A Message from the President

Development: Does it have to be Nature’s Enemy?

This sounds like a heavy topic for my message, and it is, but I think worthwhile to bring up and keep in mind as Native Plant enthusiasts. Pasco County is developing so fast that sometimes it seems we are out of control. Every time you drive on any main road there is more construction. With a thousand people a day moving into Florida there does have to be development but most of these developments are created without the least concern for Nature. Pasco County land management officials fought for years to get a narrow corridor protected for wildlife. It should not be so difficult.

That is why we are a very important organization. Not just because we love native plants and wildlife, but as a group we should be able to make some impact in how the county grows. As a chapter, and as individuals, we do have some influence on decisions. We vote! And we attend county meetings to express our views.

What else can we do?

Education and Publicity

We can put some effort into influencing the developers and landscapers. FNPS is urging the chapters to start making brochures to pass to companies involved in development that educate them on the use of native plants and wildlife corridors. We know that property and homes are more valuable if they have a conservation area nearby.

As a chapter, we can give scholarships to college students studying this subject. Does USF have courses for landscapers about the benefits of landscaping using na-
Meetings/Programs

Cogongrass Treatment Cost-Share Program

Speaker: Mona Neville Pasco County Forester September 12

Cogongrass is an invasive, non-native grass which occurs in Florida and several other southeastern states. It is considered to be one of the "Top 10 Worst Weeds in the World". The Cogongrass Treatment Cost-Share Program’s primary objective is to reduce the spread of cogongrass to new areas by helping private landowners control or eradicate existing infestations.

Speaker Bio: Mona Neville grew up in Wesley Chapel, graduated from Land O’ Lakes High School and received her bachelor’s degree in forestry management from the University of Florida. She began her career with the Florida Forest Service Withlacoochee Forestry Center, as a state lands forester. In January 2016 she had the chance to return to her roots and became the forester for Pasco County, stationed in the forest service’s Dade City office.

Native Plants 101

Speaker: Mary Ellen Gotto October 10

Mary Ellen will define what a native plant is and why we should use them. This includes conservation of natural resources (water, soil) and the importance of native plants to wildlife. She will talk about purchasing and planting native plants and container gardening for those who are unable to "get down" and dig in the soil. There will be photos of her plants and handouts.

Speaker Bio: Mary Ellen moved to Florida in 2009 and, never having heard of native plants, became very frustrated about not being able to grow what she wanted. Sandy Vanno, a friend in her community, brought Mary Ellen to a Nature Coast Chapter meeting and after a few meetings, she was completely hooked. Even though she lives in a deed restricted community she has probably close to 100 species of native plants on a quarter acre lot. In 2015 her yard received a FNPS Native Landscape Award at the FNPS Conference.

To suggest a program contact Pat Kelly at (352) 588-0266 or patriciak03@gmail.com

Thank you

For bringing refreshments to the July meeting!

Joni Hartzler
Gary Krotz
La Verne Wampler
James Bright
Mary Ellen Gotto

The Nature Coastline
Field Trips

Saturday, September 16
Starkey Wilderness Park
10500 Wilderness Park Blvd
New Port Richey, FL 34655
9 AM

Meet at the horse corral which is down the unpaved road on the right after passing the kiosk. This is the same road that the camping area is located. Bring water and snacks.

Leader: Gail Parsons  813-928-1412 cell
gailpar1@verizon.net

Saturday, October 14
Little Gator Creek Environmental Area & WMA
No address - located on SR 471 a little more than 3 miles north of US 98 (Green Swamp area). Entrance on left side (west) going north on 471.
3 PM

NOTE the above time. We will be looking for an endangered plant that goes by the common name of the Happy Hour Flower, at least that’s one common name. It only blooms in the fall in late afternoon. That’s all the hints given out in this newsletter. Bring water and snacks.

Leader: Gail Parsons  813-928-1412 cell
gailpar1@verizon.net

Heartwood Preserve
Talk & Tour
By Karen P. Watrous

Heartwood Preserve natural cemetery and conservation sanctuary consists of 41 acres adjacent to Jay B. Starkey Wilderness Park. Located on the former Starkey Ranch, this land was not cleared for agricultural use during its time as part of the ranch. Laura Starkey, a member of our Native Plant Society, operates Heartwood and gave Nature Coast Chapter a tour as our January field trip.

