The Palmateer

Volume 22, Number 1 | *Central Florida Palm & Cycad Society* | *March, 2005*

Mark the Date

March 12th, Florida Tech, Melbourne

By John Kennedy

The spring meeting returns the chapter to a favorite venue, the campus of Florida Institute of Technology in Melbourne. The time is 9:00 a.m. to 1:00 p.m. Be assured, dear hearts, that there will also be a sale of palms, cycads, and miscellaneous tropicals.

An additional feature is a visit to the nearby palm collection of Joe and Janie Alf. A map to the Alfs' will be distributed at the meeting. Their garden will be open for viewing from 11:00 to 2:00.

FIT is a historic place in the annals of The Palm Society (now the IPS). The founding president of FIT, Dr. Jerome Keuper, was the third president of The Palm Society, and created on the campus in the early 1960s a collection only surpassed in Florida (at the time) by Fairchild Tropical Garden. He also created the Dent

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Above, Host Rob Branch, center, stands beneath a variegated Foxtail during the December 12th meeting at his place in Sarasota.. We can't quite see what's so interesting to the person on the right. Below, visitors tour his garden.
(Photos by Chuck Grieneisen)

The Rob Branch Botanical Garden

December 11th, Sarasota

By Diana Grabowski

Approximately seventy individuals attended the CFPACS annual Winter Social held at Rob Branch's Garden located in Sarasota on December 11th.

The main comment many of our members had was "how nice the garden looked in its entirety." Palms were still standing upright , there was little evidence of windburn, and there was a greenhouse that wasn't in shambles. Rob's garden was truly a nice change from what most of our members had become accustomed to, many whose gardens and businesses took quite a beating during the hurricane season.

Members browsed Rob's very impressive garden on their own, with winding paths throughout the property, it was a delight. Rob has probably one of the

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Diana Grabowski Becomes CFPACS President

Diana Grabowski is the new president of the chapter. She is well-known to many members who have attended several December social meetings at her and husband Mark's Cocoa Beach house where she demonstrated her superior cooking skills to all.

Diana has been East Coast vice-president for two years. In the great American tradition, she is an entrepreneur. Holder of a Ph.D. in science education from Florida Tech, she travels around the state and southeastern U.S. providing workshops to teachers, demonstrating approaches to science that will attract and inform the kids.

Women presidents have not been all that common in IPS chapters (the IPS itself has never had a female president.). Currently, the Louisiana Palm & Cycad Society also has a female president, Kathryn Ostdahl.. Closer to home, Kitty Philips is the new president of our neighboring chapter, Palm Beach Palm & Cycad Society (PBPCS).

See Diana's first message as president on page 24.

—John Kennedy

Just like yours, right? Rob Branch's greenhouse, visited by the many during the December meeting in Sarasota. (Photo by Diana Grabowski)

March 12th Meeting

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Smith Trail of palm plantings in honor of his friend, the founder of The Palm Society.

The original collection deteriorated over the years due to neglect; many palms simply disappeared. However, there has been the beginnings of a turnaround. Dr. Anthony Catanese, the current president of FIT, a couple of years ago decided to restore the glories of the FIT palms. He found the seed money to plan the restoration of the botanical garden. There had been an earlier attempt, years before, that was short-lived.

Members will tour on March 13th the newly-designed garden. To create the garden, an extraordinary effort was necessary to clear out the heavy infestation of exotics, including the air potato (*Dioscorea bulbifera*) and the ever-present Brazilian pepper.

During the hurricanes, the area was flooded and many of the newly planted palms were washed out. These have been restored. Essentially, the FIT Botanical Garden is new, with some surviving mature palms from the old days. Palms are scattered all around the campus and will continue to be added to over the coming years.

Brevard members! The university is looking to ID all the palms on the campus to update a map more than 20 years old. Volunteers may be solicited somewhere ahead to help catalogue the existing palms.

Fast food establishments are found on Babcock Street, to the east of the campus, and on New Haven Avenue, about a mile north. See suggestions for lunch at the right on this page.

FIT is on spring break. The students will be gone, only us and the palms and a few casual visitors should be present.

Directions are elsewhere on this page.

Your last *Palmateer*?
If you didn't renew your membership for 2005, this is the final issue of the newsletter that you will receive.
To renew, send your check to Membership Chair, Karen Barrese, ASAP.
Details on page 28.

Directions to Florida Tech, Melbourne, March 12, 2005

From North & South

Take I-95 exit 176. This is Palm Bay Road, SR 516. Go east about 1.5 miles to Babcock Street (major intersection, SR 509). Turn left (north) on Babcock. Go another 1.5 miles—approximately—to University Blvd. Florida Tech campus is on the northwest corner of Babcock and University. Turn left (west) onto University. Go to the first street on the right, about 100 yards, Country Club Drive. Turn right (north) on Country Club Drive. The Administration Building will be on the right, maybe 50 yards ahead. Park in front of the Administration Building—or across the street from it. The entrance to the botanical garden, and our vendors, is 50 yards behind the north side of the Administration Building.

Eateries

On Babcock Street, just south of University Blvd., is Pelican Plaza which contains several restaurants aimed at students. Mystic Pizza has been recommended for pizza and subs; there is also a Middle Eastern restaurant here. Across Babcock, a block south is a buffet, formerly a Ryan's. South on Babcock, about a mile is a Friendly's Restaurant; half a mile below this is Palm Bay Road, with every fast food franchise imaginable. On the east side of Babcock, just north of Palm Bay Road is a Cuban restaurant local members have suggested in past years.

The CFPACS board will meet informally—in the healthful outdoors— for a few minutes at 9:00 at the entrance to the botanical garden. All members are welcome to overhear.

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December Meeting, Sarasota

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most extensive collections of *Arenga* species I've seen in one locale in my "Palmateer" years. He also has planted a xeriscape area that featured a *Brahea* sp. and several unique succulents. Lastly, Rob has a very impressive collection of bromeliads that blanketed the pathways and could also be seen as you peered up into the canopy.

An informal lunch was enjoyed by all in the garden as guests chowed down on a catered lunch and covered dishes brought by members. After lunch there was an auction, with Neil Yorio pulling through again as the official auctioneer, providing the group with tidbits of interesting and pertinent information on each auctioned plant. As always there were a few instances of competitive bidding among "Palmateers", it's entertaining to watch and it's for a good cause too.

At the close of the meet each member was able to choose several plants from those donated by Montgomery Botanical Center to the CFPACS and SWPACS Chapters. The board thanks John and Faith Bishock for their time and efforts in making several trips down to MBC to collect the donated plants and bring them to the Sarasota meet, and also MBC for the donation of the plants to our society.

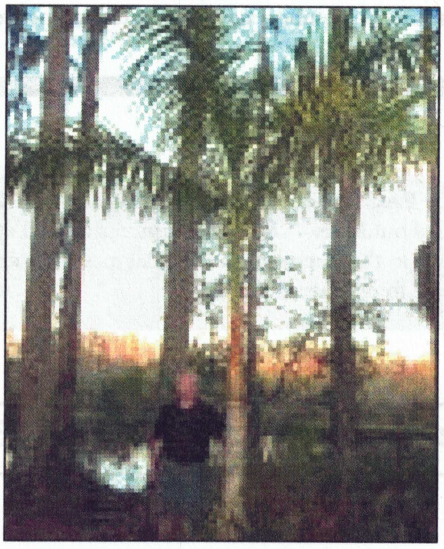
The board extends a grateful thank you to Rob for hosting the December meet at his lovely garden. Everyone had a good time exploring the garden, eating and socializing, and, of course, as usual the ritual of selling their plants and still purchasing more plants to take up the void in the backs of their homeward bound vehicles and gardens.

Incoming president, Diana Grabowski, looks over Rob Branch's greenery in Sarasota with outgoing president, Ray Hernández.

(Photo by Mark Grabowski)

Below, the bromeliads at Rob Branch's Sarasota garden.

(Photo by Mike Merritt)



The Royal at left is not in Sarasota, but 25 miles north of Tampa in Land O Lakes, where it took 28.4° on January 24.. (Is that Tom standing there?)

(Photo by Karen Barrese)

Small Palms Did Better Than Large Ones, And Other Observations on Palm Winners and Losers

Livistona chinensis *unscathed by two hurricanes, at the Florida homestead of Mike Dahme in Grant.*

By Mike Dahme

Although actual fatalities were rare the effects of the two hurricanes that graced the shores of the Treasure and Space Coasts last September could in many cases be considered severe, particularly for those that changed habit from arborescent to decumbent [not to mention degrees in between]. Of these, my palm collection is now well-endowed, though for the most part the fallen remain alive and I'm anticipating a number of L-shaped trunks to remind of Sept. '04. In *Syagrus* the Queen seems well-rooted and quite resistant to strong winds: so much so that two healthy specimens were destroyed by their trunks being snapped off, as we would break a toothpick. However, others of the genus were considerably less resistant, *S. botryophora* which went plop during the first [weaker] 'cane, and *S. oleracea*, many specimens of which have assumed pronounced leans.

Outdoing these was *Livistona australis*, whose tendency towards the supine was noticeable as far back as the March ['97?] "windstorm of the century". Once these get of sufficient size here their upright days are numbered and it matters not where on the property they're located. Perhaps this is due to the high water table, for when asked, the Livistona monographer J Dowe was unaware of this tendency in Australia. Most other *Livistona spp.* resisted being felled, though one large *L. rigida* went from a modest lean to the horizontal a few days after Jeanne, but some clearly show the effects in petiole and foliage. None more so than the SE Asian tropical *L. saribus*, this surprisingly cold-hardy member of the genus which otherwise has a lot to recommend [relatively fast-growing and distinctive appearance], certainly has an Achilles Heel as the winds flayed the fronds and twisted the petioles leaving the appearance of palms on a Guadalcanal beach following a few weeks of all-out warfare. It will be a long time before a semblance of normality returns for these for not only will the fronds in the crown need to be replaced but the existing ones will have to drop [or be removed].

In contrast is the common Chinese Fan which immediately following the storms appeared almost as normal, hurricane effects barely discernible. Hmmm . . . maybe our area's "commons", *Phoenix*, *Sabal*, *Washingtonia* and the lowly *L. chinensis* are here for a purpose besides their cold-hardiness? *L decipiens* also did fairly well, though leaflets dangle more than usual, the one big one that went down was a hybrid [pictured in bulletin 24:4 it was misidentified]. I'd previously inclined to the pollinator having been L chinensis, but know better now.

