# Sea Rocket

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

November 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

***President***
*Lois Harris*
*lois6459@att.net*

***Vice President***
*Jim Robey*
*321-636-5383*

***Treasurer***
*Madeline Klinko*
*madeline@digiphase.com*

***Secretary***
*David Humphrey*
*brevcracker@gmail.com*

***Chapter Representative***
*Vacant*

## Committees

***Membership***
*Vacant*

***Education/Outreach***
*Janina Shoemaker*
*janina13@cfl.rr.com*

***Special Media / Marketing***
*Arlene Perez-Garrido*
*miamicouponqueen@yahoo.com*

***Nursery***
*Lois Harris*
*lois6459@att.net*

***Hike Leader***
*Paul Schmalzer, PhD*
*paul.a.schmalzer@nasa.gov*

***Newsletter***
*David Humphrey*
*brevcracker@gmail.com*

***Hospitality***
*Armand De Filippo*
*armanddf@rcn.com*

# Hornbeam or Blue Beech

*(Carpinus Caroliniana)*

in it's Fall wardrobe

## Remember, mark your Calendars

**Sea Rocket and The Friends of the Enchanted Forest Will be meeting together on November 15th at 6:30 at the Enchanted Forest. We will have Tim Kozusko a Wildlife Ecologist. He will be speaking on "Why Prescribed Fire"**

# November 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.

**November 1** **FTA Hike—Malabar Scrub - meet at Sams Discount Club at 4255 West New Haven in Melbourne at 8:30 am.**

**November 4** **Sams House on Merritt Island, from 11 am to 12 pm.** Florida Plants take the spotlight as we explore our Native Gardens. Hike out with your guide Martha, and learn all about hoe pioneers and Native Americans made use of these plants.

**November 4** **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.

**November 8** **FTA Hike— Sandhills Con. Area** - meet at Lone Cabbage Fish Camp on Hwy 50 and the St. Johns River at 8:30 am.

**November 11** **Kayaking the Mosquito Lagoon at 10:00 am**. This adventure is hosted by a ranger from the National Seashore Park Service. Call for reservations and requirements. Bring your own kayak or reserve a kayak if needed. Some experience required Call (321)-403-9334 to make arrangements. Put in at the Eddy Creek Boat Ramp.

**November 15** **Sea Rocket and Friends of the Enchanted Forest General Meeting at 6:30 PM**. We will be having Tim Kozusko a Wildlife Ecologist.

**November 15** **FTA Hike—Lake Proctor Trail** - meet at west entrance of Lowe's parking lot at I-95 and Hwy 50 in Titusville at 8:30 am.

**November 18** **Lagoon Hike at Sam's House from 11 am to 12 pm.** Take an easy guided hike through mangrove forests, and hammock habitats to the Indian River Lagoon. Bring plenty of water and good hiking boots.

**November 22** **FTA Hike—Sebastian River Buffer Preserve** - meet at Sams Discount Club at 4255 West New Haven in Melbourne at 8:30 am.

**November 29** **FTA Hike—Econ River Loop Trail** - meet at Lone Cabbage Fish Camp on Hwy 50 and the St. Johns River at 8:30 am. $2.00 per person entry fee applies.

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 10-25-17

Board Members present: Jim, Madeline, Dave, Paul, Armand, Arlene
Guests: about 12
**Welcome and Call to Order:** 7:00

**BUSINESS:**
**Approval of September General Meeting Minutes as printed in October newsletter: Approved**

**Treasurer Report:** Madeline Klinko, checking; $4751.98 saving, $2752.30 total $7504.28
Harvest Festival plant sale stats: $1,072 & 214 plants into the community
Thank you to all that came out to help & all of you that came to purchase.

**Still Vacant Committee Chairs**: Chapter Representative, and Membership chair
Need a new Newsletter Editor & Secretary for new year coming HELP!!!!!!!
**We need your help – This is your Chapter – Get Involved!!!!!!!!!!!!**

**Refreshments** – Armand De Filippo, Dave
Thank you for providing these snacks for our enjoyment.

**ANNOUNCEMENTS:**
**Hike October** –Dr. Paul Schmalzer – Dicerandra Scrub Sanctuary 10-28-17 9:00/12:00. The Dicerandra plant grow high and dry. The lower reaches of the hike are wet

