



TILLANDSIA

Newsletter of the Dade Chapter of the Florida Native Plant Society, Inc.
- For Miami-Dade County and the Florida Keys -

MAY 2017

Monthly Meeting

and Annual Chapter Meeting

Tuesday, May 23, 2017, 7:30 p.m.

Pinecrest Gardens, 11000 SW 57 Ave. (Red Road), Miami

Free and open to the public

Refreshments begin at 7:15 pm., merchandise sales before and after the program. The plant raffle follows the program. Contributions of **raffle items** and **refreshments** are always greatly appreciated. **Please label your raffle plant donations!**

South Florida Endemic Plants and Their Conservation Jimmy Lange, Fairchild Tropical Botanic Garden

Jimmy will provide an overview of the plants endemic to (found only in) South Florida, discussing their evolutionary origins and the ecological challenges they face such as habitat loss, sea-level rise, and invasive species. Emphasis will be on plants that are listed under the Endangered Species Act. He will then focus on outlining work- both current and upcoming- being done by Fairchild's Conservation Team and others to conserve and understand these species.

Jimmy Lange is a field botanist with the South Florida



Conservation Team at Fairchild Tropical Botanic Garden, dedicated to in situ and ex situ conservation of the rare plants of our region. He is an active member of the FNPS and a board member of the Florida Exotic Pest Plant Council.



Some featured endemics (photo credit), l - r:

- *Opuntia abjecta*, Jumping cactus (J. Lange)
- *Euphorbia deltoidea* subsp. *pinetorum*, Pineland deltooid spurge (Jennifer Possley)
- Seed of *Argemone blodgettii*, Blodgett's wild mercury (Jack Hahn in imaging lab, 25x)
- *Phyllanthus pentaphyllus* var. *floridansus*, Florida five-petalled leafflower (Jimmy Lange)



Chapter Activities

May 23 (Tue.): Meeting at Pinecrest Gardens preceded by the Annual Chapter Meeting

May 27 (Sat.): Field trip (Larry and Penny Thompson Park)

June 10 (Sat.): Chapter workday Everglades National Park

June 27 (Tue.): Meeting at Pinecrest Gardens: Craig Morell - Director of The Kampong, the National Tropical Botanical Garden's Florida garden

Notice of Annual Chapter Meeting & Election

May 23, 2017, 7:30 p.m. at Pinecrest Gardens

Call for Nominations: *Yes, you can still join the dedicated group of members steering our chapter! Chapter board member nominations are still being accepted.* Elections for the Dade Chapter Board positions of secretary, treasurer, and up to three directors at large (all for two-year terms), plus up to two directors for one year terms will be held at the May 23 chapter meeting. A slate will be presented by the nominating committee at the meeting.

Please contact Amy Leonard (aleonar74@yahoo.com, 305-458-0969) if you are interested in serving on the board or have someone to suggest. *The main qualifications are enthusiasm and a desire to see the chapter thrive. You don't have to be a botanist - a variety of skills are always needed on the board!*

Field Trip

Saturday, May 27, 2017, 9 a.m. – noon: Larry and Penny Thompson Park pineland. Our May speaker (and a rock star in the field), **Jimmy Lange**, will lead us **in search local endemics and other interesting plants.** This park is a part of the botanically rich Richmond Pineland Complex, but safe from the planned development discussed in the news. We recently visited in the fall; now we'll see spring wildflowers. *(continued on page 2)*

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(FIELD TRIP continued)

Time, address and directions are in the newsletter mailed to members. Please join to enjoy all the activities of the chapter!

- **Bring:** Water, sun protection. Bring a loupe if you have one. Close-focus binoculars might be good for spotting butterflies.
- **Difficulty:** Easy - paved and unpaved paths and optional off-trail, but open and sunny.
- **Delayed or lost?** Try Patty's cell, 305-878-5705.

