The Palmateer

Volume 22, Number 3 *Central Florida Palm & Cycad Society* *September, 2002*

October 26
Fall Meeting in Brevard County: West Melbourne, Grant

By Diana Grabowski

The next CFPACS meeting will be held on Saturday, October 26th, in South Brevard county. The site of the morning meeting is at the home of Mary Ann and Jerry Hooper in West Melbourne. The CFPACS Board will meet there at 9:00 a.m.; all members are invited to attend the Board meeting. Plan to arrive at the Hoopers' at about 9:45 for a tour of their unique palm, cycad, and tropical plant collection. Items of note are some cool *Euterpe*s, *Corypha*, and a Teddy Bear Palm with enough trunk to be huggable. Parking is along the west side of Vermont Street.

After the Hoopers', members will head farther south to Mike Dahme's "Borassic Park" in Grant. Be pre-

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Palms (of course) but where? In an unlikely place, the Queen City, Charlotte, North Carolina. Known as the "Myers Park Trachies," these are the oldest palm planting in the city. Story on palms in Charlotte on page 4. (Photo by Ryan Gabriel)

Map, Directions, Page 3

Below, you know what they're looking at. Palms and cycads (obviously), this time at the July meeting in Sarasota. The group is listening to a description of the treasures of Marie Selby Botanical Gardens. If you attend the October meeting in Grant, you may appear in a similar picture in the December issue . (Photo by Chuck Grieneisen)

Not 60-ft coconut palms, not growing in Charlotte. These are Dictyosperma album*, tall and old beyond Florida dreams. Peter Mayotte has gone palm-voyaging again, this time to Rio de Janeiro, where he took this picture in the Rio Botanical Garden.*

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, Pinellas, Polk, Putnam, Sarasota, Seminole, St. Lucie, Sumter, Suwannee, and Volusia.**

Please notify the Membership Chair (see directory on p. 27) of any changes in street address, phone number, area code, or e-mail address. The newsletter is sent to the address of record. Seedbank notices are sent to the e-mail address of record.

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We give advice indeed; but we do not influence conduct. **—LaRochefoucald, Maxim 378**

"Rafiki," the homeplace of Bill Beattie, president of the Far North Queensland Palm & Cycad Assn., also editor of its publication, Wodyetia. *Sure doesn't look like Vero Beach. Maybe Borassic Park in Grant? But is that a* Pigafetta *in the center background?*

Some info. . .

This issue of *The Palmateer* is thinner and later than has been usual, due to the Editor's medical adventures in the summer. I had quadruple bypass surgery on July 31st in Orlando, spent a week enjoying the hospitality of Florida Hospital, before returning home to recuperate for the remainder of August and the first two weeks of September. I am much stronger—or you wouldn't be looking at an issue at all—no longer so fragile and stiff as I was. Why, I can even tie my shoes! I hope to see many of you on October 26th at the Melbourne area meeting.

If anyone gets smart with me, I'll flash my incision at the offender! People are *so* queasy . . . I am able to provide cardiac referrals in Orlando to all requesting these.

I want to thank CFPACS for sending flowers to cheer my recovery. Not only were they pretty, but there seemed to be palmy leaves among the blooms.

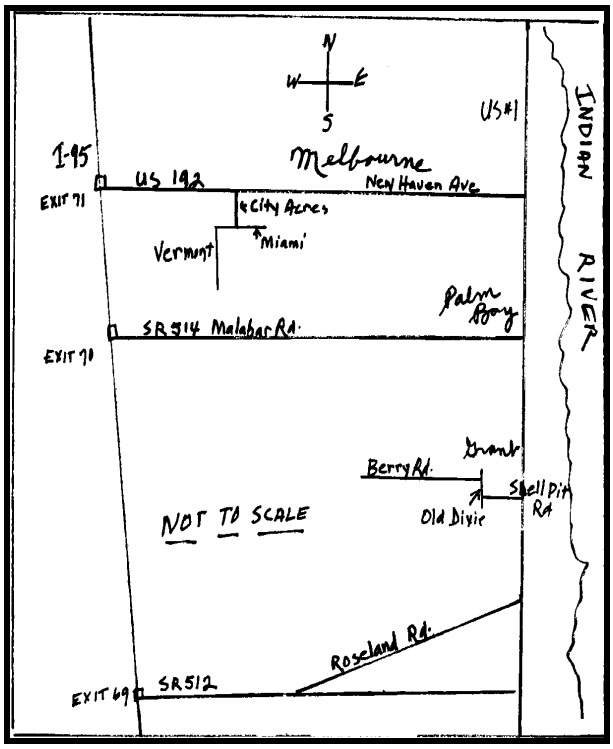
–John Kennedy

October Meeting in Brevard

(Continued from page 1)

pared to walk among many *Livistona*s and Borassoids. Deli-chicken, rolls, salad, beans, and beverages will be provided for a cost of $3.00 per person. Members are also encouraged to bring a covered dish: i.e, dessert, salad, etc., to accompany the chicken+. Additionally, each member attending is asked to bring a lawn chair, plants to donate for the auction, and plants to sell after the auction.

The auction will take place first, with 100% of the funds going to CFPACS. Upon completion of the auction, there will be a plant sale. The ability to purchase plants at a meeting is a membership benefit. Thus, specific guidelines will be followed during the auction and plant sale. NO PLANTS ARE TO BE REMOVED FROM THE SALE AREA BEFORE THE SALE STARTS. Let's all mind our manners and be well-behaved Palmateers. If you have any questions regarding CFPACS Meeting Plant Sales Policy, see *The Palmateer*, Volume 20, Number 3 (September, 2000), page 7: "CFPACS Meeting Plant Sales Policy" by Neil Yorio.



Directions: ***First stop*** (10:00-11:30), the Hoopers', 2360 Vermont St., West Melbourne, (321) 676-3458.

From I-95, take exit 71, Melbourne (US 192, New Haven Ave.)

1—Drive east about 2 miles on 192. Turn right (south) on City Acres Ave. This deadends in the length of two blocks into Miami St. Turn right (west). Vermont St. is a short jog on the left. Turn left down Vermont St. Watch for cars parked in the street about 50 yds. down.

2—Alternate route, via US 1. Go to New Haven Ave. (US 192). Drive west on 192 for about 5 miles. City Acres Ave. is on the left, about half a mile west of Melbourne Square Mall. City Acres deadends into Miami St. Turn right on Miami St., a short jog to Vermont. Turn left on Vermont St.

Second stop (12:00-4:00), Mike Dahme's, 4625 Berry Rd., Grant, (321) 724-8417.

From the Hoopers'

1—Go back to 192. Turn right (east) on 192 to US 1. Turn right (south) on US 1 for about 14 miles to Shell Pit Rd. (The intersection just north of Shell Pit Rd. is Grant Rd.) Turn right (west) on Shell Pit Rd. which deadends (100 ft.) in Old Dixie. Turn right on Old Dixie. Berry Rd. is on the left, about 50 ft. ahead. Drive west on Berry Rd. about a quarter of a mile. Park on north side of Berry Rd., walk in to Borassic Park on south side.

2—Alternate route, Hoopers' to Dahme's, return to 192, turn left (west) on 192 to I-95. Go south on I-95 to Exit 70 (Malabar Rd.). This is two exits south. Drive east on Malabar Rd. about 4 miles to US 1. Turn right (south) on US 1 to Shell Pit Rd., right again on Old Dixie, quick jog to Berry Rd. on left.

For those going only to the second stop

1—From the north, take I-95 to exit 70 (SR 514, Malabar-Palm Bay), then follow directions above, Malabar Rd. to US 1, then south.

2—From the south, take I-95 to exit 69 (SR 512, Fellsmere-Sebastian). Drive east on 512 about 3 miles to Roseland Rd. (second traffic light). Turn left (east) on Roseland Rd. for about 5 miles to US 1. Turn left (north) on US 1. Shell Pit Rd. is on the left, 5 miles north of the bridge over the St. Sebastian River.

3—It is, of course, possible to drive on US 1, either north or south, whatever distance, to Shell Pit Rd.

Northern Palms or, You Can Grow 'Em in North Carolina

By Ryan Gabriel

I am a CFPACS member living in Charlotte, NC. You may ask yourself, "why would a person in Charlotte be interested in palms? They don't grow there." Yes, I've heard that one before. But, I'm happy to report, it is incorrect.

Granted, most Charlotteans aren't aware that there any plants in existence other than nandina, Bradford pears, crepe myrtles and willow oaks. It is probably also true that Charlotte will never look like Orlando (or even Tallahassee). There are, however, folks in the Queen City who have gone to great lengths to give their yards and gardens the "tropical look".