Immediately apparent after the storms was how

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Palm Winners and Losers

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nicely cleaned were the Everglades Swamp Palm, *Acoelorraphe*. A few stems went down [and died] in some of the clumps but a small price for the many hours of cleaning of dead fronds that would have been required. As some of the older but still green fronds with petioles were likewise separated from the trunks this "cleaned-up" appearance will last for a while.

Among the Borassoids, *Borassus flabellifer* stood out as this species' appearance was less impacted, the petioles unbent and the fronds scarcely ruffled as attendees at the meeting at Joe and Janie Alf's in Melbourne will note when they view the now 22 year-old, still immature, specimen. The congener *B. aethiopum* didn't fare so well as the bent petioles of those here and the two giants at Joe and Anne Michael's in Wabasso attest. The female plant at their house is looking better, however, with several more fronds in the crown than when last seen. It has been ailing for several years, the trunk noticeably pencil-pointing, but although there's no sign of an inflorescence it may be hoped that fruits will again be available from this central Florida treasure. *Bismarckia* too was torn up by the winds but with one exception here all appear to have survived. And in all cases *Bismarckia*, *Latania*, *Borassus* and *Hyphaene* [which weathered the wind's effects better than *Bismarckia* and the African Bo, at least during the first storm] held their ground, stayed upright and display no noticeable lean.

Other genera that passed this mid-range hurricane strength test include *Arenga*, *Chamaedorea*, *Copernicia* and *Ptychosperma*; ones doing less well were *Actinorhytis* and *Aiphanes* [where did the leaves go?], *Archontophoenix* [tendency to lean], *Caryota mitis* [whole mature clumps went over, anyone want pre-dug palms?], *C.* "ochlandra" [leaners], *Chambeyronia* [my only, and very beautiful, specimen appears to be eating it, bud rot], *Elaeis* and even *Licuala spinosa*, fronds of which are often in tatters.

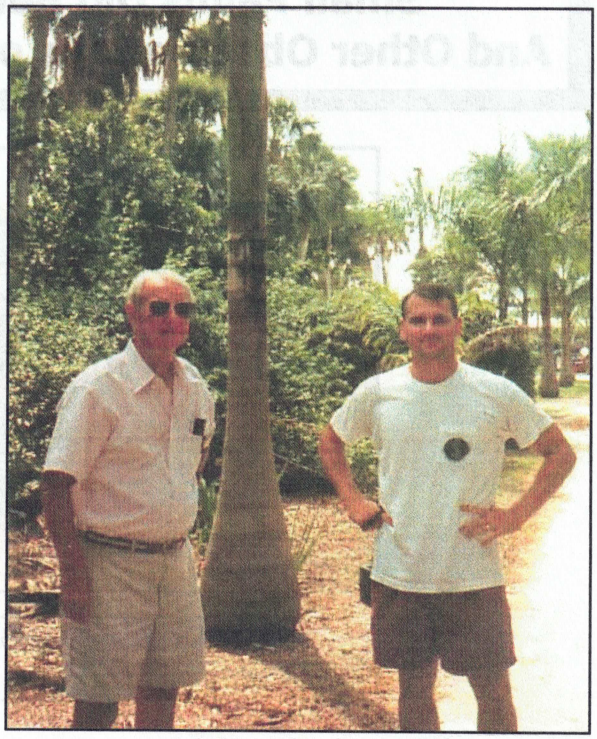
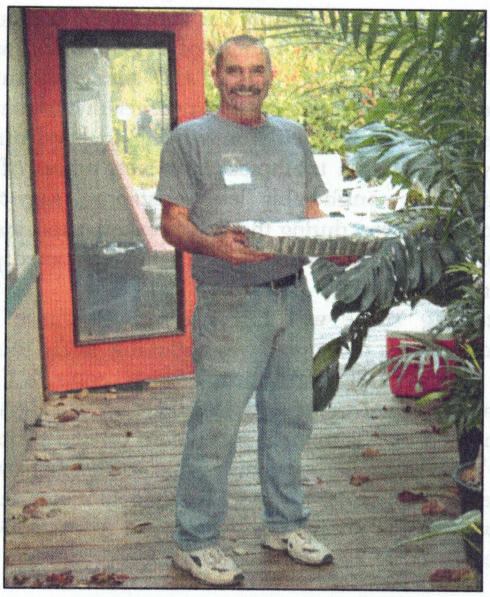


Photo taken some years back at Earring Point, Wabasso. On left is Joe Michael, whose wonderful old palms the chapter was visiting. After a post-hurricane fall, he is currently recovering in rehabilitation. At right is a slim Neil Yorio, CFPACS president, 1998-2000.



Right, our host in Sarasota, Rob Branch, carries more goodies out to the hungry visitors. (Photo by Mike Merritt)

GROWING CYCADS IN CENTRAL FLORIDA

Never Throw Away A Cycad Seed!

[This article was published in the September, 2004 issue of The Cycad Newsletter *and is reprinted here by permission.]*

By Tom Broome

I'm sure all of us have purchased seeds from time to time that are just not good. Some seeds don't have embryos from the start. Other seeds get a fungus in them and die. One of the largest reasons seeds are bad when you get them is that they have not been stored properly. Seeds can go through many people's hands before they get to you, and everyone will hold them for an indeterminate time period. If seeds are sent from country to country, chances are they have been cleaned already.

Cleaned seeds are the worst because they don't have the natural coating that preserves moisture and extends viability. The general rule people use to test viability is

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Below, hulled cycad seeds.

The 'Fern Cycad': On Growing *Zamia vazquezii*

The leaf of Zamia vazquezii, *softer and more "fern-like" than many other cycads.*

By Chuck Grieneisen

Zamia vazquezii, the "fern cycad" is a very different looking cycad for central Florida. As you can see from the photos it looks more like a fern than a cycad, until you see the cone. The *Zamia vazquezii* is a small cycad, the leaves on a large one reaching maybe 3 feet and a 6 or 8 inch caudex (stem) diameter. They do not get a tall "trunk" like many cycads. There are green and brown emergent forms. In the brown emergent forms the leaves come out a cocoa brown then turn to green as the leaves harden up. For me they have been a fairly carefree cycad. Like most cycads it prefers a well-drained mix.

The Zamia vazquezii seems to tolerate a little more water than many other cycads though. So planting it in

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Never Throw Away A Cycad Seed!

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if the seed floats, it is no good. If the seed sinks, then it must be good. Actually neither of these rules is totally accurate. A seed that is full size, but has no embryo in it will sink just as much as a good seed. Except for the *Cycas* seeds that have a corky layer in them that make them float, the reason other seeds float is because the soft insides of the seed, the endosperm, has separated from the hard outside shell. Once it separates just a little bit, the endosperm will continue to dry and shrink until it is impossible to make them sprout in a normal manner. The alternative title of this article is 'Never Throw Away a Cycad Seed,' because I will teach you some ways to obtain plants from seeds that many people would discard.

Any time I get seeds from someone else, I will test them by cutting open a few to see what the seed looks like. I may find a good seed with a full sized embryo that is ready to sprout. I may find a good seed, but the embryo has some time before it is full size, so I know to hold that seed before I plant it. Sometimes the seeds have been held far too long and they are black and "nasty looking" on the inside. These seeds are not good and can't be saved. Some old seeds were viable at one time but the endosperms have shrunk on the inside and either rattle when you shake them or they float when placed in water. These seeds will vary with the time that the endosperm has actually separated from the hard shell (sclerotesta), so techniques to save them will also vary.

If the seeds rattle just a little bit, chances are the separation took place fairly recently. If this is the case, many times, you can soak the seeds in water for a couple of days, and the inside will absorb enough moisture to fill out the shell again and will sprout normally.**Aside from** this easy way to save old seeds, I would have to consider the rest of this article a discussion on advanced methods that should be used when you have to, in order to save very expensive seeds, or very rare species. In order to have good germination, the endosperm must be able to absorb moisture from the hard shell. Except for *Cycas* species, most cycad seeds have a specialized "hatch" structure at one end (the micropylar end) from which the coleorrhiza will emerge. With some of the larger seeds, such as *Dioon*, *Encephalartos*, and *Lepidozamia*, the shell is very thick and it takes a good amount of pressure to force the hatch open. Many times, a seed with a shrunken endosperm that tries to sprout, can not push the coleorrhiza through the hatch because it doesn't have the pressure that a full sized endosperm would have.

Many people have contacted me over the years asking why their *Lepidozamia peroffskyana* seeds have not sprouted after two or three years in the seed bed. I ask them to open a couple of seeds to see what they looked like, and most times, the seeds had already sprouted, but inside the shell. If the seeds had sprouted fairly recently, all they had to do was remove the hard shell and plant the plant. If it had been a very long time, then the new plant was totally dried up and had to be thrown away.

Several years ago I purchased 100 *Encephalartos ferox* seeds that were just not good. The endosperm had shrunken to half its normal size, and some of them had already died due to fungal infestations. Even though the seeds looked bad, I did find old embryos in them.

I normally would have thrown these away, but after seeing what could happen with the *Lepidozamia* seeds, I thought I would try something else. I took my pocketknife, and cut the seed from the side in order to cut off the hard shell without damaging what was left with the endosperm. The larger the endosperm, the more careful you have to be to make sure you don't cut into it when removing the hard shell. Any wound makes a good place for fungus to get in. I dipped the bare endosperms in a fungicide and planted them in a sterile medium, sprouting end up, and burying them about 1/3 into the medium. To my surprise, 20% of these old endosperms sprouted within the first five days. After one month, 60% of these sprouted. The others rotted quickly; I would remove these when they appeared to be beyond saving. I would lightly moisten the medium only twice per week with distilled water and spray fungicide on them every other week. Once a seed sprouted, I would move it to its own container of sterile media.

After getting better at this technique and remembering what happens to old *Lepidozamia* seeds, I thought I would cut open some of my *Encephalartos* seeds that had been in the beds for over 2½ years. The seeds were good in the first place, and were planted normally, but they were taking a long time to come up. I removed the shells from a group of *Encephalartos gratus* seeds and found that the embryos were just under the surface of the hard shell, but for some reason, they just could not push through the hatch. At some point in time, they would have eventually gone bad if they stayed that way. I planted the bare endosperms in the same manner as the *E. ferox* seeds, and to my amazement every seed sprouted within three days, even though they had already been planted for over two years.

