



# PRINCIPES

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### THE PALM SOCIETY

*A non-profit corporation primarily engaged in the study of the palm family in all its aspects throughout the world. Membership is open to all persons interested in the family. Dues commence at \$12.50 per annum payable in January but may be increased if an individual member so wishes. Requests for information about membership or for general information about the Society should be addressed to the Executive Secretary.*

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JOURNAL OF THE PALM SOCIETY

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### Cover Picture

Two *Washingtonia robusta* stand tall against Crawford Science Building on the campus of Florida Institute of Technology. Immediately to the left is a *Caryota*, while to the extreme left is a large specimen of *Phoenix reclinata*.

### PRINCIPES

JOURNAL OF THE PALM SOCIETY

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# A Major Florida Palm Collection

NIXON SMILEY<sup>1</sup>

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The Florida Institute of Technology, as the name implies, is a technical university, without either a botany department or a staff botanist. But on its 128-acre main campus, on the western outskirts of Melbourne, is one of the largest collections of palms in the state. In the collection are some 2,000 palms representing more than 100 species. A fair number are mature, while the rest are established and thriving. Only three other Florida collections are larger in the number of established species—those at the Fairchild Tropical Garden, the Montgomery Foundation (Jennings Estate), and the U.S. Plant Introduction Garden, Chapman Field, all in the Miami area.

You are entitled to wonder how a technical university ever got itself involved in collecting and growing palms. On the surface, few things could have less affinity than palms and the subjects taught at F.I.T.—mathematics, physics, mechanical and electrical engineering, electronics, oceanography, space science, and aviation. Yet, here is a botanical collection, although specialized, surpassing those of most universities and colleges that offer degrees in botany.

It all started because F.I.T.'s founder, Dr. Jerome P. Keuper, had some disappointments in the landscape planting back in 1962 when the university moved to its present campus. Most of the campus soil was poor, sandy upland, covered by yellow pine and saw palmetto (*Serenoa repens*). At the north-east corner of the campus the upland

dipped into a low, wet hammock of hardwoods—oak, maple, hickory—and tall cabbage palms (*Sabal palmetto*). The soil in this area was fairly good but was too low to be of much practical use in the construction of a university campus. Crane Creek passed through the area on its way to Indian River. A smaller stream, Needlepalm Branch, crossed the campus and snaked through the lowland to empty into Crane Creek. After a hard rain, Crane Creek and Needlepalm Branch overflowed, flooding the lowland. Thus the area seemed to be of little value for anything. But no one in 1962 had time to think much about the area's potentialities. Jerry Keuper was busy planning and constructing buildings and looking about for suitable plants to set off the landscape about them.

Jerry's landscape plans failed to develop as he visualized. Most of the trees and shrubs he had obtained from nurseries proved to be ill adapted to the sandy soil, which became powder-dry during the long, dry season. He could only look on in frustration as much of the stuff declined, the foliage turning yellow and twigs dying back, despite frequent irrigation. Insects—mites, thrips, scale, and mealybugs—took their toll, and, finally, many of the plants succumbed. Up to this time, Jerry's interest in plants had been limited to the admiration of them. Trees were for others to grow and to study. He was pleased to be a passive observer. His entire background had been technical, with no time for any special interest in plants—or anything else outside his pro-

<sup>1</sup>Photos by the author except where otherwise credited.



1. Welcome sign at entrance to Dent Smith Trail.

fession except teaching, which he thought of as a hobby.

Jerome P. Keuper was born in Fort Thomas, Kentucky, in 1921. He got his bachelor's degree in physics at the Massachusetts Institute of Technology. While a student there he conceived and designed the first nuclear scintillation counter. He went on to get his master's degree in physics at Stanford and his Ph.D. in physics from the University of Virginia. From 1952 until 1958, Jerry was employed as a physicist by the Remington Arms Company at Bridgeport, Connecticut, and while there he taught mathematics at the Bridgeport Engineering Institute.

In 1958, Jerry Keuper came to Florida, his job being to determine the

accuracy of delicate tracking devices used by the Radio Corporation of America in connection with the test-firing of military missiles from Cape Canaveral. Meanwhile, he looked about for an opportunity to continue his hobby, teaching. There was none, so he started night classes for engineers employed in the missile-testing program, most of them with masters' degrees or above. Initiation of an all-out space program after the orbiting of Sputnik by the Russians brought thousands of technically trained persons to the Cape, and soon Keuper was having to enlist the help of other specialists in his teaching program. Still the classes expanded, and Jerry organized the Brevard Engineering Institute. (This name was selected because the



2. Dent Smith Trail with towering *Sabal palmetto* palms and oaks and understory planting of exotic palms.

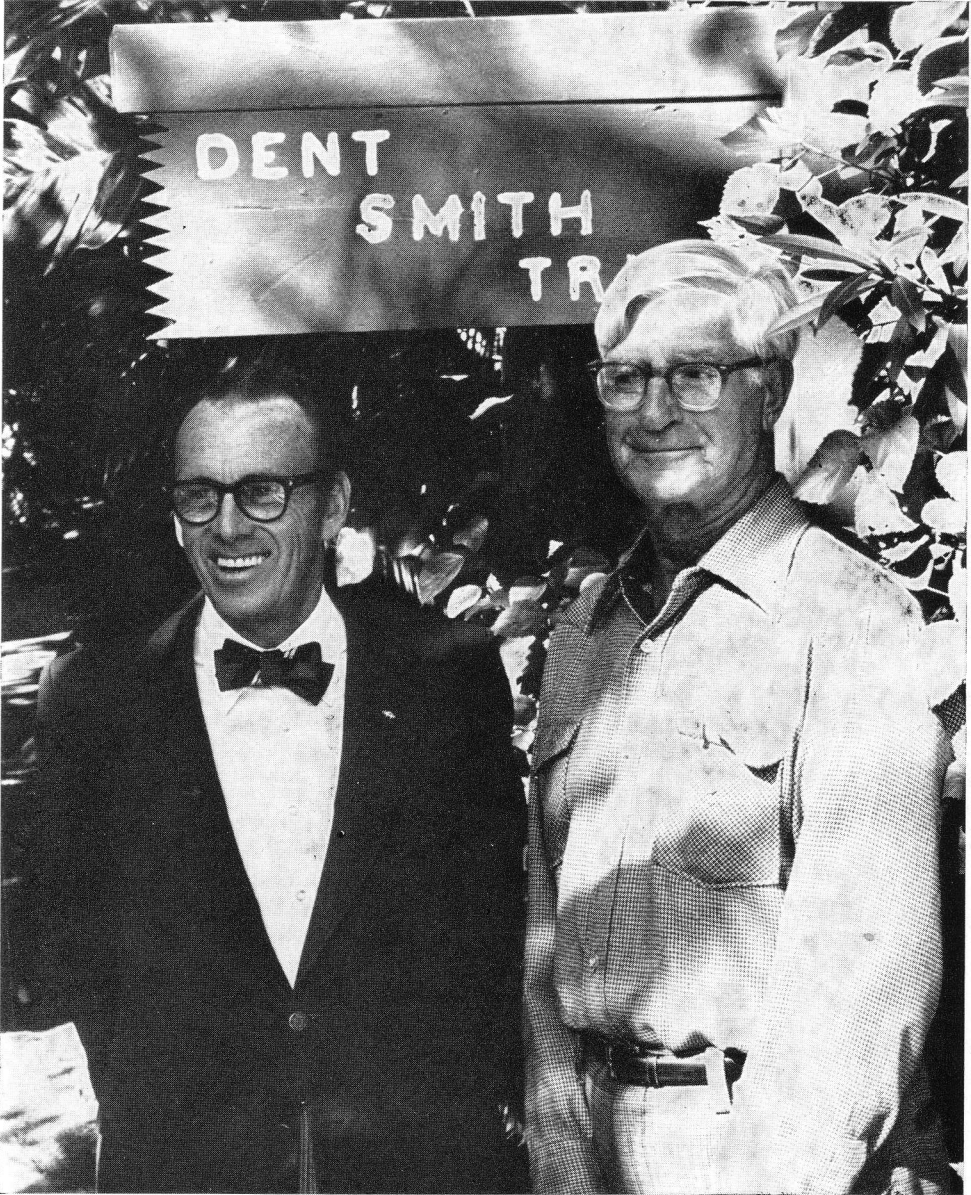




3. Fronds of thriving palms invade space over trail. Multiple-trunked palm is *Chrysalidocarpus lutescens*.

initials were the same as those of the Bridgeport Engineering Institute, represented by a B.E.I. decal on his automobile windshield.) In 1966, B.E.I. became

the fully accredited Florida Institute of Technology. Today, with more than 2,400 full-time students, F.I.T. is second only to the University of Miami among



4. Dr. Jerome P. Keuper, left, and Dent Smith at entrance to Dent Smith Trail.

private universities and colleges in the state.

Heading a school with its numerous and varied programs, Keuper had more than enough to occupy his mind and his

time. But with his landscape plantings going to the dogs, his interest in plants quickly changed from a passive to a positive, active concern. He began looking for plants tolerant of the conditions



5. Plantings give trail a lush, jungle effect.

on the campus and which would at the same time would set it off characteristically as a part of Florida.

"I must say that I had developed a real love for Florida," said Jerry. "I

liked the climate, of course, but I also liked everything else about it, and I found the landscape very attractive and different."

The cabbage palms growing along





6. Native saw palmetto (*Serenoa repens*) develops trunk in shade of taller cabbage palms (*Sabal palmetto*) and oaks.

Indian River could hardly have been more spectacular, and he noted with pleasure that the same species thrived at the F.I.T. campus—palms as tall and as striking as those along the river. Now

he began observing other palm species, noting that a number of different kinds thrived in Brevard. What his discerning eyes sorted out pleased him, and he began thinking about the possibility of



7. Large needlepalm (*Rhapidophyllum hystrix*) between Dent Smith Trail and Needlepalm Branch.

using palms as the main landscape feature on the new campus. But who knew anything about palms? Most persons he asked were unsure of their names. In the meantime, Jerry heard of a "palm nut" up at Daytona Beach. His name was Dent Smith. An avid palm collector, he had founded The Palm Society. Jerry called Dent and asked if he could drive up to see him; he wanted to talk about palms.

Smith could hardly have been more cordial. It was a pleasure to show off his palm collection to anyone, but to have a university president interested in palms was something very special. Jerry spent several hours talking with Smith and going over his collection, and, by the time the educator headed back to

Melbourne, he had become infected by the disease known as palmitis, for which the only cure is to collect and grow palms and become a member of The Palm Society. But before he left, he got Dent's promise to visit F.I.T. Jerry wanted to show him the campus and talk some more about palms. It happened that Dent was planning a boat trip to Fort Myers, by way of the Indian River and the Okeechobee Waterway, and he promised to stop at Melbourne on his way back.

