



# Sea Rocket



Florida Native Plant Society ~ Sea Rocket Chapter ~ Serving Central & North Brevard County

October 2017

The purpose of the Florida Native Plant Society is to promote the preservation, conservation, and restoration of the native plants and native plant communities of Florida.

## ~ Sea Rocket ~ Board of Directors

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Vacant

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Vacant

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## The Forgotten Thistle

*Cirsium horridulum.*



# October Places to Go, Things To Do!

(Note: All future planning can change presently. If in doubt, verify the date and times are accurate.)

**Every Saturday: GUIDED NATURE HIKES - 10:00am** - For information call 321-264-5185.

**Every Tuesday: FNPS Sea Rocket Chapter Nursery Workday—9am-12noon**, email Lois at [lois6459@att.net](mailto:lois6459@att.net) for further info and schedule.

**October Native Plant Month.**

**October 2 BBG presents Florida Friendly Landscaping Grant Workshop.** A grants workshop for the [Florida Friendly Landscaping Grant](#) program will be conducted on Monday, October 2, 2017 from **5:30 p.m. to 7:30 p.m.** at the Brevard County UF/IFAS Extension Office located at [3695 Lake Drive](#) in Cocoa.

**October 7 Butterfly Garden Workday - from 9 AM till 12 PM.** Volunteers are working in the various butterfly gardens around the kiosk at the Enchanted Forest Sanctuary. Weeding, trimming, planting, and whatever else needs to be done to enhance the natural beauty and functionality of these native gardens. Bring water, hat, gloves, and stable shoes.

**October 7 Barrier Island Center presenting—Creatures Fest from 11 am to 3 pm.** This is a free, family fun event filled with creatures! Featuring live critters big and small, animal games, eco-arts, sanctuary searches for creatures, animal themed environmental booths, mermaids with a conservation message, puppets, children's author, lionfish, food carts & more... Costumes encouraged, carpooling suggested.

**October 21 Harvest Festival and Native Plant Sale.** The Harvest Festival plant sale is important to our community to help repopulate the native communities and slow the slide from "La Florida," as Florida once was called. We will be selling all native varieties at prices less than exotics. Ask questions, let us help you pick plants that will work in your specific conditions

**October 25 Sea Rocket General Meeting at the Enchanted Forest.** Refreshments at 6:30 pm. We will hear from Arlene on "How Florida Places got their names."

**October 28 Butterfly Garden Workday - from 9 AM till 12 PM.** Volunteers are working in the various butterfly gardens around the kiosk at the Enchanted Forest Sanctuary. Weeding, trimming, planting, and whatever else needs to be done to enhance the natural beauty and functionality of these native gardens. Bring water, hat, gloves, and stable shoes.

**October 28 Dicerandra Field Trip, Saturday at 9:00 am till noon.** Hosted by Dr. Schmalzer. Dicerandra Scrub Sanctuary. This is a joint project of the Brevard County Environmentally Endangered Lands Program and the State of Florida. Vegetation is primarily oak scrub and scrubby flatwoods with a depression marsh down slope. Prescribed burns have been conducted on the site since acquisition. The endemic *Dicerandra thincicola* occurs here and should be in flower.

Please send calendar items to David Humphrey at [brevcracker@gmail.com](mailto:brevcracker@gmail.com)

For a comprehensive view of Sea Rocket activities go to [www.FNPS.org](http://www.FNPS.org); events, "searocket".

# Sea Rocket Chapter

## General Meeting Minutes 9-27-17

**Board Members present:** Lois, Jim, Madeline, Dave, Paul, Arlene, Armand.

**Guests:** 3, and 13+ members

**Welcome and Call to Order:** 7:01 pm

**Minutes from the 5-24-17 General Meeting:** Approved without comment

### **BUSINESS:**

**A Quorum established**

**Treasurer Report:** Madeline Klinko, \$2796.98 in checking; \$2752.19 in saving, \$5,549.17 total

**Board Member Openings:** **Vacant - Chapter Representative. We need your Help.**

Vacant – Membership Chair

After Elections in February, the Newsletter Editor position will be open. Training and insight provided.

**Refreshments** – Refreshment were provided by; Armand, Mary, and Bill Roe, Dave – Thank you for providing these snacks for our enjoyment.

