Sea Rocket

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

November 2016

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

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Treasurer
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Education/Outreach

Vacant

Nursery
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Paul Schmalzer, PhD
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Newsletter
David Humphrey
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Hospitality
Armand De Filippo
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The "Friends of the Enchanted Forest" Welcomes Sea Rocket members to our November Joint meeting.

The meeting will be held at the Enchanted Forest Sanctuary

On November the 19th, 2016
At 2 PM to 4PM

We will be shown pictures taken in the Enchanted Forest by the Photography club
Presented by: David Sime,
President of the Photography Club.

Not taken at the Enchanted Forest, in Titusville.

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 Wednesday: **FNPS Sea Rocket Chapter Nursery Workday—9am-12noon,** email Lois at lois6459@att.net for further info and schedule.

November 2 **FTA Hike - Sebastian River Buffer Preserve** - meet at Sams Discount Club at 4255 West New Haven in Melbourne at 8:30 am.

November 9 **FTA Hike - Sandhills Conservation Area** - meet at Lone Cabbage Fish Camp on Hwy 520 and the St. Johns River at 8:30 am.

November 11 **Merritt Island Nation Wildlife Refuge (MINWR) is fee free for Veterans Day.**

November 12 **Enchanted Forest Gardening Day**. Starts at 9:00 am. Sea Rocket will clean uo the butterfly gardens, pull weeds and just general maintenance of the butterfly gardens.

November 16 **Lunch with Nature Guest Speaker Series**. Starts at noon. Bring a brown bag lunch and enjoy a special presentation at the Enchanted Forest. This month we have Julie Albert of the Marine Resource Council speaking on "Saving Florida's Right Whales

November 16 **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 19 **Sea Rocket will be joining The Friends of Enchanted Forest for their monthly meeting**. Sea Rocket usually meets on the 4 Wednesday, but due to Thanksgiving holiday on the 24th we have been moving our meeting up one week and join the "Friends" in their meeting.

November 23 **FTA Hike - Salt Lake**- meet at West entrance of Lowe's parking lot at I-95 and Hwy 50 in Titusville at 8:30 am.

November 24 **MINWR visitor Center is closed for Thanksgiving Day,** but Driving and Hiking trails are open sunrise to sunset.

November 30 **FTA Hike - Econ River Loop Trail** - meet at Lone Cabbage Fish Camp on Hwy 520 and the St. Johns River at 8:30 am. $2.00 per person entry fee applies.

PLANNING AHEAD

December 11 **Sea Rocket Annual Christmas Banquet.** This year at Dixie Crossroads. The party starts at 6:00 PM. Order off the menu, with FREE Krabby Bite Appetizer. Dixie Crossroads menu is on line at Dixiecrossroads.com There will be more information following.
RSVP by December 2nd to Armanddf@rcn.com, or call 321-289-4102.

February 21 thru 26 2017—Mexico Migration of the Monarch Butterflies. This trip takes you on a guided tour into the middle of one of nature's most amazing phenomena, the migration of the monarchs.
Trip planning by Banner Tours & Travel, LLC. For full information and travel package contact Bannertoursandtravel@gmail.com or call (603) 785-2088

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 10-26-16

Board Members present: Lois, Armand, Dave, Paul
Welcome and Call to Order: 6.58pm

BUSINESS:

Approval of June General Meeting Minutes as printed in July newsletter**:** Approved, no comment

Treasurer Report: Madeline Klinko, $2952.81 checking; $2501.04 saving, $5453.85 total
EFS Harvest Festival $205

Refreshments – Armand De Filippo, David Humphrey – Thank you for providing these snacks for our enjoyment.

ANNOUNCEMENTS:
October 29th, Hike – Dicerandra Scrub – Dr. Paul Schmalzer
December 3rd – Scottsmoor Flatwoods Sanctuary - 9:00am Dr. Paul Schmalzer

Newsletter: David Humphrey, Newsletter Chair, is accepting articles, photos, questions or other member ideas to be published in our newsletter. Deadline for submittal is the 25th of each month.