Each month, Heartwood Preserve hosts a public “Talk & Tour” through the Preserve. July’s walk was titled “What’s in Bloom.” Along with Laura Starkey and Diana Sayegh, we took a hike through the grounds to locate and identify native plants.

Natural Communities
Heartwood Preserve contains two natural communities – longleaf pine flatwoods and a cypress dome wetland.

Pine flatwoods are flat with sandy, acidic soil. Drainage can be poor, because there is often a hardpan layer of clay under the soil. Pine flatwoods have a canopy of pine trees, an understory of low shrubs, and a groundcover of herbaceous plants. More than one species of pine trees may be present in a flatwoods, but generally only one is dominant, and this is often reflected in the name (i.e. Heartwood is a longleaf pine flatwoods).

A cypress dome wetland is also present in the Preserve. A dome swamp or wetland is a shallow depression that has accumulated peat. It is seasonally inundated with water, but may have year-round standing water. Pond cypress trees and wetland plants are characteristically found in dome swamps.

Fire
Pine flatwoods are dependent on wildfires to maintain their natural balance of vegetation. Naturally occur-

Next Talk & Tour:
August 24th
5:30—6:30 pm

(Continued on Page 6)
2nd Annual
Native Landscape Tour
Wesley Chapel/ San Antonio area

October 7th
10 am—3 pm

Four completely different and beautiful native landscapes, including three residential and one commercial site. Learn which native plants will work in your yard. Books, activities, and lots of educational materials. Native plants for sale.

Tickets $5

Nature Coast Chapter of the Florida Native Plant Society

Fall Native Plant Sale

October 21, 2017
10am - 2pm

Land O’Lakes Community Center
5401 Land O’Lakes Blvd/US 41, Land O’Lakes

Volunteers are needed: 8 am-3 pm for set up, outreach & breakdown. Sign up at the Chapter’s meetings September 12 & October 10 or leave a message (voice or text) for Pat Kelly (352) 424-2224 or at patriciak03@gmail.com.
What do insect eggs have to do with Sir Walter Raleigh and his cannonballs?

When one examines foliage very carefully, tiny engineering miracles abound—insect eggs that come in an astonishing array of shapes and sizes. Some, like the Spicebush Swallowtail butterfly, lay a single cannonball-shaped egg, one per Red Bay leaf. Why just one per leaf? Because when the egg hatches, the caterpillar needs the whole piece of real estate. It soon folds it over, seals it and then hides in the protective cubby during the day and emerges to feed at night. Other species like the Monarch can be voracious mini-cannibals and will eat their siblings if they share a leaf. The savvy ovipositing female knows this and keeps her Hannibal wannabes widely separated.

The Io Moth lays a small cluster of patterned eggs, as shown top right on Lyonia sp. Io caterpillars are not cannibals and in fact are gregarious, feeding in groups and marching single file to new leaves so there is no problem with eggs being laid in close proximity.

Some species take egg laying a step further and use a safety-in-numbers strategy. The densely packed cylindrical clutch of stink bug eggs on the lower left looks like a store of miniature 55-gallon drums, cemented to an arugula leaf with yellowish resin. The pic bottom right show part of a clutch of 1000 half-millimeter-sized owlet moth eggs stacked in layers bound together with tiny fiber threads on Dahoon Holly. The black critters are parasitic platygastrid wasps that inject their own even tinier eggs inside the white moth eggs in the stack. Presumably, they lay as many as possible and possibly this is why the moth eggs are densely stacked the way they are. The outer layer could be sacrificed to predators while protecting the inner layers. Only two of the 1000 moth eggs need to survive to maturity to maintain a stable population. As an aside, Platygastrid wasps have strong maternal instincts and will defend both their own eggs and those of the host moth against other predators and possibly that is what these in the image are doing.

