THE CENTRAL FLORIDA PALM SOCIETY

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FIRST CLASS

"ENCLOSED ARE PICTURES I TOOK ON A RECENT TRIP. ONE IS OF A **BRAHEA sp.** (UNARMED LEAF STALKS) IN SAN FRANCISCO." (SEE FRONT COVER)."THE OTHERS ARE OF WINDMILL PALMS GROWING AMONG MILK COWS IN CENTRAL LOUISIANA ABOUT 50 MILES N.W. OF BATON ROUGE. I WAS ROLLING DOWN THE ROAD, AND THERE THEY WERE." .....William Black

The Palm Society

CENTRAL FLORIDA CHAPTER

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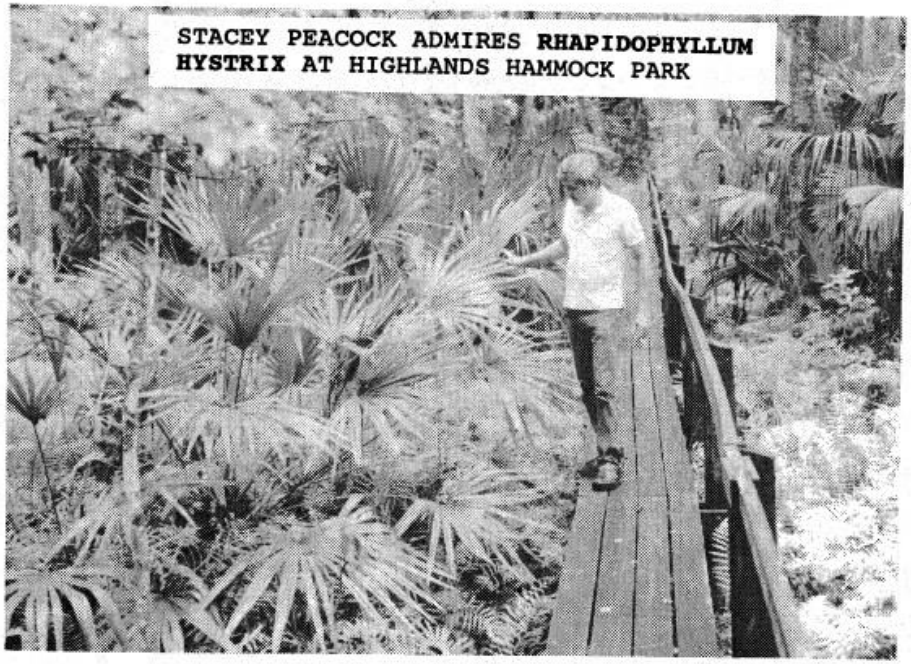

