

# Palm Beach Palm & Cycad Society

Affiliate of the International Palm Society

## Monthly Update

## April 2017

## MARCH "THANK YOU"

Door: Roland Grondin & Don Bittel

- Food: Janice DiPaola, Steve Garland, Janet James, Ruth Lynch, Elise Moloney, Richard Murray, Ed Napoli, Angie Peacock, Carol & Tom Ramiccio, Gerard Valentini
- Plants: Charlie Beck, Steve Garland, Dale Holton, Richard Murray

Auction: Don Bittel & Terry Lynch

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#### **Appointees**

Brenda Beck, Historian Brenda LaPlatte, Webmaster Ruth Lynch, Refreshment Chair

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### UPCOMING MEETING

April 5, 2017 7:30 p.m. At Mounts Botanical Garden

Speaker: Chip Jones

Subject: Cycad Sightings in Thailand

#### FEATURED AUCTION PLANTS:

Lanonia dasyantha

Allagoptera caudescens (formerly Polyandrococos)

## VISIT US AT

www.palmbeachpalmcycadsociety.com

All photographs in this issue were provided by Charlie Beck unless otherwise specified.

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#### Featured This Month: Astrocaryum alatum by Charlie Beck

Astrocaryum alatum native habitat ranges from southern Nicaragua through Costa Rica and Panama on the Caribbean side. It also grows on the Pacific side in southern Costa Rica. Habitat ranges from sea level to an elevation of 1,600 feet. It can be found in well-drained or poorly drained soil. Average rainfall in its tropical range varies between 120 to 180 inches a year. That's two to three times that of West Palm Beach. Although this palm is typically found growing in deep shade it can also be found in cow pastures growing with full exposure to the sun. Conservation status is threatened due to habitat loss.

*Astrocaryum* is a genus of palm which is known for being covered with sharp, flat, black spines. Another distinguishing feature of the genus is that leaf undersides are white or whitish.

Astrocaryum alatum typically has very spiny stems, leaves and bracts. It is a solitary, pinnate palm with strongly recurved fronds. Leaflets are unequally wide and are spread in a single plane. At some stages of maturity the leaflets are so wide that it mimics a simple undivided leaf when viewed from a distance. Fronds can measure up to 10' long. In habitat stems can grow 23' tall and 4-6" in diameter. This is a monoecious palm which produces spiny, yellowbrown fruit.

Although *A. alatum* looks similar to the more common and closely related *Astrocaryum mexicanum*, it is usually a larger scale with longer fronds which tend to arch to a greater extent. *A. alatum* has persistent leaf bases, where *A. mexicanum* tends to drop its old leafbases. *A. alatum* inflorescences are pendulous, where *A. mexicanum* have upright inflorescences.

Brenda and I attended the International Palm Society post biennial tour of Costa Rica in 1992. Dur-

ing that that tour we searched for palms on the Caribbean and Pacific sides, as well as inland and cloud forest habitats. We saw many amazing palms that were new to us. One of my personal favorites was *Astrocaryum alatum*. We saw it in forest habitat where you could look up and see the beautiful fronds with wide, white, pinnae undersides. We also saw them growing in deforested pastures growing in full sun. At that time I was unsure if they could be grown in Palm Beach County.

Upon returning to Florida I discovered that Fairchild Tropical Botanic Garden (FTBG) did successfully grow this palm in the lowlands area behind the amphitheater. Those palms were planted in 1987 and as they matured they looked every bit as impressive as the ones we saw in Costa Rica. We planted three A. alatum in our garden in 1993. That was the year our garden was established. At that point we had no canopy, so I constructed a shade cloth structure over them to protect them from the sun. Our garden soil is sugar sand, unlike the limestone at FTBG or the soils of Costa Rica. Our palms looked acceptable but never really flourished. In time they perished for some unknown reason, but I was determined to grow them, so I continued to replant. Along the way I discovered they were susceptible to boron deficiency. One of those palms replanted in 2011 looks healthy but still is not a vigorous grower. Although it is an attractive specimen, it hasn't matched the scale of the palms at FTBG or those in Costa Rica.

In 2015, I made a discovery at Holton Nursery. Dale Holton had several large potted *A. alatum*, so tall that they approached the vertical limit of his shade house. The palms had beautiful long fronds that rivaled those we saw in Costa Rica. Maybe these (Continued on page 4)



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Astrocaryum alatum in habitat, Costa Rica



Astrocaryum alatum- 2 years old with 8' long fronds in the Beck Garden



Astrocaryum alatum- 6 years old in the Beck Garden



Astrocaryum alatum at FTBG (photo taken 15 years ago current photo on pg.4)



Astrocaryum alatum (most likely) at John Kennedy's Vero Beach Garden (Photo by John Kennedy)



Astrocaryum alatum at FTBG-30 years old



Astrocaryum alatum at FTBG- spiny stem

#### (Continued from page 2)

palms would have the right genetics to thrive in our garden. I bought two of these palms and planted them in the lowest, wettest part of our garden. These palms continued to thrive and presently have 8' long fronds. The overall height of both specimens is 10 feet.

Although both were planted in the shade, we lost a canopy tree which exposed one of them to several hours of direct sunlight. That had no negative effect.