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Zamia vazquezii

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a place with a little "muck" in it would be O.K., rather than in just plain sand. (as long as it is well drained) It prefers part sun to fairly dense shade. I have never tried one in the full sun. I would call it "cardboard palm cold hardy", which means that the leaves burn at maybe the upper 20's but the caudex (stem) is more cold hardy than that.

Like most cycads it prefers a fertilizer high in nitrogen. Tom Broome makes a fertilizer that I have used with a lot of success with these. I use it 4 times a year. The cones are receptive in the Oviedo area about late November-December. I have just collected seeds in early December to late January. That means that after pollination they remain on the plant for almost a year. The seeds are usually ready to plant in January or maybe February. There is not a lot of after ripening of the seeds like many other cycads

The after ripening is how long you must hold the seeds before planting. In some cycad species it can be 6 months or longer. In the *Zamia vazquezii* it is a month or less. I have had no problems with nutrient deficiencies with *Z. vazquezii'*. The one problem I had with them was the hurricanes. I acquired many large *Zamia vazquezii*'s about a year ago. Most of them seemed to be planted in the same soil for years (decades?).

I re-planted some of them in the soil mix that Montgomery Botanical Center uses for *palms*. Their palm mix was in the "Palmateer" a few issues ago. I used their palm mix rather than their cycad mix because the *Zamia vazque*zii likes a little more water then most cycads. The palm mix is as follows; 40%peat, 30% pine bark, 20% sand and 10% perlite. They seemed to do well in that mix until the hurricanes hit. Most of the ones in that mix had some root rot on them. On some of them all the roots rotted on them. When that happened I just planted them in a better drained mix and kept them dry for a few months. That allows roots to form. Then I slowly water them until more roots form.

The Montgomery Botanical soil mix for cycads is 25% Canadian peat, 25% perlite, 25% pine bark, and 25% coarse sand. That would probably have been better if I knew they were going to get 10 inches of water in 2 days. The ones in their original soil mix were O.K. Even the small ones that I got as seedling were O.K after the hurricanes. The small seedlings were in a mix more like the Montgomery Cycad mix. So other than hurricanes, the *Zamia vazquezii* is a care free if not real cold hardy cycad for the central Florida area.

A 'patch' of Zamia vazquezii. *The superficial resemblance to ferns is very obvious here.*

A female cone of Zamia vazquezii.

Never Throw Away A Cycad Seed!

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Hulling cycad seeds.

One drawback about this last procedure is that the bare endosperms can get fungus very easily if not done correctly, or if they are kept in an environment that is not very sterile. Another way to get the same results is to carefully remove the top part of the hard shell where the hatch is. The hard seed can be planted into the medium and the endosperm can still absorb moisture through the shell, thus reducing the chance of fungus. The seed will sprout just as fast as with the bare endosperm being planted in the medium, but without the risk of damaging the seed when removing the shell. This would be a good method to try for anyone who has fully mature seeds, and wants to get a uniform germination. After perfecting this method, there is no reason to wait a year or two for any large seed to germinate.

I found one drawback to this method, but it is easily remedied. The seeds are planted with the sprouting end up. The sprouting end is removed so you have a hole in the seed at the top. If you water from above, the water will fill the seed and it will rot. You should take extra care to moisten the medium only, or soak the pot in water from below so that only the medium gets moist.

I hope this article helps everyone save more seeds so that more cycads will be produced. You may want to practice on some seeds that are less valuable to start out with, just to get the procedure down. Once you perfect these methods, you will be able to save many seeds that most people would have thrown away.

PALM BEACH PICNIC & AUCTION MARCH 12, RUTH SALLENBACH'S

The Palm Beach Palm & Cycad Society is holding a "makeup" picnic on March 12, beginning at 9:30 a.m. The chapter's usual picnic and sale takes place around Labor Day and got wiped out by the hurricanes.

No need to bring any food, but the donation of a plant for the auction would be appreciated. Unfortunately, this is the day of our spring meeting in Melbourne at Florida Tech. However, zealots with a second driver may be able to start in Melbourne and end the day in Lake Worth. Only about 100 miles south.

Yes, Virginia, there will be a PalmFest in 2005. . .

May 20-22, Fort Lauderdale, sponsored by the Broward Palm & Cycad Society. The registration fee is $75.00. Lots of great activities planned. Go to www.plantapalm.com for details.

Harry P. Leu Gardens annual Spring Plant Sale has been moved up to early March for 2006. Dates are Saturday March 5th 8am-5pm and Sunday March 6th 9am-5pm. This is the first time in recent memory this event will not coincide with the south Florida sale at Fairchild Tropical Gardens. In the past "sorry, going to Miami" may have been an acceptable excuse but it is not valid this year. See you there ... (**Dave Witt**)

How to tell them apart

MY BABY *LIVISTONAS*: THEIR DIFFERENCES

By Mike Merritt

In the last few months, as I walk about my 5 acres in central Florida, 20 miles from the Atlantic, sparsely planted with palm survivors of numerous freeze events since 1996, my attention has been increasingly diverted by plants of the genus *Livistona.* My in-ground plants, especially, stand out by virtue of the fact that nearly all have been showing strong, steady growth, and have produced many well-formed leaves of good form and color. This is in welcome contrast to species of other genera that have been variously struggling or in a permanent state of recovery from previous freezes.

I don't have any mature *Livistonas*, having been planting them only since 2000. My largest is a *L. saribus* that is my height and has a spread greater than its height. So, for information about mature *Livistonas*, I recommend consulting other members of the chapter. However, the comparative morphology of juvenile *Livistonas* can be confusing even for experienced palmophiles, especially when, as is the case with Australian *Livistonas*, many species have recently become available for the first time, and then only as seeds. Cultural information for these new species is also scarce. Therefore, a discussion of my juvenile (baby?) plants may be useful to both knowledgeable palmophiles and to less-experienced hobbyists in our local area. Photos of the juvenile plants and some discussion of thirteen species (ten Australian) follow in alphabetical order of the species.

Photo 1, Livistona benthamii

Livistona benthamii (photo 1) –

L. benthamii is widely distributed in brackish, marshy environments along the coast of northern Australia. The source of seeds was the well-known solitary *Livistona* (now deceased) that was planted by Bill Bidlingmayer on the grounds of the Florida Entomological Laboratory in Vero Beach. The palm was rediscovered and identified in 2000 by chapter members Janice Broda, John Kennedy, and Mike Dahme. A collection of its small, black fruits was made at that time. Juveniles of this species are sometimes confused with juveniles of *L. muelleri*, *L. drudei*, or *L. lorophylla/kimberleyana*, but the differences are evident to the experienced eye. As seen from photo 1, a specimen growing in full sun in sand with a moderate amount of organics, the juvenile leaves are light emerald green, soft, and divided to near the hastula into narrow, often pendant leaflets. (I have plants that have darker color than the one shown, which was chosen to illustrate leaf detail.) The leaflets radiate from the leaf base over a full circle (360 degrees of arc). The petioles have thin, sharp, brown spines that are longer near the base and recurve upward, necessitating some caution when handling potted specimens. Photos of large palms in references used for this article show leaves that are cascades of long pendant leaflets.

Seedlings developed rapidly under daily sprinkling in the greenhouse, but have been slower to develop in the ground, perhaps needing to develop root systems. Seedlings developed under crowded conditions in the greenhouse had long petioles, but when given more space in open sun, the old leaves died and were replaced with ones having much shorter petioles.

During the 25 Deg F. advective freeze of January 2003, newly planted juvenile specimens suffered damage to outer parts of the leaflets, while the petioles and hastulas were undamaged. The leaves were quickly replaced. More mature specimens might have escaped any damage. *L. benthamii* seems a likely candidate for planting in central Florida, though some damage might occur if a 1989-type event were to reoccur.

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Photo 2, Livistona chinensis

Photo 3, Livistona concinna

My Baby *Livistonas*

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Livistona chinensis (photo 2) – **There's not** much to say about this cold-hardy Home Depot warhorse (the "Chinese Fan Palm") that occurs naturally in southern Japan and Taiwan, but its inclusion is helpful in making comparisons with the lesser-known species. Photo 2 shows an unusually vigorous young grower in a full sun position in low-lying sandy terrain with a heavy organic component. It can be confused with *L. rotundifolia*, but the leaflets do not radiate over a full circle and are thicker than those of the latter species. Petioles have fairly long downwardly pointing green spines, making the plant another one to be careful of when working around. *L. chinensis* is not one of the fastest growing *Livistonas*, like *L. saribus* or *L. decora* (the new name for the species formerly known as *L. decipiens*, assigned by John Dowe in a note published in *Austrobaileya* in 2004), but it will outstrip 3-gal pots in a couple of years.

Livistona concinna (photo 3) – *L. concinna* is the species name assigned to the species formerly referred to as *Livistona* sp. "Cooktown". The species was described in *Austrobaileya* in 2001. An abridged version of the article was reprinted in the July 2002 issue of *The Palmateer* (v. 22, no. 2). In late 2000, Mike Dahme collected the small, round seeds of this species from habitat near Cooktown on the eastern side of the Cape York Peninsula of northern Australia. Juvenile specimens are very similar to those of *L. drudei*. Morphological differences between mature individuals of the two species were said in the species description to be especially notable in the inflorescences and the fruits. The plant shown in photo 3 has grown quite well in sand with a moderate amount of organics. It receives open sun in the morning, but, in winter, is shaded by a magnolia tree in the afternoon. In summer, it is in open sun all day.

When quite small, juvenile leaves are divided into about six pleated leaflets that are fairly narrow and stiff, and divided fairly close to the hastula. As the plant becomes more developed, the pleated leaflets divide into narrower flat leaflets that are more often stiff than pendulous, and which radiate over not quite a full circle. Leaf color is medium green, and leaves are somewhat glossy. The downwardly pointing brown spines on the petiole of the juveniles are not long, but will be noticed if pots are not handled with care.

(Continued on page 13)

Photo 4, Livistona drudei

My Baby *Livistonas*

(Continued from page 12)

Under daily sprinkling in the greenhouse, similar *L. drudei* seedlings developed like rockets, but *L. concinna* seedlings were markedly slower in developing under the same conditions. In the ground, the opposite seems to be occurring. A morning of 32 Deg F this winter did not affect the plant shown in photo 3, but it has not been tested under actual freezing conditions.