The FANN publication "Guide for Real Florida Gardeners" are available through Sea Rocket

EVENTS:
November –
11/12 Sat. at 9am EFS garden day. All are welcome to feel the warmth of clean soil.
11/10 -13 Native Rhythms Festival in Wickham Park, Melbourne.
11/19 Saturday at 2:00pm, joint meeting with Friends of The Enchanted Forest Sanctuary
12/11 Sea Rocket Chapter Annual Holiday Dinner at Dixie Crossroads Seafood Restaurant

BOD meeting – Nov 8 @ New York, New York in Titusville starting at 5:30

OTHER ANNOUNCEMENTS: Chapter elections coming up February 2017. There are several positions that need to be filled. Open position on the Board will be;
Vice President,
Chapter Representative
Membership Chair
Education / Outreach Chair
All other positions accepting nominations

FNPS Sea Rocket Chapter Meeting was adjourned at 7:13 pm

Guest Speaker – Captain Ron Thorstad

Captain Ron has an amazing list of accomplishment. I will summarize by saying he is a master of both Air and Sea. Capt. Ron is a gifted speaker and both educated the Sea Rocket audience and entertained us on the history of the Cape Canaveral Lighthouse. Excellent story telling skills on a deeply historical landmark, right here in our own backyard. To plan a tour of the lighthouse call (321) 453-3994 or go online to http://www.canaverallighthouse.com/ ~

Aedes aegypti mosquito

An Ecology-Based View of Mosquitoes in Bromeliads

Dr. J Howard Frank, Professor Emeritus, University of Florida

Summary: ***Wyeomyia* mosquito females prefer to lay their eggs in pale green bromeliads and their immature stages represent 98.8% of all mosquitoes in a typical bromeliad in urban habitats in southern Florida. *Aedes aegypti* females (vectors of dengue, Chikungunya, Zika, and yellow fever) prefer to lay their eggs in black containers of water (think scrap tires and saucers under plant pots). *Wyeomyia* are highly adapted to life in water in bromeliad axils: under conditions of intense competition with *Wyeomyia* in bromeliads, *Aedes aegypti* larvae die. If you think you need to reduce numbers of mosquito larvae in your bromeliads, prefer to use pressure from a garden hose with a suitable nozzle to wash out nutrients (thus starving the mosquito larvae even more) and maybe wash out some of the mosquitoes themselves. Keep the water in your bromeliad leaf axils so clean that you would be prepared to drink it.**

DISCUSSION

In nature in Florida: A few native epiphytic bromeliad species impound rainwater in their leaf axils. The northern limit of their distribution is a line roughly between Volusia County and Hillsborough County. Immature stages of two species of the mosquito genus *Wyeomyia* often inhabit these water-filled leaf axils. The life cycle of all mosquitoes is ADULT-EGG-LARVA (4 larval growth stages [sizes])-PUPA-ADULT. Adult females of these mosquitoes will bite people and rabbits, but do not transmit any disease to people. They bite in daylight hours, peaking in late afternoon, not at night. You may encounter *Wyeomyia* mosquitoes in many state parks, and perhaps also in your own yard. Occasionally an interloping mosquito, *Toxorhynchites rutilus*, lays eggs into these leaf axils, but it normally inhabits dark water-filled rot-holes in trees. Unlike other mosquitoes, its adult females do not bite; instead its larvae gain their protein by feeding on pest mosquito larvae!

How do *Wyeomyia* mosquitoes live? Adult females take blood; males and females drink plant nectars. Eggs and pupae do not feed. Dead leaves and twigs and seeds from the tree above fall into the leaf axils, especially during hard rain which adds leachates from the tree canopy and, on breakdown by minute bacteria and fungi, provides food to the bromeliad and to mosquito larvae. Larvae filter-feed on these resources. Typically the water is very clear because the *Wyeomyia* larvae and bromeliad remove nutrients – so clear that it was used for drinking water by early explorers (it would hurt nobody to drink water with some mosquito larvae). Very many *Wyeomyia* mosquito larvae die due to competition with each other for food (shown by University of Florida laboratory experiments).

