Florida Native Plant Society

MANGROVE CHAPTER

President's Message: by Lois Cantwell

I am nearing the end of my term as President of our Chapter—time for someone else to take the helm. We have a wonderful collection of members from diverse backgrounds, who love the environment and what grows in it. We socialize, have fun, promote “the natives” and enjoy nature. Many of you pitch in at our meetings and events to make things happen. Surely, there is one among you who can step into a leadership role and keep our Mangrove Chapter moving forward. You do not have to be a full-timer to qualify for this position. Your Vice President will preside over the summer BOD meetings if you are out of state. As Immediate Past President, I will continue to “wear several hats” in that capacity, so our new President can focus on the job description in our bylaws, which includes presiding at meetings, making reports to members, general supervision of chapter affairs, and acting as our official spokesperson. (My shoe size is somewhere between 8 and 9, so there is plenty of room there for someone to step in).

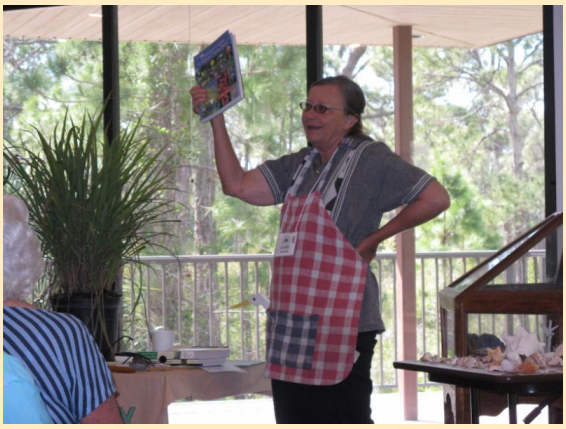
Please Welcome New Member

Please Welcome New Members: Linda Reimer, Venice; Anne Risberg, Venice; Zachary Wierzba, Sarasota

Report from Plant Native Day March 9, 2019

The ingredients for a major success were all there: perfect weather, great program, everyone pitching in to make sure our attendees had a positive experience, and having fun all at the same time. And we had three different “plant sales” going on all at once that took in over $1300! Our educational program on creating shady gardens with native plants reached at least 85 people, and we estimated a total of 130 attendees. Laurel Schiller put on her usual “clinic”, demonstrating many of the plants that were listed on our handout, and adding about a half dozen more suggestions. Our Peace River Butterfly Society friends had a lot of activity at their booth, which contributed to the festiveness of the day.

The day after our event, I sent out a "blast" Thank You to our membership, acknowledging all who pitched in to make our "Plant Native" Day a major success. For every small task that combined to make the event so worthwhile, again I say kudos to all! We are already focusing on a theme for 2020. Laurel has suggested "Selection, Planting, Establishment, and Care..." Other suggestions include "Butterfly Gardening", "Planting for Wildlife Habitats", and having a "Pollinator Symposium". Feel free to add to the list as well. We are also looking for someone to take charge of planning our 17th Annual "Plant Native" Day.



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Click Here to **VISIT THE MANGROVE CHAPTER WEBSITE**

KATE BORDUAS RETURNING TO LEMON BAY PARK

The Mangrove Chapter of the Florida Native Plant Society is pleased to welcome back Kate Borduas, Florida Master Naturalist and Certified Interpretive Guide, to their April 9 meeting at Lemon Bay Park in Englewood. Kate will engage her audience with "The Wonderful Whacky World of Lichens," an inside view of the relationship between Lichen, Cyanobacteria and algae and the creation of soil and the first land plants.

Kate has charmed us all since she first arrived in 2003 from Maine as a part-time resident. She has been living here now full-time since 2012, interrupted only by occasional exploratory treks that take her halfway across the globe.

Kate was an outspoken environmental activist while living in Maine and involved herself in both local and regional politics. For several years, she served as the President of the

Greater Portland, Maine Council of Governments.
Here in SW Florida, she is an active member in local, regional and national Audubon organizations. Twice she has led the Venice Golf and Country Club (VGCC) Audubon International Bio-blitz team to winning back-to-back global biodiversity challenges. The Bio-blitz is a species-counting competition designed to create awareness among golfers and the general public about the environmental value of the habitats supported by golf courses.

