The United States Department of Agriculture (USDA) recently released an updated Plant Hardiness Zone Map. This map is a crucial tool for gardeners, farmers, and researchers, as it guides them in deciding which plants are most likely to thrive at a location. The map divides the United States into 13 zones, each representing a 10°F range of average annual minimum winter temperatures.

**Policies Behind the Changes**
The USDA updates the Hardiness Zones map every 10 years. The changes are driven by long-term trends in average annual minimum winter temperatures. In other words, as winters have been getting warmer over the past few decades, the hardiness zones have shifted accordingly.

**Changes in Florida’s Hardiness Zones**
The most recent update shows significant changes for much of peninsular Florida. Previously, most of Manatee County’s geographic area was in zones 9a-9b. Now, we see zones 10a-10b, especially along the coast which, perhaps not incidentally, resemble the gradients of a heat map. Even some areas near Orlando are now in the 10a-10b range.

**Implications for Florida Gardeners**
The new Hardiness Zone map has practical implications for Florida gardeners. Due to the zone change, some plant species whose range has historically been more temperate will no longer be recommended. On the other hand, some tropical species that were not recommended before will now be recommended for use in home landscapes.

While these changes may require some adjustments, they also open new possibilities for diversifying your garden with species that could not have been grown before. As always, gardeners are encouraged to experiment and observe what works best in their local conditions.

https://blogs.ifas.ufl.edu/manateeco/2023/11/15/zone-changes-what-you-need-to-know/
https://apnews.com/article/garden-hardiness-climate-change-usda-zones-89d78178703e30bc3fd948ceaff61e7f
https://planthardiness.ars.usda.gov/?mod=article_inline
Overnight and after a rainstorm, tucked neatly beneath a cap of mulch or peeking deftly between blades of grass, mushrooms appear in all shapes, sizes, and colors imaginable. Mushrooms are the reproductive spore-producing structures (fruiting bodies) of a larger complex fungal organism called mycelium. All fungi exist either beneficially, as decomposers by devouring that which has already perished, or saprophytically, obtaining nutrients by consuming decaying living matter. Some are responsible for vast improvements in soil and plant health, and nutrient cycling.

People and animals consume mushrooms; they provide great sustenance and fascination. They are valued, feared, and often misunderstood. The connection and importance of fungi to biological processes, ecological complexity, and humans is vast. As we have moved into our intensely managed landscapes, we have often lost sight of the mushrooms fruiting beneath our own feet.

The active re-learning of mushroom knowledge can be as simple as going into your backyard the day after a rain. With hundreds of distinct species in Florida, our yards are the most common place we find and interact with mushrooms. Here are some of the most common mushrooms you can spot at home:

- **Green-spored Parasol, Molybdites chlorophyllum**
  - Size: Large, up to 12 in. wide cap
  - Where: Turfgrass lawn
  - When: April-November, after a rain
  - Poisonous
- **Luxury Caps, Gymnopus luxurians**
  - Size: Medium, up to 4 in. wide cap
  - Where: Mulch, clusters
  - When: Summer and Fall, after a rain
  - Beneficial decomposer
- **Earthstars, Astraeus barometricus (most likely)**
  - Size: Small, up to 1.5 in. wide cap
  - Where: Mulch, landscape beds
  - When: All year
  - Beneficial decomposer and mycorrhizal
- **Pleated Inkcaps, Parasola plicatilis**
  - Size: Very small, up to 1 in. wide cap
  - Where: In grass or mulch
  - When: Day after a rain, ephemeral, lasts briefly
  - Beneficial decomposer
- **Latticed Stinkhorn, Clathrus ruber**
  - Size: Medium, up to 4 in. wide
  - Where: Turfgrass lawn
  - When: Spring and Fall, after a rain
  - Beneficial decomposer, but stinky!

These represent only a tiny fraction of the mushrooms you may find. To report your mushroom findings, submit your photos and observations here https://survey123.arcgis.com/share/1c753d76898840b3828f25cf964a1ae6. Visit linktr.ee/flmycophiles to see relevant articles, upcoming class listings and more about mushrooms.

Photos from UF/IFAS.
Q: I found this plant growing by a pond and have never seen anything like it. Do you know what it is?

A: This plant is *Psilotum nudum*, a whisk fern or skeleton fern. Not a true fern, this plant is unusual in that it lacks true roots and leaves. Instead, photosynthesis takes place in the stems. Anchored by fibrous rhizomes, this native plant is found in shady, moist, terrestrial environments and sometimes in trees as an epiphyte. Reproduction is by spores; and the spore producing bodies are the yellow structures shown in your picture. Spores spread by wind or rain. They can end up anywhere in your garden and sprout new plants, creating a surprise when you happen upon them unexpectedly.