You would be surprised what can be grown in zone 8a. * Here in town, as well as in the city's suburbs, one

Above, a single-trunked Chamaerops humilis *growing in the author's yard close to downtown Charlotte. The palm has been in the ground for three years without winter protection.*

can find plantings of *Trachycarpus* species, *Sabal palmetto*, *S. etonia* and *S. minor*, *Butia, Chamaerops* and *Rhapidophyllum*. All of the former can be grown with no protection. Of course, if one is willing to baby the palms a little bit, that list can be more than doubled.

There are a few "rules" to growing palms here. Here are a few that I have found to be both true and helpful.

- Plant cold-tolerant species.
- Plant palms in the spring to allow them to get as much growth on as possible by winter.
- Plant the largest palms one can afford.
- Make good use of microclimates.
- Plant desert palms in raised berms of well-draining soil.
- Be prepared to offer some protection to more tender species in severe "cold snaps".

There are a variety of ways one can protect palms

Above, Trachycarpus fortunei, T. wagnerianus, *and* Sabal minor *in the garden of Clifford Main, Mint Hill, N. C. (a suburb of Charlotte). Below, a* Trachycarpus *growing in the Plaza-Midwood neighborhood near downtown Charlotte.*

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A New Report of *Calyptronoma rivalis* from Puerto Rico

By Mike Dahme

Calyptronoma rivalis, which was first described a century ago and is perhaps the rarest native palm on Puerto Rico, was as recently as five years ago known from but three sites in the northwest part of the island: the type locality a few miles east of San Sebastian (Culebrinas watershed), near to the Guajataca reservoir (Guajataca River), and along the Rio Cumuy.

Sun-grown , mature Calyptronoma rivalis *(source of CFPACS seed) at the U. of Puerto Rico Botanical Garden in Rio Piedras. Note fire ant—* Solenopsis invicta*—mounds at base of rock.. The seed collector was well-bitten for his efforts.*

Of the three, only the last site contained the palm in any numbers; at the original discovery site only six palms remain (there were 30-odd mature specimens when O. F. Cook described the species in 1901), and there are presently no juveniles or seedlings present. The Guajataca site is reportedly also represented by few specimens and in a state of decline. So I was surprised when chapter member Noel Pecunia mentioned that he knew of a place where the species was growing, by his description not one of those above.

Recently, we went to see the grove, accompanied by Noel's sons, which was on a 75-acre property owned by seventy-ish "Don Francisco" and his wife. As it turned out, this location was just 6/10 of a mile from Cook's type locality, and on the same stream (tributary to the Culebrinas River). As Don Francisco's grove, which contains several dozen mature specimens, additional juveniles and seedlings in the thousands (growing like lawn grass in spots), is upstream of Cook's discovery, it is unlikely to have originated from it, though the fruits being quite small birds could be responsible for initiating a population at any suitable location.

By "suitable," read wet. This species, whether on P. R. or Hispaniola, always grows naturally along shallow watercourses, i. e., the headwaters of river systems. In the case of Don Francisco's grove, the watercourse (in dry weather) could barely be described as a creek, more of a soak: though the water was flowing, it would in places disappear from the surface for underground channels.

On being asked, Don Francisco—who was born on his property—said he didn't know of any other Manaca Palm sites (although he lives in walking distance from one). Clearly he appreciates the palm well, for before we walked to the grove we came across several large individuals close to the house that he'd planted some four decades ago. (For perspective, this is about the time that Dent Smith was establishing a Palm Society.)

"Cultivated" (i.e., transplanted seedlings) 40-year-old Calyptronoma rivalis *at Don Francisco's.*

These grow alongside a ditch he dug to channel creek water to other parts of his property. Though in nature a watercourse is a requisite for the species, in cultivation it does fine high and dry, as several now mature specimens at the University of Puerto Rico Botanical Garden (in Rio Piedras) demonstrate. Likewise, the deep shade in which they naturally grow isn't a requirement, for the individuals at Rio Piedras are in complete or considerable sun. (I feel they look better when shade-grown, however.)

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Calyptronoma Site in Puerto Rico

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I have two that have been in the ground [in Grant, Brevard County] since '99, these grown from seed collected in '96 from the Camuy River site. They are growing nicely in considerable shade several feet above the water table (but on the edge of a pond), and have shown no ill effects from winter cold. However, since '89, I haven't experienced temperatures below 31°F, so the ultimate cold hardiness test is to come.

Although the species is considered rare on P. R. (Henderson in *Principes* 28:168-72 [1984]), I suspect that there are other populations waiting to be "discovered." Any headwater tributary of the northward-flowing Guajataca and Cumuy Rivers, or the westward-flowing Culebrinas and Añasco Rivers, at suitable elevation (Don Francisco's are at 175 meters, the nearby type locality about 65 meters lower) would constitute suitable habitat.

Above, some of the mature Calyptronoma rivalis *at Don Francisco's natural population, which stretches several hundred feet along the creek. Below, juveniles in the same grove. Water is present, but at the time of the visit, hardly flowing.*

ERRATA

This is where the Editor grovels, apologizing for malfeasance in the previous issue, begging members to forgive him. First of all, the *Syagrus glaucescens* on page 34, pictured in Ralph Velez's California garden was described in the caption as "trunkless." Not so. Since the Editor has read Glassman's monograph on *Syagrus*, and, furthermore, has somewhere a Larry Noblick checklist on the genus, he should have known better. Blame it on early-onset senile dementia, right?

The Sharp-Eyed Critic has pointed out that the caption of a picture (on page 16) says that Mark Grabowski is shown collecting the seed of a *Chamaedorea*, but the palm seems to be palmate. And as we all know, *Chamaedorea*s are all pinnate. Oh. But the Editor didn't look closely enough and declares that the caption only reflects the ID on the back of the supplied picture. He has apologized several times in the past for taking the word of the picture-taker on the content of the picture. As a so-called "expert," of course, the Editor has to expect brickbats when he gets it wrong (no matter the source).

On the impressive picture on the back page of *Caryota no* at Norm Moody's, the caption thanks Susanna Walker who took the picture, editor of the Palm Beach chapter's *Palm & Cycad* ***Review***. Alas, the title of the publication is *Palm & Cycad* ***Times***. The Editor has already apologized to Susanna for the mistake, which she cheerfully laughed off.

Mike Merritt's informative article on a palm excursion in the Keys arrived with the title "Palms <u>of</u> the Conch Republic." In the jump heads, or continuations, the title turns into "Palms <u>in</u> the Conch Republic." Gulp. But then—maybe—no one noticed but the Editor and the author. Sorry, Mike. Our treasurer writes well. And, unlike many palmpersons, his spelling is good, too. A picture caption for this article gives credit to "Jeri," cutting off the last name. It's Jeri Prall.

—John Kennedy

Cycad Pollinators, Herbivores, and Toxins

By Phil Lounibos

(The article below is excerpted from a review "Cycads: their evolution, toxins, herbivores and insect pollinators," co-written by the author and colleagues in Germany. The review was published online in June, 2002, and can be accessed at the website of the journal Naturwissenschaften *at www.link.springer-ny.com/link/service/journals A printed version has also appeared in volume 89, pages 281-294 of that journal.)*

Pollination

The evolutionary success of flowering plants (angiosperms) has been associated with their many adaptations for pollination by insects. The geologically older gymnosperms are, by contrast, regarded as predominantly wind-pollinated. Among the gymnosperms, however, there is growing evidence that a significant number, if not the majority, of cycads are pollinated by insects.

Field experiments in the 1980s by William Tang, Knut Norstog, and their associates in south Florida that excluded wind pollination demonstrated that our native coontie, *Zamia integrifolia*, and the introduced cardboard palm, *Zamia furfuracea*, are both pollinated by beetles. Two species of the weevil genus *Rhopalotria* are host-specific pollinators of these two *Zamia* species. A third beetle species, *Paraxonotha zamiae*, pollinates only *Z. integrifolia*. Polleniferous male cones of *Z. integrifolia* and *Z. furfuracea*, where adult weevils aggregate or 'lek' (Photo 1), emit different attractant odors which presumably guide the correct species of pollinator to its appropriate host plant. While feeding on the starch-rich parenchyma of the cone's microsporophylls, weevils become dusted with pollen. Subsequently, the pollen-laden beetles visit female cones where they enter cracks between mature megaporophylls and deposit the pollen at the archegonia (egg sacs) where fertilization occurs.

Photo 1. Rhopalotria mollis *weevils, pollinators of* Zamia furfuracea*, aggregating on a male cone in a Ft. Pierce garden.*

The relationship between *Rhopalotria* weevils and their cycad host plants is mutualistic in that, in exchange for pollination, the beetles receive food and shelter. Female weevils lay their eggs in microporophylls where grub larvae develop and metamorphose into adults (Photo 2). According to field observations by Norstog and Priscilla Fawcett at Fairchild Tropical Garden, as many as six generations of *Rhopalotria mollis* can be produced during the two-month coning season of *Z. furfuracea* in south Florida.

