



Sea Rocket



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

June 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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May 24th, Sea Rocket General Meeting is thrilled to have our Chapter President, and Nursery Chair, our own **Lois Harris** sharing with us her work at the Brevard Botanical Garden (BBG). Lois is highly qualified to speak on the BBG project as she is instrumental in creating and maintaining this beautiful jewel.



Brevard Botanical Garden

June 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 for further info and schedule.

June 10 **Sea Rocket Chapter - Native Plant Sale** will have trees, shrubs, perennials and annuals available for purchase. Plants native to Florida are not the same as plants introduced from other places. Native plants provide conservation benefits that others rarely measure up to. They also are the plants that will literally bring life to your landscape. Native plants form the only real foundation for Florida's butterflies, bees, and other pollinators, hummingbirds, songbirds, and other interesting wildlife.

June 14 **KBB presents “Lagoon Friendly Lawns Workshop.** Looking to certify your lawn as lagoon-friendly or move up to the Silver or Gold award level? Join us for the next set of quarterly education workshops! 6 to 7 PM Contractor Training. 7 to 8 PM Irrigation Do's and Don'ts. Both sessions are open to the public [Please RSVP](#)

June 17 **FNPS Garden Workday from 9:30 to 12:30.** Grab your hat, sunblock, and water and come help maintain the butterfly garden at the Enchanted Forest Sanctuary!

June 21 **First day of Summer**, the sun has reached its highest point (or most Northern point) in the sky.

June 21 **Lunch with Nature 12:00 to 1:00 PM. Fire and ecological Diversity.** Bring your lunch and enjoy an informative talk by biologist Tim Kozusko about how fire is beneficial to native ecosystems, and the differences between Prescribed burns and wildfires. No registration required.

June 24 **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 will be in work. Great time to learn from experts about native plants. Bring water, hat, gloves, and stable shoes.

Looking Ahead

July 15 **Sea Rocket Annual Picnic. From 12 to 4 PM.** Mark your calendars for this gastro-nomic experience. The planning has begun. Fox lake park offers trails and boating opportunities as well as shelters and clean bathrooms. All are welcomed to come and enjoy.

Please send calendar items to David Humphrey at brevcracker@gmail.com

For a comprehensive view of Sea Rocket activities go to www.FNPS.org; events, “searocket”.

Sea Rocket Chapter General Meeting Minutes 5-24-17

Board Members present: Lois, Jim, Madeline, Karen.

Welcome and Call to Order: 6:58 pm

BUSINESS:

A Quorum established

Treasurer Report: Madeline Klinko, \$2,252.93 in checking; \$2,501.76 in saving, \$4,754.69 total
Correction to the April General Meeting Minutes. Madeline states that we made \$1015 with \$50 to remain in the cash box. We did not make \$1065. Motion to make correction was seconded.

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

Janina Shoemaker has volunteered to take the education/outreach chair position. Thank you, Janina.

Refreshments – Refreshment were provided by; Armand, Mary, and Bill Roe, Karen Butrim and Madeline Klinko – Thank you for providing these snacks for our enjoyment.

ANNOUNCEMENTS:

We have new members: William Roe and Janina Shoemaker—Welcome aboard!

No hikes are planned for the month of June, July, or August

EVENTS:

6/10/17, 10 am to 3 pm Sea Rocket Native Plant Sale scheduled for Saturday, Lois passed around a sign-up sheet for members to volunteer to assist with the sale.

No general meetings scheduled for June, July, and August. The BOD will continue to meet.

Next general meeting is on September 27th.

EEL 7/15/17 Creepy Crawly Day at the Enchanted Forrest (Patty).

There was a plant drawing at the end of the meeting.

BOD meeting – 6/13 @ New York, New York in Titusville starting at 5:30

OTHER ANNOUNCEMENTS

Madeline will submit something in writing about the FNPS Conference for the next newsletter.

Janina provided the following information regarding the Commissioners Budget Cuts:

Tuesday, the 23rd, the Brevard County Commissioners met in a workshop setting for reviewing the budget, including the allocation for Parks and Recreation. A substantial audience of around forty supporters was present, and twenty spoke fervently and eloquently asking the Commissioners to consider full funding. They spoke for the Environmentally Endangered Lands and the recreational areas and parks, specifically describing the uniqueness of the county lands, the quality of life, tourism equation, the educational impact, the water activities, the exercise options, and the value to our special needs citizens and elders. Attention was drawn to the mission statement on the wall of the meeting room, and every word was pertinent to the continuation of a full budget consideration. The challenge to the commissioners was to abide by the mission statement. We were thanked for our attendance, but no promises were made.