"I didn't know a thing about palms, and didn't pretend to," said Jerry, recalling Dent's visit. "I wanted Dent to tell me more about these plants. I wanted to know how to plant them and how to grow them. And I wanted to get some



8. A forest of saw palmetto (*Serenoa repens*). Photo by Dent Smith.

sources of palms. I was anxious to get some palms started on the campus; I was in a hurry."

To Dent Smith, the 128-acre campus, with its yawning spaces, looked like an ideal place for palms. But his enthusiasm knew no bounds when he saw the low jungle of hardwoods and cabbage palms, moistened by two streams. It was the kind of habitat that he was well acquainted with, and he began looking immediately for the needlepalm (*Rhaphidophyllum hystrix*) growing along the winding branch. He was surprised to find none. The only other native palm Dent found besides the cabbage palm was the saw palmetto, which grew in profusion on a high bank beyond Crane Creek.

"Jerry, you have an ideal place for palms," said Dent after they had fought their way through the underbrush. "You could have one of the finest collections in

the world here. The palms you can't grow in the upland part of the campus you can grow here in this jungle, where there is constant moisture and cover to provide some protection from frost during cold winters. You could grow all but the most cold-sensitive palms here." Dent discounted the effects of periodic flooding. Most palms, he told Jerry, could take some flooding, provided the water did not stand over the roots of the palms for several days at a time.

The suggestion that F.I.T. could have "one of the finest collections in the world" was the kind designed to send a person like Jerry Keuper into action. "We're ready to start," replied Jerry, who likes to use the collective pronoun when speaking of F.I.T. "Just tell us how to get started." "I'll do better than that," said Dent. "I'll send you a truckload of palms and a man to show you how to plant them."





9. Jerry Keuper on Dent Smith Trail, with *Ravenea hildebrandtii* in background. Photo by Dent Smith.

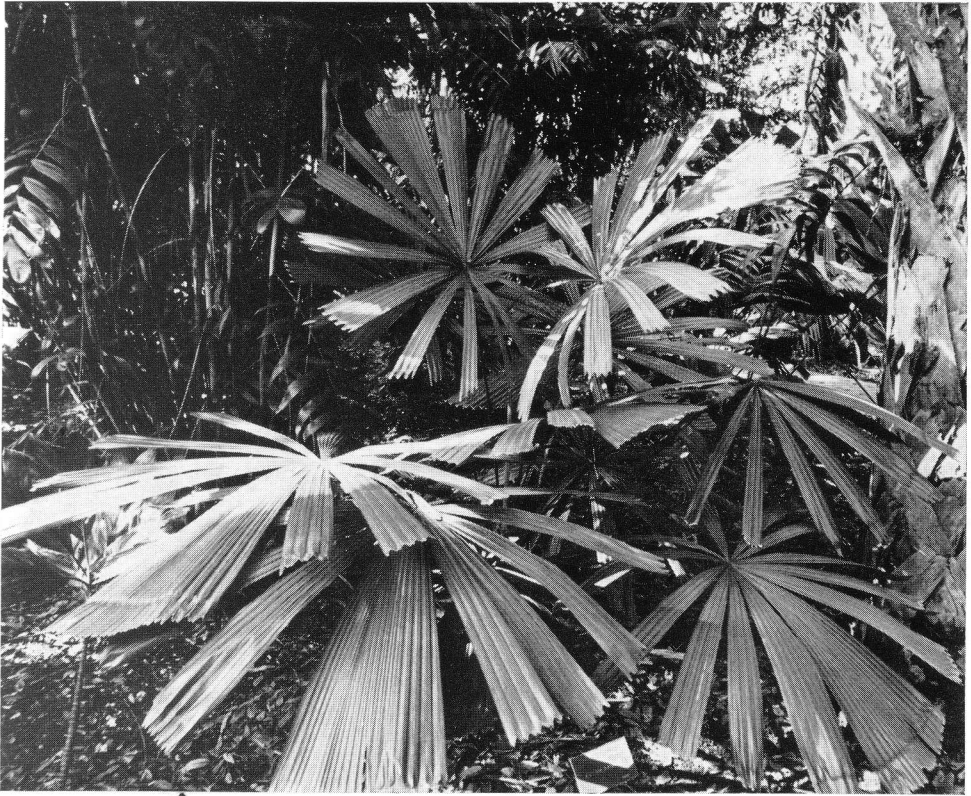
A few days later a truckload of palms arrived at the Florida Institute of Technology, accompanied by Dent's helper, Dewey Watson. It was just a beginning. Jerry picked up from there. Checking with consultant Dent Smith from time to time—and sometimes not—he began scouring South Florida for palms. In the beginning he was interested in large palms for the landscape planting of the campus, meanwhile acquiring an increasing number of species in containers from plant nurseries and collectors.

Dent, who supplied funds for a shade house, also was helping to build the collection. Knowing that the native Florida paurotis palm (*Acoelorrhaphe wrightii*), would tolerate the low temperatures Melbourne experiences in some years, Dent purchased 100 of these palms at the Cutler Nursery in south Dade County. But when Keuper arrived with a truck to pick them up, he noted that Al Cutler had

another 100 paurotis in three-gallon cans. "Load them, too," said Keuper. "We'll take all." An admirer of the paurotis, Keuper was acquiring all of this species he could find. He eventually wound up with with some 300.

Dent, meanwhile, continued to deliver palms for the F.I.T. collection, among them a number of fine specimens of the needlepalm. "You've got to have needlepalms growing along that branch in the jungle," said Dent. "It just doesn't look right without them." As a result of Dent's efforts to remedy nature's neglect, the winding stream acquired the name of Needlepalm Branch.

West of Fort Lauderdale, off U.S. Highway 84, Jerry spotted a magnificent *Acrocomia totai*, and purchased it. But how do you move a thirty-foot *Acrocomia* without obliterating the long, black spines that cover its trunk? To many persons, perhaps, this would have



10. A fine specimen of *Licuala paludosa* on trail.

been a small matter. Who wants palm spines, anyway? But to Jerry Keuper the spines were important, because they were part of the palm's identity, just as its quills are part of a porcupine's identity. So, on a weekend before the palm was to be transported to Melbourne, the educator and his wife, Natalie, drove down to Fort Lauderdale with a ladder, newspapers, blankets and tying line. Pressing the spines upward against the trunk, the Keupers covered the palm from ground to foliage. Today this palm stands in front of F.I.T.'s library, with the spines undamaged.

Jerry enlisted his staff in the search for palms. One member, quail hunting near Fellsmere, on the edge of the St. Johns River marshes, spotted an enor-

mous Canary Island date palm (*Phoenix canariensis*) standing alone in a field. The property owner refused to sell, but Jerry waited. Eventually the property changed hands and he approached the new owner, who gave him the palm. This huge specimen now occupies an important site on the F.I.T. campus.

In 1968, Jerry found an experienced plantsman to take charge of the planting and care of the palms, Jim Joyner. Although Joyner had a job with Shaw Nursery in Miami, he was looking for a chance to get away from the "big city." Moreover, the chance to help develop a major palm collection was a once-in-a-lifetime opportunity.

Meanwhile, Jerry was going ahead with plans suggested by Dent Smith for



11. An elevated walk through palms takes students between dormitories and classrooms.

the development of the moist jungle. Calling on a professor of engineering on his staff who had an eye for the esthetic, plans were made for paved trails on either side of winding Needlepalm Branch. The engineer not only obliged but came up with plans for unique rainbow-shaped bridges across the stream. After the trail was completed, it was christened the Dent Smith Trail.

Palms were arriving at the campus almost faster than Joyner could plant them. He was spending so much time in the jungle garden that students began calling him "Jungle Jim," a nickname that stuck. Among the palms that went into the jungle were more than a dozen *Chamaedorea* species, including the climbing *Chamaedorea elatior*. All are

now thriving, as are genera of three or four dozen other palms, represented by one or more species. Among them are *Aiphanes*, *Acoelorrhaphe*, *Areca*, *Arenga*, *Brassiophoenix*, *Coccothrinax*, *Daemonorops*, *Gaussia*, *Geonoma*, *Howea*, *Hydriastele*, *Licuala*, *Livistona*, *Opsiandra*, *Pinanga*, *Pritchardia*, *Ptychosperma*, *Raphia*, *Ravenea*, *Rhapidophyllum*, *Rhapis*, *Roystonea*, *Sabal*, *Scheelea*, *Syagrus*, *Thrinax*, *Veitchia*, and *Zombia*. *Sabal*, with fourteen species, was second only to *Chamaedorea* in the number represented.

Many of these are repeated among the upland plantings, where *Washingtonia*, *Sabal*, *Veitchia*, *Coccothrinax*, *Phoenix*, *Livistona*, *Chrysalidocarpus*, *Roystonea*, *Caryota*, *Butia*, *Arecastrum*, *Elaeis*, *Diclyosperma*, and *Acoelorrhaphe* predomi-