Dade Chapter and FNPS News

Welcome new members! Kristin Cadavieco, Akash Goel, Andrew and Tiffany Street, Noah Youngstrom

Would you like to host the Dade Chapter July “Evening Yard Visit and Social” meeting? Each July, instead of a program, we enjoy a garden and a pot-luck dinner. It is *usually* at the home of a member, but we have also been hosted at other locations. The landscape does not need to be all native or “fancy”, but something you’d like to share. We could expect perhaps 30 people (or more) and need shelter in case of rain. **The date is flexible** (usually a Saturday evening) and members can help out with chairs, etc.. If you might be interested, please contact Amy Leonard (aleonar74@yahoo.com, 305-458-0969).

 **Broward Chapter FNPS.** See coontie.fnpschapters.org/. Meetings at Secret Woods, 2701 W. SR 84, Dania Beach. **May 10, 2017, 7 p.m.: Chapter meeting.** “Broward’s Rare Native Plants and the Non-native Invasive Weeds that are Leading to their Demise” – Pat Howell.

See the website (or sign up to receive by email) to read the beautiful newsletter produced by the Broward president (and Jack-of-all-trades-native-plant), Richard Brownscombe. Great photos and articles!

The May-June, 2017 Sabal Minor newsletter from FNPS is at www.fnps.org/assets/pdf/sabalminor/sabalminor19_3_2017.pdf. It is not available by postal mail. Please contact the *Tillandsia* editor if you need help finding a way to read it.

Did you receive your Palmetto magazine? FNPS members should have received the latest issue from FNPS (Volume 33:4 > 2016) in early April. Those whose memberships lapsed or whose memberships were received at the FNPS office later than the *Palmetto* mailing would have missed this issue. It contains a nice article (“*A Gumbo Limbo Turns 30*”) by Dade Chapter member **Henry Block** with his observations on 30 years of the Kenwoods Outdoor Learning Center. Kudos to Henry and Kenwoods! **If you are through reading your Palmetto and plan to recycle it, you are encouraged to bring it to a chapter meeting and offer to someone who did not receive it.**

37th Annual Florida Native Plant Society Conference

May 18-21, 2017, Westgate River Ranch Resort

Amazing field trips, speakers, workshops, socials, plant and merchandise sales.

It's a great way to see another part of Florida! www.fnps.org/conference/2017

What Our Friends Are Doing

Dade Native Plant Workshop: MDC Kendall Campus Landscape Technology Center. 3rd Tuesdays at 7 p.m. See www.nativeplantworkshop.com or contact Steve Woodmansee at steve@pronative.com. Bring at least three cuttings (especially in flower/fruit), which need not pertain to the topic. **Novices and experts alike are welcome.** *Join on the website (free) to receive email reminders or to post on the site.* **May 16, 2017 topic:** Brassicaceae (Mustard Family)

Livablecutler Volunteer Restoration Workdays. Pine rockland, hammock and coastal wetland are being restored at **SW 184th Street east of Old Cutler Road** by volunteers with Livablecutler. This group is “dedicated to preserving the natural areas and green spaces that make the living good along Old Cutler Road in South Miami-Dade County.” The South Florida Water Management District is the primary landowner. This newsletter will not be in time for the upcoming workday, but please see www.facebook.com/livablecutler/ for future events. **There are hundreds of plants to plant, weeds to pull, mulch to spread.** Students can earn community service hours.

Environmentally Endangered Lands Volunteer Workdays. *Adult volunteers are always helpful to guide the teens.* Please pre-register at EEL@MiamiDade.gov; 305-372-6611.

<http://www.miamidade.gov/environment/endangered-lands.asp>

• **May 13: Black Creek Forest Preserve**, SW 112 Ave. south of SW 211 St. (Planting, final event of the season)

Speak Up for Pine Rocklands Still on the table - May update

The April *Tillandsia* asked for citizen action on these two issues. The need continues.