Now we grow exotic bromeliads in Florida, so what is the difference? In 1978-1979, a University of Florida survey was conducted in four urban areas of Florida, of mosquito immatures in exotic bromeliads planted in the ground. The reason was the spread of Dengue fever types II, III, and IV, transmitted by the mosquito *Aedes aegypti* in the Caribbean, a threat to Florida. The question was: what is the prevalence of *Aedes aegypti* in exotic bromeliads? To answer the question, the apparently commonest bromeliad in urban areas, *Billbergia pyramidalis*, was surveyed. Cities surveyed included the Daytona Beach area, Tampa, Vero Beach, and Miami, in collaboration with local Mosquito Control Districts.

(Continued next page)

(DISCUSSION continued)

The result was that 98.8% of all the mosquito immatures were *Wyeomyia,* which do not transmit any diseases to humans; less than half of 1% were *Aedes aegypti* , and about 0.7 % *Culex quinquefasciatus*, both of which were interlopers in a bromeliad habitat that had been taken over by native Wye*omyia* mosquitoes. This suggested that *Aedes aegypti* were but a trivial component of mosquitoes in *Billbergia pyramidalis* bromeliads. Furthermore, the numbers of immature mosquitoes present do not show the **outcome** of extreme competition among mosquito larvae – which is shown only by numbers of mosquito pupae (or emergent adults). The numbers of *Aedes aegypti* surviving to the pupal and adult stage in bromeliad leaf axils is effectively zero (0%).

Hysteria due to the presence of Zika virus in Florida. Belatedly in 2016, some people have realized that mosquito larvae occur in bromeliad leaf axils in Miami. Apparently they do not realize that studies on the subject were performed in 1978-1979, much less the results of that study. Their whistle-blowing is inappropriate except in the special circumstance that people have allowed the pollution of the water in bromeliad leaf axils. What pollution?

1. **do not** allow grass clippings from a lawnmower to get into the bromeliads. These clippings rot and enrich the wa-ter, making it appropriate for *Aedes* and *Culex* mosquitoes.
2. **do not** allow the flowers of *Neoregelia* bromeliads to decompose in the water for the same reason. For ease of maintenance, it is best not to grow masses of close-packed *Neoregelia*.
3. **do not** use the insect growth regulator methoprene (sold as brand name Altosid) nor the bacterium *Bacillus thuringiensis* **serovar** *israelensis* (sold under at least two brand names) because it kills all mosquito larvae, including the beneficial *Wyeomyia* as well as the bad ones such as *Aedes* and *Culex* mosquitoes and the dead bodies of the mosquito larvae they kill will rot and eventually will provide nutrient to living *Aedes* and *Culex* mosquitoes.

A Special thanks to Dr. Teresa Cooper for providing this information for us ~

How does autumn color happen?

For years, scientists have worked to understand the changes that happen to trees and shrubs in the autumn. Three factors influence autumn leaf color-

1. **length of night**
2. **leaf pigments,**
3. **and weather,**

but not quite in the way we think. The timing of color change are primarily regulated by increasing length of night. As nights grow longer and cooler, biochemical processes in the leaf begin to paint the landscape with Nature's autumn palette.

Jack Frost really has little to do with it.

Where do autumn colors come from?

A color palette needs pigments, and there are three types that are involved in autumn color. During the growing season,

- **chlorophyll** is continually being produced and broken down and leaves appear green. As the length of night increases in the autumn, chlorophyll production slows down and then stops and eventually all the chlorophyll is destroyed.
- **carotenoids** *(Carotenoids, or tetraterpenoids, are organic pigments that are found in the chloroplasts and chromoplasts of plants)*
- **anthocyanins** (*Anthocyanins are water-soluble pigments that may appear red, purple, or blue depending on the pH*) that are present in the leaf are then unmasked and show their colors.