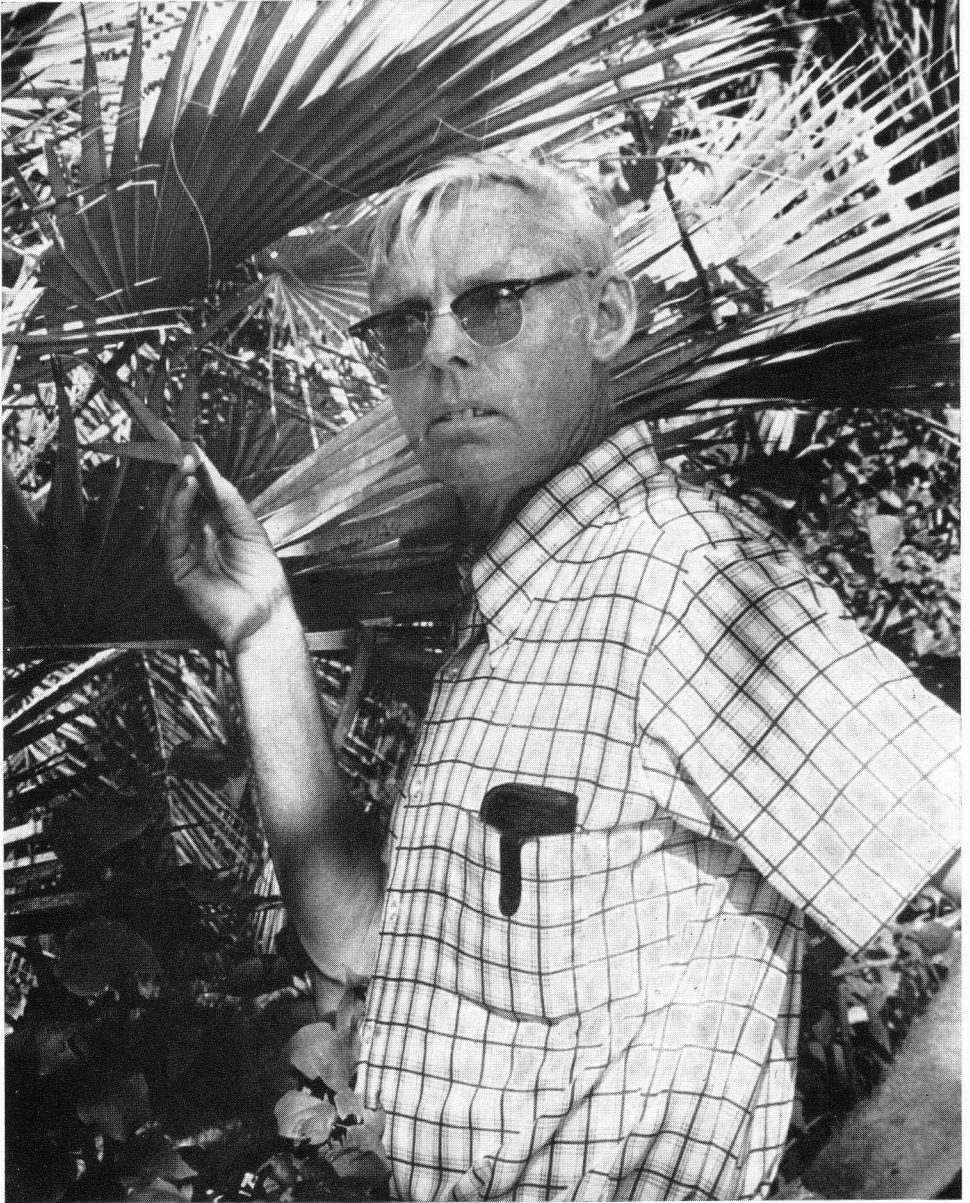
12. Gray-green leaves of *Erythea armata* stand out in this landscape planting.

nate. Among the plantings are young representatives of *Borassus flabellifer*, *Rhopalostylis baueri*, *Rhyticoccus amara*, *Pinanga kuhlii*, *Parajubaea cocoides*, *Bismarckia nobilis*, *Coccothrinax miraguama*, *Satakentia liukuensis*, and *Chelyocarpus chuco*. There also are fine specimens of *Erythea armata*, *Cryosophila warszewiczii*, *Bactris gasipaes*, and what is believed to be the largest specimen in Florida of *Ravenea hildebrandtii*, a palm from Madagascar. In the nursery are a number of species not yet represented in the plantings and which are not considered a part of the established collection.

Members of The Palm Society who attended the biennial meeting at F.I.T. in 1970 will remember the progress Jerry Keuper had made in building his collection just three years after getting started. Those who plan to attend the

1976 biennial meeting at F.I.T. will have a chance to see the astounding changes that have taken place since 1970. Jerry, who couldn't be more pleased with the progress of the collection, has promised to go all-out to see that the meeting is a memorable one. The meeting will take place after the students leave for summer vacation, thus making available ample dormitory space, as well as a cafeteria, and an auditorium. Charges will be nominal for food and services. Buses will meet planes to transport palm people to the campus. Side trips to other major collections are planned, including Dr. U. A. Young's collection in Tampa, the Fairchild Tropical Garden, Montgomery Foundation, and Chapman Field.

Walking over the campus and along the Dent Smith Trail, you find it hard to believe that F.I.T.'s palm collection was begun just seven years ago. Many



13. Jim Joyner, Florida Institute of Technology's "Jungle Jim," plants and maintains the palms.

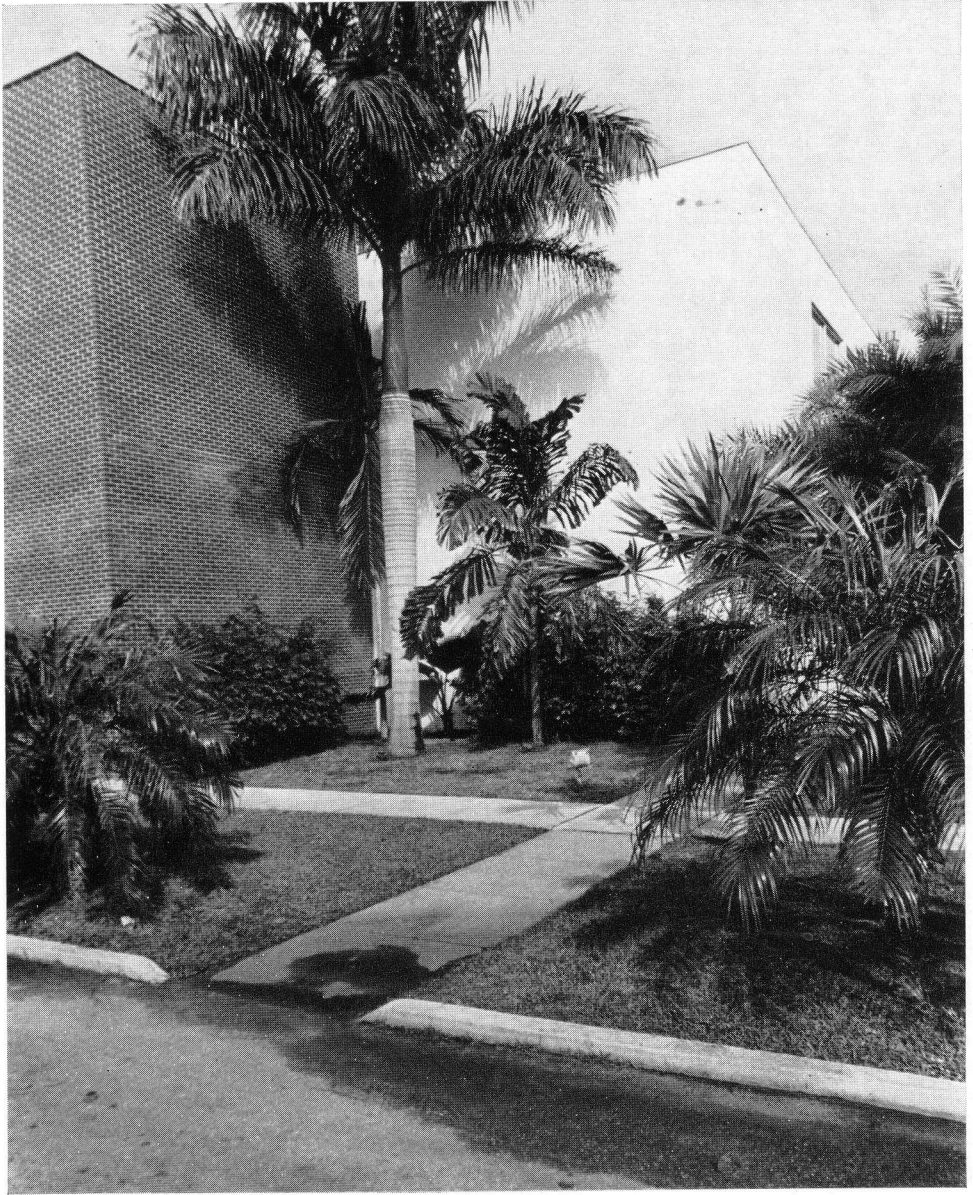
of the palms, particularly in the jungle garden, have outgrown the spaces allotted them. Jungle Jim has to keep the fronds of a number of palms tied back to keep them from obstructing the trail.

The single-trunked palms may in time grow tall enough so that persons using the trails will pass beneath them, creating a pleasing effect. But the multiple-trunked palms, such as the



14. Palms provide major landscape plants at Florida Institute of Technology campus. These tall palms are, left to right, an *Acrocomia* species, *Washingtonia robusta*, and native *Sabal palmetto*. Jerry Keuper had the *Acrocomia* hauled in from a field in Broward County after covering the spines with newspapers and blankets to protect them.

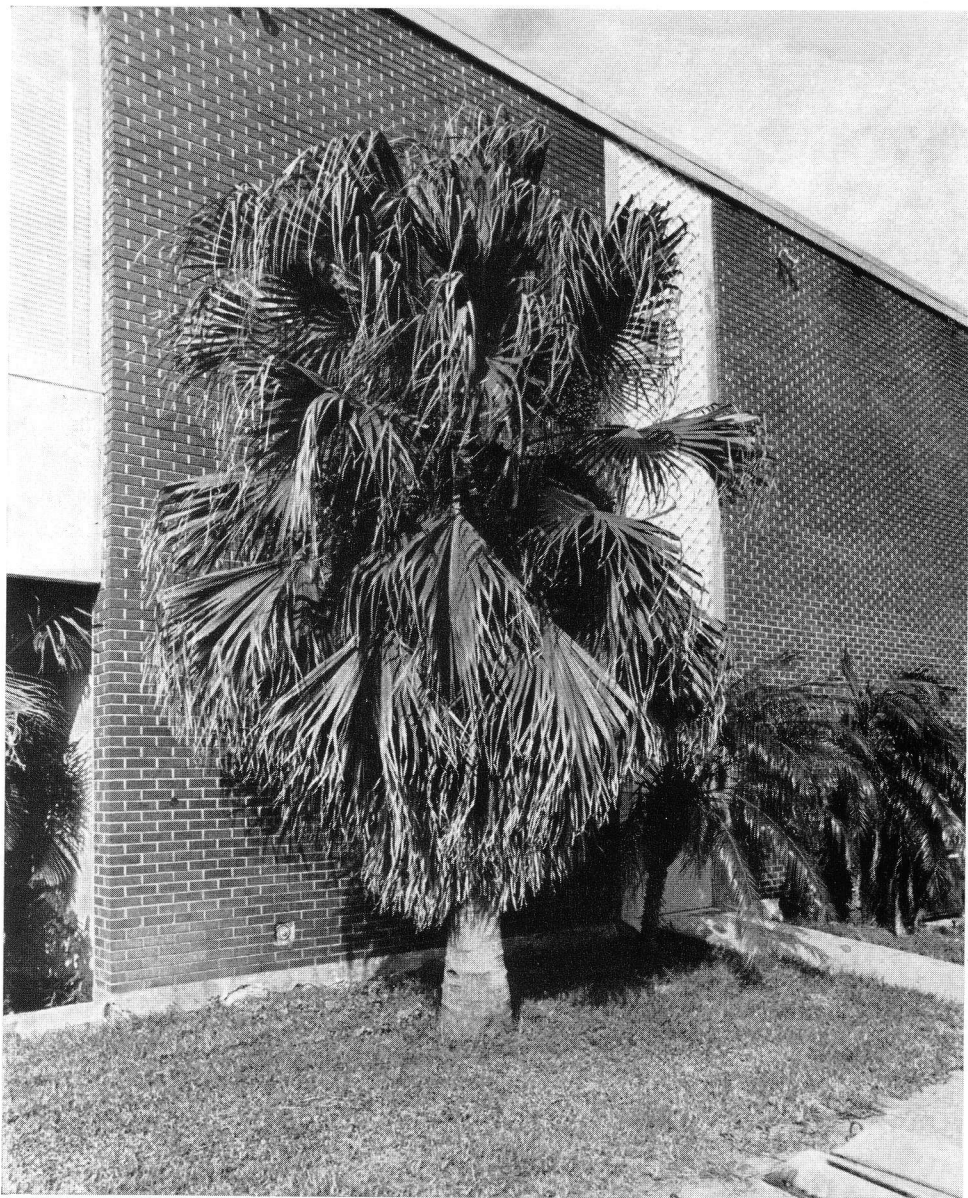




15. A royal palm (*Roystonea elata*) dominates this landscape planting. Behind it is a *Ptychosperma elegans*, while immediately to its left is an *Aiphanes acanthophylla*.