As a Florida Master Naturalist and Certified Interpretive Guide, Kate leads birding and wildflower walks throughout Charlotte and Sarasota County, and has given numerous presentations at Bayshore Live Oak Park in Port Charlotte. She is an active member in both the Mangrove Chapter of the Florida Native Plant Society and the Peace River Butterfly Society, and leads interpretive trail walks for Charlotte Harbor Environmental Center (CHEC). Kate's knowledge and enthusiasm for discovering the mysteries of the natural environment are sure to charm you as well. Please join us for her delightfully informative presentation, "The Wonderful Whacky World of Lichens."

Mangrove Chapter meetings are held at Lemon Bay Park, 570 Bay Park Blvd. in Englewood, Florida with speakers beginning at 7:00 p.m. Doors open at 6:15 pm. We encourage Floridians and our winter visitors to learn more about the importance of Florida's native plants and communities by becoming a member of the Mangrove Chapter of the Florida Native Plant Society.

Volunteer Opportunities

1.. We have an **Earth Day Event** coming up on April 28th, which is a Sunday. It is held at Buchan Park on Old Englewood Road. A sign-up sheet will be circulated at our April Membership Meeting. It's a great venue with lots of environmental groups represented.

2. We need a couple of members (not running for office) to **serve as Nominating Committee** for our **Annual Election of Officers in May**. Contact Lois at **birderlois@hotmail.com**.

3. We need a member (not on the board) to **audit our treasurer's reports for 2018.** Linda Wilson keeps excellent records and can share them with someone for review. This is just a formality that we go through each year, so not a big deal.

4. We need a new **Chairperson for Speaker Programs and Publicity** Carolyn Gregsak is stepping down from this position at the end of April. She has superbly organized these
responsibilities, so the next person to follow her can easily step into her shoes. Not only that, but many of the speaker programs for next season have already been scheduled, so there are only be a couple of dates to be filled.

Field Trip Report

Walking near Hickory Lake

Turkey Oak

Maypop

Our group of 8 met in the parking area at the entrance to Hickory Lake Scrub, on a lovely sunny morning, which was perfect for a slow stroll through scrubby habitat. Just then, a bald eagle flew overhead, which was thought to be a good omen for the day. The first flowering specimen that we observed was a Maypop, which we thought was unusual. Following that, we observed Rusty Lyonia, Scrub Oaks and Pines, Turkey Oak, Skyblue Lupine, Ashe's Calamint, Sandlace, Prickly-pear, Avon Park Harebells, lots of Tread Softly, oodles of Reindeer Moss, Flag Pawpaw, Shiny Blueberry, Spiderwort, and quite a few other plants typical of the scrubby ecosystem.

Skyblue Lupine

Sandlace

Flag Pawpaw

At one point we spotted a pair of green annoles fighting with each other. One was a brilliant shade of green, the other being much darker. They had quite a wrestling match going on (not mating), then broke apart and went their separate ways. As we descended into the area along Hickory Lake, it was interesting to see the transition to

vegetation that typifies the wetter area. Pickeralweed, Duck Potato, ferns, and other wetland species were seen, accompanied by the croaking sound of a bullfrog. Many bird sounds were heard along the way, but not all were identified as to their owners.

Arriving back at the parking lot, we got in our cars and formed a caravan to drive to the next site, which is the 5,000 acre Tiger Creek Preserve, owned and managed by The Nature Conservancy. After some confusion about how far we needed to go to get there, we finally plugged into GPS and took about 20 minutes to arrive at the trailhead parking area. We took the Pfundstein Trail through a recently burned area, which proved to be somewhat boring, and only a few additional plants were noted, including Lyre-leaf Sage in the parking area.

Above: Burned area near Tiger Creek Preserve

Left: Plants recovering from recent burn

It was about 12:30 and time to call it a day. Some of us headed back into Frostproof for lunch. After being fortified, our little group of 3 decided to head back to the Tiger Creek Preserve to try a different trail. The George Cooley Trail was a 0.6 mile loop that took us through a partly burned high scrub area down into a wet area in similar fashion to Hickory Lake Scrub. At a junction, we spied water to our right and discovered a section of Patrick Creek and identified more Pickeralweed and some Lizard's Tail among ferns and other wet area growth. Turning back, we got to a section of the trail that "squished" and had one muddy spot, but were able to navigate the worst of it and get back to higher ground. As we got back to the car, we noticed some small yellow flowers that we tentatively identified as Florida Scrub Frostweed.

Patrick Creek

Florida Scrub Frostweed?