Livistona drudei (photo 4) –
L. drudei occurs in nature on the east coast of Australia south of the Cape York Peninsula. References describe it as a species of the banks of perennial streams. The seed from which the plant shown in photo 4 was grown was obtained from the garden of east-coast chapter member Scott Ward in 2001. The fruits were black, and the seeds were somewhat oval and slightly larger than the seeds of *L .concinna.*
It is impossible (for the author) to distinguish juveniles of the two aforementioned species. The specimen shown in photo 4 is less developed than the *L. concinna* shown in photo 3. The 5 to 7 leaflets are still mainly pleated, but some are beginning to split into a larger number of thinner leaflets. As shown in photos of mature specimens, the leaves develop pendant leaf tips.
The two specimens I have in the ground are in full sun locations in sandy soil with a moderate amount of organics in one location and a meager amount of organics in the other location. They receive daily water from a drip system, when I can keep the drippers unclogged. These two plants were slower growers than the average in the greenhouse, which might explain their relatively slow progress in the ground. Neither has been challenged by a freeze, but the species is generally considered to be cold-hardy. I have had potted specimens kept in open sun during the summer go into deep shock with a near complete loss of leaves when the soil was allowed to go dry. They recovered with regular application of water and removal to a shadier location.

Livistona fulva (photo 5) –
In nature, *L. fulva* is restricted to a small area inland of the eastern coast of Australia southeast of Rockhampton. At one time, it was known as *L.* sp. "Blackdown Tableland". *L. fulva* is described as a palm of gullies and the base of cliffs, where groundwater seepage occurs. The plant shown in photo 5 is *L. fulva* and was raised and planted by Mike Dahme. Mike obtained the seeds from an Australian acquaintance who collected them in habitat in 1999. *L. fulva*'s claim to fame is in the orange brown color of the emerging new leaves, reported to be caused by the presence of a layer of indumentum on the underside of the new leaf. The brown cast of the underside of the juvenile leaf is strikingly illustrated in photo 5.
The plant has strong sharp spines that extend directly outward from the petiole and which change in color from green to brown as the leaf ages. Pictures of mature palms show stiff, slightly folded leaves that are medium to light green and without drooping (pendant) leaf tips. Mike Dahme reports that seedling development is about average, and that seedlings were planted out one to two years after germination. Planted seed-

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Photo 5, Livistona fulva

Photo 6, Livistona humilis

My Baby Livistonas

(Continued from page 13)

lings have done well in sunlight, scattered light, and deep shade. The plant shown in photo 5 receives full sun during much of the day. No cold hardiness information is available to this author at this time.

Livistona humilis (photo 6) –

L. humilis is described as the smallest of the Australian *Livistona*s. It is found in the Arnhem Land Peninsula of the northern part of the Northern Territory. My small, oval seeds were collected in habitat in 2000 by the Australian associate of California CFPACS member Sam Sweet. I only have potted specimens, which are shown in photo 6. The second plant shows a slightly different leaf morphology from the others, which I can't explain. The leaves of the second plant are flatter and not quite as divided as the other three, which have thinner leaflets that tend to curl. Leaf color is medium

Photo 7, Livistona kimberleyana

to dark green. The downwardly-pointing green spines are small and break off without injury if rubbed in the wrong direction.

My *L. humilis* seedlings have developed with glacial slowness. They receive daily sprinkling, which keeps the medium moist but never saturated. The root systems are better developed than might be suggested by the small plant size. The leaves have a tendency to develop fungal spots with age, possibly a reaction to a more humid environment than nature designed them for. Photos of mature plants show small leaves with stiff, non-pendant leaflets.

Livistona kimberleyana (photo 7) –

L. kimberleyana is a species of the dry interior of the Kimberley Mountain Range in northwestern Australia. The plant shown in photo 7 was grown from one of a group of small, slightly oval seeds collected in habitat in 2000 by the Australian associate of Sam Sweet. Juveniles of this species are sometimes confused with *L. benthamii* and *L. muelleri*. With experience, the differences with these species are obvious, but there is apparently a very close similarity of *L. kimberleyana* and *L. lorophylla*, another Kimberley Range species. In fact, rumor has it that botanist John Dowe is going to regard the two species as synonymous under the name *L. lorophylla*. From illustrations, it also appears that *L. kimberleyana/ lorophylla* could be easily confused with *L. inermis*, an Arnhem Land Peninsula species.

The plant shown in photo 7 is growing in scattered light in loamy sand. The leaf is divided all the way to the hastula into extraordinarily thin leaflets, giving the leaves a spidery appearance. The gray-green leaflets are relatively stiff, however, and not pendant. The thin, tough leaflets might

Photo 8, Livistona lanuginosa

be an adaptation to the harsh, dry climate of their natural environment, according to some references. The spines on my juveniles are small, green, and downwardly-pointing, and break off without causing injury if handled.

The development of the seedlings was relatively slow in the greenhouse. The seedlings received daily sprinkling, so that the root media was always moist but

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My Baby *Livistonas*

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never saturated. Insubstantial looking plants may have substantial root systems. The in-ground plants have quickly developed new leaves, but the overall size has increased only slowly. The plants have not been subjected to freezing temperatures. From photos, the leaves of mature plants tend not to have pendant leaf tips until they begin to decline.

Livistona lanuginosa (photo 8) –
L. lanuginosa is restricted to a small area inland of the east coast of Australia and south of Townsville, Queensland. It used to be known as *L.* sp. "Cape River". It is a species of sandy river bottoms that can be either dry or covered by raging torrents. This may help to explain some unusual features of this species. Seeds are large, 5/8 inch in diameter, according to my records. My seeds were collected from a cultivated grove in Townsville in 2000. Only one was viable. The resulting plant is now root-bound in a 7-gal pot. Photo 8 shows an in-ground specimen planted by Mike Dahme.

The leaves of my juvenile are divided for about ¾ of the distance from hastula to leaf tip. The leaflets of medium width have a midrib, making them stiff enough not to be pendant. The color is light green and new leaves appear to have a waxy layer, making them glaucous. The lowest leaflets on either side have noticeable prickles on the lower outer edges. The downwardly-pointing brown spines on the petiole are relatively short, but sharp and strong enough that careless handling can cause blood to be spilled.

L. lanuginosa grows like a rocket. My pot-bound specimen is no older than any of my other Australian *Livistonas*. The fruits can appear to be ripe months before they are actually mature. It is recommended that deep pots be used for seed germination, because the large seeds produce a root that descends deeply in the potting media. It has been suggested that the large size of the seeds, the deep rooting of the eophyll, and the rapid growth are adaptations to the extreme range of conditions of the natural environment of the species. Photos of mature palms show that some, but not all, of the leaflets become pendant.

Livistona muelleri (photo 9) –
L. muelleri occurs naturally along the coasts of the Cape York Peninsula in northeastern Australia, and on the east coast almost as far south as Townsville. Its natural environment is described in references as seasonally swampy areas with sandy soils of low fertility (could be central Florida!). The specimen shown in photo 9 was grown from the small, round seeds collected in habitat in 2000 by Mike Dahme. Juveniles of this species are sometimes confused with juveniles of *L. benthamii* and *L. drudei*, but the differences become clear with experience.

The specimen shown in photo 9 is growing in full sun in sandy terrain with a fairly substantial organic component. The leaves are dark green and divided to near the hastula into relatively narrow but stiff leaflets that radiate from a radius of more than 180 degrees of

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Photo 9, Livistona muelleri

Photo 10, Livistona rigida

My Baby *Livistonas*

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arc. The petioles of my small plants have fairly pronounced green spines that project straight outward and have downward curving brown tips. They are worth avoiding when handling potted specimens. Photos of mature *L. muelleri* show stiff, plate-like leaves with no evidence of pendant leaf tips. The overall impression is of an attractive species that might well be sought for landscapes in our area.

L. muelleri has not grown rapidly for me in the greenhouse. Seedlings make deliberate, steady progress with daily sprinkling. The root development is greater than is apparent from the size of the plant and relatively small plants need potting up. I have had potted specimens in full sun go into shock in mid-summer, perhaps with insufficient water, as described above for *L. drudei*. The plant shown in photo 9 has been to 31.5 Deg F with no ill effect, but hasn't been challenged by a "real" freeze.

Livistona rigida (photo 10) –

L. rigida is a palm from widely separated areas of northern Queensland and the Arnhem Land Peninsula of the Northern Territory, where it is found near river channels or other sources of water. A. N. Rodd (1998) considered *L. rigida* to be a subspecies of *L. mariae*. What he considered the *mariae* subspecies of *L. mariae* is found in a small region in the Macdonnell Range of central Australia. John Dowe considers these to be separate species. In a 2004 note in *Austrobaileya*, he described a third Rodd subspecies, *L. mariae (occidentalis)*, as a separate species, *L. nasmophila*. While *L. mariae* and *L. rigida* are nearly indistinguishable morphologically, they appear to respond differently to the environment of central and eastern Florida, according to Mike Dahme (*Palmateer*, v. 22, no. 2, July 2002).

The seeds, of which the plant shown in photo 10 is a product, were about 3/8 inch in diameter and were collected in habitat in 2000 by Sam Sweet's Australian contact. Seedling growth rate was about average. The plant shown in photo 10 is growing in full sun in sandy terrain with limited organic content. The leaves are divided for about 60 percent of distance from hastula to leaf tip in the center of the leaf, and more near the edges. The longitudinally-ribbed leaflets extend outward from the hastula over a radius of less than 180 degrees of arc, and the outer leaflet on each side has a row of spines on its outer edge. *L. rigida* is the only member of the genus except L. *lanuginosa* that I have grown in which juveniles have the latter feature.

Another remarkable feature of *L. mariae/rigida* is that the leaves and petioles get a dark reddish flush when exposed to full sun for a period of time. In shade, the leaves and petioles are medium green. The short, sharp, downwardly-pointing spines on the petioles

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Photo 11, Livistona rotundifolia

Photo 12, Livistona saribus *[Editor's favorite]*

My Baby *Livistonas*

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remain light green and require that the plants be handled with care. The leaves of mature trees are large and have pendant outer leaf tips. My seedlings have not been exposed to below 32 Deg F temperatures. See Mike Dahme's article for comments on cold hardiness.