A link to information about this curious plant follows.  
https://blogs.ifas.ufl.edu/charlotteco/2022/12/08/the-cryptic-but-unique-whisk-fern/

---


**BY DR. SCOTT ZONA (COOL SPRINGS PRESS, 2023)**

By Kristine Del Vecchio, Master Gardener Volunteer

I did not read this book front to back but sampled it every day like a box of chocolates. His is a familiar name to some of us in Florida; a botanist who spent many years working with the Center for Tropical Plant Conservation at the Fairchild Tropical Botanic Garden in Coral Gables. Dr. Zona specializes in palm biology, a topic on which he has written and lectured extensively.

This is NOT a book about how to grow plants! Rather, it is a book about how plants grow. All living things do five things: they eat, grow, defend themselves for survival, reproduce, and prepare for the next generation. But plants accomplish these lifecycle tasks in unique ways unlike animals. Zona delves into each of these topics chapter-by-chapter, using creative examples, lush photographs, and vivid botanical drawings that illuminate complex concepts. A favorite example: Zona’s visual explanation of Liebig’s Law of the Minimum will enlighten anyone’s understanding of soil chemistry. The chapter on defense mechanisms is particularly fascinating. Because plants cannot access the same fight-or-flight responses available to animals, they have developed an extraordinary repertoire of mechanical and chemical weapons which are explained with the humor and enthusiasm that is Dr. Zona’s forte.

The text is dotted with “Botanical Tips,” little gems of information that provide immediate ideas and solutions for common plant questions. Dr. Zona also provides a “Further Reading” list for each chapter for more in-depth understanding of concepts.

This book is a celebration of the science and beauty of plant life. It will appeal to everyone from “botany nerds” to “those who have yet to discover their inner botanist” to whom Dr. Zona dedicates his book. This book is a 2023 American Horticultural Society Award Winner.
Although live oaks and other large trees commonly planted in residential landscapes are wonderful for shade, wildlife, and ecological benefits, they can be problematic in smaller properties due to damage to infrastructure. In addition, many of these larger trees are being removed due to fear of hurricane damage. It may be prudent to look at alternative trees which are not commonly used but still provide beauty, shade, and ecological benefits. The trees discussed below may be found at native plant nurseries.

Marlberry is a native, fast growing, multi-stemmed or clumping, small tree, 12 to 20 feet tall and 6 to 12 feet wide. Although multiple trunks are attractive, marlberry can be trimmed into a single trunk for use as an accent or specimen tree. They are quite dense, even in shade, and make an excellent screen or line of trees when planted further apart. They are also attractive in mixed settings. Marlberry is suitable for zones 10-11 in semi-shade to full sun in well-drained soil with a wide pH range. The flowers are white with a pleasant scent, blooming periodically during the year and attracting butterflies. The small round purple fruit that occurs in the spring is edible and attracts birds.

Wild cinnamon (*Canella winterana*) is a native evergreen, multi-stemmed or single trunked tree, which grows 15 to 20 feet tall. The dense foliage and narrow canopy make it suitable for planting along patios and decks or along a property line. It blooms in summer and fall with purple and white flowers and has bright red berries which makes it a good plant for birds and other wildlife. It is also notable for its fragrance. Wild cinnamon trees are salt tolerant, do best in part shade to full sun, and tolerate alkaline soils. It is not cold tolerant, so suitable for zones 10a -11.

Pigeon plum (*Coccoloba diversifolia*) is a moderate to fast growing, upright, densely foliated, evergreen, small to medium size tree. It grows to 20-40 feet tall and 20-35 feet wide. Pigeon plum has a beautiful canopy, striking bark, and bright to dark green leaves that are reddish when newly emerging. In a home landscape it may be used as a specimen tree, shade tree, or hedge. In addition, it has showy whitish green flowers year-round and purple fruit when ripe. The fruit is eaten by wildlife, especially doves and pigeons, thus the name. The fruit drop could be a nuisance if planted close to hardscapes. Grow pigeon plum in zones 10b-11, full sun to partial shade, and moist, well-drained soil. It has good salt tolerance. Trees in open landscapes should be pruned to have a short dominant trunk to prevent branches from splitting in storms.

All these plants are growing in our demonstration gardens here at Extension. Stop by!