A succession of warm, sunny days and cool, crisp but not freezing nights seems to bring about the most spectacular color displays. During these days, lots of sugars are produced in the leaf but the cool nights and the gradual closing of veins going into the leaf prevent these sugars from moving out. These conditions, lots of sugar and lots of light,spur production of the brilliant anthocyanin pigments, which tint reds, purples, and crimson. Because carotenoids are always present in leaves, the yellow and gold colors remain fairly constant from year to year.

The amount of moisture in the soil also affects autumn colors. A late spring, or a severe summer drought, can delay the onset of fall color by weeks. A warm period during fall will also lower the intensity of autumn colors. A warm wet spring, favorable summer weather, and warm sunny fall days with cool nights should produce the most brilliant autumn colors. ~

http://na.fs.fed.us/fhp/pubs/leaves/leaves.shtm

How to Replant a Young Uprooted Tree

By: Bill Klein

Big Trees Doomed

If winds have uprooted a large old tree, the tree generally can't be saved and removal is your only option. Righting a large toppled tree would require heavy equipment to lift the tree. Big trees rarely survive after being righted because of the loss of roots that nourish the tree.

Corrective Strategies

Replanting an uprooted tree is often more difficult than simply planting one from scratch. Ideally, enough of the root system will be intact to give the tree a fighting chance. If the tree has a good crown of leaves, this will help the plant create food during the days immediately following replanting. The tree will need every leaf it has, so only prune dead or damaged branches.

The immediate corrective strategy focuses on replanting the exposed roots, as these start to lose moisture rapidly upon air exposure, leading to tissue death in the roots. **The roots are very delicate and need to be covered as soon as possible. The dirt should be watered to keep the roots moist in order to prevent the roots suffering even more damage from wind and sun exposure.** Something as simple as covering the roots with a black polythene sheeting will go a long way in helping to protect them if they can not be adequately covered with moist earth..

Start replanting by shoveling out a space under the root ball to allow the tree to fall back in place. **Make sure you plant the tree a little deeper if possible, particularly if the tree was uprooted because the hole was too shallow to begin with.** Prune away any broken roots. Tie a rope or chain around the tree, with rope or padding underneath to avoid damaging the bark, and pull the tree upright. Dig out some of the soil around the roots, but be careful not to do any additional damage. When you refill the hole, be careful not to damage any of the roots. Rapid soil drainage is normal for our sandy soil. Use existing soil to fill the planting hole. Break the soil up and sprinkle it back into place gently. Add water as you fill the hole then water to settle the soil around plant roots to eliminate any air spaces around the roots. These air spaces will allow the roots to dry out and die. Form a water basin about 3 to 4 feet in diameter around the tree and 1 to 2 inches deep to hold water when watering, also add mulch to the basin and pull it back 3 to 4 inches from the trunk to prevent damage to the trunk. It is critical that plants are watered well at planting time.

Pruning and Care Until Tree is established

The tree will likely show signs of distress, so make sure you check on it often. The tree will need to be watered as needed (maybe weekly if there is no rain) for several months until it develops roots into the surrounding soil.

The tree will also need the props for several months, since it will not be able to support itself until it has had a chance to grow new roots.

Be prepared to prune any dead or damaged branches. The tree will need every leaf it has, so only remove the damaged branches without leaves. If the tree has new buds opening you will have to decide whether or not to allow them to open. The energy drain on the tree could be enough to cause the replant to fail.

After the tree has been established prune the tree to lighten the crown and branches in order to decrease the load and stress on the roots. This also helps to decrease resistance to high winds. Though it's best to prune during winter when trees are dormant, selective pruning or thinning such as this is OK any time of the year, and it may be necessary to save the fallen tree. Mulch the trees and provide adequate moisture and fertilizer to help it establish and grow. The presence of new foliage and stems indicate healing and root growth.

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How to Replant a Young Uprooted Tree (continued)

Why Trees Topple

Strong winds topple trees that don't have a healthy, well-developed root system to anchor them in place. Contrary to popular belief, most tree species don't have big deep tap roots directly beneath the trunk. Instead, trees have shallow anchor roots radiating out from the trunk. The anchor root system consists of perennial woody roots that grow out horizontally in the top foot of soil, and perennial vertical anchor roots descending a couple feet or more into the soil from the horizontal roots. Short feeder roots grow out from the perennial anchoring roots to collect water and nutrients for the tree. The root system radiates out from the tree for a distance about equal to the tree's height.