Livistona rotundifolia (photo 11) –
L. rotundifolia is a species of southeast Asia (Malaysia, Borneo, and the Philippines). It is occasionally called the "Footstool Palm". With its bright green, relatively undivided leaves, it is similar to *L. chinensis*. I have many small plants in the ground in a variety of environments. The ones planted in the more organic sandy soils and in partial shade look the best. Photo 11 is of a small plant in the ground and a much better developed individual in a pot from the greenhouse (one has a root system, the other has leaves). Both are from the same batch of seeds acquired from a cultivated setting in Puerto Rico in 2002. The potted plant shows a feature that distinguishes *L. rotundifolia* from *L. chinensis*. On some of the leaves, the blade radiates from the hastula over more than 360 degrees of arc.
The petioles are well-armed with relatively long, brown sharp spines that are only slightly curved downward. These spines should be watched carefully when the palm is handled. Seedling development in the greenhouse seemed slow for the first year or so, but has now accelerated. None of my in-ground plants have been tested below 31.5 Deg F.

Livistona saribus (photo 12) –
L. saribus is a species with a widespread distribution in southeast Asia, where it prospers in wetlands environments. It is sometimes called the Taraw Palm. The fruits are of a distinctive steel-blue color, and seeds are about 3/8 inch diameter. Quantities of seeds are produced by Mike Dahme's grove of *L. saribus*, and by other trees on the east coast. The five specimens I have planted out are all from these sources. Leaf color is similar to *L. chinensis* and *L. rotundifolia*. Mine are of a form with green petioles; another form exists with red petioles. Leaves are deeply divided into sections of three or four leaflets, which are much less divided, only for about 2/3 of their length. Leaflets extend from the hastula over more than a 360-degree radius. The spines on the petioles are distinctively thick and long, and extend directly outward from the petiole with an interesting undulation in the middle. They gradually turn from green to brown and are formidably sharp and strong, necessitating care when handling.

Photo 13, Livistona victorieae

L. saribus is a fast grower in both the greenhouse and in the ground. My in-ground plants are planted in a variety of sandy soil conditions ranging from organic to almost inorganic, all in full-sun locations. All plants are prospering (with fertilization), but the one in the lowest location near water and with the most organic soil has done the best. All have developed some sclerotic leaves from full-sun exposure after planting out, but soon recovered, developing the compact habit shown in photo 12. Several plants in pots exposed to full sun and insufficient water experienced the shock and leaf loss described above for *L. drudei*. One of my *L. saribus* thrived after surviving 19 Deg F in January 2001, so it is clear that this species is well-suited for central Florida, if the wicked spines are not a problem.

Livistona victoriae (photo 13) –
L. victoriae occurs naturally in northern Australia on both sides of the border between the Northern Territory and Western Australia. It is found near water sources in rather harsh and dry conditions. The small seeds from which my plants grew were collected in habitat in late 2000 by an associate of Sam Sweet. Because the species is so poorly known, it has been suggested that my plants might actually be *L. nasmophila (formerly mariae, ssp. occidentalis)*. However, comparison of my juveniles with pictures of more mature plants don't reveal any evident morphological inconsistencies, and my *L. rigida* and *L. victoriae* juveniles could hardly be more different.
Photo 13 shows one of my juveniles in a location

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My Baby *Livistonas*

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where it gets some shade from a nearby tree during part of the day. It is in a sandy terrain with a moderate degree of organics and receives daily water from a dripper. Despite the necrotic tissue in two of the leaves, the plant was producing numerous leaves after being planted last spring, and appears to be robust. The leaves are divided for about ¾ of the leaflet length. This is less than in the leaves of most of my other Australian *Livistonas*, and the leaflets are also wider. My plants have leaves that are medium green and show some traces of glaucousness underneath. New leaves are stiff, but in older leaves, the leaflets become pendant where they divide, giving the leaves a curious laterally folded appearance. The downwardly-pointing spines on the petioles are not long, but are sharp and strong enough to warrant caution. Photos of mature individuals in my principal reference show leaves that are folded longitudinally but which do not have pendant leaf tips.

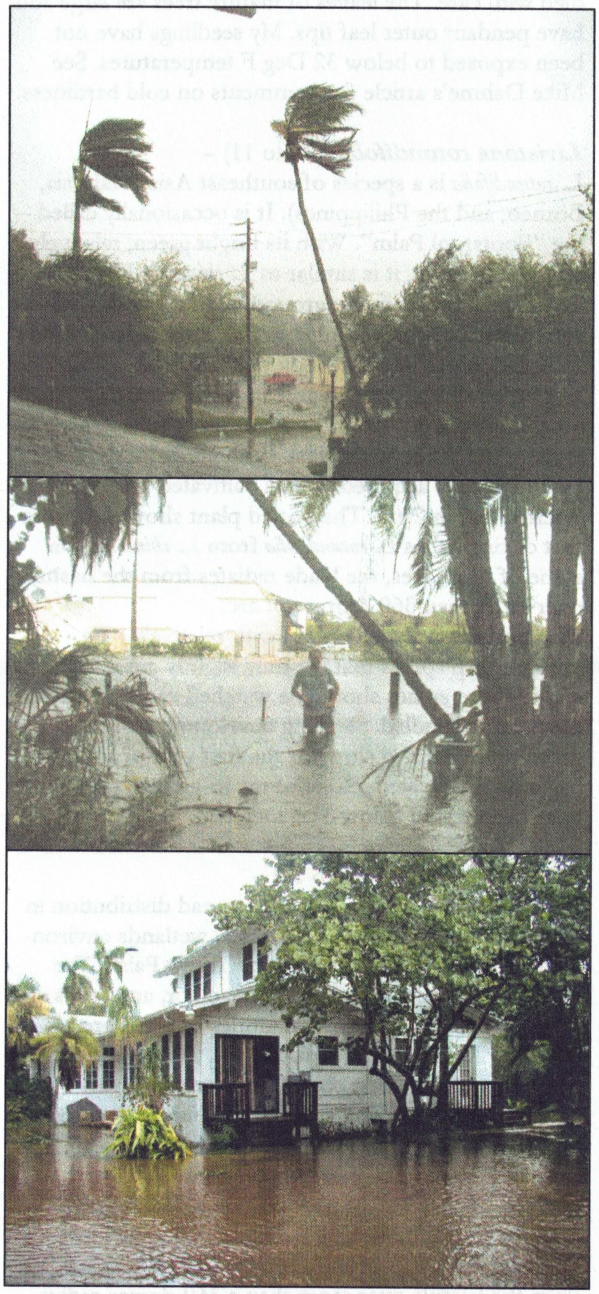
Seedlings in the greenhouse developed fairly quickly. Juveniles in pots which received insufficient water under full sun suffered shock and leaf loss, as described above for *L. drudei*, *L. muelleri*, and *L. saribus*, but recovered well when moved into scattered light with better watering.

Summary

The focus of this article has been on discussing juvenile Australian *Livistonas*, though three Asian species were also discussed. Surprisingly, I have never had plants of cold-hardy and widely-available species *L. australis* or *L. decora (*formerly *decipiens)*. I have seedlings from habitat seed collection of *L. eastonii* and *L. lorophylla* (identified as such by the collector), but these are too small and undeveloped to integrate into the preceding article. Also, I have never worked with (but look forward to so doing) *L. nitida*, *L. inermis*, *L. alfredii*, *L. fulva*, *L. mariae*, or *L. nasmophila*. I have depended on Mike Dahme for the information given herein on *L. fulva*.

The principal literature reference for this article was a previous article, "A. N. Rodd's revision of Livistona in Australia" by John Price, that appeared in *Palms & Cycads*, the journal of PACSOA (no. 64 & 65, July-Dec 1999). I also used the well-known references of Riffle and Craft and David Jones.

Hurricane Charley in Ft. Myers



Top, Hurricane Charley raging in Fort Myers. Center, Neil Wilkinson standing on his dock. Bottom, his house flooded. (Photos from Neil Wilkinson)

TRIMMING & PRUNING PALMS: THE CORRECT WAY

[This article appeared in the October, 1991 issue of Central Florida Palm Society Bulletin, *predecessor—or ancestor—of* The Palmateer, *accompanied by dark black-and-white pictures. It is reprinted here as a useful reminder of good pruning practices.— Editor]*

By Bernie Peterson

There have been many fine books and articles written about the cultivation of palms, but little has been written about the pruning and trimming of palms. It is not surprising therefore that many shabby unpruned, or worse yet, horribly overpruned, palms can be seen in Central Florida.

In warmer climates, South Florida for instance, many so called self-cleaning palms are grown, these are mostly crownshaft palms. Their tidy appearance is one thing that makes them so popular with the palm buying public. In Central Florida few of our palms are self-cleaning to the extent that a royal palm is. In most cases several dead leaves are present in the palm's crown of foliage, unless they are pruned out. A queen palm for example may have 4 or 5 dead leaves and a few dried spadices, *Sabal palmetto* is about the same. Washingtonia is an extreme case, and a young tree may have many dead leaves clinging to its trunk. Incidentally, the retention of dead leaves by a plant is known as **marcescence**, in the case of Washingtonia this is thought to provide a thorny protective barrier to keep climbing animals from reaching flowers or immature seeds in the crown of the tree.

Whether or not to prune the dead leaves from a palm is largely a matter of taste, some palms have an air of informality about them and look just fine even with some dead foliage on them, mature *Sabal*s fall into this category. Palms which have a more formal appearance might be Canary Island Date, Queen Palm, and *Butia.*

The leafbases of some palms provide them with such a strong symmetry that leaving them unpruned is a waste of beauty. *Butia capitata* is the best example of this, if left untrimmed it resembles an untidy bundle of sticks. In a recent article in "Principes", T. Myers eloquently describes the beauty of a well pruned *Butia.* Photos 1 and 2 *[not included here.—Editor]* are before and after shots of a healthy *Butia* which I pruned. Note that the leafbases have been cut to a uniform short length, this is what brings out the symmetry of the tree. Also note that only a few green leaves have been removed, removing healthy leaves does not improve the appearance of a palm. Young *Sabal*s which still have leafbases or "boots" on their trunks should be pruned in a similar manner, as would other young palms which retain their leafbases. Members of the genus *Phoenix* have long sharp spines on their leafbases, when their dying leaves are trimmed away the cut should be made between the trunk and the spines, thus ensuring that no spines are left attached to the trunk. Photo 3 *[not included]* shows a poorly pruned Canary Island Date with the spiny portion of the leafbases left on the trunk, as can be seen, the beautiful symmetry of the trunk is lost, and the unpruned spines are dangerous as well.