STACEY PEACOCK ADMIRES **RHAPIDOPHYLLUM HYSTRIX** AT HIGHLANDS HAMMOCK PARK

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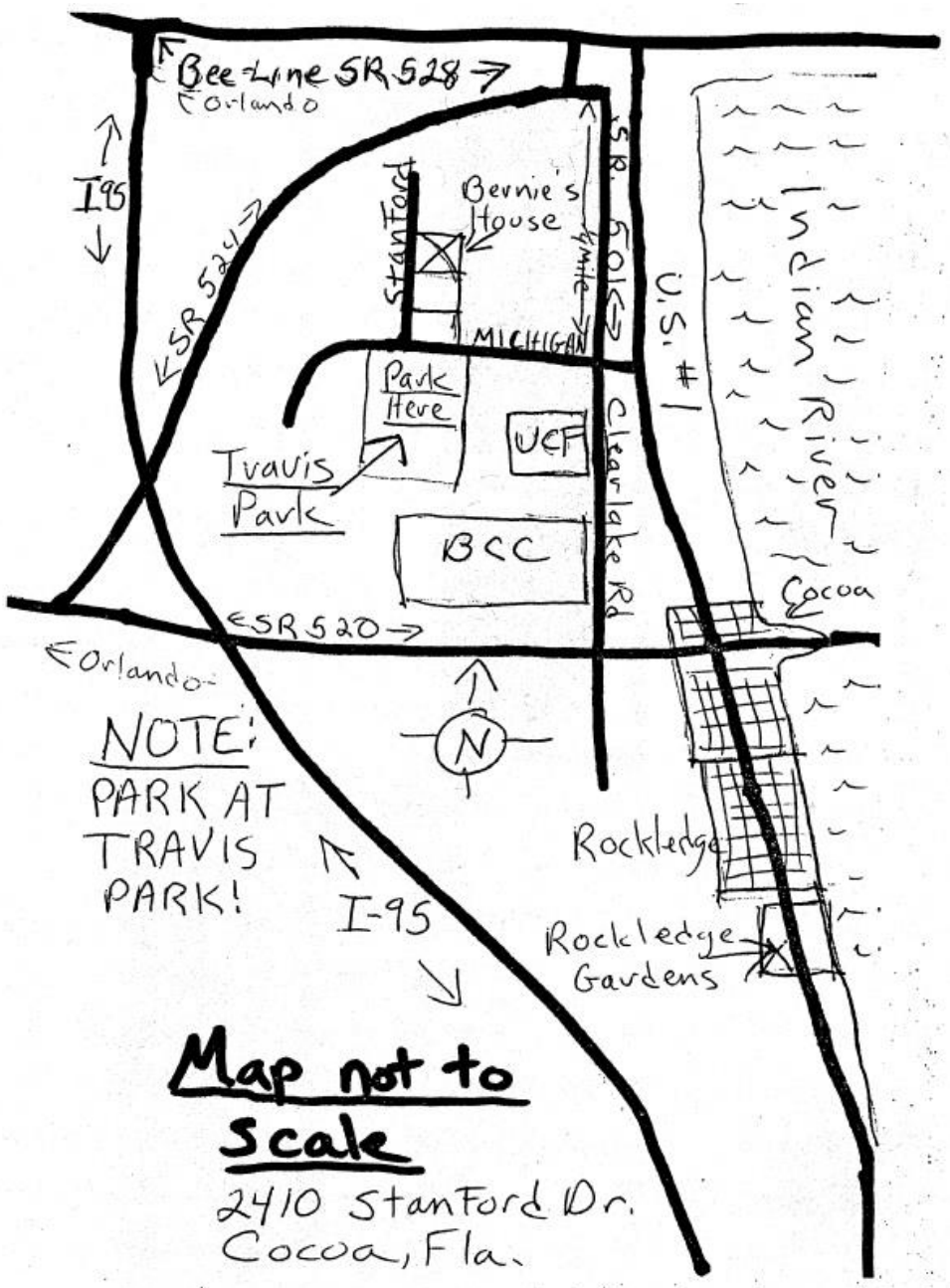
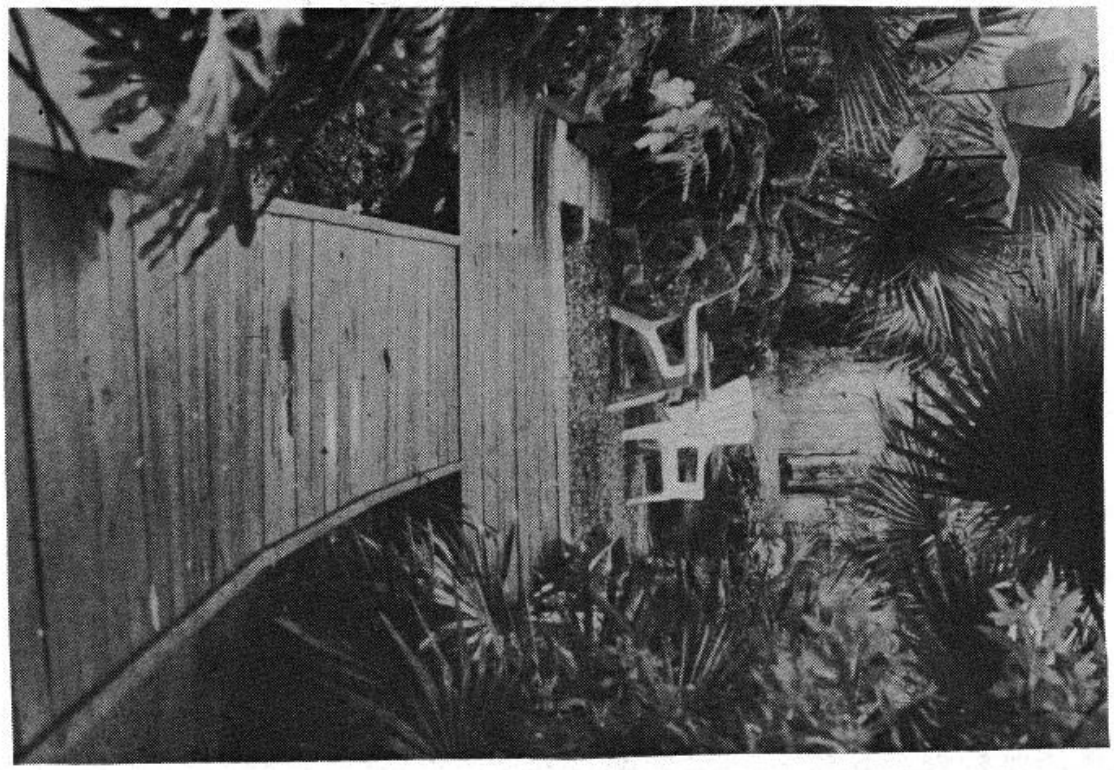