*Acoelorrhaphe*, *Arenga engleri*, *Chrysali-docarpus lutescens*, several species of *Chamaedorea*, as well as the slower-growing species like *Licuala* and *Sabal*, are likely to continue to compete with pass-

ersby for space on the trail. On the other hand, many of the palms planted in the jungle probably would do better in more light. But these are things that collectors learn as time passes, after they have had



16. Green leaves and blue fruit of a *Livistona chinensis* break the monotony of a massive brick wall. Smaller palms at right are *Phoenix roebelenii*.

a chance to take note and to know more about the palms in their collections.

With few reservations, the uses of palms on F.I.T.'s campus show what can be accomplished by the members of The

Palm Society in a landscape setting. As with most collectors, however, there tends to be greater emphasis on the collection than on esthetics. But there are some excellent examples of how well



17. These old specimens of *Arecastrum romanzoffianum* (?) were hauled to campus from a site where they had grown for possibly half a century.





18. An African oil palm (*Elaeis guineensis*) appears to be crowding the space about the entrance to a dormitory, but it is still effective as a landscape specimen.

palms can be used in the landscape. One of the finest is a row of palms used to screen a major parking lot from adjacent private residences.

When the university sought to build

the parking lot, some 200 feet deep and extending four blocks, the neighbors complained. They knew they not only would be looking out on the parking lot all day, but that the noise of cars and



19. An effective planting of native cabbage palms (*Sabal palmetto*).

motorcycles would be a constant source of irritating noise. When Jerry promised to plant a wide and tall screen of palms along the back of the proposed parking area, the neighbors withdrew their objections. Today the palm screen, prin-

cipally plantings of large *Phoenix reclinata*, not only provides a background of evergreen foliage that is different from common hedges, but also reduces the noise.

By far the most picturesque part of the



20. The genes got mixed up in the seed that produced this "weirdo," which was planted as an oddity. It is probably *Elaeis guineensis* var. *idolatrix*.

collection is the jungle planting along the Dent Smith Trail. Most such habitats are found only in state parks or in the back country far off the beaten track, but nowhere else in Florida has anyone attempted to build a sizeable palm collection in such a spot. Although local heavy rainfall may turn Crane Creek and Needlepalm Branch into furious torrents that overflow the jungle and cover the roots of the palms with two or three feet of water, no harm is done. The runoff is rapid and soon the winding concrete trails are open for foot traffic again. And these trails are in almost constant use during the school year, by students taking a short cut on their way to classrooms from dormitories that overlook the jungle.

One big question about the collection is yet to be answered—the effect of low temperatures. Florida's last major freeze was in 1962, when the temperature dropped to the 20s Fahrenheit. Dent Smith recorded 22° F. at his place on Halifax River, Daytona Beach, despite the fact that he was within a quarter-mile of the ocean. During one period the temperature remained below freezing for fourteen hours. Although he lost a great many palms in that freeze and had numerous others seriously damaged, Dent appreciates the effects of cold as well as any other palm collector. He made detailed records of the damage, later publishing reports in *Principes*, along with a list of palms he considers to be cold-tolerant. Although Melbourne is





21. Palms make remarkable silhouettes in late afternoon light. At left are two native sabals, at right a *Washingtonia* species.

eighty miles south of Daytona, the F.I.T. campus is two miles from Indian River and five miles from the ocean. Most of F.I.T.'s hardy palms are part of the landscaping of the upland part of the campus. The more tender ones have been planted in the jungle where there is canopy, but when a northwester brings cold that plunges the thermometer to the 20s, no canopy is sufficient.

Although Jerry has used Dent's list of cold-tolerant palms as a guide, he has "cheated" a bit, collecting and planting tender species like *Licuala grandis* and *Pritchardia pacifica*, whose damage or death is a certainty when the temperature drops below 32°. But is there a collector who has not taken a chance? What are you going to do with a magnificent

*Pritchardia pacifica* that someone gave you? Say take it back; that you don't want it? No, you accept the palm and plant it if it is too large for your greenhouse, and hope that somehow you can protect it from the cold. Moreover, the weather is warm when you do the planting, and winter seems a long way off. In Miami, for instance, we still have tropical fruit collectors who insist that the breadfruit can be cultivated outdoors, although nobody has succeeded in doing so thus far. This tropical tree drops its leaves when the temperature hits the low 40s. Many tender palms are hurt, too, when the winter temperature remains in the 40s and 50s night after night, especially when a dry wind is playing upon their foliage.



22. Palms dominate in this landscape setting, giving a cue to the intensity of interest in palms at the Florida Institute of Technology.

Dent Smith believes that at least 150 palm species can be grown outdoors at Melbourne. But F.I.T. has another campus, that of the School of Marine and Environmental Technology, at Jensen Beach, on the Indian River. Much closer to the Gulf Stream than Melbourne, the winter temperature at Jensen Beach may be several degrees warmer in winter than at the main campus—warm enough for the cultivation of the coconut. Keuper hopes eventually to extend his palm collection to the 85-acre south campus. At present, however, he has neither the time nor the funds to develop two separate palm collections.

What is the future of the Keuper palm collection? Obviously it is a one-man affair, being a reality only because Jerry Keuper is the founder and president of F.I.T. He has no plans for “institu-

tionalizing” the collection. The addition of a botany department to an otherwise technical university would be impractical. And at the present time there is no money to add a competent botanist, who, of course, would require his own staff. Jerry regrets that it is impossible to keep as good records as he would like. His hope is to employ a trained horticulturist, an able plantsman who also can keep the kind of records that would add immense value to the collection. That, too, would be a costly addition, and presently is out of the question since it would siphon funds from the school. But if an “angel” should come along, Jerry would start looking for the right man immediately. “We’ve got a good plantsman in Jim Joyner, but he is no records keeper and doesn’t pretend to be,” said Jerry.

Is a palm collection a valid addition to the campus of a technical institution? Keuper was unsure at first, in fact a little dubious, but he has changed his mind. "I now think the collection is important to the school," he said. "At first, the students and the staff were critical, but I believe that most of them have changed their minds. The students take a lot of pride in the Dent Smith Trail, and when we expect visitors they pitch in to help clean up the area, picking up litter and sweeping the walks. I've noted an increasing interest over the years."

For one thing, the jungle garden has become a nature retreat for the students, who go there to get away briefly from an altogether different kind of environment, mathematics and technology. You see them walking the trail alone or in pairs, sometimes boy and girl, occasionally with visitors that may be their parents. Or, you see a student sitting in one of the shelters along the Dent Smith Trail, deeply engrossed in study. Then, on occasion, the students seem to go native, acting a bit like Tarzan of the Apes. On the Sunday that Dent Smith and I were photographing the palms in the jungle garden we came upon a tree loaded with students. I counted eleven among the branches. A multitude of Tarzan-like cries from the tree-tops would hardly have seemed out of place—or even Tarzan himself swinging through the trees.

### Palm Trees on F.I.T. Campus

(Revised—March 15, 1973)

*Acoelorrhaphe wrightii*  
*Acrocomia totai*  
*Aiphanes acanthophylla*  
*A. caryotifolia*  
*Archontophoenix alexandrae*  
*A. cunninghamiana*  
*Areca alicae*  
*A. catechu*

*A. triandra*  
*Arecastrum romanzoffianum*  
*Arecastrum* × *Butia*  
*Arenga engleri*  
*A. microcarpa?*  
*A. obtusifolia*  
*A. pinnata*  
*A. tremula*  
*Arikuryroba schizophylla*  
*Attalea* sp.  
*Bactris* sp.  
*Borassus flabellifer*  
*Brassiophoenix drymophloeoides*  
*Butia capitata*

*Caryota aequatorialis*  
*C. mitis*  
*C. ochlandra*  
*C. urens*  
*Chamaedorea arenbergiana*  
*C. brachypoda*  
*C. cataractarum*  
*C. costaricana*  
*C. elatior*  
*C. elegans*  
*C. erumpens*  
*C. glaucifolia*  
*C. microspadix*  
*C. radicalis*  
*C. schippii*  
*C. seifrizii*  
*C. stolonifera*  
*C. tenella*  
*C. tepejilote*  
*Chamaerops humilis*  
*Chrysalidocarpus cabadae*  
*C. lutescens*  
*C. madagascariensis*  
*C. madagascariensis* var. *lucubensis*  
*Coccothrinax argentata*  
*C. argentea*  
*C. crinita*  
*C. dussiana*  
*C. eggersiana*  
*C. miraguama*  
*Cocos nucifera*  
*C. nucifera* cv. 'Dwarf Malayan'



- Copernicia alba*  
*C. baileyana*  
*C. glabrescens*  
*C. prunifera*  
*Corypha umbraculifera*  
*Cryosophila nana*  
*C. warszewiczii*  
  
*Daemonorops longispatha*  
*Dictyosperma album*  
  
*Elaeis guineensis*  
*Erythea armata*  
*E. brandegeei*  
*E. edulis*  
  
*Gaussia attenuata*  
*Geonoma sp.*  
  
*Heterospathe elata*  
*Howea belmoreana*  
*H. forsterana*  
*Hydriastele sp.*  
*Hyophorbe verschaffeltii*  
*Hyphaene thebaica*  
  
*Latania loddigesii*  
*L. lontaroides*  
*Licuala grandis*  
*L. paludosa*  
*L. peltata*  
*L. pumila*  
*Livistona australis*  
*L. chinensis*  
*L. decipiens*  
*L. mariae*  
*L. rotundifolia*  
  
*Microcoelum weddellianum*  
  
*Neodypsis decaryi*  
  
*Opsiandra maya*  
*Orbignya cohune*  
  
*Parajubaea cocoides*  
*Phoenix canariensis*  
*P. dactylifera*  
*P. pusilla*  
*P. reclinata*  
*P. roebelenii*  
  