• **Trinity Pineland.** This Miami-Dade County Environmentally Endangered Lands preserve near Sunset Drive and SW 73 Ave. is adjacent to the site of a proposed large charter school of 2500 students. There is **concern about potential serious impact on the pine rockland and its rare species from a massive increase in traffic.** Action on this matter by the Board of County Commissioners has been delayed until **May 18** and also may depend on a proposed new Florida Senate bill. **Please keep checking www.sunsetneighbors.com for the latest status and information on how you can help with your support at the commission meeting (no public comment) and more.**

• **Coral Reef Commons** (the planned development in the Richmond Pineland Complex along SW 152 St., to include Walmart and much more).

<https://www.fws.gov/verobeach/20170323CRCNR.html>

The U.S. Fish and Wildlife Service is seeking public comments on a developer's plan to avoid, minimize, and mitigate impacts to eight threatened, endangered, and at-risk species in Miami-Dade County. The plan is part of a process to clear the way for construction to begin on a 137-acre residential and commercial project in south Miami.

The comment period is 60 days from March 23, so you can still get your comments in early, maybe by May 19. Even if you have no comments, the material online is informative.

Spring Wildflowers on Long Pine Key

by Chuck McCartney

On April 15, members of the Dade Chapter joined folks from the Broward FNPS chapter on a field trip to look at spring wildflowers of the pine rocklands in Everglades National Park. The morning's objective was to hike the fire road south from Gate 8 at Pine Glades Lake, the large borrow pit south of the Main Park Road toward the western end of Long Pine Key.



Typical of plants of this area, there weren't vast arrays of any one species in bloom, aside from numerous examples of our official state wildflower at this end of the peninsula,

Leavenworth's Tickseed (*Coreopsis leavenworthii*), and some nice displays of **Starry Marsh Pink** (*Sabatia stellaris*) in its myriad color varieties.



But the group did encounter a significant number of species in flower, 62 in total for this site. This included a seldom-encountered open-flowered specimen of the Pine Pink Orchid (*Bletia purpurea*) among all the more typical closed-flower self-pollinating forms of this terrestrial species.



Another interesting wildflower seen in this area was **Small's Flax** (*Linum carteri* var. *smallii*), with its fairly large, bright yellow flowers that easily could be confused with Piriqueta without careful examination.

Later, after we lunched together at the Long Pine Key Picnic Area, those who stayed took a short hike through the pineland and out onto an adjacent marl prairie. Including the pineland and the prairie, we encountered an additional 14 species in bloom, and in the prairie we observed a single flowering plant of the Grass Pink Orchid (*Calopogon tuberosus*).



One of the nicest finds at this picnic-area pineland was a nearly white flower of the normally purplish-flowered **Thickleaf Wild Petunia** (*Ruellia succulenta*) growing where the trail butts up against the edge of Mosier Hammock. When we got near enough to

get close-up shots of the flower, it was a nice surprise to see a narrow five-pointed star in the middle of the flower formed by a purple line radiating from the center into each of the petals.

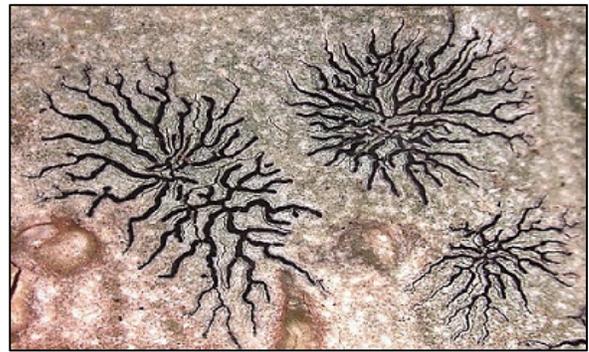
Both pineland sites visited also produced flowering plants of the rapidly naturalizing ground-growing Asian orchid *Eulophia graminea*, which some are starting to call the Golf Ball Orchid because of the sometimes surprisingly large size of its bulbs.

