

Chinese crown orchid grows from a pseudobulb and can form large clumps which are difficult to remove. It also spreads when seed pods release tiny dust-like seeds. It is advisable to dig up the pseudobulbs and remove any seed pods before they open. Avoid moving mulch where they have been found into another area and decontaminate tools and clothing so as not to spread the seeds.

<https://plants.ifas.ufl.edu/plant-directory/eulophia-graminea/>

## Tour Our Educational Gardens During the County Fair January 13 – 23, 2022

Come visit the Master Gardener Volunteers at the Barbara Davis Educational Gardens on the grounds of Manatee County Extension Office at the Fairgrounds. Opening times will vary; consult our Facebook page for more details at <https://www.facebook.com/ManateeCoExtension/>.



# Missing Tulips and Daffodils? Plant these Florida-Friendly Winners



Text and Photos by Joy Derksen, Master Gardener Volunteer

When you think of planting flowers from bulbs and rhizomes in Florida, you should consider the many different varieties we can grow here. Miss your tulips and daffodils? We have some pretty spectacular replacements that cannot be grown in colder areas. Siam tulips (*Curcuma alismatifolia*) have been available in garden shops over the last few years. These relatives of ginger plants do well here. I have some in my garden that have bloomed for three years. Like tulips, they disappear over the winter and return in the spring.



Siam Tulips (*Curcuma alismatifolia*)

Another option is tropical gingers. They add lush texture, fragrance, and tropical flowers to our gardens. Variegated shell ginger (*Alpinia zerumbet* 'Variegata') is a common landscape plant whose tiny shell shaped flowers come into bloom in the spring. I also like butterfly ginger (*Hedychium spp.*) with its sweet-smelling white flowers. Pinecone ginger (*Zingiber zerumet*) has an interesting red flower which grows at its base and, yes, looks like a big red pinecone!

Are you missing daffodils? I have a pot of Amazon lilies (*Eucharis amazonica*) that bloom several times each summer.



Amazon Lily (*Eucharis x grandiflora*)

They are a remarkable twin for white daffodils and are very fragrant in the evening. Mine usually start blooming around Mother's Day.

We even have a flower similar to crocus - the rain lily (*Zephyranthes spp.*). Some are native and others are hybrids. This plant naturalizes here and blooms after heavy rainstorms. It comes in pale and deep pink, yellow, and white. It is a member of the Amaryllis family which is another go-to flower for locals.



Rain Lily (*Zephyranthes rosea*)

Christmas amaryllis (*Hippeastrum spp.*) bulbs can go right into the garden after blooming. Plant them outside with the bulb top near the surface. They like well-drained soil in semi shade and make a lovely display when grouped. Amaryllis plants are mostly pest free except for lubber grasshoppers that eat the leaves and flowers. You may need to stake the heavy, double and triple flowers as they fall over in the wind.



Pink Crinum (*Crinum x powellii*)

Crinum lilies are another member of the Amaryllis family that do very well here. Many of them are native to parts of the world that are lakes part of the year and dry as a bone at other times. One of my favorites is the giant crinum (*Crinum asiaticum*). These crinums can easily reach four to five feet in height. They have large, strap-like leaves with spikes of scented white trumpet flowers that arrive with hot weather and continue until it gets cold. 'Queen Emma' is a Hawaiian crinum with maroon tinted green leaves and deep purple and white flowers. There are shorter crinums with pink flowers or wine-colored stripes on their petals. Crinums are happiest with some shade, although many do well in full sun. They tolerate drought as well as stand in water for short periods of time. Giant crinum flowers develop into small hard bulblets that will make new plants anywhere they land.

Daylilies (*Hemerocallis spp.*) also do well here if you select the right type. Evergreen and semi-evergreen varieties survive hot summers best. Plant in full sun to partial shade in well-drained soil. Get your daylilies from local growers and you will have better luck than purchasing plants from outside this region.

Bearded irises do not grow here. Instead, we have African iris, Louisiana iris, walking iris (*Neomarica gracilis*), and Virginia iris. African Iris is a tough-as-nails plant. Nothing seems to bother it, and it accepts a variety of soil conditions. It likes sun and semi shade. As you might guess from the name, Louisiana irises are tolerant of swampy soils, and they like full sun. You can plant them on the edge of a pond. Walking irises are called that because plantlets form at the end of flower stalks that bend over and set the sprout in the soil. They can "walk" over to new spots in the flowerbed. Virginia irises also like bright sun and can live in a flowerbed or boggy area. Divide irises into smaller clumps when they get crowded.