Smaller Native Trees: [https://blogs.ifas.ufl.edu/browardco/2020/04/07/smaller-native-trees/](https://blogs.ifas.ufl.edu/browardco/2020/04/07/smaller-native-trees/)
Marlberry tree: [https://edis.ifas.ufl.edu/publication/FP048](https://edis.ifas.ufl.edu/publication/FP048)
Wild Cinnamon: [https://go.ufl.edu/0g8ku5](https://go.ufl.edu/0g8ku5)
Pigeon Plum: [https://hort.ifas.ufl.edu/woody/Pages/cocdiv/cocdiv.shtml](https://hort.ifas.ufl.edu/woody/Pages/cocdiv/cocdiv.shtml)
Citrus trees are small to moderately tall, producing five petaled strongly scented flowers which develop into fruit with a high vitamin C content. Most citrus trees have thorns. They have differing tolerances to cold weather but grow best in semi-tropical regions in a warm, sunny location with at least six hours of light. The soil should be light and well-drained. The fruit is known as a hesperidium with a pericarp (peel), pith (white part), pulp (the edible part) and seeds. Zest, used in flavoring, is the outer part of the peel.

The citrus genus evolved some seven million years ago in the Himalayas and spread slowly into Southeast Asia. There are five ancient species of citrus from which all modern varieties were created: the papeda (Citrus micrantha), citron (C. medica), pomelo (C. maxima), mandarin (C. reticulata), and kumquat (C. japonica).

Citrus hybridizes very easily (via pollen exchange), both accidentally in nature and with human intervention. The grapefruit, discovered in Barbados in the 18th century, is an accidental cross between a pomelo and sweet orange, where the sweet orange is also a cross between a pomelo and a mandarin. The seed of a hybrid fruit will not grow identical fruit; it will produce a tree with fruit resembling some form of past parentage. Plant a seed of a Persian lime (C. latifolia) and you might produce a tree with fruit resembling a grapefruit. As you might guess, most citrus is propagated via grafting, using a root stock and a scion.

Citrus also tends to mutate easily, either naturally or through modern intervention using radiation. The ‘Ruby Red’ grapefruit was found in 1929 as a natural sport on a limb of a ‘Thompson’ pink grapefruit tree which was itself started as a limb sport of a ‘Marsh’ grapefruit. Radiation is used to trigger mutations or create seedless fruit.

Unfortunately, citrus is plagued by many pests and diseases. Citrus greening (also called huánglóngbìng or HLB) is a bacterial disease transmitted from tree to tree by sap-sucking insects called citrus psyllids (Diaphorina citri). The disease first appeared in South Florida in 2005 and has spread throughout the state. It causes mottled leaves and misshapen, bitter fruits, before eventually killing the tree. Much effort continues to develop tolerant varieties and methods to prolong tree life, to protect against infections, and to find a cure. For more information on how you can help, see https://www.aphis.usda.gov/aphis/maps/plant-health/help-prevent-citrus-diseases

There are various prophylactic measures available to combat HLB. By using netted enclosures, it is possible to protect young trees for several years prior to uncovering, allowing a healthy tree to develop. Whereas there is no guarantee that the unprotected tree will not become infected, there are now chemical injections available to keep the citrus tree alive and productive. If you want to grow citrus, please read Citrus Culture in the Home Landscape https://edis.ifas.ufl.edu/publication/HS132

**WHAT’S THIS?: PODOCARPUS CATKINS**

Photo & text by Maureen Hirthler, Master Gardener Volunteer

These are the pollen cones (catkins) of a male Podocarpus macrophyllus, often used as a hedge or small tree here in Florida. This plant is also called a yew podocarpus. It is a conifer, or cone bearing plant, although the female cones resemble a purple or blue fruit.

Certain parts of the fruits and the leaves of both genders are toxic; it is a good idea to keep children and pets away from them.

You can find out more about the podocarpus at https://edis.ifas.ufl.edu/publication/ST495
Cogongrass - A Growing Problem
By Nancy Hammer, Master Gardener Volunteer

Cogongrass (*Imperata cylindrica*) is an invasive, warm season, perennial grass and one of the most noxious weeds on the planet. In the United States, it has become established in most southern states, including Florida. It is listed as a High Invasion Risk by the UF/IFAS Assessment of Non-Native Plants.

This noxious weed was accidentally introduced into Mobile, Alabama in the early 1900s, then intentionally used as a forage grass and for soil erosion. It proved to be lacking as forage (due to its razor-like serrated leaves) but highly successful at displacing desirable native plants. It has been reported in every county in Florida, growing on more than one million acres. It thrives about anywhere - including conservation areas, golf courses, forests, pastures, and in most soils including low fertility sand and heavy clay. In Central Florida it has established on hundreds of acres of reclaimed phosphate mining sites.