A complete list of the 76 wildflower species observed in bloom can be obtained by emailing the *Tillandsia* editor.

Lichen Survey of Dagny Johnson Key Largo Hammock Botanical State Park

Rick and Jean Seavey (members of DCFNPS) have studied lichens for many years, participating in the lichen survey of Fakahatchee Strand Preserve State Park, where 432 species were discovered (*Tillandsia*, October 2011), and conducting lichen inventories in Everglades National Park (569 species) – both sites with numerous species new to science or North America.

In January, 2015, they, with others, expanded their work to Dagny Johnson Key Largo Hammock Botanical State Park in Key Largo. The resulting publication "**The Lichens of Dagny Johnson Key Largo Hammock Botanical State Park, Key Largo, Florida, USA**" is now available for download from the Florida Museum of Natural History Bulletin web page (www.flmnh.ufl.edu/bulletin/publications/ - see Vol. 53).



Phaeographis radiata sp. nov. image by Jean Seavey

If you read or skim through the pages (skipping whatever is too detailed for you) you can't help but appreciate the sheer number and diversity of lichens, their beauty, the fact that so much new information is being collected, and the effort made to conduct these inventories and identify thousands of specimens in the lab. Kudos to Rick and Jean! Learn more at www.seaveyfieldguides.com.

- Patty Phares

[The following article is reprinted from *Tillandsia*, May 2008]

Lichens as Habitat Quality Gauge for Ecosystems (and Your Back Yard!)

by Rick Seavey

Of all living organisms, North American lichens have to rate very low on our knowledge scale concerning their life history, taxonomy and even simply what they are. On this continent they have been poorly studied, which is surprising for an organism that covers about 8% of the Earth's terrestrial surface. By contrast, European lichens are well known, well studied and have long been used as a gauge of air and habitat quality. In South Florida, an area that could certainly benefit from such a gauge, the lichen flora is largely unknown. For the last 3-4 years my wife Jean and I have been trying to correct this gap in our understanding of the natural world. It should be a surprise to no one that, considering our very different flora and weather as compared to the rest of the United States, our lichen flora would be different as well. Accordingly, after several thousand

collections, we have identified many species new to North America (mostly West Indian species) and a dozen or more new to science.

What exactly are lichens? In short, lichens are considered by most to be a symbiotic relationship between a fungus and an alga. Fungi are not capable of producing their own sustenance. They must draw nutrients from dead and/or rotting organic matter or parasitize living things. Therefore, most fungi spend their entire lives within organic soil, within tree bark or attached to a host. Chained to these habitats, their mobility is severely limited. Algae, on the other hand, are capable of producing their own nourishment in the form of starches and sugars through photosynthesis. But their niche within the natural world is also very limited. Too much or too little sunlight will rapidly lead to their demise as will desiccation or predation by a number of organisms.

But in a lichen symbiosis nearly all of these problems are overcome. When a fungus and an alga join forces their physical state is altered and each is unrecognizable from their former self. In this relationship the alga is considered the passive partner doing what it has always done, i.e. producing food through photosynthesis but now enough for two. The fungus does everything else. It constructs a suitable shelter, sometimes incredibly elaborate and brightly colored, to house itself and its partner. It regulates the amount of sunlight and water reaching the alga. As an aide in accomplishing this, it may metabolize substances that block the sun's deadly ultraviolet light, or substances that repel water or substances that taste foul or are even poisonous as a protection against marauding snails. Some lichens produce antibiotic compounds to protect them from bacterial invasion. And some can even produce chemicals that inhibit plant growth preventing them from being overgrown, which would be fatal to its algal partner and thus to themselves. Lichenologists have isolated and identified over 1000 substances produced by lichens as a whole. Many are used by humans as medicines, dyes, foods, poisons and perfumes.