Photo 2. A microsprophyll of Z. furfuracea *dissected to reveal a* R. mollis *weevil that has developed and metamorphosed inside. Note the characteristic weevil 'snout' and enlarged foreleg femur. The latter indicates this specimen is a male.*

New research in the past decade has extended the scope of insect pollination to native cycads of Africa, Australia, and Asia. Different weevil (family Curculionidae) species have been shown to pollinate *Cycas* sp. in Asia and several species of *Encephalartos* in Africa. Beetles of the family Languridae, in which *P. zamiae* belongs, also participate in the pollination of these Asian and African cycads. In Australia, a species of thrips (order Thysanoptera), joins the beetle-dominated world of cycad pollinators as a collaborator with a weevil species in the pollination of *Macrozamia*

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Cycad Pollinators

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communis. A different thrip species is the only known pollinator of *Macrozamia macdonelli* in the Australian Outback. Anecdotal evidence supports insect pollination of species in other cycad genera, such as *Dioon*, but confirmatory field observations and experiments are lacking for the majority of cycad species.

These accumulating findings on pollination have practical implications that extend beyond academic interests in the evolutionary ages of insect-cycad interactions. If pollination by specialized insects is more common than believed, transplanting of endangered cycad species from native habitats to botanical or private gardens risks the disruption of normal pollination mechanisms if the indigenous "helper" fauna are not also moved with their host plants. There is evidence that such disruption has happened in the past in the case of an endangered Cuban cycad, whose beetle pollinator is believed to be extinct. Although *Z. furfuracea* thrives in south Florida pollinated only by *R. mollis*, in its native Mexico a species of *Pharaxonotha*, which apparently 'missed the boat' to Florida, also participates in the pollination this species.

Toxins and Herbivores

Cycads produce several noxious compounds which limit the abundance and types of herbivores that feed on these plants. The most important class of protective chemicals is composed of the nitrogen-containing methylazoglucosides, such as cycasin, macrozamin, and neocycasin, that occur in all cycads and are known to be mutagens and carcinogens. A second class of poisons consists of non-protein amino acids, such as BMAA, demonstrated to be neurotoxins.

Among the most conspicuous consumers of south Florida's coonties is the Atala butterfly *Eumaeus atala* whose gregarious caterpillars are vividly colored (Photo 3), an example of aposematism that warns predators of their toxicity. Although the Atala was considered to be near extinction in Florida in the 1970s, it has made a spectacular comeback in the past few decades, assisted by increased conservation and landscape use of *Z. integrifolia*. Pioneering work by Miriam Rothschild in England and Deane Bowers in the U. S. A. showed that Atala larvae store ingested cycasin and transfer it to the pupal and adult stages, thereby protecting them from predation by birds. Recent analyses in Michael Wink's laboratory in Germany demonstrated that 40% of the cycasin in Atala adults is sequestered in the wings, where birds most often snatch butterflies. Three other species of *Eumaeus* hairstreak butterflies from elsewhere in the American tropics have gregarious, aposematic larvae that feed on, and presumably derive toxins and protect from, species of *Zamia*, *Dioon*, and *Ceratozamia*.

In Florida, caterpillars of tiger moth *Seirarctia echo* also feed on coonties, and may severely damage plants after fire in the Everglades. In South Africa, brightly colored geometrid (looper) moth larvae and adults store, and are protected by, cycasin and macozamin derived from their *Encephalartos* host plants.

***Rhopalotria* weevils** also store cycasin and BMAA from their *Zamia* hosts, although it is not known

Photo 3. Final-stage gregarious larvae of the Atala butterfly on coontie leaves.

whether these compounds proect the beetles from potential predators. The concentration of toxins varies considerably among the different tissues of cycads and may be correlated with the risks to the plant of consumption herbivores. For example, female cones of *Z. furfuracea* contain 8-33X more cycasin per gram of fresh weight than male cones, perhaps a reflection of the greater 'cost' to the plant of seed destruction by herbivores.

Despite the toxins, a variety of bird and mammal species feed on the brightly colored fruits of some cycads and later disperse their seeds. Such mutualistic animal-plant relationships are common among angiosperms but relatively rare among gymnosperms. Although some native vertebrates feed on cycads without apparent negative effects, range animals such as sheep or cattle are known to become very ill or die from cycasin or BMAA

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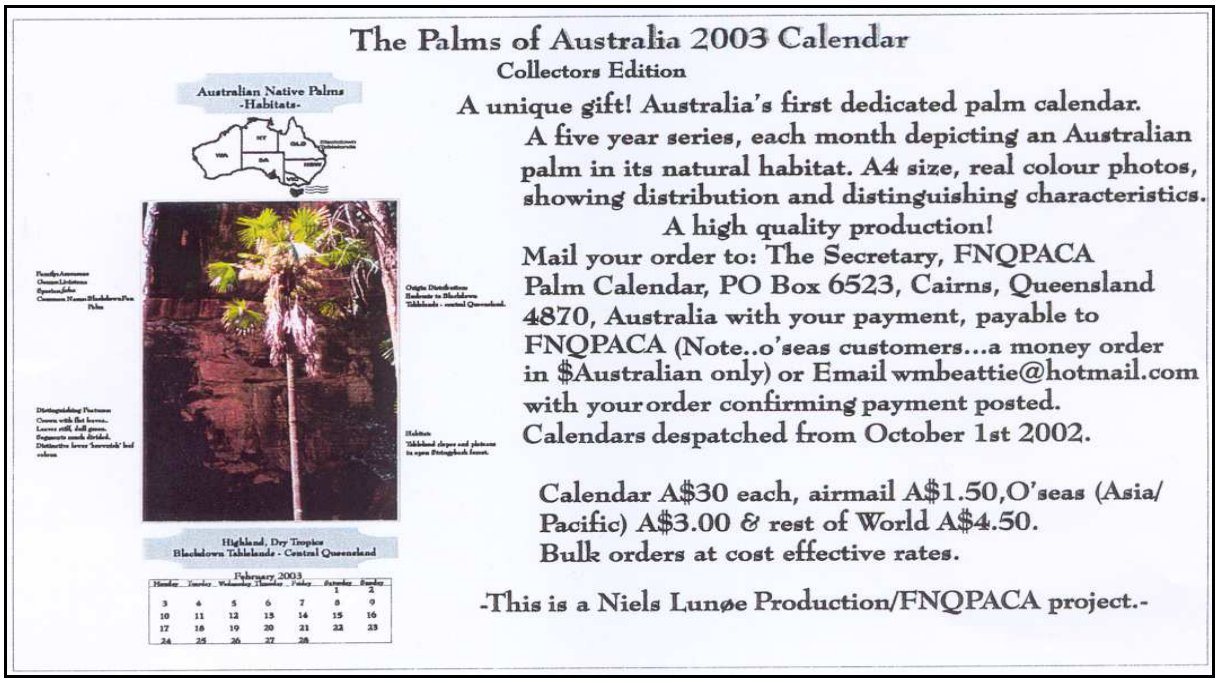

Cycad Pollinators

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poisoning from cycads. The jury remains 'out' on the negative effects of cycad consumption by human cultures that utilize cycads as food staples. The ALS, Alzheimer-type pathology of so-called "Guam Disease" has been ascribed to the long-term effects of low-dose uptake of BMAA from cycad consumption.

Evolution of Insect-cycad Relationships

Because cycads preceded the flowering plants in geological time, it is attractive to speculate that insect pollination cycads might predate that of the angiosperms. However, although the 240 extant species of cycads appear to have changed little morphologically from Mesozoic (250-60 mya), sometimes known as the "Age of the Cycads," comparative molecular studies by Wink and his students have indicated that modern genera such as *Encephalartos*, *Macrozamia*, and *Lepidozamia* originated more recently in Miocene (25-14 mya) and Pleistocene (1 mya) epochs. Thus, despite appearance, cycads might not be "living fossils," and the obligate relationships between insect pollinators and their host plants might not predate those of the angiosperms. Regardless of their evolutionary time of appearance, it would appear that the symbioses between cycads and their insect pollinators developed from adaptations of herbivores that first had to overcome the chemical defenses of the host plants before establishing obligatory, mutualistic relationships.

Australian Palm Calendar

The FNQPACA (Far North Queensland Palm and Cycad Assn.) is offering a calendar with gorgeous pictures and with details of Australian native palms. Each month has a beautiful photo of a different species, together with its physical characteristics, size, and natural habitat. The price is A$30, for air mail, add additional A $4.50. Any money order must be in Australian dollars. The exchange rate (mid-July) is about 56¢ to the Australian dollar. In effect, then, the calendar costs about $15, with about $2.50 more for air mail postage to the U. S.

The calendar is available for shipping as of October 1.

Checks in American dollars are not acceptable. (Our own chapter does not accept foreign membership payment in anything other than American dollars, because currency conversion charges are prohibitive on small amounts, perhaps as much as—or more than--the basic payment itself.) The money order should be made out to FNQPACA.