At this point a few more words about overpruning are in order. Palms, like any other plant, need their green leaves to manufacture food through the process of photosynthesis, cutting the leaves off reduces the plant's ability to manufacture food. In addition, as plants grow they have the ability to translocate certain nutrients, notably magnesium from older leaves into the newly produced leaves. Premature removal of too many leaves interferes with this transfer of nutrients and may result in a magnesium or other deficiency. Magnesium deficiency is common with *Phoenix* spp., and results in a yellowing of the oldest leaves of the tree, if the tree's owner does not recognize the nature of the problem he may cut off even more leaves to get rid of the yellow ones and thus begin a vicious cycle, which can result in a very unattractive palm. Due to their size, habit of growth, and spiny nature Canary Island Dates, as well as other species, must sometimes be over pruned, in such cases it is important that the palm be well fed. In an effor to save time landscape maintenance personnel sometimes are guilty of overpruning palms. Photo 4 *[not shown]* shows a pair of *Sabal palmetto*s, which have been butchered. These trees some twenty in number are part of the landscaping at an apartment complex in a rather fancy neighborhood adjacent to a country club, once a year they are cut in this manner, presumably to do a whole year's worth of pruning at one time. Or to put it another way to subdue something which is considered a nuisance for another year. Clearly palms treated in this manner do nothing to beautify the grounds, as I have already stated *Sabal palmetto*, in most cases, looks best when left natural, or unpruned.

Multi-trunked palms like Paurotis or *Phoenix reclinata* are the most challenging to prune, yet they offer an opportunity to control the growth of the plant which is not possible with single trunked palms. Pruning may be considered option on multi-trunked species also, but thinning out the smaller trunks and suckers reveals

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The Attack of the Killer Palms

Palms Threaten Native Ecology!

By John Kennedy

And you thought the rampant, invasive plants were melaleuca, Brazilian pepper, air potato, Australian pines, Japanese climbing fern. Wrong. That ever-vigilant guardian of Florida's natural ecology, FLIPPC (Florida Exotic Pest Plant Council), not only stands against the onslaught of subdivisions, shopping centers, sugar cane, etc., but is also on the watch against the insidious creep of dangerous palms.

Two more species of palms have been added to Category II dangers: those species that have naturalized but not **yet** disturbed the natural ecology. But FLIPPC is ever alert to move these intruders to Category I, truly invasive plants. The Queen Palm, *Syagrus romanzoffiana*, has finally hit the big time, appearing on the charts for the first time. (Wouldn't folks in Gainesville and Jacksonville be thrilled to be able to grow this menace?) The second newcomer is something of a surprise: *Chamaedorea seifrizii*.

The University of South Florida in Tampa has an interesting website, www.plantatlas.usf.edu of the Institute of Systemic Botany, that lists all vascular plants growing in Florida by counties, together with maps, pictures, and other info. Checking here, the Queen Palm has been collected from sites in Hillsborough, Charlotte, Martin, and Palm Beach Counties. *Chamaedorea seifrizii*, however, is only found in Miami-Dade County.

Livistona chinensis made FLIPPC's Category II several years ago. USF shows it as naturalized in Putnam, Manatee, Broward, and Miami-Dade. *Ptychosperma elegans* has also been listed for a few years and is naturalized in Broward and Miami-Dade.

Phoenix reclinata, which a major palmperson told me really is a menace, has also been listed for several years. USF shows it as naturalized in Brevard, Indian River, Martin, Broward, Miami-Dade, Collier, and Pinellas. The Institute of Systemic Botany bases listings on verified collection of plants from specific locales. Gaps on the state map between counties where a species has been collected may mean that the intervening counties have not yet been searched for these plants.

About three years ago when I first stumbled on the FLEPPC list, I contacted three members of its board to ask what criteria were used prior to a species being listed. I received one civil reply, two that were not. None of the three respondents answered my question. Apparently, one of "these people" spots an exotic species growing somewhere outside of a yard and, presto! it's on the list. Listing, of course, stops the exotic species in its tracks. Thank goodness for FLIPPC. If there are seedlings around any of your fruiting palms, be careful whom you tell about this potential threat.

Disclaimer: I have been a member of the Florida Native Plant Society (FNPS) for more than 10 years, and know--as we all do--that there are some truly awful exotics in the state. I believe that Florida natives are underutilized and should be planted whenever and wherever possible. I also think, unlike some zealots on the issue, that a balance between native and exotic plants in Florida gardens is not only possible, but desirable.

Oh, USF also lists *Livistona rotundifolia* for Miami-Dade County. Don't tell FLIPPC!

Trimming & Pruning Palms

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the graceful curves of a *P. reclinata* stem, or the neat patterns of Paurotis trunks. Photo 5 *[not shown]* is a beautifully groomed Paurotis at the home of Robert and Kathy Fowler in Ft. Pierce, by regular pruning and removal of overgrown trunks and unwanted suckers this plant could be maintained at this size indefinitely, the same could be done with other multi-trunked palms.

The purpose of pruning a palm should be to enhance the beauty and symmetry of the plant. Pruning the leafbases of a *Butia* can be fairly time consuming if the plant has been neglected or improperly pruned in the past, but maintaining a correctly trimmed palm is easy. To sum up, pruning of palms is easy and in many cases optional. But as with pruning of other types of plants one must be careful not to do too much.

The website of the Venezuelan Palm Society is beautiful and not complete. While more accessible to Spanish-speakers, it's not that difficult for non-Spanish speakers to navigate. Take a look:

www.avepalmas.org

Back by popular request (two inquirers) are more of the innumerable Palm Points taped for beginners by your Editor for broadcast over WQCS-FM, 88.9, Fort Pierce (Indian River Community College's public radio station).

Palm Points #40
Growing Palms from Seed

Growing palms from seed is not for the impatient.
Palms germinate on schedules that humans are bound to find infuriating. Sometimes, a seed sits for a year or more without any sign of life. Nothing is wrong.
The seeds of most palms germinate in 6 months or so. The seeds from some palms never sprout because the species has male and female plants. When there is one of each, close by, and they bloom at exactly the right time, then there will be fertile seed. One plant alone cannot produce fertile seed.
It's a better idea to buy palms that someone else has already germinated and grown for a few years.

Palm Points #41
Palms and Disease, Part One

Palms are usually pretty healthy. Any palm that is properly cared for is likely to do just fine.
But bugs do find palms. The royal palm bug is cyclical. Years with little damage are followed by a season of many bugs. The new leaves on royal palms are chewed to bits. Though unsightly, healthy individual palms do survive.
If the new spear of a palm falls over, the culprit could be a weevil that lays its eggs in the bud and its larvae have eaten the base of the spear. A drench of insecticide poured into the bud may take care of the munchers. Or a systemic insecticide may be poured around the palm.

Palms Points #42
Palms and Disease, Part Two

A fatal disease of palms is *Ganoderma.* It afflicts date palms in particular, but other palms are susceptible. There is little indication of anything wrong until large fungus conks appear on the trunk.
At this point, nothing can be done. It's possible to avoid spreading the disease if the doomed palm is cut down and burned.
All cutting tools must be sterilized in alcohol after use, or the tools will spread Ganoderma to other, healthy palms.
More commonplace are the routine disfigurements that plants tend to have. Scale, sooty mold, notches eaten away by unknown munchers.
No palm has every leaf perfect and beautiful. Be content if most fronds are lovely.

Palm Points #43 Patio Palms, Indoor Palms, Part One

Condo dwellers grow their palms in pots or tubs on the patio or balcony.
Here, it's possible to grow very tender palms.
An example is Lipstick Palm. This shrubby, clumping palm usually has slender, bright red trunks.
Unfortunately, though, Lipstick Palm is too tender to grow outdoors, even in Miami.
But, if you must have this spectacular palm—which faints below 60 degrees—it can be grown in a tub and brought into the house every night when you put out the cat.
When palms are grown on the patio or balcony, the same attention to light conditions is necessary. Is the palm a sun-lover, a shade-lover, or will it take some of each?

Palm Points #44 Patio Palms, Indoor Palms, Part Two

Many tender palms can be grown almost indefinitely in a large pot. Many other palms can spend a few years in successively larger pots.
When grown on patio or balcony, attention to light conditions is necessary. The same is true when palms are brought inside the house.
Most palms need brighter natural light than occurs in artificially lighted houses. Most palms also need higher humidity than is usual in artificially cooled and heated houses.
Most palms do poorly under interior conditions. The palms that do succeed are those that grow naturally in deep shade and can accept low humidity.

Palm Points #45 Patio Palms, Indoor Palms, Part Three

Palms that can take the low light and low humidity inside the house include Lady Palm,

(Continued on page 24)

A Control for Asian Cycad Scale?

By Doug Caldwell

In many areas of Naples the king and queen sagos (cycads) are under attack by *Aulacaspis yasumatsui* a small white scale from Asia. This little white scale that arrived in the Naples area about 1997, settles on the undersides of the fronds changing them to a glowing white, so that the cycads resemble a small flocked Christmas tree. This flocked appearance is sort of attractive, but the sagos react adversely to the piercing and sucking type of feeding activity of this scale by turning brown and dying.

This pest is very difficult to manage, forget the word 'control' at this point in time. This scale is from Thailand where it is not considered that big of a deal because the native insect parasites and predators keep it at bay. Without the normal compliment of insect enemies in Florida, scale populations take off unchecked. Not only that, but it ***feeds on underground structures,*** especially at the point where new "pups" originate as well as on roots, and is untouchable with most homeowner-use type of insecticides. Populations also accumulate at the point of attachment of the plant's thick frond bases on the trunk.

This pest has repeating, overlapping generations. This means a constant re-invasion every 4 to 6 weeks especially during March through October. A tiny wasp parasite and a predator beetle from the scale's homeland were released in 2000 or so and seem to be establishing! Unfortunately, I don't think that these good bugs are aggressive enough to help many of our already infested cycads. See what the good bugs look like at http://collier.ifas.ufl.edu/Horticulture/CAS_index.htm.