*P. rupicola*  
*P. sylvestris*  
*Pinanga kuhlii*  
*Pritchardia hillebrandii*  
*P. pacifica*  
*P. remota*  
*P. thurstonii*  
*Pseudophoenix sargentii*  
*Ptychosperma elegans*  
*P. macarthurii*  
*P. praemosum*  
*P. propinquum*  
  
*Raphia farinifera*  
*R. vinifera*  
*Ravenea hildebrandtii*  
*Rhapidophyllum hystrix*  
*Rhapis excelsa*  
*R. humilis*  
*Rhopalostylis baueri*  
*Rhyticocos amara*  
*Roystonea elata*  
*R. hispaniolana*  
*R. oleracea*  
*R. regia*  
  
*Sabal allenii*  
*S. bermudana*  
*S. blackburniana*  
*S. causiarum*  
*S. domingensis*  
*S. etonia*  
*S. mauritiiformis*  
*S. mexicana*  
*S. minor*  
*S. nematoclada*  
*S. palmetto*  
*S. parviflora*  
*S. texana*  
*S. yapa*  
*Scheelea huebneri*  
*S. leandroana*  
*S. liebmannii*  
*S. martiana*  
*S. urbaniana*  
*Schippia concolor*  
*Serenoa repens*  
*Syagrus coronata*

S. inajai  
 S. quinquefaria  
 S. weddelliana  
 Thrinax morrisii  
 T. radiata  
 Trachycarpus fortunei  
 T. martianus  
 T. takil  
 Trithrinax acanthocoma  
 Veitchia joannis  
 V. merrillii  
 V. montgomeryana  
 V. winin  
 Washingtonia filifera  
 W. robusta

Zombia antillarum

Addendum from Revised List of  
 March 21, 1975

Arenga caudata  
 Bactris gasipaes  
 Bismarckia nobilis  
 Chamaedorea costaricana × C. schippii  
 Chambeyronia macrocarpa  
 Copernicia yarey  
 Prestoea montana  
 Ptychosperma salomonense (Strongylo-  
 caryum sp.)  
 Veitchia arecina

## NEWS OF THE SOCIETY

A Chapter of The Palm Society was formed in the spring of 1974 in the San Francisco area of California. A report submitted by Warren Dolby, Chairman, follows: "Last February Virginia Ryder of San Francisco invited several local members to her home for dinner and to talk palms. It was at that gathering that we decided to form a local chapter since meetings of the Western Chapter are usually held in the Los Angeles or San Diego areas over 400 miles away. The first meeting was held in April 1974 at Knowland Park in Oakland. Invitations went to all Palm Society members within 100 miles and about 25 people showed up. A pot-luck picnic and bar-b-cue was enlivened with lots of palm talk. Jim Wright flew up from San Diego to carry best wishes from southern California. The highlight of this first meeting was a plant auction led by Dick Douglas which netted the new chapter over \$100 and sent everyone home with a prized plant. In August a second meeting was held at the home of Dr. and Mrs. Petralli

in Santa Cruz, and in November our group met in San Francisco's Golden Gate Park. Several projects are already underway. One is the development of a guide to unusual palms or interesting palm plantings in our part of the state. Another involves the encouragement of public planting of palms. Already we have given palms to the University of California Botanical Garden at Berkeley and we are making arrangements to help develop palm plantings in Golden Gate Park which probably has a fine climate for high altitude palms such as *Ceroxylon*. Officers of the Northern California Chapter are: Warren Dolby, Chairman; Virginia Ryder, Secretary; Richard Douglas, Vice-Chairman; Patricia Rapp, Treasurer."

Welcome to the new Chapter; we wish them success and congratulate them on the choice of their projects.

\* \* \*

The Palm Beach Chapter invited all Florida members to visit the former

(Continued on page 71)

# Palmologue

## This and That

DENT SMITH

### New Directions

Beginning with this issue Palmologue ceases to be a letters-and-excerpts section. It becomes a column of sorts, or as some would have it, a colyum, which would make me a colyumist, no less. So be it. I am qualified for this switch, though not highly, by having contributed to *The Charleston Gazette* (W. Va.) at age 15 some stuff supposed to be funny, under the pseudonym Artemus Ward, Jr. Although he tried hard, Artemus himself wasn't always very funny, either.

The object now is not to take Palmologue along the path of comedy. My foremost wish is to print, before anything else, a personal note about a staunch friend—perhaps yours, too—who died last November. No full obituary appeared earlier in *PRINCIPES* for the reason that the contents had already been prepared for the printer. But what follows below does not purport to be a standard notice of death. It states informally a few salient facts, but one of its purposes is to make it known that the lapse of time has not caused us to forget.

### Otto Martens—a Memoir

It would hardly be natural for me to refer to him as the late Mr. Martens. To me he was my unassuming friend Otto, just as he was to so many others, and a more formal usage would add nothing of dignity or stature.

In October of last year Otto wrote to say farewell. He told me he had inoperable cancer. It was terminal. He said he had lived a full life and had no regrets. But even as he lay on his deathbed he could not forget the ceroxylons he

had so recently seen in Colombia, and he deplored losing the chance to see the many seeds he had collected spring to life. He asked me not to reveal that the end was impending for him. His great and good friend Madame Ganna Walska knew of it, and frequently telephoned from Santa Barbara to inquire about his condition.

Otto died at his new home in Virginia Beach, Virginia, on November 14, 1974. In accordance with his expressed wishes, the remains were cremated and the ashes scattered from an aircraft over the sea. Surviving are his widow, Gertrude; a daughter, Ursula; a son, Werner, a practising physician in Virginia Beach; and two grandchildren, Suzanna and Andrew.

Otto was born February 25, 1898 in northern Germany at Itzehoe, Holstein. Such cold winters, he said. His father was a Post Office inspector, and if memory serves aright, there was some connection with the family of the girl who eventually became his wife, forty-three years ago. His education was completed at Kiel and at Hamburg University before his migration in 1926 to the United States. From 1933 onward he was engaged in nursery work, and retired in 1973 after forty years with Deigaard Nurseries in southern California. He had been the general manager during the last twenty years with that concern.

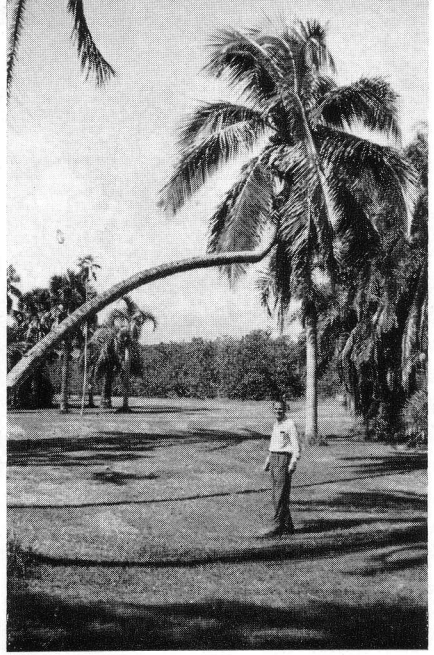
He lived to be 76 years of age. His favorite joke with me was that he was more alert because he was younger. And he was younger, by eight months. A letter from him last June congratulated me on having reached my 100th birthday. Despite my antiquity he came to



see me in Daytona Beach five times over the years, four times from California and once from Virginia after moving cross-continent. In 1972 we went at Dr. Keuper's invitation in his DC3 from Guatemala City to Tikal and return, and afterward we rented a car for an excursion by ourselves to Chichicastenango and on to Lake Atitlán for a short stay. Back in Mexico City I had taken Otto to see the former site of the Hotel Metropolitano, now a dungeonlike den of not very fashionable dealers in jewelry, where I had landed in 1921 to seek a fortune which somehow eluded me, and it was the only place that failed to inspire Otto's admiration. He said let's get out of here while we're still alive, so we infiltrated the Government pawnshop called Monte de Piedad, and then crossed a corner of the Zócalo to wander about in the vast ancient cathedral for two hours or so, which excited Otto's interest and wonder. Characteristically his interest was engaged by countless things at home and everywhere else. Handsome palms new to him, and even odd ones, usually got a wide grin of approval, as in the accompanying illustration (Fig. 1).

Collectively Otto's enthusiasms were one of his outstanding characteristics. His enthusiasm for The Palm Society was boundless. It would be accurate to say that he loved it, and he thought it a great honor to have served as its president for two years. He loved most plants, but palms with a passion. He loved his fellow man. I never heard him say a derogatory word about anyone. He was extremely conscientious, and would not permit his convictions to be compromised.

In mid-May of 1970 Otto was hospitalized in Loma Linda, California, because, he wrote, of "a little trouble." It was found that he had a malignant lesion in the lower colon, but the ensuing surgery was believed thorough and successful.



1. A convoluted coconut palm at Chapman Field elicits a typical smile from Otto Martens.

From the hospital he wrote that he had not enjoyed being fed intravenously for two weeks, but that he had no complaint about anything and was eager to get back into the world. His recuperation was satisfactory and he appeared to be in good health until October, 1974, after which his decline was rapid. But in the four years prior to his death he was vigorous and well able to travel, and took trips to Lord Howe Island, South Africa, Florida, Mexico, Guatemala, Colombia, and several from Virginia Beach to his beloved California. Only last August came a postcard from Santa Barbara with the message, "It's heavenly here."

Otto had told me of his battlefield experiences as a German soldier at only seventeen during World War I, and of the death daily staring him in the face. Some years afterward he briefly returned to the subject in a letter. "When I first saw the appalling slaughter around me,

there had been no previous suffering, all of us desperately wanted to live, it was death out of full life on the battlefields in the first world war. We who entered the war at 17 years, unprepared, too young to cope even with the thought of death, had to go through every agony, every fear, every hopelessness, every despair. Our buddies were here one minute and gone the next, never to return to us, mangled, sometimes unrecognizable. We were never the same after that, but death now is not quite the same, either." Otto did not write those words in anticipation of his own death, and never dwelled upon it at all. To show that he was true to his usual form, here is just one short sentence from the same letter. "My trip to Rio de Janeiro and South Africa was a great, wonderful experience." Not exuberant, perhaps, but typically on the bright side, and ardent.

One could truthfully say of Otto that he was high-minded. It would be even more exact simply to say a fine man, and that would say it all. I miss him, and so do all of us who knew him. We wish his widow and all his family to know that we are quite aware how great their loss.

#### **Biennial Meetings, et hoc**

Early this year there came to hand from Dr. Mardy Darian of California a letter containing some astonishing words that he has since authorized me to quote, as follows:

"There are two things that appear to be bothering the members out here. They are upset with the apparent secret method of choosing the candidates for office and the site of the Biennial. I see the necessity—feasibility—to have directors experienced, etc., decide, but it appears very undemocratic in their eyes."