In its lichenized form, the fungus and alga are now tremendously more mobile. They may live on rocks, soil, wood, bark, leaves, bare metal, glass, roof shingles, tombstones and even underwater. They can be found on every continent and at nearly all altitudes if the surface is ice free at least part of the year. Some are finicky accepting only one rock type or one tree species or a particular soil.

More than in most places of North America, the lichen life cycle of South Florida is tied very closely to its flora, trees in particular. This makes sense as we have only one rock type which eliminates all the siliceous loving species, and our "soil", unless imported (not good for lichens), is in short supply. Of all the species Jean and I have documented from this region, over 90% occur on tree bark, leaves or lignum. We have tentatively divided these lichens into three clades: cosmopolitan species, inhabitants of minimally altered communities and those that don't seem to care where they occur. A little over half on our current lichen list fall into the second clade, and some of these are found only on one tree species. To complicate matters further, it seems that that tree has to be among its communal associates. A lone backyard tree of the preferred type does not seem to attract these arboreal specific lichens.

What is the message here? Well, it's kind of complicated. The thinking is that environmental health can be judged by what organisms occur within it. And as lichens do not move and are readily detected, they are often used for this purpose. This is a common practice in Europe and is beginning to be used in the northern part of this country. But in both those areas the lichen flora is fairly well known and the clade distinctions pretty well identified. Here in South Florida the opposite is true and this is what Jean and I are trying to correct. With the billions of dollars supposed to be spent on Everglades Restoration and so many managed "natural" areas within our highly developed part of the state, it would be nice to know if we were doing things right or not. Can lichens provide any insight into this question? Well, many countries throughout the world think they can and are using them exactly for that purpose.

...

Eventually our goal is to put a lichen flora, complete with keys and pictures, on the web for all to use. For a preview, you can view some 80 odd lichen pictures Jean has put on www.seaveyfieldguides.com. Click the lichen tab and then any species on the left to view the exterior and interior parts. Perhaps one day, armed with flora, keys and pictures, you will be able to go into your own backyard, create your own lichen checklist and decipher the message lichens are communicating to us.

Wanted: Sightings of New Guinea Flatworm

The New Guinea Flatworm (*Platydemus manokwari*) is an invasive non-native predatory flatworm confirmed in Florida in 2015. It is now killing native Liguus tree snails and other native and non-native snails in large numbers. See the DCFNPS website dade.fnpschapters.org under Announcements for a "*Platydemus quick fact sheet*" by Alicia Warren (Miami-Dade County PROS Natural Areas Management, nam@miamidade.gov). We'll have more information in later newsletters.

DADE CHAPTER FLORIDA NATIVE PLANT SOCIETY

President: Kurt Birchenough (kbirc001@fiu.edu, 202-905-3921)
Vice President: Amy Leonard (aleonar74@yahoo.com, 305-458-0969)
Secretary: Gita Ramsay (gita.ramsay@gmail.com, 786-877-7168)
Treasurer: Susan Walcutt (walcutts@bellsouth.net, 305-297-7757)
At Large: Ted Shafer, Jennifer Stine, Eric von Wettberg, Vivian Waddell
Dade Chapter – FNPS Council of Chapters: Eric von Wettberg (ebishopv@fiu.edu, 305-348-2298)
Refreshment coordinators: Cheryl & Ben Morgan (ckmorgan@bellsouth.net)
General chapter information: 305-985-3677
DCFNPS website & social media: <http://dade.fnpschapters.org/>
DCFNPS e-mail: dadefnps@gmail.com
Mail: Dade Chapter FNPS, 6619 S. Dixie Hwy, #181, Miami FL 33143-7919

TILLANDSIA

Editor: Patty Phares (pharespl@gmail.com, 305-255-6404)
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FLORIDA NATIVE PLANT SOCIETY

FNPS office: info@fnps.org, 321-271-6702
FNPS website, blog, social media: <http://www.fnps.org>
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