FNPS Sea Rocket Chapter Meeting adjourned at 8:00 pm

Submitted by Karen Butrim

The Brevard County Board of County Commissioners – Budget Workshop

Date Line: May 23, 2017, Report by David Humphrey

I am reminded of why I don't go to these meeting often. The meeting started on time at 1:00 PM. That was good. Parks and Recreation (P&R) were ninth on the agenda. That was bad. By 2:00 PM we had heard from the fifth department, the Tourism Development, on the agenda. Thankfully, Curt Smith, the Commission Chairman moved P&R up to the next slot.

Both P&R and the EEL managers spoke, laying out their needs and asking for a bump in the budget, not a cut. After they had spoken, the citizens were called forward to have their five minutes in the light. There were over 15 women and men that came forward with one message, "We need our parks." There were stories of families moving to Brevard because of the natural beauty, not for the malls or plastic entertainments. The referendums voted on by the people of Brevard were brought up several times along with the overwhelming support for the referendums which amounted to an additional tax to support the P&R and EEL properties. Homeschoolers spoke for the education benefits offered by these programs. Tourism, which we had just heard about from the Tourist Development Director, on how Brevard's natural areas, the Lagoon, and the many opportunities to enjoy these assets added significantly to the Brevard Budget. This detail was pointed out several times. The last speaker spoke at or about 4:00 PM.

When the commission went to the next agenda item, nearly the entire commission room cleared out. The preponderance of support was for maintaining or increasing the budget for P&R and EEL.

Brevard County Mission, Vision, Values

Our Mission: Contribute to enhancing and ensuring Brevard's **quality of life... Today and Always**

Our Vision: A community which excels and is recognized for...

- Providing for the Health, Safety, Education and social Needs of our community
- Building a diverse, strong economic base with the needed infrastructure to support a quality lifestyle
- **Protecting the environment and conserving our valuable natural resources**
- Creating cooperative partnerships between government, business, community organizations and our residents
- Maximizing performance and communications to provide excellent service to our customers~

(Emphasis added by the editor.)

Despite everything the fight continues to maintain a budget.~



<https://apod.nasa.gov/apod/ap170326.html>

Astronomy Picture of the Day for March 26, 2017

Pictured here is a Color-enhanced electron micrograph, is a millimeter-long **tardigrade** crawling on algae.

Explanation: Is this thing an alien? Science says, "Probably not", but of all the animals on Earth, the tardigrade might be the best candidate. That's because tardigrades are known to go for decades without food or water, to survive temperatures from near absolute zero (-459.67°) to well above the boiling point of water, to survive pressures from near zero to well above that on ocean floors, and to survive direct exposure to dangerous radiations. The far-ranging survivability of these extremophiles was tested in 2011 outside an orbiting Space Shuttle. The tardigrades are so durable partly because they can repair their own DNA and reduce their body water content to a few percent. Some of these miniature Water Bears almost became extraterrestrials recently when they were launched toward the Martian moon Phobos on board the Russian mission fobos-grunt, but stayed terrestrial when a rocket failed, and the capsule remained in Earth orbit. Tardigrades are more common than humans across most of the Earth.

~

An Email from Matt Hayden On the Scavenger Hunt

“Greetings. I'm going to take my time to explain to you folks about something incredibly fine that I both observed and participated in. Specifically, I'm talking about the event at the Enchanted Forest this morning (5-13 ed.) hosted by Lois.

First some background info: I hate scavenger hunts, so I was hoping that Lora would forget about it!! I was wrong. Here's how it played out.

Lois had about 10 participants. Each was given a master plant list. This alone would have been enough to ruin any scavenger hunt by being overwhelming. To make it more efficient, Lois had put an “x” by the ones that were possible. This was genius.

Prior to turning us loose, she had put numbered flags on the native plants within easy walking distance to the center. Lora and I are pretty good at plant ID, and got 51 correct....but... when Lois saw we were baffled, she strolled over and gave hints...but we still had to think about it and work

for it. I won't forget the plants that were new to me. She and Karen watched the participants, and checked in with all of us frequently. They handled this in the most professional manner I've ever observed.