### **ANNOUNCEMENTS:**

**We have a new member: Joseph Byrd —Welcome aboard!** Joseph came bearing gifts, a full pot of Asclepias tomentosa or Velvetleaf Milkweed. Sea Rocket thanks you, the Monarch butterfly thanks you and the monarch caterpillar thanks you.

### **EVENTS:**

**9-30, 10 am to 3 pm** Sea Rocket Native Plant Sale scheduled for Saturday,

**10-10 BOD meeting @** New York, New York in Titusville starting at 5:30

**10-21, 10 am to 3 pm** Sea Rocket Native Plant Sale scheduled for Saturday,

**10-28 – Field Trip to Dicearandra Scrub**, hosted by Dr. Schmalzer

**11-4, FNPS** Chapter Reps from across Florida will be holding their meeting at EF

### **OTHER ANNOUNCEMENTS**

Glen Bupp works at the Extension Service in Cocoa as the Commercial Horticulture Extension Agent for Brevard County working to support the green industry and commercial horticulture.

Glen explained why container gardening could be fun, but also necessary based on your soil composition. Retention ponds in the new housing areas are dug out and distributed in the housing area. This action puts the worst soil on the top. Then sod is laid on top of that. The soil lacks nutrition, is compacted, which acts as a barrier to downward root growth. This is intolerable for plant life, and nothing will prosper in this soil.

Enter container planting. Picking a container is the first step. A plastic pot is not recommended for permanent containment. The roots wrap around the inside of the pot and never develop root hairs. A clay pot is a better choice as the clay will “breathe,” allowing air into the root system. Still, the roots will wrap and not develop the fine root hairs. The best choice for potted plants is the fabric bag. The fabric container answers many of the problems of plastic and clay pots. The fabric drains well, breaths deeply, and allows the root system to develop healthily and naturally, avoiding the unnatural wrapping around the pot. The fabric allows the root to pass through. The air will “prune” the root, causing the root to branch out and develop root hairs. Glen recommended using a mixture of potting soil and perlite to keep the soil light and loose. Always in a pot or the ground remember the gardener's mantra – **“The Right Plant in the Right Place.”**

**FNPS Sea Rocket Chapter Meeting adjourned** at 8:15 pm

Submitted by David Humphrey

## KBB Gold Award meaning

### The four core concepts

1. **Minimize Nutrient Pollution.** By limiting or better stop using artificial nutrients (Chemical fertilizers). These same chemicals can be eliminated from entering the ecosystem through ground water or run off water.
2. **Reduce Turf Area.** By reducing the turf as in grass and replacing it with native ground covers such as Sunshine Mimosa, Frog Fruit, Dune Sunflower, and others. Using these plants can help you reach goal number 1. It can also attract pollinators to your yard. Butterflies, honey bees, and a myriad of pollinator insects. Not the root chopping chinch bugs or grubs that require chemicals to run off and those chemicals will run off to the lagoon eventually.
3. **Reduce Stormwater Run Off.** By using stones, like flag stones or pavers the water has a chance to soak into the ground and not run off into the gutters. Impermeable ground such as concrete, or asphalt is the biggest contenders for the loss of our ground water reserves. By planting native ground covers instead of turf grasses, the soil is much more able to accept water thus reducing the run off into the lagoon.
4. **Restore Ecosystem Balance.** Restoring an ecosystem balance is best achieved by using native plants. The same plants that have populated Florida for thousands of years. These plants are adapted to Florida weather, insects, and soil chemistry. The plants can thrive, as can the wildlife that depends on these plants for nesting, food, and protection.

The GOLD award is given when all four goals are met. Whether you have a small yard or large property, the methods and goals remain the same.



Bryan Bobbitt awarding Dave Humphrey the "GOLD" award for reaching and maintaining the four core concepts for a Lagoon Friendly Yard."

## OMG - Even Plants are being Replaced with Nanobots

Cyborg bacteria covered in tiny solar panels can beat plants at photosynthesis, which means they could be key in creating renewable solar fuels.