Dear Palm Enthusiast:

The following summarizes the excellent sale at Stacey Peacock's house. Based upon the quantity of plants sold, the rain didn't have much effect on the palm lovers or your treasurer.

PERSON	#PLANTS	SALE VALUE	80%VALUE	20%VALUE
Bernie Peterson	13	$ 51.00	All donated	$ 51.00
Roy Works	63	272.00	$217.60	54.40
Richard Lundstedt	13	48.00	38.40	9.60
Ted Langley	8	44.00	35.20	8.80
Stacey Peacock	21	99.00	79.20	19.80
	118	$514.00	$370.40	$143.60

Enclosed is a check in the amount of 80% of the sale value. Thank you for the donation to the Central Florida Palm Society.



PHOTOS: This page, Sunken Garden at Palm Head. Facing page, Variegated Rhapidophyllum Hystrix and the Bayhead Walk, both at Palm Head.

CLOCKWISE FROM LEFT:
JAMES MENGE ADMIRES HYBRID; ROY WORKS AND ED HALL TALKING PALMS; POOLSIDE AT THE HALL'S RESIDENCE; SABLE CAUSARIUM TOWER SKYWARD.

CENTRAL FLORIDA PALM SOCIETY: ANNUAL WINTER LUNCHEON MEETING

Ed and Nancy Hall of Maitland were our hosts for this year's annual winter meeting on Saturday, March 14, 1992. Towering Sable causarium, overhead Trachycarpus, a beautiful Butia hybrid, and much more were soon discovered as members toured the **Hall's** beautifully landscaped home and garden. Rare and exquisite bromeliads abound in their extensive collection, and everyone had a wonderful time.

After the lunch at the China Jade Buffet, the meeting continued with the election the new Vice-President **Stacey Peacock.** Congratulations **Stacey.** A marvelous slide presentation was given by **David Besst** on his and **Ed Hall's** quest for the Cham. stolonifera in the wilds of Mexico. **Dave** donated one of these plants for the plant raffle, and **Anita Lee** donated a Rhapidophyllum hystrix. Thank you **Dave** and **Anita.** The grand finale was the eagerly anticipated auction of one of **Bernie Peterson's** wood carvings (see photo on Page 3). The carving of an Archontophoenix palm executed in solid mahogany commanded $325 at the auction, is now in the proud possession of **Hershell Womble.** Congratulations on your acquisition **Hershell**, and thank you **Bernie Peterson.**

Report On U. S. F. Plant Sale in Tampa

I am glad to report the University of South Florida Plant Sale on April 18, was once again a big success. This, thanks to all the members who participated in the sale. **You made it happen.** We beat last years sales record by about five hundred dollars.

Several people have told me that the Palm Societies area looked great. Our group was by far the largest group there, and had the biggest variety of plants.

Although our location may not have been ideal, I feel that it had many benefits. We had shade, a large area (which we needed), and a holding and loading area for plants.