**November Newsletter:** David Humphrey, Newsletter Chair, is accepting articles, photos, questions or other member ideas to be published in our newsletter.
**EVENTS:**
Tuesdays we are in the nursery – weeding, pruning, fertilizing, watering or planting in the gardens
October – Native Plant Month
10/28 Saturday & 10/31 Tuesday Garden workday 9:30 … prep for FNPS board mtg. Nov 4th @ EFS

**Christmas Banquet – Sunday, December 10th**– Survey members (Eat out at restaurant??? Or Pot-Luck at my house??) Undecided as yet.
**BOD meeting – 11/14** @ New York, New York in Titusville starting at 5:30

**OTHER ANNOUNCEMENTS: None**
FNPS Sea Rocket Chapter Meeting was adjourned at 7:30 pm 1.5 Hrs

## Guest Speaker – Arlene Perez-Garrido on "How Florida Places got their names."

Arlene highlighted a few of the 445 place names found in S Florida. Understanding where their names are derived from, provides insight into historical distribution of flora, fauna and natural ecosystems such as Mahogany Hammock & Buttonwood keys. Names also give us historical uses (Hospital Key) or commemorate events as Bradley key named after the Audubon's 1st warden who was murdered by poachers he encountered there. Some site's name are anecdotal - Hell's Bay got its moniker from of the Everglade's first rangers who stated 'it's hell to get into and hell to get out of.'

November 15th's speaker: Tim Kozusko "Prescribed Fire"

# Ancient cycads found to be pre-adapted to grow in groves

Credit: Courtesy of John Hall

Fossil cycads are recorded from 280 million years ago around the time coniferous forests first arose. The ecological distribution pattern of many living cycads today suggests they have limited and ineffectual seed dispersal. For example, Macrozamia miquelii, a cycad endemic to Australia, is found in highly clumped, dense, numbers, where it dominates the understory. Moreover, large areas of seemingly suitable habitat often separate populations from each other. These patterns suggest that few to none of the seeds are being dispersed large distances away from parent plants, one of the long-standing tenets of the advantages of seed dispersal.


John Hall and Gimme Walter (University of Queensland, Australia) were interested in determining whether the seed dispersal and seedling distribution pattern of M. miquelii might indicate that it is maladapted to its current dispersersnotes Hall. " when it comes to plants, there is a bit of a subconscious assumption that the purpose of seed dispersal is to simply spread seeds as far and as evenly as possible across the broadest possible area."

"The large, heavy and poisonous seeds, surrounded by a fleshy and non-toxic fruit-like layer, seem well adapted to being occasionally swallowed whole en masse by megafauna, which would then pass the many seeds simultaneously at a new location: the genesis of a new grove."

Female cycads produce one to two cones that contain multiple, large seeds, each covered with a thin outer fleshy sarcotesta. By tagging ten large seeds from the single cone of 12 plants, the authors were able to track how many of the seeds were removed from the parent cycad and how far the seeds were dispersed.

They found that within three months virtually all of the seeds had their sarcostesta eaten -- primarily by brushtailed opposums, which scrape the flesh off and discard the large seeds. However, almost all (97%) of the tagged seeds that the authors recovered had been moved less than one meter away; only a few were moved beyond the vicinity of the parent plant and in all cases they were found less than 5 meters away.

Moreover, although most of the seeds ended up under the parent cycad, almost no seedlings were found within a 1.5 m radius of adult cycads, suggesting that most seeds within the vicinity of the parent perish.

These patterns suggest that despite their large seed size, the primary dispersers of these cycads today are smaller bodied animals; these animals do not spread the seeds far and wide, nor take them to potentially new colonizable habitats," posits Hall.

"We argue that the answer to this question is that that cycad plants are all born either male or female, and rely completely on host specific insect pollinators -- so a lone cycad that dispersed a long way from others of its kind would probably be disadvantaged rather than advantaged in terms of reproduction.

Thus, if cycads evolved to be dispersed by large-bodied frugivores, these animals would most likely have deposited many cycads seeds in their dung at once, and thus these plants may be adapted to grow in groves -- an aspect that plays to their favor today, despite the loss of these megafauna dispersers.

"There's no doubt that cycad ancestors were contemporary with herbivorous dinosaurs for many hundreds of millions of years, so it's plausible that cycad seed dispersal ecology and "colony forming" behavior may be extremely ancient, and echo the ecology of dinosaur-plant interaction" he concludes.