Photosynthesis, or the way plants turn carbon dioxide into oxygen, is crucial for life on Earth — but it's not a very efficient process. Scientists at a UC Berkeley lab taught bacteria how to cover their own bodies with nanocrystals, which function as tiny solar panels that capture more energy than plants can. The bacteria ended up having 80 percent efficiency, compared to about 2 percent for plants. This form of artificial photosynthesis is a big step toward developing more efficient fuels that generate renewable energy using sunlight. (The results were presented at the 54th National Meeting & Exposition of the American Chemical Society.)

[For More Reading](#)

The Enchanted Forest Sanctuary presents

# 2nd Annual Harvest Festival



Hay Rides! A FREE Autumn Event Live Animals!  
October 21st, 2017

Guided walks 10am-3pm Face Painting  
Children's crafts Local Vendors  
Education Programs AND MORE! Exhibitors



444 Columbia Blvd.,  
Titusville, FL 32780  
321.264.5185  
www.eefbrevard.com

Find us on  
Facebook & Twitter!



## Enchanted Forest's Second Annual Harvest Festival on October 21, 2017, 10am - 3pm.

During this **FREE** event guests are invited to enjoy guided hikes, hay rides, special presentations, meet Florida wildlife, explore environmental exhibitors and educational activities, and much more!

Harvest Festival will feature many children's activities including:

face painting, hands-on activities, Exploring forest animals, autumn nature crafts, log dissection, and more!  
Local vendors include The Organic Elephant: Organic Produce, Set Adrift: Handcrafted Home Goods, and Coastal Kitchen Food Truck.

For more events or information on the Enchanted Forest Sanctuary and the Environmentally Endangered Lands Program,



## Creatures Fest

Saturday, October 7th 2017

11 a.m. to 3 p.m. - FREE!

8385 S. Highway A1A, Melbourne Beach (321) 723-3556

Featuring live critters big and small, animal games, eco-arts, sanctuary searches for creatures, conservation booths, mermaids, puppets, children's author, lionfish, food carts & more...  
Costumes encouraged, carpooling suggested.

The Barrier Island Center was created and is managed under Brevard County's Environmentally Endangered Lands Program referenda. The Program was established by voters in 1990 and reaffirmed in 2004 to protect and preserve the rich biological diversity and native species of Brevard County for future generations.



## Bee Business Update

### Colony Collapse Disorder losses are down 27% from 2016

The number of hives lost to Colony Collapse Disorder, a phenomenon of disappearing bees that has raised concerns among farmers and scientists for a decade, was 84,430 in this year's first quarter, down 27 percent from a year earlier. Year-over-year losses declined by the same percentage in April through June, the most recent data in the survey.

"You create new hives by breaking up your stronger hives, which just makes them weaker," said Tim May, a beekeeper in Harvard, Illinois and the vice-president of the American Beekeeping Federation based in Atlanta. "We check for mites; we keep our bees well-fed, we communicate with farmers, so they don't spray pesticides when our hives are vulnerable. I don't know what else we can do."

#### **To Save Bees, It Would Help to Know Why They're Dying: QuickTake**

In the USDA study, beekeepers who owned at least five colonies, or hives, reported the most losses from the varroa mite, a parasite that lives only in beehives and survives by sucking insect blood. The scourge, present in the U.S. since 1987, was reported in 42 percent of commercial hives between April and June this year, according to the USDA. That's down from 53 percent in the same period one year earlier.

Among other factors, beekeepers said 13 percent of colonies in the second quarter of this year were stressed by pesticides, 12 percent by mites and pests other than varroa and 4.3 by diseases. Bad weather, starvation, insufficient forage and other reasons were listed as problems with 6.6 percent of hives.

#### **Colony Collapse**

May Berenbaum, head of the entomology department at the University of Illinois and a winner of the National Medal of Science, stated "It's been more of a blip in the history of beekeeping," she said in an interview. On the other hand, "it's staggering that half of America's bees have mites," she said. "Colony Collapse Disorder has been vastly overshadowed by diseases, recognizable parasites, and diagnosable physiological problems."

— With assistance by Agnieszka De Sousa [Full Story](#)



### PEAR Park project to test weed control methods

As anyone who has started a small wildflower meadow at home probably knows, weeds can make or break successful wildflower establishment. (Editors note— Amen to that!) Often, weed seeds germinate, and plants grow so aggressively that they can out-compete wildflower seedlings. That's especially true of large scale roadside projects and natural land restorations.