A relative of irises, the blackberry lily (*Belamcanda chinensis*) is a favorite of mine. It is easy care, grows from seed, and flowers in sunshine and partial shade. Bright orange and purple flowers grow above the leaves all summer long. When the blackberry lily is finished flowering, its seedpods open and look like blackberries. You can plant seeds for new plants or divide the original plants as they become overcrowded.

For more information:

<https://gardeningsolutions.ifas.ufl.edu/plants/ornamentals/bulbs-for-florida.html>.

Butterfly ginger: <https://edis.ifas.ufl.edu/fp240>

Pine cone ginger: <https://edis.ifas.ufl.edu/fp622>

Variiegated shell ginger: <https://edis.ifas.ufl.edu/fp036>

Amaryllis: <https://edis.ifas.ufl.edu/ep060>

Rain lilies: <https://edis.ifas.ufl.edu/ep412>



# GARDEN VS. HABITAT

By Jennifer Tonge-Martin, Master Gardener Volunteer



A habitat is an area designed and controlled by nature, a system determined by its elevation, soil type, amount of rain and sun, and its past history. The plants (and animals) in a natural habitat have adapted and evolved to fit these parameters, and thrive only to the extent that they interact beneficially with all the other elements.

A garden, on the other hand, is designed and controlled by humans. We influence the type of soil, amount of light and moisture, even change the topography of the land around our homes to suit us. This allows us to bring in and raise many plants and animals that may be foreign to whatever is the natural habitat. We are “in charge”!

Of course, habitats change naturally: weather patterns change, insects and animals migrate in and out. These changes are gradual, usually the plants and animals evolve to fit the new situation. Sudden changes generally drive the natives out of their habitat, at least temporarily. Human influence tends to be of the sudden variety.

How can you integrate your landscaping with the natural habitat? Will your aesthetics always interfere with nature, or can you live in harmony with it?

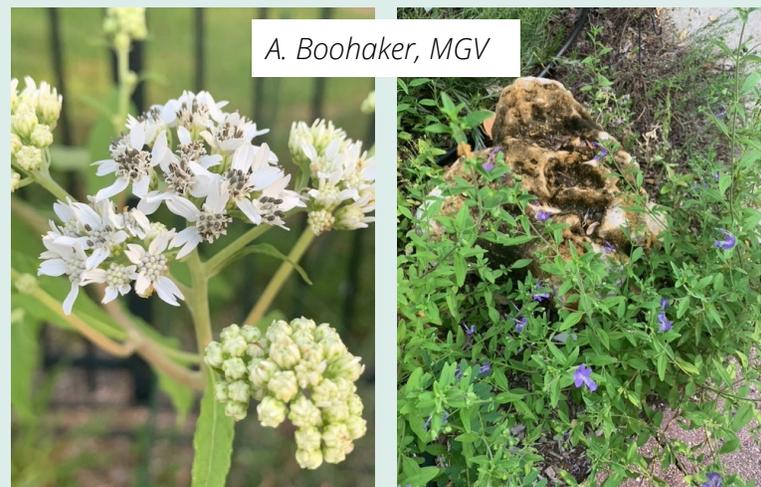
This year, a conference sponsored by the Florida Native Plant Society presented findings and experiences in rehabilitating native habitat areas that had been altered by human/invasive influences. I was struck by how much planning, resources, and effort habitat rehabilitation requires. The results are clearly worth it, with decreased contaminants in the water, return of native plants and animals, and improved environmental quality evidenced after only a few years. But it is beyond most homeowners to attempt in their own back yard.

Much more “do-able” on the home front: integrating aspects of the natural habitat into our landscapes. If we increase native plantings, for example, we decrease the harmful gardening practices required to sustain highly artificial landscapes. It is not habitat restoration, but it allows our landscape to serve the greater habitat surrounding us.

Let’s dig up our Mexican petunias and plant native asters and milkweed instead! Let’s welcome the pollinators into our yard, love the sight of a sleek black racer, bat, or tree frog! Let’s support our local government’s efforts to rehabilitate our waterways and wildlife areas! Most importantly, we can learn to appreciate that which makes Florida so unique and desirable, so that our little gardens interface, rather than interfere with nature.

For ideas on native wildflowers, ask for a tour of Manatee County’s Barbara Davis Educational Gardens at Extension. Under the leadership of Master Gardener Volunteer Amy Boohaker, our sundial/native wildflower garden provides a great source of inspiration.