Bulk orders might be the best way to go. A group of individuals could place an order and send one money order to Australia. The address: The Secretary, FNQPACA, P.O. Box 6523, Cairns, Queensland 4870, Australia. For additional information, contact Bill Beattie: wmbeattie@hotmail.com

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(Phil Lounibos, a CFPACS member who lives in Fort Pierce, is an entomologist at the University of Florida's Medical Entomology Lab in Vero Beach. –Editor)

PALM PRUNING: WHY PALMS SHOULD NOT BE SCALPED

(CFPACS members all know that palms must not be scalped in the name of "neatness" or "hurricane protection." The article is reprinted here from the Summer, 2002, newsletter of Heathcote Botanical Gardens in Fort Pierce—with the permission of the author and of the editor—presents cogently the reasons why palms should be spared such disfiguration. The author is Martin County's Cooperative Extension Director.)

By Carol Cloud Bailey

Palm trees symbolize the tropics. Their appearance in the landscape tells native Floridians and visitors alike that yes; indeed you are in paradise. Florida has chosen a palm tree, *Sabal palmetto*, or the Cabbage Palm, as our State Tree. Palm trees can be one of the most expressive and expensive parts of any landscape. Yet the care and maintenance of these magnificent plants is often misguided.

While driving around Martin County the last few weeks, I have noticed that some palm trees have been severely pruned. Severely or harshly pruned in this case means that all old leaf bases and all but a few leaves have been removed. When I finally found a crew in the process of performing the dastardly deed, I stopped and asked the landscape crew why they were pruning the palm trees so severely. The answer amazed me. The crew leader said that first, the customers requested the pruning, second that the trees were safer in hurricanes if pruned this way, and, third it saved customers money by only pruning the trees once a year. Let me dispel these myths.

Palms do not require the same kind of pruning as broad-leaved trees. Most palms have only two growing points, at the top down inside the leaves and at the bottom where the roots emerge. This makes palms vulnerable to damage in these two growth zones. Harsh pruning is harmful and unnecessary and can lead to the weakening or death of the tree.

Old palm tree leaves or fronds may persist and hang on the tree when dead like the *Washingtonia* palm. Other palms may shed their fronds when dead like Sabals or Royals. It is true that shedding palm fronds could be dangerous projectiles in high winds, but green palm leaves do not blow off the tree. While the removal of clusters of large palm fruits (coconuts, for example) is a sensible precaution before a hurricane, wholesale trimming of the leaves is not recommended. Removing perfectly good, green, functional leaves at the same time as dead or dying fronds are trimmed is harmful to the palm, especially to those species whose canopy consists of no more than 8 to 12 leaves.

Palms subject to such over zealous trimming are often referred to as "hurricane pruned." This term is an unfortunate misnomer as the tree is not prepared for, or safer during hurricane season by this pruning. Removing green fronds does a lot of damage:

- Green leaves or fronds are the work engines of the plant. By removing them, you weaken the plant by reducing the palm's ability to make food and take up water.
- Removing green fronds wounds the palm. This wound site invites insects and diseases.
- Green fronds protect the top growing point, the palm heart, from cold temperatures. The old leaf bases or "boots" may also play a role in cold protection—leave them on and let them drop naturally. In the severe 1989 freeze, over-trimmed Cabbage Palms suffered damage, while those left with a normal canopy and full complement of leaf bases were unscathed.
- Removing green fronds reduces the palm's natural resilience to high winds. Over-pruned palms can develop a "bottle-neck," a trunk with bulges and indentations. This is likely to be most noticeable on fast growing palms. In high winds, these weak points may snap, and the palm head breaks off, killing the tree.
- Older leaves provide a source of potassium, magnesium, and other "mobile" elements for the growing palm. Unattractive deficient older leaves should not be removed until the nutrient imbalance is corrected. If a palm is lacking these nutrients, trimming will "push" the deficiency symptoms further up the canopy. Some deficiencies can quickly lead to death of some palms (Broschat, 1994).

Palms like Royals and "Areca" [*quotes added.—Ed.]* palms are self-cleaning; the leaf base forms a sheath and the old leaf falls cleanly. Pulling the sheathing base from the trunk prematurely can permanently scar the palm trunk and should be avoided. Other palms may be cleaned by manual removal of dead leaves; the leaf is trimmed to a short stub and the leaf base ("boot") is allowed to

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remain.

Harsh pruning of the fronds and the premature removal of remaining boots put a strain on Florida's wildlife. Removal of flowers and seed stalks seems to cause little trouble for the palm but could reduce food availability for local wildlife. Palms are the home and dinner table to migratory songbirds, woodpeckers, butterflies, honeybees, bats, tree frogs, and many other watchable wildlife. Palm trees such as our state tree, the Cabbage Palm, have around for thousands of years. Thy have survived droughts, fires, and floods. Their winter berries are important wildlife food. Protect palm trees from overpruning for the beauty of your Florida yard and the wildlife that lives there.

Recommendations:

- Never remove green fronds or leaves.
- Leave boots on the tree to fall naturally.
- When climbing palms for canopy maintenance, the use of climbing spikes is not recommended. The holes left by these devices will never heal. Only bucket trucks, ladders, or pulley/sling systems should be used to prune tall palms. Homeowners should consider a Certified Arborist if they can't reach the fronds safely.
- Removal of fruit stalks, particularly in urban areas will not harm the tree and may help keep the landscape neat. However, when possible leave seed for wildlife.
- The practice of sanding trunks of palms to remove the adhering residue of leaf bases or char marks from forest fires (in the case of wild-collected *Sabal palmetto*) is not recommended.

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Caught in the act! The Editor holds the weapon with which he removed a dead leaf from the Phoenix rupicola *behind him. The picture-taker seemed to regard the activity as remarkably rare and, thus, worthy of being recorded for posterity. This event was pre-surgery; no loppers have since been employed. Be assured, Ms. Bailey, the Editor does not scalp. . . . .*

A promenade of Cyrtostachys renda*, the Lipstick Palm, far from Central Florida, in Singapore. (Photo by Geoff Stein)*

Hiking in Puerto Rico

Palms, Epiphytes, Native Cycad

By Jerry Hooper

Recently, Mary Ann and I had the good fortune to visit Puerto Rico. Hospitality was provided by seed man and palm poofter extraordinaire, Mike Dahme. Finding his place is not as difficult as getting up his driveway. René Coativy from the French palm society, Manureva, was visiting and soon all were off in search of palmy places.

Every day proved to be a testing of our driving ability. One day we drove to the summit of Cerro De Punta at 1338 meters it is the highest point on the island. Throughout Puerto Rico are many forest reserves and parks set aside to preserve the flora and fauna. Inside of these parks are some really good hiking trails. One of my favorite hikes in PR is Mt. Guilliarte 1205 meters. A good trail one and a half to two hours round trip, lots of *Prestoea montana*, tree ferns and epiphytes. At the base of the trail is a good roadside café with BBQ and cold cerveza.

Seed man Mike Dahme at home somewhere outside of Orocovis, Puerto Rico. *(Photo by Jerry Hooper)*

Another day hike was to the summit of Cerro Dona Juana 1079 meters. Four hours round trip, literally thousands of *Prestoea* in all stages of blooming some thick of bole some thin all of them topped with a nice green crownshaft. On another day we were to visit the habitat of *Zamia portoricensis*. As is noted in cycad literature, *Zamia portoricensis* can be found growing in the Susua National Reserve. This is a completely different landscape from where *Prestoea* grows. Finding the reserve however is another question.

While roads in PR are well maintained, once you get off the beaten path they may be poorly marked and very steep in areas of higher elevation. The winding uphill road to the park is through rugged dry land with scrubby vegetation and it is very hot. Once inside the park *Zamia portoricensis* is easily observed from the road and from a trail which from what we surmised is a three hour hike. There is a ranger station and we were offered a photo copied pamphlet of the area with a map of the trail. From the pamphlet we learned that the park is elevation 80 to 473 meters. We hiked for a couple of hours and noticed that most of the *Zamia*s we observed were growing in shady understory situations and as to be expected these plants had more luxuriant foliage than those growing in exposed areas. Mature female plants were observed in

Zamia portoricensis *in habitat, Susua National Reserve, Puerto Rico. Note that plants look much like* Zamia integrifolia *or* Z. pumila *but leaflets are much narrower.* *(Photo by Jerry Hooper)*

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Hiking in Puerto Rico

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cone and seedlings were also observed.

Along the trail it was easy to see different types of serpentine soils, some of which were a turquoise blue color. Other interesting plants observed were *Acrocomia aculeata*, *Thrinax morrisii*, turk's cap Melocactus and Leafless vanilla orchid. After a couple hours of hiking in the midday sun we decided to leave the area as it was getting quite hot!