Unfortunately, little scientific information exists on effective weed control during wildflower establishment in large areas. That's why the Florida Wildflower Foundation has joined with Lake



County on a research project at PEAR Park in Tavares that will experiment with various weed control methods.

"This is an exciting step for the Foundation, which has only supported research in the past with grants," said Brightman Logan, the Foundation's research chairman. "This project gives us the chance to steer our own project to test methods we hope will boost the success of restoration efforts and roadside plantings."

[Click to learn more](#) about the project's goals and methods.

# Snips and Clips



Scientists discovered this terrifying little beauty in a small forest in southern Colombia while cataloging thousands of native plant species. They named it *diabolicus* for its dark-violet gynoecium (the reproductive bits on orchids) which looks like the head of a devil. Oh, and did we mention its petals are shaped like claws? Don't worry—it might look scary, but it's actually classified as an endangered species. [Read More](#)

Training provided. FREE

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As editor of this newsletter, I will be stepping down next year to pursue new goals and studies. If you would like to pick up the torch and have a propensity toward prose let me know at [brevcracker@gmail.com](mailto:brevcracker@gmail.com) and we will go from there. It has been fun, but the time to move on is pressing in.

Editor Dave

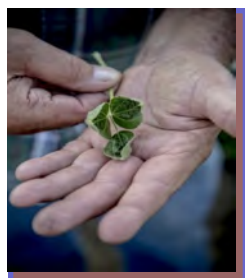
# This miracle weed killer was supposed to save farms. Instead, it's devastating them.

By Caitlin Dewey

August 29, 2017, at 5:38 PM

BLYTHEVILLE, ARK. — Clay Mayes slams on the brakes of his Chevy Silverado and jumps out with the engine running, yelling at a dogwood by the side of the dirt road .

Its leaves curl downward and in on themselves like tiny, broken umbrellas. It's the telltale mark



of inadvertent exposure to a controversial herbicide called dicamba.

The dicamba system, approved for use for the first time this spring, was supposed to break the cycle and guarantee

weed control in soybeans and cotton. The herbicide — used in combination with a genetically modified dicamba-resistant soybean — promises better control of unwanted plants such as pigweed, which has become resistant to common weed killers.

The problem, farmers and weed scientists say, is that dicamba has drifted from the fields where it was sprayed, damaging millions of acres of unprotected soybeans and other crops in what some are calling a man-made disaster

After the Environmental Protection Agency approved the updated formulation of the herbicide, farmers across the country planted more than 20 million acres of dicamba-resistant soybeans, according to Monsanto.

But as dicamba use has increased, so too have reports that it “volatilizes,” or re-vaporizes and travels to other fields. That harms nearby trees, such as the dogwood outside Blytheville, as well as non-resistant soybeans, fruits and vegetables, and plants used as habitats for bees and other pollinators.

According to a 2004 assessment, dicamba is **75 to 400 times more dangerous** to off-target plants than the common weed killer glyphosate, even at very low doses. The new formulations of dicamba were approved on the promise that they were less risky and volatile than earlier versions.

Critics say that the approval process proceeded without adequate data and under enormous pressure from state agriculture departments, industry groups, and farmers associations. Those groups said that farmers desperately needed the new herbicide to control glyphosate-resistant weeds, which can take over fields and deprive soybeans of sunlight and nutrients.

Such weeds have grown stronger and more numerous over the past 20 years — a result of herbicide overuse. By spraying so much glyphosate, farmers inadvertently caused weeds to evolve resistant traits more quickly.

Meanwhile, a class-action lawsuit alleges that dicamba manufacturers misrepresented the risk of their products. Monsanto says the suit is baseless.

There are also early indications that dicamba may not work for long. Researchers have shown that pigweed can develop dicamba resistance within as few as three years. Suspected instances of dicamba-resistant pigweed have been found in Tennessee and Arkansas.

“We’re on a road to nowhere,” said Nathan Donley, a senior scientist at the Center for Biological Diversity. “The next story is resistance to a third chemical, and then a fourth chemical — you don’t have to be a rocket scientist to see where that will end.