I watched all the teams and individuals being fully engaged in the activity for the entire time. When we had worked for more than an hour, Lois had to round everyone up....they were still having that much fun!

Details: the use of clip boards made the writing easy. The printed plant list has become a reference sheet for me when I spend time in the native plant gardens. I don't need the numbered flags, as I have a list of the possible plants that are there....which will be easy to use for a very long time.

The surprise for me is that I thought I knew these gardens. I didn't. This was one of the best hands on learning lab experiences I've had in years, and I wouldn't change a thing if it gets run again.

Matt Hayden
Treasurer and Conservation Chair
Space Coast Audubon” ~



Matt Hayden is behind the camera.

Are you searching for help create a wildlife friendly Landscaping plan? Here are some websites that will help you.

All these sites are embellished with beautiful pictures of birds, wildlife and landscaping ideas.



FLORIDA NATIVE PLANT SOCIETY

<http://www.fnps.org/plants>

Database helps you search for native plants by county, light available, water needs, soil type, special interests.



Plants for Birds by the NATIONAL AUDUBON SOCIETY

www.audubon.org/native-plants/search

The Audubon Database is reasonably new to the web, but is mature in its functionality. It lets you search for native plants by zip code, type of bird you would like to host. Also shows form (tree, shrub etc.), what food produced and type of butterfly and caterpillars supported.



KEEP BREVARD BEAUTIFUL

<http://keepbrevardbeautiful.org/our-programs/lagoon-friendly-lawns>

has some interesting programs –and rewards! They certify landscape contractors and help you find one! Also Florida Friendly landscape grants for Public lands!! \$\$\$!!



National Wildlife Federation NATIONAL WILDLIFE FEDERATION

www.nwf.org/news-and-magazines/national-wildlife/birds/archives/2010/help-migratory-birds.aspx
top 10 things you can do in your home or yard to help declining migratory birds.

www.nwf.org great wildlife gardening info and certification.



INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES

<http://fyn.ifas.ufl.edu/> Florida Friendly Landscapes and lot of gardening ideas, all Florida specific.

Poison ivy isn't all bad. What is one benefit of the plant?

Answer: **The berries provide food for birds**

As well as providing food for our lovely song birds, the plant also photosynthesizes and produces oxygen.



Why You Need More Dirt in Your Life

Soil helps build up our defenses against disease and imparts a sense of the sacred—and we are killing it.

By Simon Worrall

It's estimated that children now spend less time outside than the average prisoner. This could have devastating effects: Kids need to be exposed to the microbes in the soil to build up their defenses against diseases that may attack them later. As we retreat indoors, more and more of the earth is disappearing, with an estimated quarter of a million acres paved or repaved in the United States each year. We're living our lives separated from the natural world. One scientific discovery was the hypothesis that human beings need to be exposed to the biota in the dirt, in the ground, especially when they're kids, as a way of inoculating us to diseases that appear later in life both the newest science and the oldest traditions tell us the same thing, which is that the ground is alive. The ground gives us life.

simonworrallauthor.com.

“Earthing” also called “grounding” stems from the idea that in modern city life we no longer have direct physical contact with the Earth, and therefore are losing out on purported health benefits of exchanging electrons with the surface of our planet. A handful of small studies have found that grounding appears to provide some general health benefits, such as better sleep, less pain, reduced stress and tension, and better immune function compared to study participants who weren't grounded. One study suggested that earthing eliminates the potentially harmful effects of the electromagnetic fields given off by all the electronic devices that surround us.

<https://www.drweil.com/>

A new study published in the New England Journal of Medicine reported that children who grow up on traditional farms are 30% – 50% less likely than other children to develop asthma.~



My granddaughter's first “mud pie.”

-Ed. Dave

Gloomy Scale Insects,

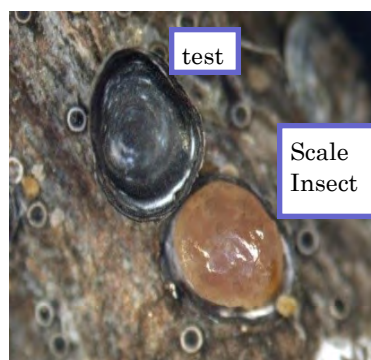
Pest of the Red Maple

By Jim Robey



June in Florida means that the snowbirds have flocked back North, traffic is lighter on the roads, and you may be able to get a seat in one of your favorite restaurants! It also means the heat is on and the bugs are out.