Above, right, habitat of Zamia portoricensis*, Susua National Reserve. That's Mary Ann Hooper toiling up the trail. Below, in habitat,* Zamia portoricensis, *female plant in cone, Susua National Reserve. (Photos by Jerry Hooper)*

The USF Fall Plant Festival 2002

By Tom Broome

It's time again for the Fall sale in Tampa. The University of South Florida, in Tampa is hosting the Fall plant festival on Saturday, October 12th, and Sunday, October 13th. The hours will be 10 AM to 4 PM on Saturday, and 10 AM to 3 PM on Sunday. Members of the USF Botanical Garden get in early at 9:30 AM.

The Fall sale last year was one of the best sales we have had for a while. We had new vendors, as well as some of our veterans there. We had extra people to help with palm and cycad questions, and many of our members showed up just to see their friends in the society, and meet new people.

If there is anyone who would like to be a vendor, please get in touch with me as soon as possible. We need to get nametags for you, so we need to know who is coming out as early as possible, and not at the last minute.

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.

The fall sale is good because everyone has had a chance to grow out their plants all season, so this is the time to get larger plants. I would like to invite everyone to come out, especially the people who have not been to this sale. 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, Tom Broome at 863-984-2739. I hope to see everyone there.

PALM BASICS

Here are five more of the endless small bits of information about palms that John-the-Editor taped for the Indian River Community College public radio station, WQCS-FM, 88.9. There are only 51 spots, so we will not run out of printing five an issue until about 2007. These pieces were written in the Fall and Winter of 2000, and references to recently past conditions are somewhat out-of-date. The Palm Points—which continue to be broadcast—were aimed at the beginner on the Treasure Coast (the warmest part of Central Florida), who knew nothing about palms. Needless to say, there is much, much more to understand and even experienced palm growers learn something new all the time. ***—John Kennedy***

Palm Points #11 Cold Hardiness, Part Three

Palms stop growing, but are not damaged, when the temperature goes below 60 degrees.
The last major hard freeze on the Treasure Coast occurred at Christmas, 1989. The temperature bottomed out on Christmas Eve morning at 18 or 19 degrees, in many locations.
The high on Christmas Day was barely above freezing and, with nightfall, the temperature dropped below freezing again. Warm weather—70 degrees—did not occur until several days later.
During the 1980s, freezes came predictably almost every year.
The winter just past [*1999-2000]* brought freezing temperatures briefly into the upper 20s to some colder spots in this area for the first time in 11 years.

Palm Points #12 Cold Hardiness, Part Four

When a cold front is on the way, when temperatures are predicted to drop as low as 25 degrees, what can you do?
Bring all tender potted plants into the garage or house. The ground in Florida doesn't freeze, but the soil in pots can freeze.
For palms in the ground, water thoroughly. Pull back mulch so that warmth can rise into the plant from the watered soil.
Cover leaves, if possible. Burlap is good, but old bedspreads or sheets will do. If the leaves are too big, at least tie a cover over the emerging leaf. Sometimes it's possible to bind the upper leaves around the spear and wrap them together.

Palm Points #13 Cold Hardiness, Part Five

Palm leaves should never be covered with plastic before a freeze. If plastic touches the leaves, the freezing temperatures transfer directly to the plant. Plastic can be used only as a tent over the palm with air space between plastic and plant.
In daytime, when temperatures have gone above freezing, remove the coverings. A palm may be cooked if it remains covered when temperatures have climbed into warmth. The coverings will need to go on again if the next night also is freezing.
Coverings have to be tied down or on because plunging temperatures are often accompanied by wind. Otherwise the covers may blow off.

Palm Points #14 Cold Hardiness, Part Six

After the freeze, a palm may look dead but may not be. Don't dig it up or throw it away. Again, water thoroughly.
A damaged palm may not resume growth until hot summer weather. The first new leaves may be distorted and terrible looking. Eventually, normal leaves will appear.
After the freeze, pull on any palm spear within reach. If it comes out, all is not yet lost. Pour insecticide into the cavity once a week for perhaps three weeks. Separately, pour in fungicide.
Insects are attracted to freeze-damaged palms and eat the damaged bud or lay eggs. Insects kill as many palms as the freeze does. Quick preventive action may deter this.

Palm Points #15 Foxtail Palm

A new palm found at garden centers is the Foxtail Palm. A pinnate palm, at first glance it looks almost like a queen palm, though a little smaller. But it has thicker, darker green leaflets all around the stem.
The effect is that of a foxtail. Foxtail Palm has a bright green crownshaft, the area below the leaves. The grayish trunk is bottle-shaped, with a slight bulge.
The palm is self-cleaning: dead leaves fall off. No cutting is needed. This new palm is a fast grower, going from about a foot high to 20 feet in less than 10 years.
Foxtail Palm must be planted in full sun, with good drainage, for optimum growth.

Palms and Cycads at Strybing Botanical Garden, SF

By Mike Merritt

Visiting relatives in the San Francisco bay area in May, I decided to look in on Strybing Arboretum and Botanical Garden in Golden Gate Park on the western (Pacific) side of San Francisco. I have combined sightseeing with visits to relatives in the Bay area every few years since the mid-1960's, and have made many trips to Golden Gate Park, but was hardly aware of the botanical garden, which seems to keep a low public profile relative to its more well-known neighbors, the Steinhart Aquarium and the Whitney de Young Museum. However, on this trip I was eager to take the opportunity to see palms and cycads of species and habitat preference that would normally make them unavailable for examination in Florida gardens.

I quickly learned that the arboretum was closed to the public for renovation, and the security fence around the perimeter was sufficiently invulnerable to keep out terrorists, so I could not sneak in to take pictures. I did take a picture of a tall palm with a truly massive trunk, which was identified as a Chilean Wine Palm (*Jubaea chilensis*) and photographed two years ago by Ed Brown in his article on California palms (*Palmateer*, v. 20, no. 3, p. 11). The photograph was reproduced in that issue in black and white. My picture (photo 1) has the advantage of color and the disadvantage of an intervening security fence.

Jubaea chilensis, *the Chilean Wine Palm, at Strybing Arboretum and Botanical Garden , San Francisco.* *(Photo 1)*

Below, Monterey Cypressses (Cupressus macrocarpa) *at the Strybing.* *(Photo 2)*

The botanical garden, however, was open to the public, and I entered through the main entrance, Friend Gate. I quickly realized that I was in a garden of major scope. Although I can't compare areas (Strybing is on 55 acres), the garden seemed to be on a par with Leu Gardens in Orlando or Fairchild Tropical Garden in Miami, and was intensively planted with a large number of well-grown specimens of all plant genera. Like most of San Francisco, the terrain was hilly, and elevation differences of 30-50 ft occurred within a short lateral distance. The overall topography of the garden was bowl-shaped with a low area in the center surrounded by a hilly periphery.

Garden literature and public information displays emphasize the basic concept of the garden organization, which is based on geographic area rather than botanical relations. San Francisco and the Bay area are identified as having a Mediterranean climate; therefore, Strybing display areas feature plants of other areas of the world that have Mediterranean climates, such as the southern European area that lends the name, cen-

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Palms, Cycads at Strybing

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Torrey Pines, Pinus torreyana*, at the Strybing Botanical Garden, San Francisco.* *(Photo 3)*

tral Chile in south America, south and southwestern Australia (Perth area), south and southwestern Africa (Cape Province), and central coastal California. The display area for the latter has an impressive grove of huge coast redwoods (*Sequoia sempervirens*) and numerous Sierra sequoias (*Sequoiadendron gigantea*). Other display areas feature plants of temperate/subtropical regions such as Asia, eastern Australia, New Zealand, and new world and old-world cloud forests. There are succulent collections and a primitive plant garden, and magnolia and rhododendron collections.

Most large gardens that I have seen are built on a framework of large trees predating the garden's development. For Florida gardens, these would be various species of pines (*Pinus*) or oak (*Quercus*). At Strybing the "framework" trees are numerous huge Monterey Cypresses (*Cupressus macrocarpa*) (photo 2). In some areas, the big trees are enormous Torrey Pines (*Pinus torreyana*) (photo 3), a rare conifer species otherwise found only in a small park in San Diego County and on Santa Barbara Island. These trees of both species were of a stature that compared even to the redwoods.

Palms at Strybing

Palms species form a much smaller part of the plant kingdom in Mediterranean and temperate climatic regions than in the tropics and subtropics, so the palms at Strybing generally had to be searched out in the various geographical sections. Doing so, however, was rewarding because many temperate species not grown in central or south Florida could be found. Unlike Ed Brown (*Palmateer*, v. 20, no. 3, p. 11), I knew nothing of genera like *Jubaea*, *Parajubaea*, *Rhopalostylis*, *Ceroxylon*, *Juania*, or *Trachycarpus*, and this was my first opportunity to view living specimens.