How To Replant a Young Uprooted Oak Tree
Do It Yourself
http://www.doityourself.com/stry/how-to-replant-a-young-uprooted-oak-tree

Can an Uprooted Tree Be Replanted?
By Herb Kirchhoff
http://www.ehow.com/info_8486617_can-uprooted-tree-replanted.html

Coming Soon to Central Florida

The FNPS Conference Committee and participating chapters are planning a first-of-its-kind even in central Florida.

May 18-21, 2017

Theme: Connections: Above and Below

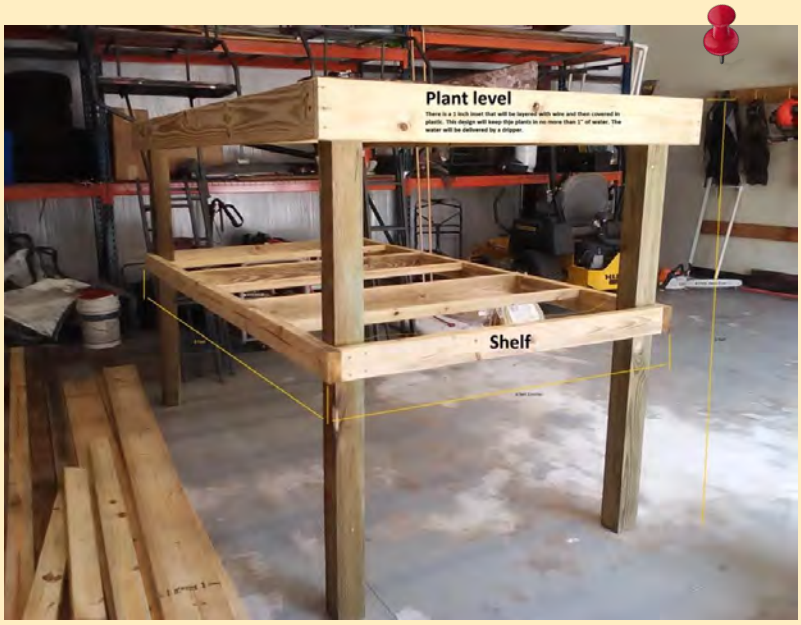
The venue will be the Westgate River Ranch Resort. This upscale resort is in the heart of Florida, just of SR 60 south of Lake Kissimmee. The area has many, many field trip opportunities most of which will be new to the Conference.
Click here for more information on the venue

Sea Rocket Rocks!

We may not be meeting in the summer, but Sea Rocket never rests. We have Jim Slone volunteering time to put in a fence at the South Lake Recreation Area.

Sea Rocket is on the move.

Then there is the KBB "Keep Brevard Beautiful award, that was applied for and approved. The sign was made from scrap pallets, and finished by the local Boy Scouts.



The nursery, our biggest money maker that supports many of our other activities, has had a hard time of it. What with high salt levels in the old well. Thankfully, the new well has very little salt, but has a high iron content. The iron coats the leaves and cuts off photosynthesis. So your board of Directors decided to change the watering method, from overhead spraying to watering from underneath the plant. This is the first proto type table. It will be sunk 2 feet in the ground and water will be supplied to the top plant level via a micro drip system. Only the root will be in the water and then only an inch or so deep. The plant will drink freely from the bottom of the pot of salt free water, while the leaves will remain free of iron stain and can block out the life giving sunshine.

CALL FOR RESEARCH TRACK PAPERS & POSTER PRESENTATIONS.
FLORIDA NATIVE PLANT SOCIETY
2017 CONFERENCE.

The Florida Native Plant Society Annual Conference will be held in Westgate River Ranch Resort, River Ranch, Florida, **May 17-21, 2017**. The Research Track of the Conference will include presented papers and a poster session on Friday May 19 and Saturday May 20.