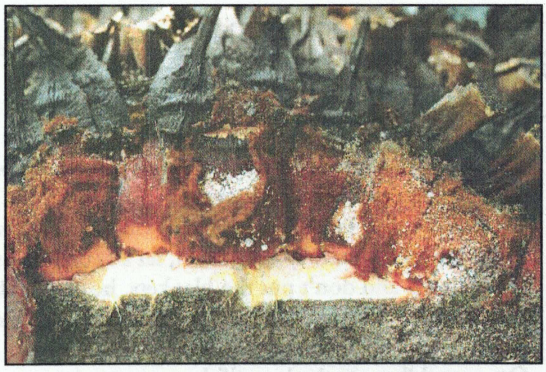
What To Do: A systemic insecticide is needed for the stages that feed hidden away, at the base of the emerging "pups" and under the thick woody plates (petiole bases) on the trunk. I tested (one application) of **2% horticultural mineral oil**; 2% Safer Insecticidal Soap and 1.56% Organocide solutions. These products provided only 47%, 5% and 21% mortality, respectively. Not good enough! In another test, a Cygon 2E (dimethoate) foliar application at 4 tsp./gal gave 85% control. The best chemical strategy, would be a **systemic compound** which would be absorbed into the root system as a root treatment application. It would then move upwards into the foliage and kill the scales on the fronds and on the trunk as well as the scales feeding on the roots. Merit® applied as a soil application has given unreliable results. A root drench of dimethoate (Cygon 2E, 2 oz per gallon) gave 95% control of the adult scale in November 2002 in my test. Pesticide trials are being conducted at several University of Florida locations. A new, highly effective systemic product called *SAFARI*™ (dinotefuran from Valent USA Corp.), will be available early 2005. *SAFARI* 20 SG may be the two-shot "silver bullet" with two root applications per year; one in early May and again in mid September. Price looks to be about half as much as a similar systemic, but it only comes in a 3 lb package at $90 per pound! However at the highest rate of 24 oz per 100 gal and 2 qt per foot of height, the cost breaks down to 34 cents per foot! There may be a homeowner-friendly-size product available next year.

If the scale population has exploded and the predators and parasites are not protecting the cycad sufficiently, try Dimethoate 400 (EPA Reg. No. 34704-207; only available in 2.5 gallon size) as a root-soil treatment. For small cycads, up to 2 ft. in height (measured from ground to bud), apply 1 oz of Dimethoate 400 in one gallon of water and if taller than 2 ft., add 0.5 gal of solution per 6 inches in additional height. Because of their larger size, queen sagos may need double the dose.

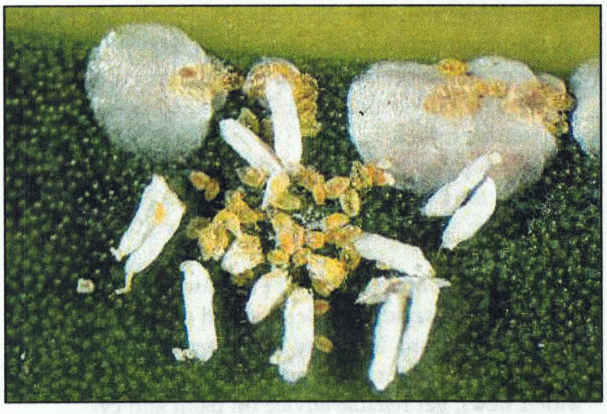
In south west Florida peak active periods are May and early October but they may be active year round. Make sure that the label has the intended use on the label as dimethoate is being phased out by the EPA. Until *SAFARI* is available, monitor closely and use repeated sprays of horticultural mineral oil, 2% dose, as the new white fluffy scales appear. Remove the "pups", as these side-shoots make scale management more difficult.

Plant Selection: If you are fed up with the battle, try a scale resistant, substitute plant with a form similar to the king sago, such as *Dioon edule* or perhaps some agave species, Crinum lily or *Phoenix roebelenii*, may work.

[Doug Caldwell is UF IFAS Horticultural Extension Agent for Collier County, Naples, and member of CFPACS.—Editor]



Above, the scale is at the base of the fronds and almost unreachable by sprays. Below, the female scales are, initially, crawlers.



Disease Corner

Bud Rot (Another Problem)

Phil Stager sends some pictures from his St. Pete garden. A mature *Syagrus quinquifera* that he cut down after noticing a 12" x 16" hole in the trunk just under the crown. He believes this (described as "stinking to heaven") to be *Thielaviopsis* rot throughout the trunk. Phil cites Boschat & Meerow, *Ornamental Palm Horticulture*, p. 146, as the authority for his ID.
The palm was 16 years old. He blames the problem on fronds and old crownshaft pieces falling on the emergent spear twice within 6 months.

PRESIDENT'S MESSAGE

The holidays are over and a new year has begun. It's a time of new beginnings and exciting new possibilities for what the year will have in store for all us "Palmateers".

It can only get better than what all of Florida experienced during the 2004 hurricane season.

As I drive through various regions of Florida on my weekly consulting missions it's evident that many communities are getting back to normal and that includes landscaping endeavors. In January Winter Park replanted palm trees that were uprooted during the hurricane season. I'm sure there are other similar stories and if you know of any please send me an email with details so that they can be shared with all of our members.

I have to ask myself if growers and hobbyist will reevaluate what they decide to plant this year based on what they learned from the past hurricane season. Perhaps, some folks will think twice before investing the big dollars on that unique palm or cycad to only have it experience a sudden or lingering death in the Hurricane Season of 2005. I suspect that most of us will continue to plant and purchase whatever we desire because after all most of us are "Palmalohics" and it will take more than one horrific hurricane season to change our ways of thinking.

Like the rest of most of the United States, Florida was not spared from cold temperatures. On several occasions temperatures dropped to the freezing mark in several counties. Extreme drops in temperature were recorded on the night of January 23rd and January 24th. The CFPACS website was buzzing with folks exchanging frigid details of their extreme temperatures recorded and monitoring the status of their dearly beloved plants throughout the week.

Hopefully, the January cold spells will not linger into February and generally they don't, let's keep our fingers crossed and don't put the blankets, heaters, lights, and unique protection inventions up until Spring as sprung.

On a worldly note the beautiful coconut palm trees lining all the coasts ravaged by the tsunami helped in saving hundreds of individuals. Countless survivors credit their survival for the palm tree that became their saving grace as they climbed up and grasped for dear life until it was safe to come down.

On January 22nd a Nicobarese man, a survivor of the tsunami was found by the Indian Navy. He was found on the deserted island of Pillow Panja. He gave credit to the wondrous coconut tree for his survival, he lived off nothing but coconuts for 25 days and made a coconut tree his refuge.

On the local events updates, the CFPACS will have a booth at the Leu Gardens Spring Sale on March 5th and 6th, be sure to stop by and visit Dave Witt and Co. It's a great sale.

On Saturday March 12th CFPACS will host a Spring Sale at FIT Botanical Garden located on the FIT Campus in Melbourne. I hope to see many of you Palmateers at this meet. It's a great time to catch up on winter news, get reliable advice on palm and cycad issues, and of course buy some more plants to add to your garden. See additional details for the Spring events in this issue.

Aside from attending the quarterly events sponsored by the CFPACS organization I encourage all of you as you plan your 2005 travels, to visit some of the wonderful botanical gardens the state of Florida has. Some of these gardens are in our own backyards such as Bok Sanctuary, Florida Institute of Technology Botanical Garden, Harry P. Leu Gardens, Marie Selby Gardens, Kanapaha Botanical Garden, and McKee Botanical Garden. Those requiring a little more driving-time for CFPACS members are: Edison-Ford Winter Estate, Fairchild Tropical Garden, Morikaimi Museum and Japanese Garden, and Mounts Botanical Garden.

Lastly, please do visit the CFPACS website for yearly updates, to share your insights and get helpful and knowledgeable advice.

Happy planting and steadfast growth.

Diana Wehrell-Grabowski

(Continued from page 21)

several of the Chamaedoreas, and the Kentias.

Palm Points #45

Kentias are two species of small pinnate palms commonly known as florist's palms. These are the palms likely to be placed around the speakers' platform or on stage at some event.

Palms that grow most of the year indoors need to go outdoors occasionally for a little R & R.

Move them gradually into the brighter light outside. When bringing them back in—maybe several weeks later—move them gradually into the lower light inside.

Watch for spider mites and other pests that attack houseplants.

From the Editor's Desk

Most of us have taken a licking from the hurricanes. Yet it has been a surprise, a pleasure to see how quickly many palms showed signs of life, how easy (relatively) it was to right and prop up some of the fallen—or, at least, the leaning. Of course, we're hoping now that recovery isn't trashed by a hard freeze. Our fingers are crossed, our prayers to be answered. If we get through February—this is written on February 8—and the first week or so of March, we're home free.

*****

What I'm looking for to include in the June issue of the newsletter is stories of recovery, especially if unexpected. Send to me: jkennedy@ircc.edu Deadline for the June issue is May 13.

*****

This issue of *The Palmateer* was assembled under the gun, so to speak. Our printer-in-chief, noble president Diana Grabowski, prints the issue on the chapter's printer that lives in her Cocoa Beach office. But the entrepeneuresse will be on the road for most of the second half of February. So the issue had to be done faster than usual. To make matters even more interesting, your Editor started receiving mysterious error messages on the chapter's computer that resides in his house. Attempting to remedy the problem, he managed to eliminate Publisher 98 from the computer, and was unable to re-install it. No March issue? However, he had requested a year ago that Publisher (2002) be installed on his employer-provided computer. Thus, the issue is saved at the price of long days at the office. Tune in again for the next tale of woe.

*****

Joe Michael fell in a trailer in which he and wife Anne were living after their return from a second hurricane evacuation. Their house was made uninhabitable, and is now being very thoroughly repaired. According to Anne, Joe is recovering slowly in a rehabilitation facility in Palm Bay. We all remember that marvelous Michael palm place, Earring Point in Wabasso, surrounded on three sides by the Indian River. And, yes, the female *Borassus* seems to be recovering.