Story Source: Materials provided by American Journal of Botany. ~

## Call for Research Track Papers and Poster Presentations at the 2018 Conference

The Florida Native Plant Society Annual Conference will be held at the Miccosukee Resort in Miami, Florida (500 S.W. 177th Avenue, Miami, FL 33194), May 17-20, 2018. The Research Track of the Conference will include presented papers and a poster session on Friday May 18 and Saturday May 19.

Researchers are invited to submit abstracts on research related to native plants and plant communities of Florida including preservation, conservation, and restoration. Presentations are planned to be 20 minutes in total length (15 min. presentation, 5 min. questions).

Abstracts of not more than 200 words should be submitted as a MS Word file by email to Paul A. Schmalzer paul.a.schmalzer@nasa.gov by February 1, 2018. Include title, affiliation, and address. Indicate whether you will be presenting a paper or poster.~

## Atlas of Florida Plants
## a treasure trove of info

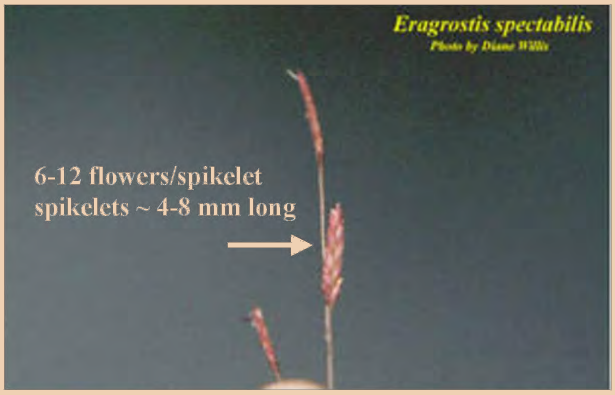
Trying to identify that wildflower you found in your yard or on a field trip? The USF Atlas of Florida Plants is a terrific source of native wildflower and plant information where you can dig into a treasure of images and specimens, and it's just a few mouse clicks away.

If your goal is to draw in specific birds using native plants try the Audubon native plants database.

The FNPS site can help you find the right plant for the right place. Finding the right plant for your site is the best formula for gardening success.~

Greg Hendricks, a Sea Rocket member, and Master Naturalist was explaining to me the difference between two different lovegrass varieties (Eragrostis) spectabilis and elliottii. In far less than a thousand words the photos tell it all. Enough said. ~

**Purple Lovegrass**


**Elliott's Lovegrass**


# Community Corner

*News for and about your Chapter*

# Your Board of Directors Working for YOU!

## Dr. Paul, Dave, Janina, Armand, Madeline

### From the Desk of the Editor and Chief

I will be stepping down as Editor of the Sea Rocket newsletter after elections in February 2018. Sea Rocket is still looking for that special person to step in and edit this Newsletter. I will be applying past knowledge and learning new things from Master Gardeners in the Master Gardener program. I have had a lot of fun and learned a lot of things as editor and will miss the challenge, but a new challenge has arisen that I need to pour myself into.

**If you are interested, contact**

**brevcracker@gmail.com**

### Forest Festival and Native Plant Sale

We sold 214 Plants and made $1,072. Enchanted Forest counted over 1006 people at this years Forest Festival. **This was the best sale we have had since records have been kept**. We had two food trucks, an Italian Ice vendor. Long lines there. And a Taco truck. They sold out. Major good day for all. The weather was good with no rain. We had a breeze that kept things temperate.

Sea Rocket had our first string both selling and recording. The Sea Rocket Board wants to thank our volunteers for their support and help. Board Members were; Lois, Madeline, Dave, and Armand.

Non board members were **Matthew Heyden**, **Lora Losi**, **Marlys Breckle**, **Jill and Jeff Whitson** and sons, **Jonathon and Jason**, and **Sandi Bandieri** . It is volunteers like these that made the day the best yet. Thank you all for the time given and the work done.~

## Feds grant endangered species protection to four Florida plants

Tampa Bay Times

The U.S. Fish and Wildlife Service announced Thursday it will grant Endangered Species Act protection to four rare Florida plants found nowhere else.

Two shrubs, the Everglades bully (***Sideroxylon reclinatum Michx.)*** and the Florida pineland crabgrass *(Digitaria pauciflora),* as well as an herb, the pineland sandmat *(Chamaesyce deltoidea pinetorum),* are being listed as threatened. species. Another shrub, the Florida prairie-clover ((*Dalea carthagenensis* (Jacq.), is being listed as endangered.