I am planing for some improvements for next years sale. If you have ideas or suggestions, please contact me. We are looking forward to seeing you at next years sale. **Plan now to be there.**

Ted Langley

WANTED: Member or Members in the Orlando area to organize next years LEU GARDEN SALE.
CONTACT: Ed Hall
or
Ted Langley

negate the factors mentioned above. The truely great freezes in recent memory have been of the blowing type (as is probably borne out in historical terms as well) and so the low temps for Tampa and Palmhead were pretty close. In 1985 the temperature here reached a low of 20 F and at Christmas 89 it reached 22 F and both cases were multiple day events with extended periods of up to 18 hrs below freezing. Well that's an overview of the conditions. At least we're still in the citrus belt.

A CULTURAL REVIEW OF THE COLLECTION

Acoelorrhaphe wrightii: I would descibe this as a real water lover and it thrives from water table level to several feet above the mean water level where it appears to me to be best suited. In the open and exposed to higher wind levels, the plants sustained a fair amount of freeze damage while those plants under the bayhead canopy were totally undamaged. Exposed plants lost a number of the taller canes. Paurotis palm would seem to be adaptable to both acid and alkaline conditions but perhaps a little lime in central Florida might make for the healthiest appearance. I plan to experiment with this idea. As for light requirements, full sun is preferable to deep shade when hoping for moderate growth but plants can survive and grow slowly in shade. Very!

The Genus Acrocomia: Of course the biggie for us is Acrocomia totai. There are 3 thriving specimens in the collection, the oldest being approximately 7 yrs old, the middle 5 yrs, the youngest 3yrs. Others were planted in locations that proved too wet and subsequently died. This is one palm best suited to coarse and airy sands that get regular doses of water either through rain or supplemental irrigation. Drainage is the key. Wet (anaerobic) feet seem to spell death for this species. Although my three plants are planted on the highest ground available to me, it would not surprise me to lose these wonderful palms to an overly wet summer. As they are presently rising like rockets my fingers are crossed that I may never lose them. Another observation has to do with their rapid rate of growth...namely that they are heavy feeders. A good fertilizer routine will maximize upward returns. You can expect this tree to be an early bloomer as well...my oldest bloomed without setting seed this past year. Expect the seed to be almost impossible to germinate for the average fellow (like me). Next time I have a bunch of seed to experiment with, I plan on placing them on the ground, lowering the lawnmower to the lowest notch and running them over at full throttle 9-10 times. If all else fails try the ridiculous I always say. The range of A totai is Argentina, Paraguay, and Bolivia, which probably owes to it being so cold hardy. In past freezes, my plants have sustained a fair amount of cosmetic damage but quickly outgrow it.
OTHER SPECIES: My experiences with other species is pretty limited. Most of my trials were with unknown sp. which I purchased (and usually paid handsomely for) and planted only to lose them in different freezes. Several got pretty large and so parting with them was bitter sorrow. The future budget for trying more is limited to $4 to $5 for a plant if such fortune comes my way. The market for Acrocomia is Florida is pretty bare....availability is sporadic at best even at Palm Society sales.
JUST SPECULATING: What is the pH preference of A. totai in its native environment???? My experiences would seem to indicate that they are at least adaptable within a fairly wide range of pH. Those receiving an annual mild application of lime seem equally as happy as the one that doesn't. Still would be nice to check and know the preferred.

Allagoptera arenaria: This beautiful palm comes from the Brazilian beaches where it grows just above the high tide mark and on nearby sand dunes. The old name for this genus was Diplothemium. This palm is prized by most aficianados and reflects that in bringing a premium price when found for sale. There is one specimen in my collection and it has been thriving for years, a survivor of both the 1985 and 1989 freezes. Both times the plant was covered tightly and sustained only superficial damage. Even under the cover it must have been freezing but without the wind. I think it could be classed at least moderately hardy but who knows how low she could really go. In their native environment, Allagoptera is found growing in alkaline pH so offering it a little lime now and then will give the best growth in central Florida. My plant is growing well in a sunny spot. Just how it would do in shade is not known to me but my guess would be not too well. Availability of this palm was once quite limited but in recent years this has began to change. Supply is up and the price is coming down. As more bargains appear I hope to do more experimentation with soil and water conditions. My present plant is about 4 feet above the mean water table. Recently I was given a small seedling of A. campestris and after a year, it hasn't grown much (in a pot) but still appears healthy. The only information I have found about habitat in the literature is that it too is from Brazil's coastal sand dunes. We'll see!!!