The first specimens were found in the New Zealand section, where I found spectacular individuals of (relying on the labels) the Nikau Palm (*Rhopalostylis sapida*) (photo 4) and the Norfolk Island Palm (*Rhopalostylis baueri*) (photo 5). *Rhopalostylis* species have glossy-green leaves held erect, and grow well but slowly in warm-temperate climates. They are said to like ample water and fertilizer and to be protected from wind and sun when young (David Jones, *Palms Throughout the World).* They are difficult to grow in central Florida's heat and humidity. The few successes have been plants grown in shade to protect them from the summer sun.

Rhopalostylis sapida, *the Nikau Palm, at the Strybing.* *(Photo 4)*

In the Chilean collection, the garden has planted numerous large seedlings of the Chilean Wine Palm (*Jubaea chilensis)* (photo 1); however, no mature specimens were found here. The Chilean Wine Palm is a slow growing palm from a warm-temperate climate that develops a massive trunk. Used extensively for its "honey" and for making palm wine (Andrew Henderson, *A Field Guide to the Palms of the Americas*), it is now rare and protected in its native habitat. It grows well in parts of California, but is very difficult to maintain in Florida because of the heat and humidity of our summers.

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Palms, Cycads at Strybing

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Rhopalostylis baueri*, the Norfolk Island Palm (Photo 5)*

In either this or the South American section, I found impressive specimens of the Wax Palm of the Andean mountains (*Ceroxylon quindiuense*) (photo 6) and *C. hexandrum*, as well as large seedlings of *C. vogelianum* and *C. parvifrons* (according to the labels). (The Ellison brothers, *Cultivated Palms of* the *World*, list *C. hexandrum* as a synonym of *C. vogelianum*. Henderson makes no mention of C. *hexandrum*.) *Ceroxylon* is a genus of pinnate-leaved palms from the Andean mountains that are remarkable for having a waxy layer on the stems. C. *quindiuense* is a giant, growing to 200 feet. *C. parvifrons* is said to grow at the highest elevation of any palm in the world (Andrew Henderson). Though requirements vary (David Jones), *Ceroxylon*s are generally regarded as not doing well in Florida's climate, though Ed Brown is working with them (v. 20, no. 3) and they are grown in parts of California.

A young, stemless *Juania australis* (photo 7) had an impressive display of large pinnate leaves. This species originates from one of the Juan Fernandez Islands, lying off the coast of Chile. *Parajubaea cocoides* was also found as a large seedling. This species is unknown in the wild, and may be a cultivar of *P. torallyi,* an Andean mountain species. It is said to prefer a cool, dry climate (Andrew Henderson).

Finally, I found something familiar, and was almost shocked to find three Piccabeens (*Archontophoenix cunninghamiana*, labeled var. "Illawara") living in Strybing. One had stunted, deformed new leaves, perhaps a result of California's recent cold winter. Moving farther on, I found a nice-looking pair of Windmill Palms (*Trachycarpus fortunei*). I was surprised by the huge, yellow, furry-looking flower bract on the larger one. Nowhere in the park did I find one palm that I wanted to see, a mature *Dypsis decipiens*, perhaps because the park

This is Ceroxylon quindiuense*, one species of the Andean wax palms. (Photo 6)*

has no Madagascar or Mascarene Island section. *D. decipiens* comes from the dry desert part of Madagascar and is relatively cold hardy. It has a reputation of being frustrating to grow in Florida, as I can personally attest, specimens often dying abruptly with little warning. However, according to Dave Witt, CFPACS Prez, the plants do much better if repotted when they begin to develop a tillering heel (usually below the soil surface). The plants must be replanted with the base of the plant and the tillering heel above the soil level.

A number of palms were planted near a public park

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Palms, Cycads at Strybing

(Continued from page 17)

and resting area by the duck pond in the center of the gardens (photo 8). Future generations will be impressed by this grove of Chilean Wine Palms when they finally attain their full stature. A young *Rhopalostylis sp.* is indistinctly visible to the right.

Cycads at Strybing

While doing a tremendous job of growing temperate-region plants of many kinds, the staff of Strybing are relatively clueless at maintaining cycads, as a garden staff member that I talked to briefly volunteered when I asked about the location of the garden cycads. I found a small *Encephalartos horridus* in the succulent garden that this individual was unaware of ("so that's what that is!"). In the Western Australia section, located on a hillside, a young *Macrozamia reidlei*, a western Australia native, appeared quite robust.

Above, a young Juania australis *at Strybing. Has anyone ever been successful with this palm anywhere in Florida? (Photo 7)*

The garden made an unfortunate decision to include cycads, which generally require well-drained soils, in the Primitive Plant Collection, which is located in the wetlands at the bottom of the bowl formed by the park topography. Touring this collection is by following a catwalk through a pond and an area of marsh grass, around which are planted "primitive plants", at least half of which are huge specimens of the Tasmanian Tree Fern (*Dicksonia antarctica*). Most of the cycads planted here are not faring well. In the center of the area of marsh grass, however, a large *Macrozamia moorei* maintained a large crown and was producing a large new flush of leaves.

In Conclusion

Despite the Strybing Botanical Gardens' inexperience in growing cycads, it is a magnificent and world-class garden, and should not be missed by plant lovers visiting the California bay area. The enormous conifers are spectacular and many other non-botanical sights of interest are located nearby. The palm specimens in the collection are mainly young, but larger ones are of sufficient interest to warrant the hike to see them. My

Below, a youthful grove of Chilean Wine Palms, Jubaea chilensis*, near the duck pond at Strybing. The palms will be an awesome spectacle in—40 years? (Photo 8)*

What Next?

As if anthrax, terrorist attacks, and Donald Duck accounting aren't enough, it's the advance of the Killer Palms! FLEPPC—Florida Exotic Pest Plant Council--was right, after all. Remember, this is the quasi-official watchdog group that searches for invasion by exotic plants that advance on that part of the state's natural environment which has survived the shopping centers, citrus, sugar cane, burgeoning housing developments, highways, etc. FLEPPC was very stern about the escape from cultivation of *Phoenix reclinata*, *Ptychosperma elegans*, and *Livistona chinensis*.

The June issue of the IPS journal *Palms* (known to old-timers as *Principes*) carries an article by a Danish botanist on the invasion by exotic palm species in a secondary forest near a small town in Panamá. Apparently *Roystonea regia*, *Ptychosperma macarthurii*, *Roystonea oleracea*, and *Areca triandra* have completely naturalized, as has *Aiphanes aculeata*. Other species are also present, though not reproducing (yet): *Bentinckia nicobarica*, *Dypsis madagascariensis*, and *Livistona saribus*. Not exactly on-site, but lurking nearby, is *Euterpe oleracea*.

Joint culprits are reported to be fruit-eating birds and leafcutter ants (that don't eat palm leaves). Not insignificant is the fact that Summit Gardens is about four miles away. Central Floridians, of course, are as alarmed as the author about the world-wide implications of this invasion. Perhaps FLEPPC should patrol the areas near Fairchild, Montgomery, Leu, and other places of potential infection. In a favorable climate, after all, palms could become the next Australian pines, Brazilian peppers, or *Melaleuca*s.

The September issue of *Palms* contains a view-with-alarm account of *Nypa fruticans* which has established itself as a mangrove in West Africa in an ecology devastated by the locals. Implied is the necessity of ripping out these exotics so that the niche can return to the state the natives have reduced it to. One possibility, barely mentioned (rejected?), might be to teach the same desperate people the uses made of *Nypa* in its native habitat.

--John Kennedy

Borassus flabellifer *seen germinating in the shade house at John and Faith Bishock's in Sarasota during the July meeting.* *(Photo by Mark Grabowski)*

Medemia argun, *growing at Nong Nooch, Thailand.* *(Photo by Geoff Stein)*

Northern Palms

(Continued from page 4)

from severe cold. I like to wrap the trunk in Christmas lights (the tiny ones, not the big bulbs) and then cover the palm in a blanket or burlap. However, there are growers who even go so far as building elaborate structures around their palms, like mini-greenhouses. Small plants can be protected by shoving some pine straw into the crowns. Personally, I prefer to plant species that need to protection. Although I have a *Jubaea* and a *Serenoa* that will probably need some assistance on our coldest nights.

Occasionally, cold and high humidity can damage the bud of the palm, causing the "spear" to pull out in late winter. Often, this can be remedied by pouring a copper-based fungicide into the palms crown to prevent rot. Most of the time, if rot can be prevented, the palm will recover by late spring.

We in the NC Piedmont envy you folks in central Florida. You can grow so many species of palms and cycads with so little effort. However, many people in Florida have a few palms in their yards. Here in the Queen City, palms are the exception, not the rule. They can make one's yard truly unique.

Please check out the Southeastern Palm & Exotic Plant Society at www.speps.net.

* **On the** USDA Hardiness Zones map, Charlotte lies on zone 7. However, if one takes the winter minimums of the past 60 years, the average minimum is 11 degrees. That is zone 8 by the USDA's definition. Plus, palms don't read maps anyway.

OH, NO. . .