Leaving that area, we decided to see where the rest of Pfundstein Road went and ended up on a dirt road that led us through a farm community and eventually dead-ended. Saw plentiful exotics like Lantana camara and Coganrgass but also observed Wild Petunia along the shady side of the road and Sandhill Milkweed out in the pastures, which the cows don't eat due to its toxicity. A second dirt road led us through acres upon acres of citrus trees. Having worked off our lunch, we headed back into town and stopped at a local ice cream shop for sustenance before heading home. It was a fun time and educational, and I enjoyed exploring places I had never been to before.

2019 FNPS 39th Annual Conference Registration is Open

Check out the FNPS website home page for the specifics about the upcoming State Conference, which is May 16-19 at the Plantation on Crystal River. "Transitions" is this year's theme, which is pertinent to the Nature Coast region of Florida in a number of ways—sea level rise, migrations of ecosystems due to climate change, and the transition zone between north and south Florida. The region also has a large diversity of plant communities and the transitions between uplands and wetlands are common. So, go to **www.fnps.org/conference/2019** and click on the speakers, field trips, plant sales, workshops, socials and more to see what is in store for you as an attendee.

April is full of "days"

In the preceding months of 2019, we observed MLK Day, Florida Arbor Day, Valentine's Day, President's Day, etc. As April rolls in, we will see several

"environmental days". On April 6th, from 9:00 am to noon, we can participate in Charlotte County's Great American Clean Up Day at Cedar Point Environmental Park, Oyster Creek Environmental Park and/or Buck Creek Preserve. For additional information and/or to register for the clean-up, call 941-475-0769.

The official date for Earth Day is April 22nd. Many environmental groups, local schools, and various organizations will be holding Earth Day celebrations in the latter part of the month. We will be participating in one on April 28th (see the listing under Volunteer Opportunities elsewhere in this newsletter).

Then there is National Arbor Day on April 26th. David Wilson, a Mangrove Chapter founding member, is doing his usual thing by sending a Proclamation to the Charlotte County Commissioners that the week of April 21st through April 27th, 2019 shall be known in all of Charlotte County as "Native Tree and Shrub Preservation Week. All citizens are urged to protect and/or plant native trees and shrubs in their neighborhoods, thereby preserving a natural public resource for all Charlotte County's present and future citizens. The ceremony will take place on April 23rd in the commissioners' chambers at the Administration Building, Murdock Circle. If you wish to attend, be there by 8:30 AM to be seated before the 9 AM meeting begins.

2018 red tide outbreak — not Mother Nature's doing

By Andy Mele, Special to The Islander

As 150 guests at the Suncoast Waterkeeper Brunch for the Bay learned March 3, the red tide bloom in 2018 was not a natural occurrence.
The determining factor in today's red tides, after all variables are accounted for, is human-induced nutrient pollution — primarily nitrates and phosphates.
Nutrients are not merely a marginal contributor, as some institutions and elected officials would like us to believe.

True, Karenia brevis, the toxic alga that populates the lethal blooms we call red tide is a naturally occurring organism. It is found in waters around the globe. And, yes, red tides have been documented since the arrival of Europeans to Florida's shore. But there is a difference between the naturally occurring red tides and the rapidly growing red tides we have endured for decades.

About Karenia brevis

Karenia brevis is also known as red tide when its numbers become higher than 1,000 cells per liter. K.brevis emits brevetoxins that can become airborne in water spray and wind. At concentrations above 10,000 cells/liter, red tide can cause respiratory symptoms in humans. Above 50,000 cells per liter, fish mortality begins to occur. Above 1,000,000 cells/liter, discoloration of the water can be seen. Concentrations as high as 50,000,000 cells/liter were observed during the 2018 red tide event.

Larry Brand, Ph.D. and a research scientist at the University of Miami, was the featured speaker at Suncoast Waterkeeper's annual brunch at the Bradenton Yacht Club in Palmetto.

Brand told his audience there is a fifteenfold increase in K. brevis concentrations that is contributing to today's mega-blooms. After accounting for geological and geographical contributions to red tide, Brand said, "The only remaining variable that has increased enough to account for it is us."
Brand explained some of the complexities of Florida's red tide. Plants — and algae are plants — require 16 parts nitrogen to one part phosphorus. Where that 16N:1P ratio is found, there can be a natural red tide bloom.