Even though the reference books and websites suggest that *A. alatum* is cold hardy to zone 10B,



the palms planted at FTBG in 1987 survived the Christmas Freeze of 1989. Temperatures dipped to  $27^{\circ}$ F on two consecutive nights in the garden. The palms in our garden showed no negative effects after the cold winter seasons of 2009 and 2010. John Kennedy has an unidentified *Astrocaryum sp.* that was grown from seed collected in Central America. John's palm, grown in Vero Beach, looks very much like *A. alatum*, so it must be more cold hardy than generally thought. John's specimen grows without regular irrigation or fertilization.

Astrocaryum alatum is definitely a "collector palm." If you like exotic looking spiny palms with wide leaflets with silver undersides, this is just the palm for you. I cannot say that any specimen you buy will thrive in a "sugar sand" garden. If you do plant in sugar sand I recommend planting it in a moist area like near a roof drain. I think this palm would excel in the marl soil of western Palm Beach County. Of course genetics also plays a role. Dale Holton still has some 20 gallon specimens available at his nursery. The *A. alatum* which are thriving in our garden were grown from the same batch of seeds. The Florida Native Plant Society published an interesting article written by Dr. Warren G. Abrahamson. Dr. Abrahamson is an evolutionary ecologist and Research Associate at the Archbold Biological Station located near Lake Placid, FL. He is also Professor of Plant Genetics Emeritus at Bucknell University, Lewisburg, PA.

The study was focused on determining the age of ancient *Serenoa repens* (Saw Palmetto) which grew on the Lake Wales Ridge, located in Central FL. That location was chosen because it's the oldest (estimated 2 million years) and highest landmass (295') in peninsular Florida. The study was conducted near the southern portion of the 150 mile long ridge. Being an ancient sand dune, the soil is nutrient poor and seasonally xeric.

Dr. Abrahamson began following marked adult *Serenoa repens* in 1980. He recorded stem growth rate, leaf output, and fruit production. He found that leaves can live up to 3-1/2 years. He studied these palms through extreme drought and wildfire events. In the study area, he estimated that seedlings require many decades to a century to reach a moderate size. A conservative estimate is 100 years to become a blooming adult.

Serenoa repens is highly clonal. Stems are subterranean or creep along the ground. The stems cluster by producing suckers along the stem. Offshoots can grow in different directions and can become disconnected from the parent plant. Sometimes stems grow vertically and break away when they fall. To estimate the age of a palm you need to identify all clonal stems which belong to the same original parent palm.

Dr. Abrahamson used genetic fingerprinting to establish which stems belonged to the same parent plant. He then used mathematical models to calculate the time necessary to produce the arrangement of the clonal stems. In a  $65 \times 65$  foot study site, five genetically different clones were identified. Clonal stems which extended outside the study site were not considered in the age estimate. The oldest clone in the study site had 148 genetically identical stems and had a maximum estimated age of 5,215 years. Considering clones extended outside of the study site, the researchers suspected that 10,000 year-old *Serenoa repens* were common on the Lake Wales Ridge.

We typically do not have such harsh xeric conditions in Palm Beach County, as on the Lake Wales Ridge. We are at a lower elevation and have a higher water table. Growth should be faster here, but I'll bet that you never expected that your *S. repens* could be very, very old. Maybe we can learn to appreciate this common palm a little more than we do.

If you want to read more on the study, it was printed in Palmetto, the Quarterly Journal of the Florida Native Plant Society, Volume 33: Number 3-2016. At the time of printing this newsletter, it was not yet available online.



Serenoa repens, growing in Richard Murray's garden, probably predates arrival of Ponce de León in 1513

#### Deerfield Beach Arboretum Garden Tour by Charlie Beck

The Palm Beach Palm and Cycad Society (PBPCS) recently sponsored a tour of Deerfield Beach Arboretum. The arboretum covers 9 acres and features palms, bamboo, and trees including fruit, native, and flowering specimens. Maintenance is provided by both the City of Deerfield Beach and a volunteer group, The Friends of Deerfield Arboretum. Jerry Behan is the President of the volunteer group. Many years ago Jerry Behan was a member of our PBPCS. I remember Jerry telling me that he was involved with the arboretum, and he wanted to increase the diversity of palms. Well, his passion and hard work has certainly paid off, because the collection has been greatly expanded. Enjoy some of the photos taken that day.

Deerfield Beach Arboretum photos continue on pg. 7 & 8





Jerry Behan, President of Friends of Deerfield Arboretum, provides direction and inspiration to the garden. *Burretiokentia hapala* 

Sabal sp, 'riverside' (left)



Sabal sp. 'Lisa'

Dwarf Dypsis lutescens

## Deerfield Beach Arboretum Garden Tour (continued)





(upper left and above) *Cyrtostachys* hybrid (thought to be cold hardy)

(upper right and right) Areca vestiaria

(lower right) Corypha umbraculifera

(below) Dypsis decaryi x leptocheilos

(lower left) Pritchardia vuylstekeana

> (left) Howea forsteriana





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## Palm Beach Palm & Cycad Society Spring Sale

Saturday, April 8, 2017 9:00 a.m. to 4:00 p.m.

Sunday, April 9, 2017 9:00 a.m. to 3:00 p.m.

at

Mounts Botanical Garden 531 N. Military Trail West Palm Beach, FL 33415

Over 500 species of palms and cycads in all shapes and sizes, a limited supply of top-rated fertilizer, palm and cycad reference books, and Palm Society t-shirts are available for purchase.

> Admission: free for Mounts members; \$5.00 for non-members



#### Deerfield Beach Arboretum Garden Tour (continued)



Copernicia glabrescens

Pinanga coronata

Rhopaloblaste ceramica