Cogongrass may reach 2-5 feet and has sharply serrated, bright green leaf blades with offset mid-veins. These unique offset mid-veins make good identifiers. The seed heads are fluffy, white, and plume-like, with as many as 3,000 seeds. Seeds can be spread by wind and mechanical equipment. Most of the biomass is below the soil surface in the form of rhizomes which are responsible for much of the spread. Rhizomes may be as deep as 4 feet but are generally in the top 6 inches. Pieces of rhizome due to mechanical injury can result in additional spread. Rhizomes can also resprout quickly after fire.

Of additional concern is that cogongrass burns so hot and fast that it eliminates many native plants, including young longleaf pines and native grasses. It can also threaten homes and other structures. Invasive grasses can fuel wildfires as with the devastating fires in Maui.

The key to cogongrass control is prevention. Scout your landscape, and if cogongrass is found, be persistent and patient in keeping it from becoming established. Remove plants - including the rhizomes. Correctly-timed use of the herbicides glyphosate or imazapyr may also be necessary. Imazapyr is a non-selective herbicide which is highly effective on cogongrass, however it has residual soil activity which can negatively impact desirable plants. Glyphosate is also a non-selective herbicide and has the advantage of not having residual soil activity. Full control may require repeated applications. For more information go to https://sfyl.ifas.ufl.edu/archive/hot_topics/environment/cogongrass.shtml

---

**Master Gardener Volunteer Plant Clinics**

<table>
<thead>
<tr>
<th>Location</th>
<th>Address</th>
<th>Day(s)</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bob Gardner Park</td>
<td>2710 White Eagle Blvd., Lakewood Ranch</td>
<td>Third Sundays</td>
<td>9AM – 12PM</td>
</tr>
<tr>
<td>Crowder Bros. Ace Hardware</td>
<td>5409 Manatee Ave W., Bradenton</td>
<td>Third Saturdays</td>
<td>9AM – 12PM</td>
</tr>
<tr>
<td>Central Library</td>
<td>1301 1st St. W., Bradenton</td>
<td>Third Saturdays</td>
<td>11:30AM – 2:30PM</td>
</tr>
<tr>
<td>Lakewood Ranch Farmers Market</td>
<td>Waterside Place, 7500 Island Cove Terrace, Sarasota</td>
<td>First Sundays</td>
<td>10AM – 2PM</td>
</tr>
<tr>
<td>Rocky Bluff Library</td>
<td>6750 US Hwy 301 N., Ellenton</td>
<td>Second &amp; Fourth Sundays</td>
<td>10AM – 1PM</td>
</tr>
<tr>
<td>St. George’s Episcopal Church</td>
<td>912 63rd Ave. W., Bradenton</td>
<td>First and Third Thursdays</td>
<td>9AM – 12PM</td>
</tr>
<tr>
<td>Island Branch Library</td>
<td>5701 Marina Dr, Holmes Beach</td>
<td>First Saturdays</td>
<td>10AM – 1PM</td>
</tr>
<tr>
<td>UF/IFAS Extension Manatee County</td>
<td>1303 17th St. W., Palmetto</td>
<td>Every weekday except Wednesdays</td>
<td>9AM – 4PM</td>
</tr>
</tbody>
</table>

**UF/IFAS Extension Manatee County**
Tel. 941-722-4524
manateemg@gmail.com

Cogongrass Photo: David Holmes, UF/IFAS
When the only complaint you have ever heard about a Florida native plant is that it grows too slowly, you know you have a winner! Simpson's stopper (*Myrcianthes fragrans*) is an erect and graceful shrub or small tree that works well in difficult (or good!) environments and has lots about it to love. It is native to south Florida coastal and tropical hammocks but has adapted to environs as far north as Charleston, South Carolina.

In spring through early summer (although random blooms may appear anytime), small white blossoms open, releasing a heady aroma wafting through your landscape and attracting all types of pollinators. Crushed leaves have a nutmeg/citrusy aroma. As the hot weather moves in, the fruit emerges. In late summer into fall, the fruit turns a lovely orange red. This is a favorite food for birds, especially cardinals and mockingbirds. If you are looking for fall/winter berries to brighten your holidays, this is a wonderful time to clip and enjoy. Berries are edible. Folklore tells us the leaves and bark were used by Native Americans and early settlers as a remedy for diarrhea – thus the “stopper” in the name!