"The risk of extinction is high for these plants, now or within the foreseeable future, because the populations are small, isolated and have limited to no potential for recolonization," said Mike Oetker, acting regional director of the agency's Southeast Region office in Atlanta.

One of them, the Everglades bully, faces a more immediate threat: It grows on Everglades pine rocklands where the Coral Reef Commons development project is planned for construction. the land is part of the last, largest intact tract of pine rockland outside Everglades National Park -- a sliver of forest that once covered about 185,000 acres between Florida City and Miami.

The listing of the plant won't stop the development because, unlike with animals, there's no law against harming or killing endangered plants on private property.~


Florida Prairie Clover (*Dalea carthagenensis* (Jacq.)

## American Hornbeam

Carpinus caroliniana

There is a lot to like about this 30-foot tree. Although the hornbeam is considered a slow grower, it is worth the time to see it grow. It has a dense oval crown with an interesting trunk. The hornbeam does bloom with orange or yellow flower, but the flower is not showy, nor are the fruits. It is reported to attract birds. I would also imagine that birds would find nesting possibilities within its branches.

The hornbeam can be planted just about anywhere. It will prosper in full sun and is tolerant of shade. Although the hornbeam is tolerant of most Florida soils types, it will not prosper in a scrub environment. It will take an occasional soaking in a well-drained soil. This multi-trunked tree can be made into a single trunk without damage. It can even be bonsaied.

Summer color is full green crown with an interesting trunk. The hornbeam is not considered a "dirty" tree. The leaves, the fruit, the bark, even the roots are not known to be troublesome.

Winter color is delightful. The hornbeam has color in the winter and will highlight your property in Fall. The tree is deciduous, but the leaf fall is not reported to be a mess.

Winter color is a combination of things, length of day, temperature, and the amount of water during the summer. A healthy tree will make a lot of sugars. All these things in the right proportion will give all the color a tree can offer.~

http://edis.ifas.ufl.edu/st120

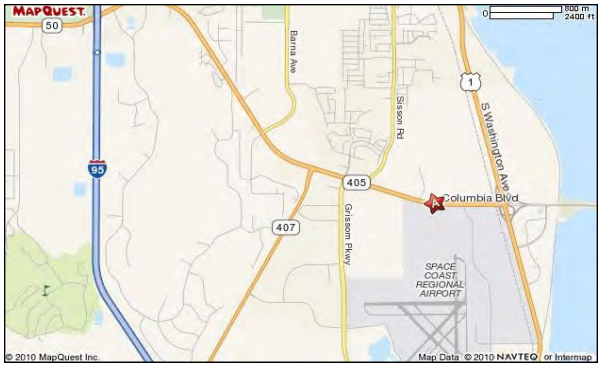
**The Enchanted Forest Sanctuary Education Center**
444 Columbia Blvd, Titusville, FL 32780 321-264-5185

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**


# Plant molecules stop worker bees from ascending throne

A bee who has just finished making some bee bread, which contains plant microRNA that will affect the development of the larvae who eat it.
MARK HORTON PHOTOGRAPHY /

Gene-regulating microRNA from plants may help to determine whether a female bee ends up as a queen or a worker, writes Dyani Lewis.

**You are what you eat** – especially if you're a female honeybee. Whereas a larval diet of royal jelly will land you on the throne for a few years, one without is a ticket to a brief life of worker drudgery.

But a new study suggests that royal jelly – a glandular secretion rich in protein, sugars and fatty acids that are produced by workers – isn't the only essential ingredient to seal female bees' fate.

Plant molecules that tinker with the developmental programs of bee larvae could also be playing a role, according to the study published in *PLoS Genetics*.

The molecules – tiny stretches of RNA, known as microRNAs – make their way into the diet of larvae destined to be workers as components of the pollen and honey combo 'beebread' they are fed. The team found that beebread was particularly rich in plant microRNAs.

microRNAs are known regulators of gene function, able to dial down the activity of a target gene. In this case, the authors suggest, the microRNAs could be regulating genes across the divide between the plant and animal kingdoms.

"Plant microRNAs in beebread inhibits ovary and bee development, and they become worker bees," says Nanjing University's Chen-Yu Zhang, a senior author on the paper.

*DYANI LEWIS is a freelance science journalist based in Hobart, Australia.~*