Dave Martin, a member of the Florida Native Plant Society, Vero Beach chapter, sent me something he came across first in a British newspaper, then on the Internet in July: a new pest munching on the palms of the Côte d'Azur and in the Barcelona area of Spain. It is the caterpillar of a large, beautiful butterfly from Argentina, *Paysandisia archon*, which is capable of flying long distances. Its larvae are borers that can cause the death of a palm; infestation may escape easy detection. There's a pile of sawdust on the ground by the trunk. Genera that are attacked by this pest include *Butia*, *Chamaerops*, *Latania*, *Phoenix* (so far only *P. canariensis*), *Trachycarpus*, *Trithrinax*, and *Washingtonia.*

The cycad auction at the Sarasota July meeting. Tom Broome (center), as high bidder, holds his prize. Prez Dave Witt stands to the right, while secretary Chuck Grieneisen (foreground) keeps track of the money.

(Photo by Mark Grabowski)

Most men, like plants, have hidden characteristics that chance brings to light.
—LaRochefoucauld, Maxim 344

Above, close up of Cycas scratchleyana *seen in July in Sarasota.* *(Photo by Chuck Grieneisen)*

Above, Cryosophila stauracantha*, in the understory at Borassic Park. Visitors on Oct. 26 may miss such small treasures while gawking at all those big palms overhead. Below,* Syagrus botryophora, ac*claimed by an admirer as "the fairest* Syagrus *of them all.," also growing there.*

Right, a curiosity: a variegated hybrid, Veitchia X Wodyetia, *at Selby in Sarasota. (Photo by Chuck Grieneisen)*

Right, *Joe Michael's "Mrs. Bo," the female* Borassus flabellifer *in Wabasso whose seeds (122) were donated by him to CFPACS for May sales of $366. Joe also gave seeds to McKee Botanical Garden and to member Richard Lundstedt.*

President's Farewell Message

By the time of reading this we should be into our Fall season, with those cool crisp highs in the mid-80s and lows dropping down into those chilly 60s. Brrr. . . A sort of calm before the storm for most local members. With the holiday season fast approaching, we can look back and reflect on what a lucky growing season we've had in our region. In addition to the six months of nearly non-stop heat, we've been blessed with rain, rain, and more rain, some areas to the point where we've just about had enough of it. Drought, what drought? In reality, all this moisture has accomplished is to partially replenish what we had lost during the past three years. Just one more link in a cyclical chain. It always seems as if we either have too much or never enough, fairly typical from what I've been told by long-time growers. One thing we can predict with some accuracy is the return of old man winter, and more than likely, a much colder version than what most of us were treated to last time around. So, dust off the blankets, oil those citrus grove heaters, and get ready to cover all those unfortunate equatorial plants you couldn't resist purchasing and planting over the summer. Forget Punxatawney Phil, Groundhog Dave says it's gonna be a tough one. . .

All nonsense aside, I would like to take the time to ask our members for some help. This is your chapter—all of the good stuff (color newsletter, seed bank, sales, auctions, meetings, website, etc.) is yours, but it sometimes seems like only a small reflection of our membership is truly involved. For these things to continue on a high caliber basis, we need more people to help out. Small things—sending a pic of an unusual plant to our editor or website, or a short article regarding the same subject, helping out for a few minutes at the sales and auctions, dropping by our website's bulletin board to ask and answer questions, submitting a place for a meeting (especially those we've yet to visit—you know who you are and you're just dying to showoff), even donating and distributing seeds (whether unusual or not—who knows what another palmperson may covet); just doing this a few times a year can be a huge help to those who are already knee-deep in the fray. THIS IS YOUR CHAPTER!!! So, get involved. We all had to start somewhere and, trust me, you will never hear the words, "no thanks, we got it covered already." It's the best way to meet people with the same sickness, er, excuse me—interests as you. And, it's a lot more fun than wearing in a butt groove on your chair. I used to be somewhat intimidated by growers with large old collections; as it turns out, they're always the nicest people and the most knowledgeable growers. And never let loudmouths like me scare you off. Ask questions, offer up observations, you guys know by now I love to hear the sound of my own voice, be it in person or rattling across the Internet. And , luckily (?), I'm not alone on this. . .

Lastly, I will mention we have a few changes coming up on our board. My term is up at the end of 2002 and our West Coast VP, Ray Hernández, has willingly (yes, Ray, the gun is loaded) offered to step up and plot the course for the next few years. And, in turn, we will need someone to take over his position. Tom Barrese has graciously agreed to run fo this spot. I'm sure many of you know both, and I'm certain if elected they will more than fit the bill. Hope to see as many of you as possible at the next meeting, a couple of terrific collections always worth visiting, plus our annual giant plant auction (please bring a plant for this, if possible). Until then. . .

—Dave Witt

A feature of the second stop in the Sarasota July meeting, at the home of Bob and Leslie Mertens: a rooftop view of the palms. Ray Hernández (left), Dave Witt (center), and Bob Mertens (right).

(Photo by Chuck Grieneisen)

From the Editor's Desk

If you've never visited Mike Dahme's "Borassic Park" in Grant, now is your chance on October 26. If you haven't been there recently, everything's bigger and there's more of it. Home of the largest *Borassus flabellifer* in Brevard County—it must be at least two feet high by now—there are literally thousands of palms on the 8 acres, sort of a palm Disney World (minus the rides). Since the plantation is rather less manicured than Fairchild or Montgomery, it's well to think in terms of dressing for a field trip: good shoes, long pants and shirt, hat. Of course, some folks regard me as a sissy for fussing about such things.

* * * * * *

Some one of you will probably remember a small boast in the June issue that there were no mistakes in the March issue. Your Editor was crowing about this, but his *hubris* has been punished. *Hubris* is, of course, the boasting that the hero does in Greek tragedy, just before the bottom drops out on him. Bragging, thus, tempts fate, and makes punishment inevitable and swift. The Errata column has been reinstated and kind members will not rub this in.

* * * * * *

My timing in talking about fertilization in drought—which seemed very much on the mark in March and April—seemed to be the signal for the skies to open and for Central Florida to have more than 30 straight days of rain in June and July, not the usual rainy-season late afternoon shower, but buckets of wetness, with the sun scarcely to be seen. The Weather Channel noted, in July, that Orlando had overcome three years of below-average precipitation and was now 7 inches ahead of the game (By now, probably 12 inches ahead?). Nowhere in Central Florida, however, got pounded as some places in Palm Beach County in June, with more than 20 inches of rain. That's the kind of situation that sends folks to Home Depot or Lowe's for ark-building materials. Maybe another feature: what to do when it rains *too much*? Most palms can handle some temporary inunandation, but cycads are another matter entirely.

* * * * * *

Driving up U. S. #1, just south of Sebastian in July, I noticed a man close to the roadside, looking up. As I got closer I saw what he was looking at: another man high up in a tall Washingtonia, cutting dead fronds. There was no ladder, no cherry picker. Instead, the guy with the loppers was wearing tree-climbing spikes! I am not at all fond of Washingtonias (unlike other personalities, such as Ray Tampá), but had to feel for the poor thing. The ignorance of the maintenance crew was only equaled—in all likelihood—by the condominium association's thirst for "neatness." Dead fronds hanging down would only reflect on the moral fiber of the condo owners and their association. Had I been able to tell the maintenance folks and the condo people that tree spikes injure the palm, don't heal, and leave the plant susceptible to insects and disease, I doubt whether I would have been believed—especially if I were saying something that might interfere with "neatness" and "grooming." I've occasionally wondered, when passing an immaculately tailored (and, often, gated) development whether the plastic palms sometimes seen in shopping malls might be preferable.

Farther south on U. S. #1, north of Fort Pierce, I have often driven by Harbor Branch Oceanographic Institution. The entrance has large stone (?) vertical plinths, reminiscent of a Polynesian restaurant (only the flambeaux are missing). But I was always struck by the twin beds, either side of the driveway, of white *Impatiens*. Having heard people moan about the difficulties of maintaining them, I was always impressed by their good condition. Of course, I was whizzing by at 55 mph; one day, I stopped to look. An illusion: all were artificial, silk! A revelation, the cleverness of a scientific organization!