Subsequently, on inquiry to Dr. U. A. Young, now President of the Society, came the revelation that he had received

a half dozen letters from members in southern California complaining of the same things, plus still other allegations in some of the letters, all of which arrived at about the same time as if in a concerted drive for reforms.

Certainly all the members of the Society, including any protesters, are entitled to know the truth, without embellishments. The plain truth is that the protests are based on misconceptions. There is not one shred of anything that would provide the slightest excuse for controversy. The Society's affairs have not been conducted in secret at any time. They have had to be conducted as the Charter and Bylaws prescribe, but absolutely nothing has been deliberated in secret and then withheld from the members.

Eight directors attended the last board meeting, which was held in Miami in late June, 1974. Those in attendance were U. A. Young, H. E. Moore, Jr., Lucita H. Wait, Jerome P. Keuper, John Popenoe, myself, and two Californians, Otto Martens and Kenneth C. Foster. The site for the next Biennial Meeting had not been discussed at all before the board meeting. Florida Institute of Technology at Melbourne, Florida, was officially selected for that meeting, and the choice of that site was announced at once, from which it should be clear that there was nothing secretive about it.

The subsequent objections from California were centered in dissent over the selection of any place in Florida, not just in Melbourne, for a second consecutive Biennial Meeting in that same state. The reasons for the selection, however, were ample. The 1972 Biennial held in Mexico City, though about equidistant from both California and Florida, was attended by only 54 members, whereas the 1974 meeting in Miami was the best ever attended, with 170 present inclusive of members' wives and children. First of

all, the directors felt obliged to select a meeting place that would offer the greatest advantages to the largest number of members. The expenses they would incur, as well as their convenience, were main considerations. Only at Melbourne would both lodgings and meals be available at very nominal cost. Only at Melbourne, also, would there be no problem about transportation, for the attending members would be lodged on campus in the school dormitories in ready proximity to the palm plantings and to the auditorium where the business meeting and any addresses would take place. Moreover, Dr. Keuper, the president of the university, had offered to supply three air-conditioned buses to take any members wishing to visit either the Fairchild Garden in Miami or Dr. Young's remarkable collection of palms in Tampa, which relatively few members have ever seen.

Had a site in California been fixed for the next Biennial Meeting, then the very principle advocated by the dissenters not to have two consecutive meetings in the same state would in all probability have to be violated by having a second such meeting in California when and if Mr. Myron Kimmach, now Vice-President, is to be the Society's president at that time, which he will be if precedent is followed. This writer, however, fails to see anything nefarious in having two consecutive meetings in California or in any other state or place that would be clearly advantageous for the Society. But to terminate the discussion of why Melbourne was selected, we have been largely guided by the advice of the California directors, viz., that the California members would prefer to go where they can see more kinds of palms than the ones they are accustomed to seeing at home.

Several letters received by Dr. Young suggest that the place of meeting should

be Hawaii. They point out that there are now many more palms in cultivation there than only a few years ago and that there is now a group of very enthusiastic and active members in that state. If California is the site of the 1978 Biennial, as presumably it will be, then perhaps a post-Biennial trip to Hawaii should be proposed. Any members attending the Biennial could take it or leave it, as their wishes and circumstances might warrant. The cost of holding the Biennial Meeting itself in Hawaii, however desirable, might be prohibitive for most members living in Florida and other parts of the eastern United States. Air fares will be raised again if the cost of fuel continues to rise. At present the round-trip coach fare from Miami to Honolulu is just under \$500, though possibly a lower fare might be secured for a group. Especially for those who have never visited the islands, an opportunity to go with friends and acquaintances having mutual interests should be attractive. If the proposal is made and adopted, the post-Biennial trip to Hawaii would really be a continuation of the mainland meeting, and the wishes of some Western members would be gratified.

Member Melvin W. Sneed of Montego Bay, Jamaica, has made a strong case for a meeting in Jamaica. The site of the next Biennial, as stated before, has already been fixed upon, in Melbourne, Florida, but if it should be wished to have a continuation of the meeting in Jamaica, plans should be made without too much delay for a post-Biennial meeting there. Mr. Sneed has very generously offered to host the meeting on that island if it appeals. Very likely Dr. Keuper would offer to furnish bus transportation from Melbourne to Miami International Airport, from whence the regular air fare in coach to Montego Bay is \$86 at present and, again, presumably a lower fare could be arranged. Mr.



Sneed, doubtless, would be willing to let members know, perhaps through the medium of this publication, something about the palms they might expect to see in Jamaica and about any other encitements.

Next on the list of complaints was an allusion to undemocratic, and also secretive, methods of choosing candidates for office in the Society. The president is empowered—nay, directed—to appoint a Nominating Committee consisting of three members, who in turn nominate a slate of officers and directors at each Biennial Meeting. After the nominations are presented, an election is held by all the members present at the meeting. Nominations may be made from the floor, but seldom have been made, ostensibly because the Nominating Committee has been composed of careful and conscientious appointees deserving of the members' confidence. The committee in 1974 consisted of two past presidents, David Barry, Jr. and Otto Martens, both Californians, and Stewart J. Mathews, a Floridian. The method is about as democratic as one might hope for, unless each meeting is to be a political arena with factions jousting for their candidates and making the kind of chaotic whoopee that goes with political battles. If we have amongst us any gifted politicians we should hope they will practise their art somewhere else.

In accordance with a resolution moved and adopted at the June, 1974, board meeting, all past presidents of the Society will cease to be directors upon expiration of their current terms, and automatically become members of an Advisory Council—well named, for its function will be confined to advice if sought, and its constituent members will have no management vote whatsoever. This provision will make room for new directors, and we who are turned out to pasture can gleefully shed our responsibilities.

At present the Advisory Council consists only of three past presidents.

The Palm Society now has about one thousand members in forty different countries and thirty-six states of the Union. In view of this, does any Floridian believe that Florida has some exalted place in it, superior to any other? Not me, shrieks Tiny Tim. Not me either, says this writer in dulcet tones, and goes on to say he is all for Texas, Arizona, Japan, England, California, Hawaii, Florida, Micronesia, and would be for Siberia too if the climate were more favorable for palms.

### Adaptable *Coccothrinax*

Several kinds of palms endemic in the tropics are surprisingly cold-tolerant, a few of them withstanding freezes down to 20° F. without injury, as for example the Porto Rican hat palm, *Sabal causiarum*. Not so outstanding in that respect, yet able to tolerate minor freezes and sometimes fully recover from injuries brought on by even much colder weather, are the species of *Coccothrinax*.

That narrow strip of Daytona Beach within a few hundred feet from the Atlantic seems to be, at 29° 11' N., about the northern limit on the east coast of Florida for successful cultivation of 170 or more palm species. In this narrow area confined between sea and salt-water river I have been growing some dozen kinds of *Coccothrinax*, comprised of both determined and undetermined species, or 27 individual palms at the latest count. Not, however, without substantial losses in 1962, when a record minimum temperature of 22° F. occurred. The number of individual palms, then, has varied somewhat with the vagaries of the weather, so it follows that no claim of a climate ideal for them may be made.

The surprising fact, to me at least, is that most examples of *Coccothrinax* not only survived the record-shattering cold

of 1962, but are flourishing now in 1975 and are prolific of flowers and fruit despite having gone through twenty or more frosty mornings and seven or eight minor freezes in the thirteen-year interval.

The ability to endure adversity is reason to speculate that *Coccothrinax*, or some if not all of its species, would prove adaptable in other climates not too different, as perhaps in coastal parts of southern California, which have a Mediterranean climate, so classified by climatologists. Any doubts can be resolved only by trials. Already a few examples are said to exist in California gardens, but whether they thrive there or merely get by is not for me to say. The drier air and lack of sustained heat might be offset, perhaps, by the much less frequent attacks of sharp cold than is our lot in central Florida. There is little doubt that the palms of the genus could be cultivated in the warmer parts of Florida north of where they are commonly found, with emphasis on the key word "warmer." There are a few in the central sections of the state, but, more than just a rarity there, they are in the main altogether missing.

No resident of Florida the Sunshine State that sometimes runs out of sunshine should attempt to tell a California or a Texas gardener what he can or cannot grow, or even to tell the Dutch anything about tulip culture. But it's all right to wonder, and I wonder if *Coccothrinax* might or could give a first-rate account of itself in the lower Rio Grande Valley of Texas. All the species should do very well there, or so I like to believe, although there is a threat of invasions of Arctic air at long intervals. Three *Coccothrinax argentata* on the grounds of Mrs. Robert N. Smith, Jr. at Harlingen survived the hard freeze of January, 1973 in the Valley. Brownsville, by the way, on the north bank of

the Rio Grande is in about the same latitude with Miami and has higher summer temperatures.

The *Coccothrinax* species are often called "silver palms," owing to the silvery undersides of the leaf blades, which is one of the indications distinguishing them from *Thrinax* with its inferior blade surfaces green, whitish or bluish, not silvery. When in ripe fruit the uninitiated may distinguish the two genera at once by the brown or black fruits of *Coccothrinax* and the white fruits of *Thrinax*. Another readily recognized feature of several species is the fiber-covered trunk of young palms, which suggests webbing woven by human agency, but of course this fiber or "web" weathers away in older palms and leaves the bare stem exposed.

As already noted, there were some losses of *Coccothrinax* on my grounds in 1962 and also some seemingly fatal damage that later on proved to have been only superficial and confined to foliage. All the species, nevertheless, suffered at least temporary damage of the leaf crowns during the severest cold we have ever experienced in the locality.

*Coccothrinax argentata* is the most cold-tolerant species, doubtless because its range extends the farthest north. Of eight plants started from seed in 1954 three were killed by the 1962 freeze and five survived. These examples were all of the small form and at the time hardly two feet tall, though all were eight years old and already adult, having set seed seven years after the seed from which they sprang were sown. The small form of this species, sometimes familiarly called the Dade County silver palm, tends to be dwarfish and seldom develops more than three or four feet of trunk, though another form occurring in the Florida Keys and the Bahamas develops a much taller trunk. The small form is desirable for any palm garden in a

suitable climate, and especially as a doorway plant where space is quite limited.

Other silver palms surviving the 1962 freeze and now in perfect health and vigor are the following: 3 *Coccothrinax argentea* (not to be confused with *C. argentata*); 1 *C. miraguama*; 2 *C. miraguama* var. *novo-geronensis*, a small variety of the foregoing, from the Isle of Pines; 1 *C. martii*; 1 *C. alta*; 3 *C. floridana*; 2 *C.* sp. acquired as *C. eppersiana*; 4 *C. crinita*, its trunk covered with a superabundance of hairy fiber; 2 *C. dussiana*; 2 undetermined palms resembling *C. floridana*; 1 multiple-stemmed palm as yet of undetermined species. Also 1 *Haitiella ekmanii*, so labeled, which may or may not be referred to *Coccothrinax* when Dr. Read's studies are completed.