For more information, visit <https://www.fnps.org/what-we-do/landscaping> and <https://flawildflowers.org/habitat-not-garden/>



A. Boohaker, MGV

Frostweed (*Verbesina virginica*)

Blue curls (*Trichostema dichotomum*)

# Let It Grow... Let It Grow

By Nancy Porter, Master Gardener Volunteer

Fairies, near and far, are making a fervent plea to let our trees grow!

Why, you ask? The benefits of trees far outweigh the negatives. Read on for some non-magical reasons!

Trees help to replenish the oxygen we breathe, and that is important to all of us. Trees can absorb carbon dioxide, as much as 13 pounds every year!

Trees provide shade and help conserve energy by lowering summer cooling costs as much as 30 percent. They can add up to 15 percent to your property value. Living in Florida, all these reasons take on a special importance. Have you parked your car in the full sun, only to return to find it over 150 degrees inside? Parking under a shade tree makes an amazing difference. Have you parked yourself under a tree in the middle of the day?

Believe it or not, trees have a direct correlation on the amount of physical activity of people who live near them. People are more inclined to get out and exercise if there are trees to help cool the atmosphere. Usually there is a slight breeze and at least a 10-degree difference in the heat index.

If you think about it, more exercise helps to reduce some major health problems, such as heart disease and diabetes. For kids, playing in an area with trees is much cooler, and they can expend their over abundant energy. When they go inside, they are better able to focus and pay attention to tasks.

Another thought to consider...try remembering a special event or occasion impacted by trees. I know my grandchildren absolutely love the tree in our front yard. When we mentioned moving, one of them asked if we would be taking the tree with us.

Some people might complain about trees that are ill-placed or difficult to maintain. By doing a bit of research, anyone can find a tree that is compatible with their needs. Planting the right tree in the right place will encourage trees to survive and thrive in our landscapes, growing for future generations to appreciate the many gifts they provide. For help, call your local Master Gardener plant clinic or your local Florida-Friendly Landscape (TM) Coordinator.



## For more info:

<https://southernforests.org/urban/benefits-of-urban-trees>  
<https://gardeningsolutions.ifas.ufl.edu/plants/trees-and-shrubs/trees/>  
<https://gardeningsolutions.ifas.ufl.edu/plants/trees-and-shrubs/trees/>

# November/December Calendar of Events

Date	Time	Event
Thursday 11/18/21	10:00AM	<p><b>Wildflowers for Ponds:</b> Leaving an unmowed border around your community's pond is a much more ecologically sound practice than mowing to the edge of it. Learn about which native wildflowers will help you to beautify this space and make it more appealing to pollinators at the same time!</p> <p><a href="https://ufl.zoom.us/meeting/register/tJYpduitpzMrGdCbdyS4m0XL-uryC78DRm9h">https://ufl.zoom.us/meeting/register/tJYpduitpzMrGdCbdyS4m0XL-uryC78DRm9h</a></p>
Thursday 12/02/21	2:00PM	<p><b>Wildcrafting for the Holidays:</b> Do you wish your holiday decor was more sustainable and less expensive? Learn plants and techniques for creating festive decorations from nature.</p> <p><a href="https://www.eventbrite.com/e/wildcrafting-for-the-holidays-tickets-191254757127">https://www.eventbrite.com/e/wildcrafting-for-the-holidays-tickets-191254757127</a></p>
Saturday 12/04/21	10:00AM	<p><b>Natural Holiday Decorations:</b> Make your own grapevine wreath and decorate with festive natural materials in this workshop. Fee \$10. Bring your own clippers. Held outdoors in Educational Garden.</p> <p><a href="https://www.eventbrite.com/e/natural-holiday-decorations-tickets-165464818727">https://www.eventbrite.com/e/natural-holiday-decorations-tickets-165464818727</a></p>
Tuesday 12/14/21	10:00AM	<p><b>The Fungus Among Us:</b> Join UF/IFAS Extension for an in-depth and interactive conversation about the fascinating world of fungi. Links to the virtual meeting will be provided via email to all registrants. Fee \$15.</p> <p><a href="https://www.eventbrite.com/e/the-fungus-among-us-tickets-182848122657">https://www.eventbrite.com/e/the-fungus-among-us-tickets-182848122657</a></p>
Wednesday 12/15/21	10:30AM	<p><b>Backyards for Birds:</b> Learn how to create a backyard buffet for birds using native plants and other landscaping techniques to help support different species and draw them to you in a way that can be enjoyable and rewarding, but also very safe for them.</p> <p><a href="https://ufl.zoom.us/webinar/register/WN_aKpxJvN9TR2yOAN7waSXtQ">https://ufl.zoom.us/webinar/register/WN_aKpxJvN9TR2yOAN7waSXtQ</a></p>

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