The Genus Archontophoenix: Yes...the stuff that dreams are made of! Possibly the palm used most as a sacrificial lamb in central Florida. I've certainly offered up my share. Of course I'm referring to A. cunninghamiana which is named for British plant collector Allan Cunningham (1791-1839) who studied Australian flora. Its reputed hardiness has always caught the imagination of area palm buffs, and many of us remember the large specimens which used to grace Orlando's Leu Gardens. Would that it could be done again? Well if recent trends continue the answer is no but there's nothing certain about the weather. Do 10 freeze free winters lie ahead? Its historically possible and I would argue to always replant this species whenever possible. Their price and availability make this an easy proposition. I always enjoy having them around no matter what size the plant as they noticeably lend a tropical touch to the garden. They can become large plants in just a few short years under good conditions. They thrive for me when planted in a bright location about 2-3 ft above the mean water table. They are well suited to central Florida weather except for the few nights of extreme cold that occassionally invade the state. This is not to say they aren't hardy. As far as crown shaft palms go they rank among the hardiest. That's to say they could easily recover from a 28 F freeze and recover with some effort from say 25-26 F. Freezing winds are particularly damaging as well as increased duration of time below 32 F. Do not lime A. cunninghamiana, my experience is that

KEY TO THE GENERA OF CYCADACEAE

A. Leaflets with a midrib, but no side veins. Megasporophylls in a crown through which the axis continues to grow. Sporophylls with several ovules along the sides. Oriental.....1. Cycas

B. Leaflets with a midrib and pinnate side veins. Sporophylls each with two ovules, forming a cone. Africa.....2. Stangeria

C. Leaflets parallel veined, no midrib. Megasporophylls in cones, each with two ovules.

a. Leaflets bipinnate. Australia.....3. Bowenia

b. Leaflets once pinnate

1. Ovules on a stalklike protrusion of the megasporophyll and arranged in a loose cone. Mexico.....4. Dioon

2. Ovules sessile. Ovules with

(a) Shield-shaped top with two strong horns. Mexico.....5. Ceratozamia

(b) Sporoplylls shield-shaped without horns

(1) Cones small, sporophylls in longitudinal rows; leaves developed singly; mostly small plants. America.....6. Zamia

(2) Cones large; leaves in crowns; mostly large plants. Africa.....7. Encephalartos

(c) Sporophylls with a long median spine. Australia.....8. Macrozamia

(d) Male sporophylls with a flat top; female sporophylls with shield shaped top. Cuba.....9. Microcycas

When the plants have cones, the genera can be identified positively. Stangeria and Microcycas are monotypic. Bowenia has only two species, both easily recognized. Dioon has 3 and perhaps 4 species, all easily recognizable. Ceratozamia has 2 and possible 3 good species and a lot of variants which taxonomists classify as species, subspecies, varieties, or forms, categories of no interest to the morphologist, except that they show how a plant may vary. The other genera, Cycas, Encephalartos, and Zamia have numerous species, some of which have not been described adequately and never will be accurately described until there has been a prolonged and detailed field study. Until such a study has been made, the descriptions of species, subspecies, varieties, and forms in the more difficult regions of a genus will continue to degenerate into descriptions of individuals, which burden the literature, while the plants may or may not ever occur again.

Although the family has persisted from the Upper Paleozoic (like 250 million years ago) up to the present time, there is not sufficient material to make a key to the extinct members."

FROM THE FIELD: Ben Ciesla of Brandon, Florida, shares some excerpts from an old publication (Circa 1910), GYMNOSPERM STRUCTURE AND EVOLUTION, by Dr. Charles Joseph Chamberlain.

"Cycads in the field vary with age and other factors. One who has studied cycads in the field would hesitate to determine most of the species from herbarium specimens.

The latest monograph is that of SCHUSTER. There is a splendid bibliography and some original work, but what seems to be a total lack of study in the field. The keys are in Latin, as taxonomists claim they should be. The rising generation knows little or no Latin, but must know English, German, and French. Keys in any of these three languages would be more useful to nearly all of the people who might want to do some identification.