The waters on the East Coast of Florida — where the St. Lucie Canal empties Lake Okeechobee discharges thick with toxic blue-green algae — are dominated by limestone deposits and are naturally rich in nitrogen. Hence, phosphorus is required to provide the optimum 16:1 nutrient that drives algal growth. No phosphorus, no algae. Phosphorus is relatively scarce on the East Coast.

On the southwest Gulf Coast, however, the opposite circumstances prevail. Because of massive natural phosphate formations underlying west-central Florida and in the Gulf of Mexico, the coastal waters are rich in phosphorus from a variety of inputs, including phosphate mine drainage. Here, algae need nitrogen to stimulate growth. No nitrogen, no algae. It's called "nitrogen-limited."

However, when Lake Okeechobee's nitrogen-rich blue-green algae enters the system from the Caloosahatchee River, the conditions for explosive growth are met.
Brand lists four principal sources of nitrogen: animal waste, crop fertilizer, stormwater runoff and illegal sewage discharges. All have increased exponentially since the 1950s along with Florida's population and development, when the first sample run was conducted by FWC. In the 1950s, less than 10 percent of the Florida coastline was developed, while the remainder was woodlands, grasslands and wetlands. Today, more than 90 percent is developed and we're flushing pollutants into the bays and Gulf.

Agricultural sources — animal waste and fertilizer — are the major causes of intense algal blooms in Lake Okeechobee. They are transported down the Kissimmee River, and pumped north from sugar cane fields south of the lake. The other two sources — stormwater and sewage — supply a steady diet of nutrients for red tide as it expands up and down the Gulf Coast.
Aside from people with respiratory symptoms who may suffer chronic asthma or COPD, the effects of K. brevis are immediately noticeable, leading people to leave the area, although no long-term or acute effects are known. The only known human fatalities associated with red tide have been from shellfish poisoning. Shellfish filter water through their gills to extract food and oxygen and, as K. brevis cells accumulate in shellfish, they can be fatal if eaten.

Blue-green algae, on the other hand, which is consumed by fish and shellfish, are suspected of having long-term impacts, specifically ALS or Lou Gehrig's disease, Alzheimer's and Parkinson's, without short-term impacts to warn of exposure. The correlations between algae and disease are still being studied, but an environmental toxin, beta-methylamino-L-alanine or BMAA, is found in both victims of the diseases and the blue-green algae.

BMAA appears to provide a causative link. And BMAA has been documented in almost all shrimp and species of fish from the areas of the red tide bloom.
As a general caution, Brand suggested not consuming any seafood from areas impacted by red tide for several months after the event has subsided.

Data sets for 1954-63 are regarded as baseline “naturally-occurring” red tide, approximately what Hernando de Soto or Ponce de Leon might have seen in the 1500s — neither a threat to tourism nor an apocalyptic killer of fish and marine mammals.

But today’s conditions are both, according to Brand, and it’s worsening.
The ozonators, bubblers and clay sprinklers being touted by Mote Marine Laboratory and some elected officials as fixes are unproven, wildly expensive and cannot be scaled up to levels needed to treat the coastline. Brand says they appear to be strategies for developing revenue from wealthy canal homeowners, and cannot be taken seriously as solutions to red tide.
He said it, and Suncoast Waterkeeper has been saying it since last summer: the only practical, meaningful and affordable solution is to stop the nutrient pollution at its source. And its true source is not at a dairy farm or a sugar cane field. It is in Tallahassee.

Here’s the Waterkeeper solution to red tide.
Florida urgently needs:

• Numeric, enforceable water quality standards and the FDEP staff and budget to enforce them.
• Common-sense limits on development.
• No more phosphate mining.
• Elected officials who understand that as the water goes, so goes Florida.
• A comprehensive water and aquifer management program, including conservation measures, pricing and limits.

Brand and Suncoast Waterkeeper maintain that without action and change, there is little chance for improvement and there’s a strong prospect the state’s water crisis will worsen.

Andy Mele, of Suncoast Waterkeeper, is an advocate for a better environment and responsible development in Manatee County. He is former executive director of a major Hudson River environmental group that was instrumental in forcing General Electric to remove 300,000 pounds of toxic PCBs from the river. He authored “Polluting for Pleasure,” the book that rendered two-stroke outboard motors all but extinct, keeping millions of gallons of oil and gasoline from U.S. waterways every year. He can be reached at ***andymele@mac.com****.*