Melanaspis tenebri-cosa, or more commonly known as gloomy scale insects, reproduce more, especially when the trees they live on are under the double stresses of heat and drought, according to a new study led by UF/IFAS entomology assistant professor Adam Dale. “This insect is drastically more abundant on urban than rural trees,” Dale said. “Plus, its favorite host tree is the most common in the Eastern U.S. Sites that are covered by more im-



Gloomy scale adult female with “test” removed.

Latin *testa* -shell or covering

pervious surfaces – Roads, parking lots, building, and more – and thus warmer and drier, are not the most suitable sites for these trees,” Dale said. These areas must be irrigated during warmer months.~

Editors notes: At Dictionary.com “Test” is defined in zoology as “The hard protective shell or covering of certain invertebrates.”

Since gloomy scale has a covering for protection, control can be difficult because you have to reach the insect for an insecticide to work. Spraying a horticulture or dormant oil on an infested tree during the dormant season will probably be the most effective chemical treatment.

Another possible treatment is a high pressure sprayer. Just be careful not to knock off the bark. ~

Community Corner

News for and about *your* Chapter

Dr. Teresa Cooper: “At the Enchanted Forest Sanctuary, we have been rescuing tiny and small giant airplants and growing them in the forest on Garden structures (Figure 1). We began putting these Garden Structures out in March 2016. Our goal was to put out 90 Garden Structures, saving a total of 900 tiny giant airplants and 486 small giant airplants. We have 3 types of Gardens Structures and we are systematically testing them to see which one offers the best conditions for the growth and survival of our giant airplants. On 12 April 2017, just a little over a year after we put out the first Garden Structure, I (Dr. Teresa Cooper), Lora Losi, Martha Pessaro, and Madison Giuntoli put the last Garden Structure in the forest! We are excited and look forward to watching these plants grow.

Many thanks to David Humphrey for constructing most of the Garden Structures!”



Fig 1



This wire frame structure is a new design using hardware mesh and a plastic mesh. Due to the extended drought these air plants do require misting in all the gardens.

After careful review of all the facts about tortoises and turtles (order testudine), I have discovered that these reptiles do not have an exoskeleton or a hybrid skeleton of both exoskeleton and endoskeletons. I searched over the internet, which supposed to knows everything about everything. There were several differing opinions. I finally asked the Brevard Zoo and was told that turtles have endoskeletons. I then asked our own (ELL Naturalist, Arial Horner) the same questions and I got confirmation that these reptiles have endoskeletons. There you have it. **Testudines have endoskeletons**—Dave

Q: What do you get when you cross a turtle and a porcupine?



A: a slow-poke.



Flies and bees act like plant cultivators

Source: University of Zurich



Pollinator insects accelerate plant evolution, but a plant changes in different ways depending on the pollinator. After only nine generations, the same plant is larger and more fragrant if pollinated by bumblebees rather than flies, as a study

conducted by evolutionary biologists from the University of Zurich reveals.

Plants pollinated by bumblebees become more fragrant

For their experiment, UZH professor Florian Schiestl and doctoral student Daniel Gervasi used field mustard -- a kind of cabbage species and a close relative of oilseed rape. The researchers allowed one plant group to be pollinated solely by bumblebees for nine generations, another only by hoverflies and a third by hand. Afterwards they analyzed the plants, "which differed greatly," as Florian Schiestl explains. The plants pollinated by bumblebees were larger and had more fragrant flowers with a greater UV color component, which bees and their relatives see. The plants pollinated by hoverflies, on the other hand, were smaller, their flowers were less fragrant and they self-pollinated considerably more. According to Schiestl, the mechanism of evolutionary change is fact that different pollinators differ in their preferences and thus preferentially cross-pollinate specific plant individuals, much like a plant breeder using individuals with favorable properties. The flies' considerably lower pollination efficiency is the cause of the increase in self-pollination. The plants essentially help themselves if the pollinator transfers too little pollen.