Cycads have several characters which could be made the basis for taxonomic keys. Most of them are composite, using both vegetative and reproductive features. In cultivation, where individuals are few and coning is rare, a key based entirely upon vegetative features would be desirable. 'SISTER' MARY ALICE LAMB devised a key to the genera based upon the leaves. Only Cycas and Stangeria have a midrib in the leaflet; and Cycas has only a midrib with no lateral veins, while Stangeria has a midrib with lateral veins. Bowenia is the only cycad with twice-pinnate leaves. Dioon is the only cycad with the insertion of the leaflet as broad as any other part of it. Macrozamia is the only one with a gland at the base of the leaflet; but in some species of this large genus, the gland is obscure or may be absent. However, its presence identifies most of the species as belonging to this genus. In Microcycas the leaflets are reflexed on the rachis; in the rest they are either flat or turned up a little. Of the other three, Zamia has the rachis sub-circinate in vernation; while in Encephalartos and Ceratozamia it is erect. In Encephalartos the margin of the leaflet is very jagged in most species and the lower leaflets are more and more reduced, until at the base, they become mere spines. In Ceratozamia there is no such reduction. With additional histological characters the key devised by 'SISTER' MARY ALICE LAMB could be made sufficiently complete for identification of the genera.

Some of the genera can be determined, at a glance, by the cones. The two strong horns of Ceratozamia, the elongate peltate top of Microcycas, the long spine of Macrozamia, the loose cone of Dioon, and the crown of megasporophylls in Cycas provide an easy identification.

Archontophoenix (con't): it likes things on the acid side unlike A. alexandrae which is adapted to alkaline soils. In fact, because of the Miami area's alkaline soils, A. cunninghamiana does not prosper and is not commonly planted. The genus has only two species and both are confined to the continent of Australia. A. alexandrae is supposedly less hardy and less popular as a result. In closing, Archontophoenix offers a fun time when planted without too much expectation.....enjoy them while they last.

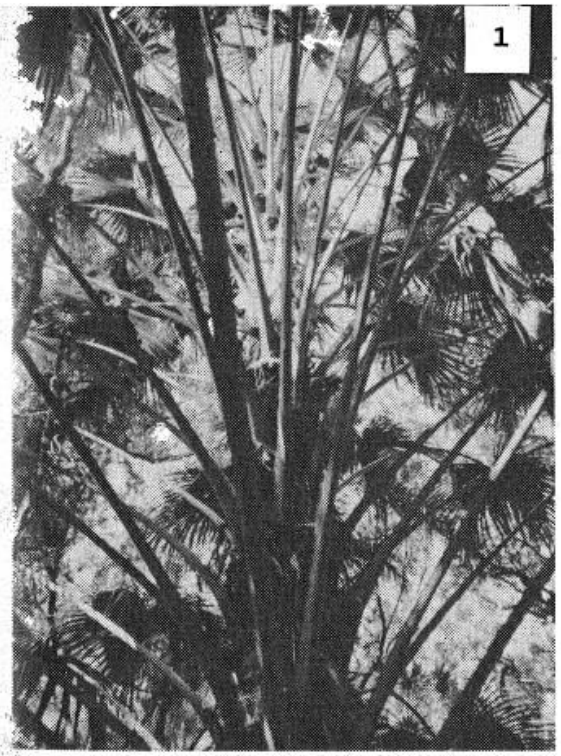
The Genus Arenga: Of the different species of this genus that I have tried growing (ambong, australasica, caudata, engleri, mindorensis, pinnata, tremula and a few unknown "sp.") only A. englerii was fully hardy to local conditions. But some of the other species do possess varying degrees of hardiness. Following is a brief comment on each of the above:

A. ambong: Certainly the most tender of the species I have tried. Starts going downhill when temperatures go below 48 F. My potted specimen gets nice during the summer months but come fall all the foliage dies away leaving only the emergent leaf. And she is in the house during cold weather!!!

A. australasica: Prefers shade and lots of water. In maturer condition it can tolerate more sun. Other than freezing temps this palm is well adapted to the bayhead environment. I would guess that the foliage is hardy to just below 32 F and not hardy to frost at all making this one strictly for fun.