In 1587, Sir Walter Raleigh posed a question to mathematician Thomas Harriot: “What is the most efficient way to stack cannonballs on ship?” Tom responded in math lingo with an equation, but in practical terms, all Walt had to do was to look at an array of Owlet moth eggs. Moths know the answer! They have to know because their survival depends on it. To learn more, Google “Close-packing of equal spheres” and you will be as smart as a moth!
Part of Heartwood was burned recently and the next Talk & Tour, on August 24, is titled “After the Burn.” This is an exceptional opportunity to see the natural process in action. The walk starts at 5:30 pm. Please wear closed-toe shoes and bring water. Long pants are recommended. An RSVP is appreciated: (727) 376-5111 or info@heartwoodpreserve.com


Our mission at Rosebud Continuum is to provide a place to allow people to work on and learn more about sustainable practices that can then be open sourced to any and all people, no matter their location on this earth, no matter their political or religious beliefs, no matter their age, color, or sexual orientation, because we all need the same things, clean air and clean water. We are all related.
—Mitakuye Oyasin.

The first thing you will most likely notice when arriving at the Rosebud Continuum is the two authentic tipis standing proudly in the front pasture, which were constructed and delivered to us by a member of the Great Sioux Nation, all the way from South Dakota. Rosebud Continuum has a strong connection to our indigenous first inhabitants, with the owner of the property and his children being tribal members of the Rosebud Sioux Tribe. We believe that it is time to bring indigenous voices back into community dialogue, that the earth, the water, and the animals are sacred, and it is time that we listen to the wisdom of the people that were here before us.

**Rosebud Continuum, Sustainability & Florida Native Plants**

*By: Maryann Bishop (with assistance by Craig Huegel)*

**A brief history**

Our project really began several years ago when we were visited by a SWFWMD representative looking for an invasive plant they were waging a campaign against. I don’t remember what it was as it turned out that we didn’t have any, but as he was looking around, he told me that our property was overrun with other invasives and that we should get rid of them. Like many property owners, I was clueless as to which plants were invasive and which were native. I also didn’t fully understand what the problem was with non-native plants to begin with, but wanting to do the right thing I set out to find someone who could help. You see, I believe that there are many others just like me in the community who really do care about doing what is right for nature, but we don’t even know that we should start looking, let alone where to start looking.

Together we can end the holocaust against the environment.
—Haida Gwaii Traditional Circle of Elders

On our journey into the why (why are natives so important), where (where do we find them and where do we plant them), and how (how do we know what goes where and how do we plant them) of Florida native plants, we were so very fortunate to have Dr. Craig Huegel join us to take the lead on this aspect of our project. Through his expertise and guidance, we are working toward planting a wonderful trail through different soil types and different sun exposures to provide a place for all to come and see what beauty and diversity is available in the world of the native plants of Florida. We want to educate everyone on how changing the plants in their yards can provide food and habitat for all sorts of wonderful birds, butterflies, bees, etc., PLUS reduce the need for watering and dangerous chemicals, thereby conserving our resources and saving our waterways. As we move forward, we want to be the place that not only shows people what is possible, but also the place to provide education, resources, and encouragement to let them make their own changes.

*(Continued on next page)*
The native plant component of our overall project at Rosebud Continuum is woven throughout our 19 acre lakeside property on Hale Road in Land O’ Lakes. We began with several fragments of hammock forest mostly dominated by water oaks that sloped towards our lake edge. The pasture is still used for grazing by our limited livestock and this area will be used for other aspects of our overall program as time passes. The hammock fragments and the lake edge were greatly impacted by a wide variety of invasive non-natives. Over the past year, we have aggressively removed most of these – Brazilian pepper, camphor tree, Chinese tallow, wedelia, skunkvine, rosary pea, caesarweed, Peruvian primrose willow, and cogongrass, to name the most offensive. We also removed some of the weakest water oaks to further open the canopy and increase light to our future plantings. As we got our hands around these problems, we set about planting natives.

Under Craig’s direction and the work of a great many volunteers, we have started to make our vision a reality. The wooded area near Hale Road and the entrance to our property has been planted to showcase many of the most beautiful native flowering trees and shrubs appropriate to the conditions onsite. Species such as flowering dogwood, redbud, fringe tree, flatwoods plum, and dwarf palm have been added to created a mid-canopy beneficial to birds and pollinators. Additional species of oaks have been added to the canopy to increase its diversity. Coontie and dwarf wild coffee have increased the diversity of the understory.