Growing 5-20 feet tall and spreading 3-15 feet, Simpson's stopper can be used as a shrub or pruned into a small tree. If those numbers have you worried, it may be pruned and shaped into a smaller specimen. Suitable for Zone 8B-11, it is extremely adaptable to most soil and drought tolerant once established. While the Simpson's stopper is most compact, lush, and dense in full sun, it will tolerate shade although appearing taller and more loosely branched. Be patient! Seedlings often take 3-5 years to establish. And do not forget to plan for mature size when selecting the location.

Simpson's stopper will enchant you with fragrant leaves and flowers, colorful fruit, and a plethora of birds and pollinators.

https://gardeningsolutions.ifas.ufl.edu/plants/trees-and-shrubs/shrubs/simpsons-stopper.html
https://www.fnps.org/plant/myrcianthes-fragrans

---

**Blanket Flower - Florida Native or Not?**

By Sally Herb, Master Gardener Volunteer

In 2020, eight scientists released a study stating that *Gaillardia pulchella* is not native to the eastern United States. Their research, based on historical data, showed that the first reference to blanket flower was in 1878 by botanist Charles Mohr who listed it as a “foreign plant.” Their evidence indicated that it is native to the southwest US. The Florida Native Plant Society states that current research suggests that it is “likely not native to Florida.” The University of Florida documents *Gaillardia pulchella* as “likely being introduced to the eastern US sometime in the last few centuries.”

Does it matter? Only to “Native” purists who seek to rehabilitate or restore native areas. For the rest of us, blanket flower is a sturdy, Florida-friendly perennial that cheerfully brightens our gardens Summer to Fall.

https://journals.brit.org/jbrit/article/view/1004/988
https://www.fnps.org/plant/gaillardia-pulchella
https://gardeningsolutions.ifas.ufl.edu/plants/ornamentals/gaillardia.html
# JANUARY CALENDAR OF EVENTS

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4/24</td>
<td>10:00AM</td>
<td><strong>Butterfly and Bird-Attracting Native Plants and Trees</strong></td>
<td>Bird and butterfly populations are in decline worldwide and their fates are intertwined. Join us for an informative class about what we each can do in our own backyards and neighborhoods by adding appropriate plants and changing practices to support these beautiful creatures and bring life back into our communities.</td>
</tr>
<tr>
<td>1/6/24</td>
<td>9:00AM</td>
<td><strong>Emerson Point Preserve Tour</strong></td>
<td>Casually stroll through the beautiful Emerson Point Preserve and learn about Florida’s native plants and inhabitants of a coastal environment. Suitable for all ages.</td>
</tr>
<tr>
<td>1/11/24</td>
<td>11:30AM</td>
<td><strong>Virtual Plant Clinic</strong></td>
<td>Submit your plant questions to our Master Gardener Volunteers for a live Q&amp;A. We will talk about hot topics in the plant world and may have a few guests join us along the way.</td>
</tr>
<tr>
<td>1/13/24</td>
<td>9:00AM</td>
<td><strong>DeSoto/Riverview Pointe Preserve Tour</strong></td>
<td>Casually stroll through the beautiful Riverview Pointe Preserve and learn about Florida’s native plants and inhabitants of a coastal environment. Suitable for all ages.</td>
</tr>
<tr>
<td>1/18/24</td>
<td>10:00AM</td>
<td><strong>The Gift of Trees</strong></td>
<td>Join us for a crash course in trees. We will cover the value of trees in our communities, tree selection and planting, maintenance, pruning and long term care considerations.</td>
</tr>
<tr>
<td>1/20/24</td>
<td>9:00AM</td>
<td><strong>Rye Preserve Tour</strong></td>
<td>Take a hike through upland habitats along the beautiful Rye Preserve and learn about Florida’s native plants, natural history, and early settlement of the area. Suitable for all ages.</td>
</tr>
<tr>
<td>1/23/24</td>
<td>2:00PM</td>
<td><strong>Basic Irrigation Operations and Maintenance (Island Library)</strong></td>
<td>Join us to learn more about your in-ground irrigation system, how it operates, and the basics of maintaining it.</td>
</tr>
<tr>
<td>1/24/24</td>
<td>10:00AM</td>
<td><strong>Salt Tolerant Plants</strong></td>
<td>Learn which plants are salt tolerant and other choices to consider for your landscape.</td>
</tr>
</tbody>
</table>

Scan the QR code below with your smartphone’s camera to register for any of the events listed above.

---

Master Gardener Volunteer Amy Stripe & Joy Dersken, Co-Editors Contents reviewed & edited by Alyssa Vinson, Extension Agent. The University of Florida is committed to providing universal access to all our events. For disability accommodations such as alternate formats of written material, please contact Katie Granberg katiebg@ufl.edu at least 1 week in advance.