“The real issue here is that people are using ever-more complicated combinations of poisons on crops, with ever-more complex consequences.”

## Yellow Thistle (*Cirsium horridulum*) or Purple Thistle or Terrible Thistle is one of Florida's Native Thistle.

In Florida, our native thistle (*Cirsium horridulum*) or Purple Thistle is not as benign as some non-native varieties. Florida's native thistle is loaded with thorns and should be handled with thick leather gloves, like welders gloves. I hate speaking negatively about a native plant. But it appears that the thistle came up from a rough background. No bovine or equine is going to eat this plant. Nothing except for the larval form of the metalmark (*Calephelis virginien-sis*) or the larval form of the painted lady (*Vanessa cardui*) will enjoy eating it. The nectar of the purple thistle is collected by bees and other pollinators. The seeds are rich in oil that birds, especially Finch need and enjoy. The Painted Bunting is an art form on the wing, that will thank you for growing Thistle by returning for more.

The *C. horridulum* will grow best in the well drained sandy soil. It is moderately salt tolerant and likes full sun. The Thistle is a robust biennial or short-lived herbaceous perennial with very spiny leaves. Stout, leafy flower spikes grow to three to four feet tall with a few flowers clustered at the top. Flower clusters are large and showy. Flowers may be white, purple or white and purple. It is well known to self-seed readily. Which in our packed urban environment could lead to neighborly disagreements about your planting



choices. After flowering, the seed heads can be removed and bagged for disposal or given to your local chapter nursery for propagation.

*C. horridulum* , although manifestly

shown to benefit the ecosystem in several ways is still not favored in butterfly gardens or landscapes. This plants suggested best use would be in a meadow environment where self-seeding would not be a major problem. Somewhere at a distance from human intervention or foot traffic.

There are several redeeming attributes of the Thistle. The roots are edible as well as the leaves and stalks. They contain bitters much like dandelion which aid in digestion and contain mineral electrolytes to provide energy when working. Stalks and roots are edible raw, and the leaves can be cooked, which will wilt the spines. For an outdoorsman, the large mature seedheads are full of pappus hair which is extremely useful in starting fires, either through catching a spark or being used as a platform to catch and propagate an ember.

I do not expect everyone to get excited about their big spiny leaves, short lives, and tendency to spread by seed. However, the flowers of these *C. horridulum* do attract butterflies and other pollinators. It is an appropriate plant for butterfly and wildflower gardens where it is native, from Maine to Florida and over to Texas.

Beauty is in the eye of the beholder. Although this plant would appear to be "weedy," it is a beautiful sight to wildlife. Even though a manicured monoculture lawn may appear beautiful to many this same lawn appears as a virtual desert to pollinators and wildlife. The Thistle is not a plant you should put in a bouquet or boutonniere, but it has a very real place in Florida's ecosystem.



## Hurricane Irma vs. The right plant in the right place

Story and Photos by Bill Klein

Hurricane Irma proved the time-tested fact that Mangroves, Sabal Palms, and other native shoreline plants are the best shoreline protection for our homes. I have taken pictures of the shoreline damage at Harbor Pointe and Space View Park that borders our property. Harbor Pointe has a waterfront Conservation Area along the Indian River Lagoon (IRL), that consists of a rocky barrier with Mangroves, Sabal Palms, and other native shoreline plants. These were planted to protect the IRL from nutrient and other runoff in stormwater and provide habitat for marine life. This same Conservation Area protected our shoreline from shoreline erosion that occurred along Space View Park and other nearby IRL shorelines in Titusville.

Space View Park removed the mangroves, built a large concrete and brick viewing area, with benches, street lights, and large planters. They planted Oleanders and other non-shoreline plants for their perceived landscaping beauty. The park was beautiful. Hurricane Irma washed out their shoreline and undermined about 30 feet of the viewing area causing it to collapse.



Removing the native plant protection can be costly.



Harbor Pointe put rocks and planted Mangroves which broke the force of the waves. The extensive intermingled root

systems of the Mangroves, Sabal Palms, and other native shoreline plants held the land together and prevented shoreline washout. The upper surface covered in short root turf grasses washed away exposing the root systems of the Sabal Palms.