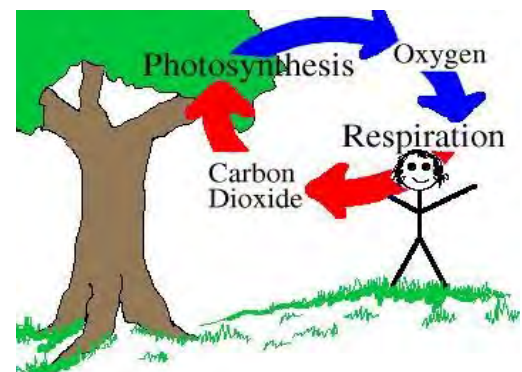
Pollinator insects hasten plant evolution

The fact that the plants change so significantly already after nine generations came as a surprise to the researchers: "The traditional assumption is that evolution is a slow process," explains Schiestl. The evolutionary biologist from UZH draws the following conclusion from his results: **"A change in the composition of pollinator insects in natural habitats can trigger a rapid evolutionary transformation in plants."** This is particularly interesting as certain pollinator insects such as bees have been vastly decimated by the extensive use of pesticides and the depletion of the landscape in recent decades. ~

Think Before You Cut

By Dave Humphrey

I've seen slapstick comedy where a woodcutter would cut the limb he was standing on. As an armchair observer, I would think, "Well that was dumb." But in actuality, we are all there. We as humans are cutting the limb we are standing on as well, and the fall will not be comedic. Humans, not just Americans, are chipping away at the support pillars that support the ecosystems of the Earth that support life for all living things. We are cutting trees and plowing over natural lands for houses, buildings, roads, and parking lots. In building, we chip away at natural systems that both clear the air we breathe, and create Oxygen that we need to live. We spray our yards and fields for bugs and kill pollinators that provide a strong link to the grocery store we visit. We pollute our water systems to the point "clean" water comes in a bottle. We suffer allergies, hypertension, cancers of every description all in the name of progress. Progress will happen, but people need to work with it to limit the damage done to the life support systems on Earth. Without humans, bacteria, bugs, and roaches would all prosper. but if we lose the bugs, bacteria, and yes, even roaches humans would likely die out. Be kind to our hard working pollinators. Be thoughtful about what that tree does for us. Being at the top of the food chain any break from bacteria to beasts is bad for us. **Think before you cut.**~



The Enchanted Forest Sanctuary Education Center

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

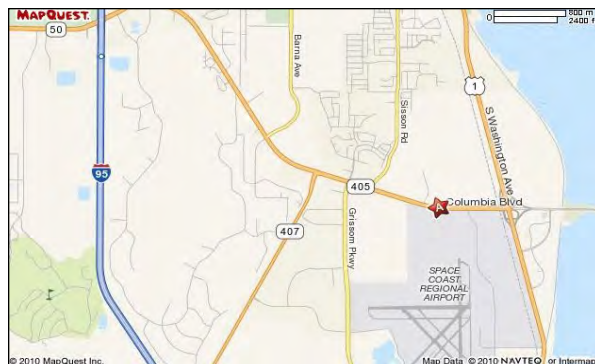


Driving Directions to the Sanctuary:

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/www.fnps.org
Sea Rocket Chapter mailing address: 444 Columbia Blvd, Titusville, FL 32780



So what is the dealio here?

A blooming yellowtop? This story could be a real sleeper but wait – on May 25th I took the picture below. And yes it is my meadow. The yellowtop (*flaveria linearis*) is a notable bloomer in the FALL! This picture was taken in the **SPRING!** Note the blanket flower (*gaillardia pulchella*) blooming also. The gaillardia is a notable **SPRING** bloomer. I have suspicions, but I only observe things. I was told in college that the other half of knowledge was where to find it. A call to the IFAS Extension service;



3695 Lake Drive, Cocoa, FL 32926

Phone: (321) 633-1702 and got an answer.

I spoke with the Horticultural Agent, Sally Scalera, and she confirmed what I was thinking. **Blame it on the weather.** It turns out Sally had just completed a “Permaculture Design Certificate Class,” and they were talking about this effect and what it means to flowering plants. Maybe the drought conditions make it “think” that it is fall already.

So there you have it. If your plants are responding to the wrong season, likely as not it is because of the weather.



Check out this website for more info on the effects of weather patterns on wildflower blooms. <http://flawildflowers.org/bloom.php>. I read through the Florida Wildflower article, which dealt with weather patterns on wildflower growth, germination, and blooming. Having just traveled to North Florida my wife and I missed the Blackeyed Susans (*Rudbeckia hirta*) and tickseed blooms (*coreopsis leavenworthii*), Blue-eyed grass (*Sisyrinchium angustifolium*) and the intense color of the phlox.~