The wooded area on the north portion of our property was treated a bit differently, though its plantings are also designed to maximize bird and pollinator habitat. The black cherries were largely left intact, but we opened other parts of the canopy by removing some of the most interior water oaks. With more space to work with, we’ve added other canopy trees – American holly, pignut hickory, and a few tulip trees. To help screen our neighbor’s property line, we’ve planted patches of evergreen and deciduous shrubs – Walter’s and arrowwood viburnum and yaupon holly. Interspersed in the mid-canopy areas are sparkleberry and other wildlife-friendly natives.

Recently, we’ve made significant progress planting a large wildflower meadow between the entrance woods and the lake edge. We are blessed to have a gentle slope in full sun that includes mesic to hydric soil conditions. Lisa Hoefler Boing, another Pinellas Chapter member, directed much of the work in laying plastic down on this area a head of time to “cook” our weed problem and create a largely bare-soil bed in which to plant. Craig and Lisa then laid out the nearly 150 native wildflowers and grasses we’ve purchased to date and we all got our hands in the dirt to get them planted. The wildflower meadow includes the larval plants for most of the common butterflies of our region as well as many of the best nectar sources for bees, butterflies, and other pollinators. Though there are still some plants to add, and a lot of maintenance we’ll need help with, we feel we are well on our way to providing a showcase for how this can be done by others.

Rosebud Continuum is more than just native plants, it’s an eco-cooperative. As our project develops over time, we hope to showcase a wide variety of sustainable practices. We’ve already installed biodigesters that are generating biogas for cooking from food and animal waste. We’ve begun our hydroponic systems and planted edible food crops. Our bee hives are already operating and producing honey. We have expansive and exciting plans. Some of which include a shared community garden space, produce swaps, and permaculture programs for all ages. Please visit our website at www.RosebudContinuum.org as well as our Facebook page for updates. Come out and share your vision and expertise to teach us a thing or two. We are actively seeking interested volunteers with like-minded skills as we grow.

(Continued on next page)
BioGas and Our Rosebud Continuum Gardens

By Dr. TH Culhane and Enas Rahman Culhane

At the end of each day, after each dinner meal, our lived-in sustainability practice begins: we feed our kitchen scraps and leftovers to our Homebiogas digester which is located right next to the house. This starts the process of turning waste into value. And taking sustainability one step further, once a week we grind a barrel or two of donated food waste from Beef O’Brady’s restaurants in Land O Lakes, providing one meal a week for our “domestic dragons” (3 big 9-foot diameter by 9-foot-tall cement Puxin Biodigesters). After grinding the food waste mixed with water in an Insinkerator and feeding it to the dragons, we can get two products out of that “Garbage”: we get Biogas as a fuel to use for cooking and running an electrical generator and Bio Slurry or organic fertilizer (liquid compost) for our gardens. We use the slurry as the only source of NPK and micronutrients for our raised bed food production gardens, our tower gardens, banana and fruit trees and our Moringa trees and Maya breadnut trees, and we use it for our Herbs spiral garden. From time to time we use it to fertilize our native tree seedlings that are in small pots waiting to be planted in the coming few months, to make sure they won’t run out of nutrients. The big biodigesters also provide inoffensive and nutritious Clogmia fly larvae that we feed our Tilapia along with dried Moringa leaves and duckweed that we grow in recycled IBC tank portions.

In this way, living off of local organic meals at Rosebud becomes something imminently possible, particularly when you have biodigesters (biogas systems). BioGas biodigesters can always provide organic liquid compost to our garden (raised beds, tower aeroponics, Fruit and medicinal...
tree garden, Herbs gardens). Yesterday I had my whole breakfast from foods produced at the Rosebud Continuum site; I had organic eggs from our chickens, Moringa (Drumstick tree) leaves and Chaya shrub (or Tree Spinach) Cnidoscolus aconitifolius leaves that grow in the garden close the BioGas biodigesters; by observing permaculture design principles I am easily able to use the bioGas liquid fertilizer or Bio Slurry to give nutrients to them.