**Native Plants help retain the soil.**

My recommendation for anyone building along the river or ocean front is to protect their investment by leaving or planting 20 to 30 feet of native Mangroves, Sabal Palms, and other native shoreline plants along the waterfront. They can build their buildings, patios, and other viewing areas up so they can still have the open water views. They can select native plants with a rainbow of colors to enhance the beauty of their landscaping which will protect their homes and other structures plus protect the waterways from contaminated stormwater, muck, and soil runoff. Native plants will also protect environment and waterways from pollution and marine-life killing algae.

### Editors note:

FNPS site <http://www.fnps.org/plants> has a nice search engine that can help you decide what to use. You pick your county which opens the specific query form where you pick the environment the plant will be in from scrub to shoreline.

## The Enchanted Forest Sanctuary Education Center

444 Columbia Blvd, Titusville, FL 32780 321-264-5185

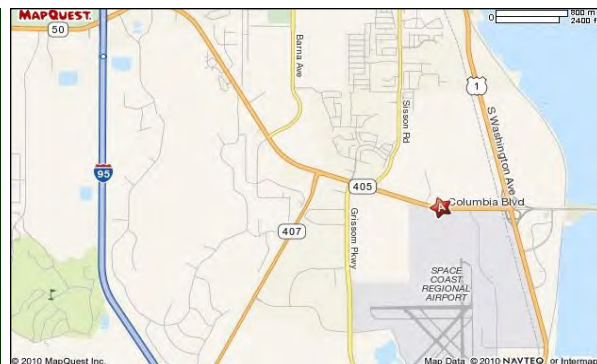


Driving Directions to the Sanctuary:

**From I-95 Northbound:** take SR-407 Exit 212 east 2.7 miles to SR-405 intersection. Turn right onto SR-405 and go east 1.9 miles (the Sanctuary entrance is on the left 0.4 miles past Sisson Road)

**From I-95 Southbound:** take SR-50 Exit 215 east. Turn left onto SR 50 and turn right onto SR-405 (2nd light) Travel 3.6 miles (the Sanctuary entrance is on the left 0.4 miles past Sisson Road)

**From U.S. HWY 1:** go west 0.5 miles on SR-405 in south Titusville. Sanctuary entrance is on the right.



## Florida Native Plant Society

For membership information, address change: P. O. Box 278, Melbourne, FL 32902-0278  
Phone: 321-271-6702; Fax: 321-951-1941; Email: [Info@fnps.org](mailto:Info@fnps.org)/[www.fnps.org](http://www.fnps.org)  
Sea Rocket Chapter mailing address: 444 Columbia Blvd, Titusville, FL 32780



**Sea Rocket General Meeting  
On November 27th at 6:30 pm  
With Arlene Perez-Garrido,  
Speaking on "How Florida Places Got Their Names"  
[www.fnps.org](http://www.fnps.org)**

## Sweat Bees (or in polite society, sudor Bees)



by Jonnie Dietz, *Florida Museum of Natural History*

**"Know your native pollinators" is a series of articles that will help you identify and appreciate Florida's varied pollinators, including bees, wasps, butterflies, moths, beetles, flies, birds and bats.**



Sweat bees are an extremely diverse group that are often abundant year round. Some are metallic green, others are smaller than a grain of rice, and nearly all are valuable pollinators.

**CLASSIFICATION** Insecta: Hymenoptera: Halictidae

### **FORAGING PREFERENCES**

The Asteraceae (daisy or aster) and Lamiaceae (mint) families are among the sweat bees' favorite flowers. You'll commonly see them foraging on:

- Blanketflower (*Gaillardia pulchella*)
- Purple thistle (*Cirsium horridulum*)
- Turkey tangle fogfruit (*Phyla nodiflora*)
- Spanish needles (*Bidens alba*)
- Seaside oxeye (*Borrchia frutescens*)
- Dune sunflower (*Helianthus debilis*)
- Canadian germander (*Teucrium canadense*)

**DID YOU KNOW?** On a hot summer day, sweat bees will seek out overheated humans to lap up their sweat. It's believed the bees value sweat as a resource for salts and proteins, which they save for their developing young.

**The Highlighted natives will be for sale during the October 21<sup>st</sup> Harvest Day, Plant Sale at Enchanted Forest from 10:00 am till 3:00 pm.**