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, 2017.** Include title, affiliation, and address. Indicate whether you will be presenting a paper or poster. ~

18 schools receive plants for wildflower gardens

Wildflowers are popping up on campuses throughout Florida, thanks to the Foundation's Seedlings for Schools program. Teachers applied for the grants last May and received their plants in late September, just in time to use their gardens in class lessons and activities. Grant recipients included elementary, charter, middle and Montessori schools. Brevard County is represented by two schools:

- **Sea Park Elementary, Satellite Beach**
- **St. Teresa School, Titusville**

Participating teachers will be eligible to receive more plants for their native wildflower gardens after completing a satisfactory grant report.

Fall is a great time to sow wildflower seeds

Thanksgiving Day is a national holiday. **It was originally celebrated as a day of giving thanks for the blessing of the harvest and of the preceding year.** Local boosters in Virginia, **Florida**, and Texas promote their own colonists, who (like many people getting off a boat) gave thanks for setting foot again on dry land. Thanksgiving was proclaimed a federal holiday by congress in 1941. ~

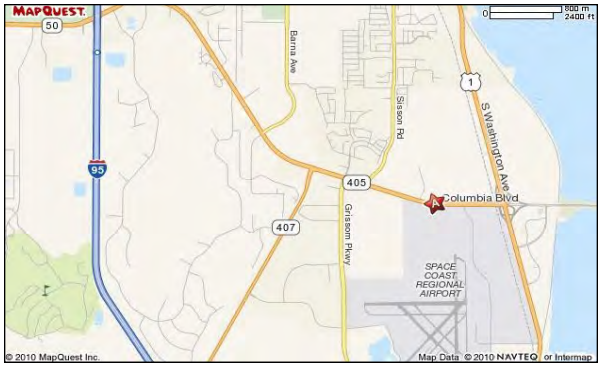
The Enchanted Forest Sanctuary Education Center
444 Columbia Blvd, Titusville, FL 32780 321-264-5185

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

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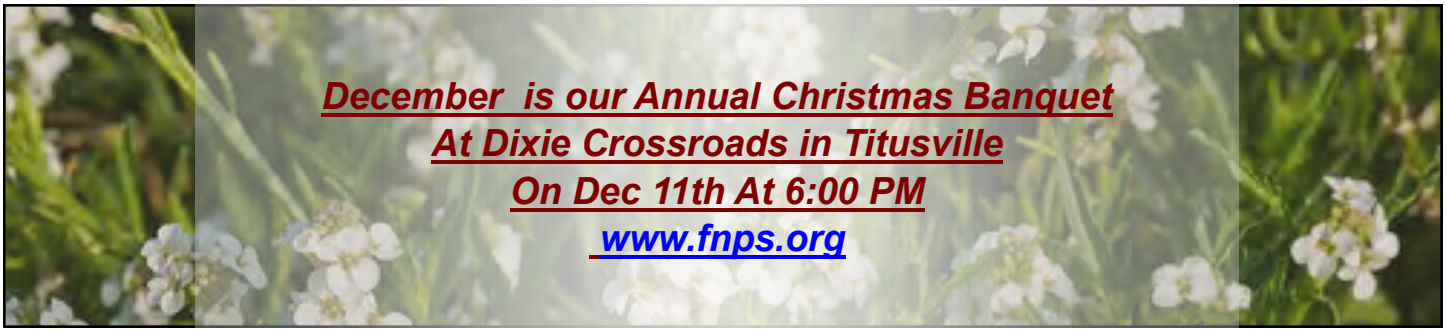
Phone: 321-271-6702; Fax: 321-951-1941; Email: Info@fnps.org/www.fnps.org
Sea Rocket Chapter mailing address: 444 Columbia Blvd, Titusville, FL 32780



Sea Rocket Chapter
444 Columbia Blvd,
Titusville, FL 32780

GO GREEN! **RECEIVE YOUR NEWSLETTER VIA EMAIL AND SAVE SOME GREEN!** ***GO GREEN!***