I had a sweet pepper and one tomato from our tower gardens which used the biogas fertilizer mixed with water to grow them, and it was so exciting to cook my meal on Biogas, the fuel provided by our Biodigesters) and make my mint tea on biogas, the mint we grow in our first permaculture design Herbs Spiral. My breakfast was proof that we can make a healthy living here at Rosebud Continuum and we can live sustainably and have food and energy security. We produce our food and make our own energy and we are planning to harvest and recycle our water. 

With my husband Dr. TH Culhane, who is a professor at Patel College Global Sustainability and founder and director of the Solar cities Biogas non-profit educational organization, we plan to live off-grid in a mobile trial house at Rosebud, using our expertise in STEAMM education (Science, Technology, Engineering, Art, Music and Math) -- essentially Imagineering and creativity, mixed with our understanding and love for BioGas based systems thinking, further integrated with wind and Solar technologies as our main sources of energy to generate our electricity. We already use Solar power at Rosebud to run air pumps that we use to grow our Tilapia fish as part of our food production sovereignty and we have solar power as a backup source of electricity for our tower gardens that use water pumps to lift the Biogas fertilizer mixed with water to keep our plants growing and alive. We also have a light run by solar power at our garden site. Solar serves us well as an emergency backup plan since we occasionally find our electricity cut off which happens sometimes here in Florida because of the thunderstorms that often hit us.

Our hope is to inspire normal folks just like us with the confidence that if we can do these things here in Rosebud, and approach sustainability at the household and community level, then you can too, from wherever you are! We are connecting the dots and putting the pieces of the sustainability puzzle in place, getting as close to an autonomous life through applied science in our Educational science and cultural center. We hope you will join us and share this exciting experience with us. 

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**Suncoast Chapter (Hillsborough County) FNPS**

Meetings are held on the 3rd Wednesday of the month at 7:00 pm at the Hillsborough County Extension Office: 5339 County Road 579, Seffner, FL 33583

**Wednesday, August 16, 2017**

Chapter Meeting: **Hillsborough County Stormwater Services**. John McGee, Manager of the Hillsborough County Public Works – Stormwater Services, will be speaking on the Stormwater Environmental Programs in Hillsborough County, including Lake and Stream Management and the Adopt-a-Pond Program.

**Wednesday, September 20, 2017**

**Snags, Woodpiles & Wildlife**

Presented by Donna Bollenbach
Botanical Name: Rudbeckia laciniata, R. heterophylla
Common Name: Cutleaf Coneflower, Cutleaf Rudbeckia, Golden Glow
Family: Asteraceae or Compositae (Daisy or Sunflower)

Type of Plant: Native erect herbaceous perennial wildflower. Often forming colonies. Self-seeding. Height: Up to 8 ft. tall, usually less. Width: Up to 4 ft.

How to Identify:
Leaves: Alternate, sessile, glabrous (smooth), variable number of ovate lobes, margins coarsely toothed to rarely entire. Stems usually glabrous, rarely with sparse pubescence (hairs), ribbed or angled. Winter rosettes of leaves.
Flowers: Showy long-stalked heads with yellow lanceolate ray florets (5 – 12 per head, – 6 cm. long) and greenish yellow disk florets. Ray florets becoming deflexed or drooping, surrounding an elongated disk. Flowering Time: Summer – Fall, July – October.
Fruit: Small (3–4 mm.) brown, 4-angled achene = one-seeded, non-splitting hard fruit.
Habitat: Moist, open hammocks and floodplains; along rivers and streams. Disturbed wet soils of pastures and ditches.

Landscape Use / Wildlife Benefit: A beautiful perennial wildflower with sharply lobed foliage much of the year and numerous large yellow flowers with greenish yellow centers in late summer and early fall. Plant in groups for best effect. Attracts butterflies and other pollinators for nectar. Also attracts many seed-eating birds.

Cultivation: Adapts well to the home landscape.
Soil: Prefers fertile, organic.
Water: Keep moist. May need irrigation during drought. Tolerates seasonally wet conditions.
Miscellaneous: Readily self-seeds.
Propagation: By seed or cuttings.
Availability: Native plant sales. See www.plantrealflorida.org!

References:
Wasowski, Sally, with Andy Wasowski, Gardening with Native Plants of the South, Dallas, Texas, Taylor Publishing Co., 1994.