A. caudata: An Arenga that should be taken more seriously in the warmer parts of central Fla. I gained this appreciation for the species from Libby Besse of Sarasota. During freezes it can be expected that this suckering palm will return to ground level. But it recovers relatively quickly so it is possible to always have this gorgeous dwarf species in the landscape. Once again a shady wet spot will give the best results and I have never used lime on this palm. Makes an excellent understory plant especially when planted in mass. The fishtail pattern of the leaves is quite striking. I would like more of these in the collection but price and/or availability is a problem. More! More!

CONCLUDING REMARKS: As you can see, this article must be written on the installment plan. Look for it to continue in upcoming issues. I don't profess to be an expert on the cultural requirements of palms but rather a casual observer of the things I have experienced over the years. If you take exception to any speculations I have made, please write me with your experience or share some reference to the fact in palm literature so I'll be able to pass it along. The address is: Stacey Peacock/ Rt 2 Box 168/ Zolfo springs, Fl 33890 Next Issue: Arenga conclusion and more!



THE CHINESE FAN PALMS OF THE F.I.T. BOTANICAL GARDEN

by Bernie Peterson

One of the outstanding species of palm to be found along the Dent Smith Trail at the Florida Institute of Technology Botanical Garden is Livistona chinensis, or Chinese Fan Palm. Here in the shade of tall native trees, and with a moist clay soil, they grow with a luxuriance and size unequalled at any other garden in Florida.

When growing within a closed forest canopy, Chinese Fans adopt what is known as an emergent growth habit; that is, they grow upwards very rapidly until their crowns of foliage emerge through the canopy of trees. This is in contrast with the habit of Sabal palmetto or Cabbage Palm, which remains suppressed in a closed forest situation, and will not grow upwards unless the death or removal of some of the forest canopy allows a higher light intensity to reach it. Numerous suppressed Cabbage palms can be seen along the Dent Smith Trail, waiting for their chance to grow.

Chinese Fan Palm is a common landscape plant used throughout Florida, but the Fan Palms along the trail have a very different appearance to the ones in our yards. To begin with they have much larger leaves, 6 to 8 feet across, and with leafstems as much as 12 feet long, the leaves are also a much brighter green than those of trees grown in the sun. The trunks are thicker and have a different surface texture; they are marked by regularly spaced rings called leaf scars. Each ring or scar represents the attachment point of a single leaf. Because these rings are spaced as much as 2 inches apart, the tree grows 2 inches taller with each leaf produced as many as 12 leaves may be produced each year, so that the tree can grow 2 feet per year, very fast for a fan-leaved palm.

It is interesting to compare the Chinese Fans growing in the shady conditions of the Dent Smith Trail with those planted in sunny sites with sandy soil. Many sun grown Chinese Fans can be seen on the F.I.T. campus, and the difference in appearance is dramatic. The sun grown plants have smaller leaves that are olive-green and have a somewhat puckered undulating appearance, the leafstems are short, and the tree have a very compact appearance. On sun-grown Chinese Fans the trunk is rather slender and has a rough corky appearance. The leaf scars are so closely stacked that they are hard to distinguish. One of the important differences between sun-grown and shade-grown Chinese Fans is that sun-grown trees begin to flower and produce seeds at a fairly early age. Trees less than ten feet tall produce thousands of seeds per year. The palms growing in the shade do not flower or produce seeds until their crowns of foliage emerge through the sheltering canopy of trees into the full sun. A few of the Chinese Fans along the Dent Smith Trail have now grown tall enough to have emerged, and have commenced flowering and seeding. Their foliage has also taken on the appearance of sun-grown specimens.

If you have not already done so, examine the differences between shade- and sun-grown Chinese Fans on your next visit to the F.I.T. Botanical Garden. You will be amazed at the difference in appearance of members of a single species that can be caused by environmental conditions.

LEGENDS FOR PHOTOS

1. Looking up into the crown of a Chinese Fan growing along the Dent Smith Trail. Note the length of the crown and the numerous leaves--more than 50.

2. The crown of a sun grown Chinese Fan Palm. Note the short leafstems, the compact crown, and the relatively small number of leaves--about 16. Also visible are flowerstalks.

3. The trunk of a shade-grown Chinese Fan, the color is reddish brown. Note the widely spaced leaf scars.

4. The trunk of a Chinese Fan grown in full sun and on sandy soil. Note the rough appearance and the vertical cracks.