Most of the survivors enumerated

above were grown from seed obtained in 1953 and 1954 from the U. S. Plant Introduction Garden at Chapman Field, Florida. All were slow growers for years, and several extremely so. Apart from the survivors of the 1962 freeze, ten were killed by it. None has succumbed to cold weather since that year despite a number of frosts and less violent freezes.

In conclusion it seems that the facts would justify much wider cultivation of the *Coccothrinax* palms, given the premise that they are handsome, attractive and distinctive from the generality of fan palms. Quite aside from that, there is a hopeful note that Dr. Robert W. Read expects to monograph the genus *Coccothrinax* this year, and thus any doubts about the identity of some species may soon be resolved.

## News of the Society

(Continued from page 64)

James McCurrach Estate in Palm Beach on November 17, 1974 from 2-5 p.m. Mr. McCurrach wrote *Palms of the World*. This estate with its many old and magnificent palms is now owned by Mr. Michael Burrows, who was willing to have the members see these interesting plantings. Well over 100 members were able to take advantage of this opportunity and admired the large plants usually seen only in much smaller sizes.

\* \* \*

The South Florida Chapter was notified by Ken Foster that he would be in the Miami area over Thanksgiving and would be happy to show us some slides on Saturday, November 30. It was a disappointment that this came at such an unfortunate time—right during the Thanksgiving weekend, and even worse, on a terribly rainy and stormy night. However, a handful of brave souls turned

up despite the elements and thoroughly enjoyed the beautiful slides of "My 100 Favorite Palms" as shown by Ken. We hope you can return and let the rest of us see them too, Ken.

\* \* \*

The South California members have become a most active group. Under Ralph Velez' direction a questionnaire went out asking members what kind of meetings they wanted, how often, whether they wanted to participate in an effort to plant palms in city or county parks, what plants they could contribute, what palms they would have for auctioning at meetings, suggestions for meeting places and much more. Apparently response was good. They are helping with development of Balboa Park Palmetum in San Diego, donations have been offered, a committee appointed to welcome new members, commercial sources of palms are being listed and meetings are planned on a regular basis. Their latest meeting was January 18, 1975 at the San Diego



Zoo, hosted by Ernie Chew. Congratulations on a very active group and to a tireless chairman.

From Joe and Pauleen Sullivan in California came news that may interest others in similar climatic areas. "So far our winter has been mild (for our area), but you in Florida would call it cold. We dip down into the 30's but seldom to freezing, last night it was 38°. We have had *Licuala spinosa* out about five years and it is doing fine. It is amazing some of the palms we can grow, but they are slow."

\* \* \*

The South Florida group were fortunate in having two out of town visitors who had programs of interest to offer. First, on January 17, the Mel Sneeds from Jamaica were kind enough to bring fascinating slides of their recent trip to the Seychelles. The slides were mostly about the impressive double coconuts. The meeting attracted a large group, many not Palm Society members, as it was held at Fairchild Tropical Garden the evening the Garden had a Moonlight Tour planned for its own members.

At a second meeting for our own members we had the good fortune to meet new members Dial and Weezie Dunkin of Harlingen, Texas. They are avid palm collectors and growers, have a large growing house and many thousands of palms. Their slides showed the planting of large sabals from Florida, then how the garden and patio areas changed as smaller palms and plantings were added. We hope perhaps the Texas members will have the good fortune to be invited to a get-together at the Dunkins before too long. Next to Florida and California, Texas as a state has the most members, so it would be a logical place for a new Chapter to be formed, even if members will have to travel quite some distance to meet. Apparently Texans are used to

that. Hawaii runs a close fourth in members, but they do have a chapter.

\* \* \*

We are happy to hear that some of the Australian members have had a visit with each other. Mrs. Mario Walford-Huggins writes that "We went to Sydney a couple of weeks ago and had a small meeting and exchange of plants with Sydney members at Ian Daly's house." Such gatherings, even if only a few members participate, are not only enjoyable but are most helpful since plants and ideas can be exchanged. We wish all our members were able to benefit by such occasions.

TEDDIE BUHLER

## LETTERS

1492 WATSEEDGE DRIVE  
VIRGINIA BEACH, VA. 23452  
AUGUST 16, 1974

"Will the 'High and Mighty' come down to the 'Low' and still be mighty?" Such was the question in a conversation between seedsmen and nurserymen after a report of the exploits of our Colombia Cordillera trip in June/July 1974. Can the 8 to 9 species of *Ceroxylon*, the *Euterpe*, *Geonoma*, *Aiphanes*, *Parajubaea* and others of such high elevations successfully be propagated, cultivated and brought to respectable ornamental size for landscape purposes in parts of southern and northern California, Oregon, perhaps areas in Washington, Texas, northern Florida, Georgia etc.?

A prominent seedsman has doubts, but inconvincible palmetees always have more hopes than doubts. Think of what a boon such importation with subsequent acclimatization would mean for those border areas where palm growing is a struggle every winter.

A post-trip study and extract from articles in issues of PRINCIPES resulted in compilation of 8 genera—28 species

—of high elevation palms, heretofore not grown in U.S. Possibly there may be a number more. We are talking about those palms found in the high Cordilleras of Colombia and Ecuador nearly under the equator with a few degrees latitude extending north, a few degrees south. Altitudes ranging from 7,000' to 11,000' with *Ceroxylon utile* found up to 13,450' not far below the limits of perpetual snow. Mean temperature there is 42 degrees F, from a few degrees below freezing to maximum of 63 degrees. Lower altitudes of course are respectively warmer and less harsh.

Alex D. Hawkes, in the years 1959/60, issued a series of 'Palm Letters'; a treatise on Andean waxpalms (*Ceroxylon*) was of special interest. It not only gives the description of them, their habitat in a fantastic world of isolation and grandeur, but also of the history of their discoveries, and best of all of the possibility of their acclimatization in a strip of land (coast range) from Washington south through Oregon to So. California, where mean temperatures do not deviate greatly from those encountered in their native environment.

The beginning has been made. An abundant amount of *Ceroxylon* seeds was collected at Tenerife Cerrito, ca. 8,000' high. . . . They are in propagating beds now.

Was the discouraging seedsman in our discussion justified to discourage?—H. E. Moore, Jr. in *PRINCIPES* Oct. 1970, Vol. 14, No. 4 says: 'Growing at high elevations as it does *Parajubaea cocoides* may prove a palm that can be grown to maturity in Southern California where it may already be established.' One beautiful specimen is growing in Lotusland, estate of Mme. Ganna Walska in Santa Barbara, Cal. Other groups of high altitude plants have successfully acclimatized to low levels: palms—*Nannorrhops* 9,000', Dave Barry's *Caryota urens*, *Jubaea* from Ocoa Valley, Chile between

peaks of 5,000'—conifers, pines, *Abies*, *Libocedrus*, *Sequoia*, all between 6,000' to 10,000'.

OTTO MARTENS

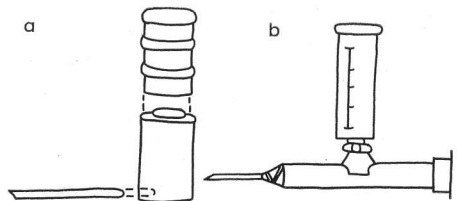
## PALM QUESTIONS AND ANSWERS

Q. My neighbor's coconut palm has lethal yellowing. I want to save my palms from the disease. What can I do?

A. A terramycin tree injection formula has been developed and is effective against lethal yellowing. The treatments are not a cure but cause a remission of the disease and act as a preventive. To be effective your trees must be treated every four months as long as lethal yellowing remains a threat to your palm trees. It is also very important that your trees be treated early.

Dr. Randy McCoy of the Agriculture Research Station in Fort Lauderdale recommends that the antibiotic solution terramycin be injected directly into the trunk of the palms. Spray or soil drenches will not work. For injection, a hole must be drilled two to four inches into the trunk, usually at a slightly downward angle. Two instruments for easiest injection are illustrated. These are commercially available in South Florida at this time.

The Mauget (R) Injector (Fig. 1) is a small disposable plastic container that is filled with one-half ounce of solution, used once, and then discarded. A hole one-eighth inch in diameter is drilled three inches into the trunk, a feeder tube



1. Instruments for injecting palms, a, Mauget (R) Injector; b, Minute Tree Injector.

Grams actual oxytetracycline per volume measure of Terramycin Tree Injection Formula (R) and minimum amount of water to dissolve antibiotic. More water, up to 16 oz. total, may be used, depending on injection methods.

Grams actual terramycin	Volume measure of Terramycin Tree Injection Formula Powder	Amount of water to use
1	one slightly rounded teaspoon	½ oz.
3	one level tablespoon	1½ oz.
6	two level tablespoons	3 oz.

is inserted one inch deep with a special tool, and the filled plastic unit is placed on the tube. The solution should be taken up after four hours to overnight. Doses higher than one gram should be placed in several units, with one gram of actual antibiotic in each unit in one-half ounce of water. The Mauget Injector has proved highly efficient in introducing the material into coconut tissues, as long as a hole is drilled into the trunk prior to inserting the feeder tube.

The Minute Tree Injector is a device that can be used for repeated rapid injections of small volumes of solution. Each gram of active oxytetracycline should be dissolved in one-half to one ounce of water and placed in the solution reservoir. Then a hole 5/32 inch in diameter is drilled three to four inches into the trunk, the needle inserted and the handle pumped. Approximately one minute is required to inject one ounce of solution.

### Precautions in Treating Lethal Yellowing

1. Only the agricultural grade of terramycin for use in palm trees should be used. Other grades of terramycin are not effective.
2. Trees can be treated before the disease hits them (preventive) or they can be treated in the early stages of the disease. Treatment as early as possible is recommended. Trees having one-fourth or more of their fronds yellowed will not respond to treat-

ment. Research has shown that one-fourth of the trees treated never respond, especially if they are not treated early enough. Guarantees would seem impossible.

3. To save the trees they must be treated every three to four months with the antibiotic terramycin. A one-shot treatment would be wasted.
4. The terramycin tree injection formula powder should be used immediately once mixed with water. The dry powder can be stored indefinitely.
5. The terramycin will stain clothing and the stains are permanent. The material should be handled carefully just as you would handle any other pesticide.
6. The injection equipment should be kept clean and be cleaned after treatment. The minute tree injector appears to be the easiest for the average homeowner to use.
7. The operator must make sure the trees take up the material for it to be effective. Occasionally trees will need to be drilled and injected three or four times before they accept the terramycin, especially if they are under stress. Stress trees should be watered well the day before the injection.