* * * * * *

***If you** change your address, please notify Mark Van Antwerp at 1600 N. Harbor City Blvd., Melbourne, FL 32935 or markvanantwerp@att.net Several members have contacted me in the recent past to say that they've moved. I always forward this information to Mark (membership) and to Mike Merritt (treasurer). I don't object to doing this—as the most obvious person, I guess—but Mark is the one who keeps the roster. Several members did not notify anyone that they'd moved and the June issue of* The Palmateer *was returned by the post office to me. In the event that I can find out the new address, I re-mail the copy in an envelope—costing us twice the postage, which is now pricier for first-class mail. I have a copy of the June issue but have not been able to locate the correct address: for Gloria and Malcolm McFahn (returned from Cocoa).*

* * * * * *

Mark would be happy to turn over the membership duties to someone else, since he is very much occupied with his new business, Two Men and a Truck. Anyone willing to take this over should contact any member of the Board. Good computer skills are a necessity; the

(Continued on page 24)

From the Editor's Desk

(Continued from page 23)

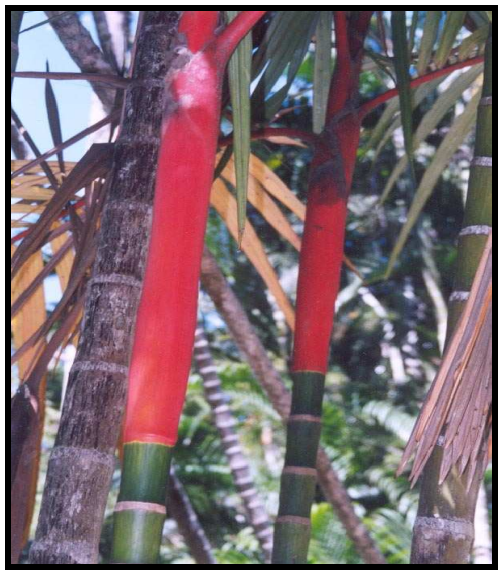
roster is kept presently on an Excel spreadsheet. Time required is several hours a week to keep up with changes of address and the addition of new members. The membership chair receives dues payments which are forwarded to the treasurer. Aside from computer skills, real conscientiousness is a fundamental requirement.

* * * * * *

My Sharp-Eyed Critic wants to know why I'm always quoting from "that French guy" in *The Palmateer*. He doesn't see why, has sent me some pithy—he thinks—political and social statements. I prefer the aphorisms or clever insights on human nature and society written by LaRochefoucauld in the 17th century. And, of course, since the business of our newsletter is palms and cycads, together with activities dealing with them, why, then, LaRochefoucauld? I'm using them as filler, basically because I happen to have a book of this cynic's maxims. I don't have, as fillers, any little palm- or cycad-facts. Doubtless, these could be done but I am involved with more basic necessities, not only with *The Palmateer*, but also with family and job and, now, my convalescence. When I first started as editor, Cindy Broome labored to provide me with a number of palm fillers, which I used up rather quickly. So, if any kind member would wish to send me 20 or so two- to four-line fillers on palms or cycads, feel free to do so.

—John Kennedy

A small corner of the crowd at the Palm Beach Palm & Cycad Society's annual picnic and auction at Ruth Sallenbach's on Sept. 14. Editor Susanna Walker readies to take picture.



This close-up shot of Cyrtostachys renda *taken at Rio de Janeiro Botanical Garden illustrates why this is called the Lipstick Palm.*

(Photo by Peter Mayotte)

Join CFPACS! Please print

Name_____
Street_____
City_____
State,
Zip_____
Email_____
Phone (area)_____
Wish to be added to Seedbank 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: $10 one year; $25 three years; foreign: US$15 one year) to:

Membership Chair
1600 N. Harbor City Blvd.
Melbourne, FL 32935

Seedbank Report

The CFPACS had a busy summer distributing seeds through the ever popular seedbank program. Credit and muchas gracias to those who donated seeds from May to September include Joe Michael, lifetime CFPACS member from Indian River County for his continued donations of *Borassus aethiopum* and royal palm seeds. Joe's continued generosity to the chapter has yielded upwards of more than $2K for the treasury. Charlene Palm donated *Chamaedorea radicalis, Dypsis decaryi*, and *Coccothrinax argentea* for the cause, as did John Kennedy (several donations of *Allagoptera arenaria*); Montgomery Botanical Center in Miami for *Encephalartos gratus*, *Microcycas calocoma*, and *Cycas chamberlainii*; Lou Thomas for *Zamia polymorpha* and *Cyrtostachys renda;* Scott Ward for many seed donations (including *Ptychosperma mcarthurii, Coccothrinax argentata*, *Livistona drudei*, *Hydriastele microspadix*, *Ptychosperma waitianum*, *P. elegans,* and *Adonidia merrillii*); Mike Dahme for a number of species including some from his most recent vacation to Puerto Rico (*Dypsis madgascariensis*, *Livistona rotundifolia, Licuala grandis*, *Aiphanes minima*, *Pritchardia pacifica*, *Thrinax morrisii*, *Chamaedorea brachypoda*, *Attalea phalerata, Archontophoenix cunninghamiana*, *Arenga sp., Prestoea acuminata, Allagoptera arenaria, Chamaedorea tepejilote*, *Syagrus coronata*, *Calyptronoma rivalis*, *Licuala sp., Licuala spinosa, Livistona muelleri, Sabal causiarum*); Ed Carlson and Bob Grice who combined for literally thousands of *Wodyetia bifurcata*; Mark Grabowski for *Chamaedorea tepejilote* and *Allagoptera arenaria*; Andrew Henderson for *Archontophoenix alexandrae* and some much sought after *Jubaeopsis caffra; Dioon spinulosum* and *Ceratozamia hildae* from Willie Tang; Neil Yorio for *Copernicia alba*; Richard Lundstedt for several hundred *XButiagrus* hybrid seeds. **Special thanks** to the hand gesturous Sam Sweet of California who provided habitat-collected *Livistona eastonii*, *L. lorophylla, L. kimberleyana*, and *L. victoriae.* These will prove to be some of the more rare and challenging species of this typically utilitarian palm genus. The combined donations to the chapter from all these generous individuals (after postage expenses) will exceed $3300 for the past 5 month period. Persons donating seeds who have met the chapter's $100 minimum net gain from this distribution period alone (and hence receive a year's free membership) include John Kennedy, MikeDahme, Scott Ward, Ed Carlson, Bob Grice, Sam Sweet, and Richard Lundstedt.

—Neil Yorio

Check this date!

November 23- 24 Saturday 9-4 and Sunday 10-3. 15th Garden Festival. Sales of all kinds of plants, including trees, shrubs, native plants, herbs, orchids, bromeliads, ferns, gingers, bonsai, African violets; garden related items such as fountains, statuary, baskets, tools. Children's activities, Heathcote gift shop, music and food to add to your enjoyment. Adults $4, children 6-12 $2, under 6 free. Heathcote Botanical Gardens, 210 Savannah Road, **Fort Pierce**. (772) 464-4672, hbg@ircc.net

Virtues are swallowed up by self-interest as rivers are lost in the sea.
LaRouchefoucald, Maxim 171

Hyphaene compressa *in the Singapore Botanical Garden. (Photo by Geoff Stein)*

Please note to members that email addresses that are bounced back as unknown recipients will be dropped from the email distribution lists. Please notify the seedbank coordinator of any email changesso the proper adjustments can be made.

TREASURER'S REPORT

March 16, 2001 to July 20, 2002

INCOME:

Seed sales……	2,160.17
Membership Dues……	972.00
Donations to CFPACS (Prescott Ward)…….……..	30.00
Public Sales (FIT, Leu, USF)……..…..…….……..	1,182.64
Private Sales ……	0.00
Back Issue Sales……	0.00
Sale of Putnam shares……..	2,958.81
Total _____	7,303.70

EXPENSES:

Publications (v. 22, no. 2 and future no. 3)…..……..	1,367.57
Computers and Software ……..	125.22
Grants (Kanapaha, Henderson, MBC)……..	1,900.00
Miscellaneous (insurance + corp. ann. rpt.)……..	65.00
Total _____	3,457.79

INCOME - EXPENSES …….. 3,845.91

Bank balance 03/16/02…… 19,162.70
Bank balance 07/20/02…… 22,785.54

Net increase……. 3,622.70

(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)
……. 7,563.15 (current value, close of market 7/17/2002)
(4,604.35 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

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

Tentative Plans for PalmFest 2003

We are going to try to keep the registration fee @ $75

Tentative Plans:
PalmFest 2003 will be held May 24 & 25th and hosted by the Palm & Cycad Society of SW Florida.
Saturday May 24 - Fort Myers/Cape Coral
Edison Home in Fort Myers
Bochette Rainforest Garden Tour
Lunch Palm Garden - Downtown Fort Myers
Plant Auction
Tour PalmTree Gardens in Cape Coral
Banquet Dinner @ Host Hotel: Ramada-Amtel Marina Hotel in Downtown Fort Myers ($59+/night)
Larry Noblick MBC - Keynote speaker
Sunday May 25 - Sarasota
Tour of Libby Besse's on Siesta Key
Selby Gardens - Tour by Nancy Edmondson
Lunch @ Selby
Bishock Ranch - Garden Tour, Plant Sale, Refreshments
The minimum (guarantee) for the banquet is 50 people. We also need 25 guaranteed reserved (w/credit card) rooms to get the discounted rate.

Hopefully, we can get enough Pre-registrations in to cover the number we must guarantee.

—Jeri Prall

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The famous grand avenue of Roystonea oleracea *in Jardin Botanico of Rio de Janeiro.*
(Photo by Peter Mayotte)