John Kennedy

The USF Spring Plant Festival 2005

It's time again for the spring sale in Tampa. The University of South Florida, in Tampa is hosting the spring plant festival on Saturday, April 9th, and Sunday, April 10th.The hours will be 10AM to 4 PM on Saturday, and 10AM to 3 PM on Sunday. Members of the USF Botanical Garden get in early at 9:30 AM.

We can really use your support in order for us to be able to continue making palms and cycads available at these sales.

Set up times for vendors are 8:00am.-6:00pm. Friday and Saturday morning 7:00 till 9:00.

If there is someone new who does not know how to get to the garden, it is near the southwest corner of the USF campus, in Tampa. You can get to the campus on the Fowler exits from either I-275 from the west, or I-75 from the east. From the east, you will drive a few miles before you see the campus. Turn right into the main entrance, and go to the first light. Turn left, the road will end at the entrance to the garden. From the west, get onto Fowler and drive about a mile, and then turn left into the main entrance, and follow the other instructions. There will be people to show you where to park.

Most of the other societies are there as well, so if you enjoy growing plants such as bromeliads, orchids, ferns, or anything else unusual, you can find it at this sale.

If you need more information on the sale, or would like to be one of our vendors, please contact me, Chuck Grieneisen at chuckfg@mpinet.net or 407-359-

SALES

Harry P. Leu Gardens, Orlando, March 5-6, 9-5.
Marie Selby Botanical Gardens, Sarasota, March 19-20.
Kanapaha Botanical Gardens, Gainesville, March 19 (9-6)-20 (10-5)
University of South Florida, Tampa, April 9 (10-4)-April 10 (10-3)
Heathcote Botanical Gardens, Fort Pierce, April 30, 9-3

SEED BANK REPORT

Since my taking over as seed distributor last year there have been a number of donors to thank, some new and some the old "usuals". Of course, Miami's Montgomery Botanical Center is foremost among them, too many species to list individually - at least 40 but including such unusual seeds as *Orania*, several *Attalea* species, *Syagrus cearensis* [recently formally so-named by Larry Noblick] and highly coveted cycads in *Dioon* and *Encephalartos*. Thanks again to the staff there for their generosity.

From far away members Shri Dhar of India and Vincenzo Rubino of Italy came *Severinia buxifolia* [Chinese Box Orange] and two Dominican Republic species of *Coccothrinax* respectively, while Californian member Joseph Prabhaker of Ortanique made a very generous [over 60 lbs worth] donation of such species as *Manicaria* and the two species of *Borassodendron* [*borneense* and *machadonis*], one *Hyphaene*, two *Attalea* plus 4 spp of *Phoenix* collected from habitat. Thanks to all.

Closer to home, seeds came from Mike Dahme, Charlene Palm, Rick Nale, Bud Wideman [*Zombia*] and myself. Joe and Anne Michael donated seeds of *Attalea speciosa*. Amounts raised for the chapter treasury are available in the treasurer's report.

—Dean VanderBleek

Fourth Quarter Meeting Minutes Dec 11/04

The fourth quarter meeting was called to order at the residence of Rob Branch. The results of the recent election are in and Diana Grabowski will be taking over as president from Ray Hernandez as of Jan 1/05. We will be getting a new webmaster to replace Steve Wasula after his great service to our website. Our new webmaster will be Frankie Ramos. The possibility of our society organizing Palmfest this year if none of the other societies have it was discussed.

It was agreed that we would not pay for a share of the Montgomery seed program. It was a program that Montgomery Botanical Center had that their seeds were divided up into shares. People and institutions could then buy shares. We had someone generously give us a share at no charge last year and we decided that it would not be worth the money and work to distribute the lot of seeds to pay for the share.

For the auction plants it was agreed to give away the most common ones and auction the rest.

Meeting dates were finalized for the upcoming year. The dates will be the 2nd Saturday of the following months; March, June, September, and December. A March plant sale at F.I.T and up to 4 gardens was discussed for the March meeting.

It was agreed that the meeting minutes should be posted to all board members, but board members only, before the new *Palmateer*..

The east coast vice president for the upcoming year is open and various candidates were suggested. A decision on the matter has been deferred until later.

The laser printer that publishes the *Palmateer* needs a technician.

Publishing *The Palmateer* online was discussed. It was agreed to ask the new webmaster about the feasibility of that.

—Chuck Grieneisen, Secretary

The White Tee Shirt is inhabited by none other than Cycad-Celebrity-About-Town, Tom Broome. Look closely: John and Faith Bishock are in the background and Hersh Womble, too. Scene is Rob Branch's in Sarasota.

(Photo by Mike Merritt)

TREASURER'S REPORT

September 18, 2004 to December 11, 2004

INCOME:

Seed sales.....	431.30
Membership Dues.....	85.00
Donations to CFPACS.....	0.00
Public Sales (USF Fall Sale).....	393.67
Private Sales (Gaylord Palms meeting).....	-309.24
Back Issue Sales.....	0.00
Total	600.73

EXPENSES:

Publications (v. 24, no. 4).....	941.31
Grants	0.00
Miscellaneous (gift books).....	116.00
Total	1,057.31

INCOME - EXPENSES ..... -456.58

Bank balance 09/18/04..... 22,867.21
Bank balance 12/11/04..... 22,372.38

Net increase..... -494.83 (decrease)

(Note: Club-budget and bank reporting periods do not exactly coincide.)

ASSETS:

Endowment (mutual funds)..... 10,000.00 (purchase price)
..... 9,456.26 (value at time of purchase)
..... 9,312.72 (current value, close of market 12/9/2004)

(6,353.91 Washington,
2,958.81 banked
from sale of Putnam shares)

Office equipment and tent..... 1,595.00
Computers and software..... 2,544.41 minus depreciation
Printer..... 2,200.00 minus depreciation

—Michael Merritt, Treasurer

Please print

Name_____

Street_____

City_____

State,

Zip_____

Email_____

Phone (area)_____

Wish to be added to Seed Bank E-mail list? (Circle one) YES NO

Willing to be listed publicly in roster? (Circle one) YES NO

Mail check made out to CFPACS (domestic: $15 one year; $40 three years; foreign: US$20 one year) to:

Karen Barrese
Membership Chair
5942 Ehren Cutoff
Land O Lakes, FL 34639
cfpacsmbrship@aol.com

Membership also available at website:
www.cfpacs.org
The dues of anyone joining after October 1 are applied to the following calendar year.

The International Palm Society (IPS)
Anyone interested in joining the IPS and receiving the quarterly, illustrated journal, *Palms*, should send a check for $35 (regular membership) or $45 (family membership) to:

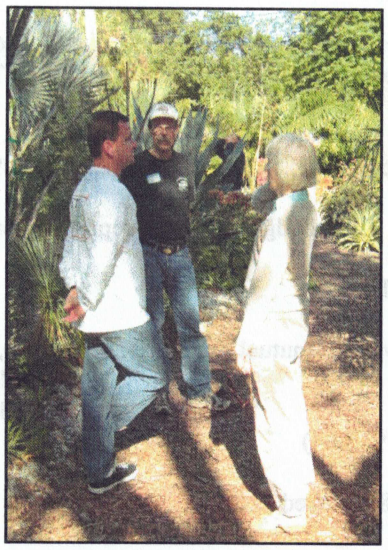
International Palm Society
P. O. Box 368
Lawrence, KS 66044

Dues may also be paid online at the IPS website, www.palms.org

JOIN (OR RENEW) NOW!

The Central Florida Palm & Cycad Society service area includes the following counties:
Alachua, Brevard, Citrus, DeSoto, Flagler, Hardee, Hernando, Highlands, Hillsborough, Indian River, Lake, Levy, Manatee, Marion, Okeechobee, Orange, Osceola, Pasco, Pinellas, Polk, Putnam, Sarasota, Seminole, St. Lucie, Sumter, Suwannee, and Volusia.

Please notify the Membership Chair (see directory on p. 29) of any changes in street address, phone number, area code, or e-mail address. The newsletter is sent to the address of record.



Three-way chat in Sarasota at Rob's: Neil Yorio, Phil Stager, Libby Besse. (Photo by Mike Merritt)

CENTRAL FLORIDA PALM & CYCAD SOCIETY

President
Diana Grabowski
541 S. Atlantic Avenue
Cocoa Beach, FL 32931
(321) 783-2342
ScinceLady@aol.com

Past President
Ray Hernández
4315 W. San Juan Street
Tampa, FL33629-7703
(813) 832-3561
SubTropicOfCancer@hotmail.com

Secretary
Chuck Grieneisen
2450 Simmons Road
Oviedo, FL 32765
(407) 359-6276
chuckfg@mpinet.net

Treasurer
Michael Merritt
1250 Bee Lane
Geneva, FL 32732-9172
(407) 349-1293
(407) 349-2924 FAX
mmerritt85@cfl.rr.com

East Vice President
Vacant

Central Vice President
Tom Broome
P. O. Box 325
Polk City, FL33868-0325
(863) 984-2739
cycadjungl@aol.com

West Vice President
Tom Barrese
5942 Ehren Cutoff
Land O Lakes, FL 34639
(813) 996-7148
Palmnation@msn.com

Membership Chair
Karen Barrese
5942 Ehren Cutoff
Land OLakes, FL 34639
(813) 996-7148
cfpacsmembership@msn.com

Editor, *The Palmateer*
John D. Kennedy
3225 13th Street
Vero Beach, FL 32960-3825
(772) 567-9587
Palmateer@cfpacs.org

CFPACS Seed Bank
Dean VanderBleek
6725 N. U.S. 1
Mims, FL 32754
(321) 269-9061
brevocolipalms@yahoo.com

CFPACS Webmaster
Frankie Ramos
4169 N. Indian River Drive
Cocoa, FL 32927
(321) 634-5223
webmaster@cfpacs.org

Above, Pritchardia munroii, *one of two surviving mature individuals of this species. Some juveniles are being raised from the two trees. The occasion is last year's IPS Biennial in Hawaii.*
(Photo by Mike Merritt)

CENTRAL FLORIDA
PALM & CYCAD SOCIETY

Above, Copernicia alba *at Rob Branch's in Sarasota, seen on December 11th.*
(Photo by Mike Merritt)

Old Lags Reunion? From left, Rick Kern (vendor), Mike Dahme, the Editor (cup is empty), Dean VanderBleek (w/ Coccothrinax crinita*) at Garden Fest, Vero Beach, February 5th. Wielding the camera is Mike Merritt.*