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## PALM BRIEFS

### A New Species of *Ptychosperma* (Palmae)

During field work in New Guinea in 1971-72, I sent seeds of an apparent new species of *Ptychosperma* to the seed bank of The Palm Society, and to several tropical gardens. With the recent completion of a revision of this genus, I have confirmed that the seeds (numbered *Essig LAE 55066*) do represent a new species. I am naming the species for Professor Harold E. Moore, Jr. of Cornell University, despite his modest protestations. As my doctoral thesis adviser, Professor Moore provided invaluable assistance throughout my studies. His other contributions to the study of palms and as editor of *Principes* need no description here.

*Ptychosperma mooreanum* belongs to the subgenus *Ptychosperma*, as does the familiar *P. elegans*. Thus it has a solitary stem and rinate endosperm in the seed. It is distinctive, however, in that the flowers are deep purple and the ripe fruit are black-purple on a golden-orange panicle. This is the only black-purple-fruited species in this subgenus, though *P. waitianum*, *P. schefferi* and several others in the subgenus *Actinophloeus* also have this color of fruit. Overall, the plant is smaller and more delicate than *Ptychosperma elegans*.

A more elaborate description will appear later with a complete revision of the genus *Ptychosperma*. The following Latin description will serve to validate the name of the new species for the benefit of horticulturists and researchers already using the plant.

***Ptychosperma mooreanum* F. B.**  
*Essig sp. nov.*

*Caulis solitarius, ca. 2-4 cm. in diam.; folia regulariter vel irregulariter pinnata, pinnis anguste cuneatis vel in parte*



1. *Ptychosperma mooreanum* on Normanby Island, Milne Bay District, Papua New Guinea (*Essig LAE 55066*).

*distali angustatis; inflorescentia multiramata, gracilis, aurantescens; flores purpurei; fructus atropurpureus, globosus, 9-12 mm. in diam.; semen leviter 5-sulcatum, albumine ruminato.*

Distribution: Southeastern Papua from the Gulf District to the Milne Bay District, including Normanby Island.

Type specimen: PAPUA NEW GUINEA. Milne Bay District: Esa'ala Subdistrict, Normanby Island, Sewa Bay, lowland along coast, in broken forest, alt. ca. 10 ft., 21 October 1971, *F. B. Essig LAE 55066* (BH, holotype; CANB, isotype; LAE, isotype).

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## The Age of the Chusan Palms at Glasnevin in Ireland

A slim volume by John Adair entitled *Hints on the Culture of Ornamental Plants in Ireland*, third edition, (1878), makes it possible to date the Chusan palms growing in the National Botanic Gardens at Glasnevin, Dublin.

*Trachycarpus fortunei* (Hooker) H. Wendland was introduced to cultivation in Europe about 1844 as an outcome of Robert Fortune's first expedition to China. Kew received plants from Fortune about 1849, and it was soon realised that the palm was quite hardy. Backhouse, who lived near York in England, grew the palm outdoors from about 1860. Until about that date the plant had been grown in conservatories.

Following the experience of English growers, David Moore, director at Glasnevin in 1870, planted out a Chusan palm behind the Director's Residence in the autumn of that year. A seven-foot-high plant from one of the conservatories was used. This plant still exists, so that it is more than a century old.

In the autumn of 1871 Moore moved *T. martianus* (Wallich) H. Wendland from the conservatory to a bank near the yew walk known as Addison's Walk, but this plant no longer exists. The seed of this species was received at Glasnevin on August 14, 1847 from Lt.-Col. Edward Madden of the Bengal Artillery. Madden introduced numerous species of Indian plants to Europe between 1841 and 1850, (Morley, 1972). The *T. martianus* seed was "procured at 8000 feet on a recent excursion to the Nepal frontier..." according to Madden.

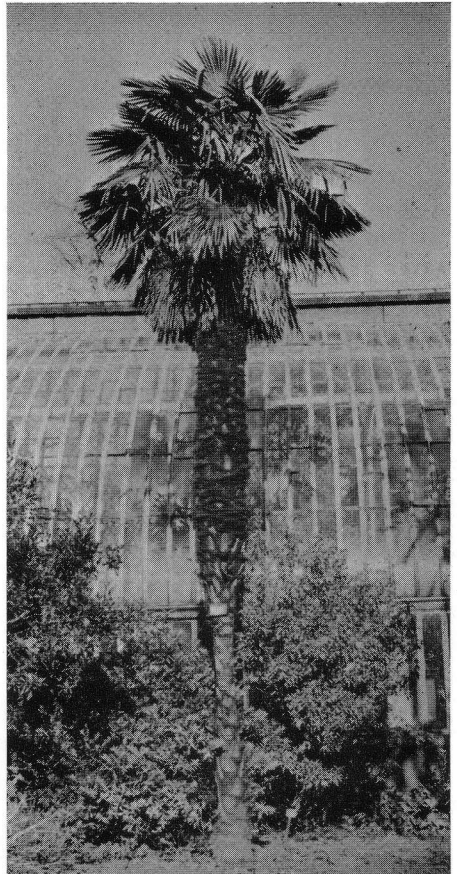
Sometime after 1871, but before 1878, the *Trachycarpus* in front of the Curvilinear Range was transplanted from the conservatories, see Figure 1. Both this and the *T. fortunei* near the Director's Residence continue to flower.

As an indication of the temperature regime at Glasnevin, for the period 1941-1970, the absolute minimum was  $-11.7^{\circ}$  C., the absolute maximum was  $27.8^{\circ}$  C.

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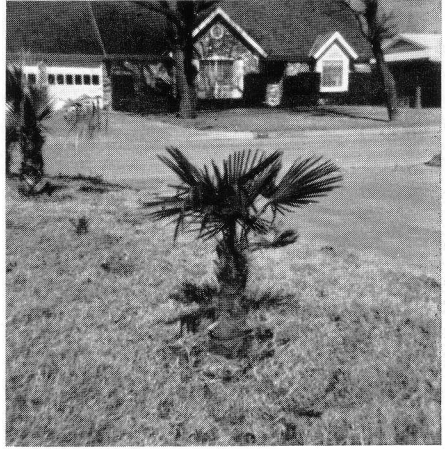


1. *Trachycarpus fortunei* in front of the Curvilinear Range at National Botanic Gardens, Glasnevin, Dublin.

## Washingtonia robusta in North Texas

"There is nothing between Texas and the North Pole except a barbed wire fence," is an old descriptive wintertime bromide coined here in the Lone Star State. Between fall and spring an annual parade of arctic fronts tour Texas on their southward journeys, leaving a frigid mantle of air and ghost-like lawns and trees in their wake. Some icy waves are more severe than others but all can be cause for concern for the palm lover. With unusual outbreaks of cold some plant losses almost invariably occur. As a result palm enthusiasts, particularly in the northern half of the state, generally mother-hen over their more tender out-of-door species during this period of the year.

One particular palm that must have seasonal protection here to escape the violation of old man winter's rough hands, is the beautiful but tender *Wash-*



2. Small, but rugged *Trachycarpus fortunei* (center) planted near a larger *Washingtonia robusta*. Though Tom Thumb-size by comparison (8 in. tall) it does not need winter protection here in North Texas by contrast.

*ingtonia robusta*. With only small specimens ever available locally for yard planting, these diminutive examples are usually smitten by low temperatures before they ever achieve any true size. Even a good southern exposure behind a friendly wall or fence often is simply not enough aid to this lush-green plant in freezing weather. With this, it appeared that *W. robusta* would forever lay beyond the pale of growable plants here in the upper reaches of Texas. Then, a local seafood restaurant in Fort Worth brought about an unexpected surprise for palm lovers in our area.

The fall of 1972 witnessed the restaurant's planting a collection of *W. robusta* which were *mature* and of solid size. Each of the dozen or so trees is from 8 to 12 feet in height and they were evidently transplanted here directly from California. So far as is known this splendid stand of arboreals represents the most northerly outdoor planting of *W. robusta* anywhere in the state.

Openly located and generally unprotected, their size thus far has apparently



1. Picture of fanless *Washingtonia robusta* by author's garage. With a northerly planting, the 2½ ft. palm has been protected a quartet of years or it would doubtless have perished in winter weather. Though very much alive, it had not yet arrayed itself in seasonal greenery when this late winter photo captured its appearance.



3. An arboreal relative of the taller *W. robusta*, the tougher *W. filifera* (lower right) seems more combative by nature to fend off the ill effects of cold weather. As such, it has a wider planting range throughout Texas.

granted them a stay of execution from winter's harsh sentence. For two seasons of cold now they have battled the fiercer elements of frigid weather eye to eye very ably. However, it remains to be seen whether or not these lovely palms will be able to strike up a detente with the colder months over a long span of time. If they can do so then perhaps some larger specimens, particularly with protective locations, may be able to be grown much farther north than heretofore thought possible. Should this prove true, then *W. robusta* may one day enter the lawn repertoire of fanciers in northern Texas, if even on a limited scale.

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### Some Palm Products of the Peruvian Amazon

A ten-day visit to eastern Peru in late August and early September 1974 afforded an opportunity to gather some

information on local palm products. The cities visited were Tingo Maria, Pucallpa, and Iquitos.

Fruits of *Mauritia vinifera* were found in abundance in the markets of the three cities. *Aguaje*, as the fruit is commonly known, is eaten out of hand, and in Iquitos the rust-colored pulp is used as a tasty ice cream flavoring.

Wood from the outer layer of the trunk of *Bactris gasipaes* is utilized by Amerindian groups of the Pucallpa region to fashion bows and lances, which are decorated with string of various bright colors. The wood is strong, heavy, almost black, and handsomely streaked with light-colored vascular bundles. Travellers to Pucallpa may buy bows and lances directly from women of the Shipiba tribe who sell them in the city. They may also be found in gift shops in Iquitos and Lima.

Palm cabbage or *chonta* is a popular vegetable of the Upper Amazon. It is collected in sufficient quantity to support a hearts of palm canning factory in Iquitos, and fresh palm cabbage, mostly from *Euterpe precatorea*, is found in the open-air market of the city (Fig. 1). The palm heart is shredded and eaten as a salad with lime juice (Fig. 2). As such it has a crisp pleasant taste, quite unlike the canned product.

Vegetable ivory or *yarina* was formerly an important palm product, but



1. Fresh palm cabbage in the open-air market at Iquitos, Peru.



2. A *chonta* salad of fresh palm cabbage.

has now been replaced by plastics. Nevertheless *Phytelephas macrocarpa* continues to be of very minor commercial importance in the Iquitos area because the green fruits are edible. A small hole is cut in the fruit and the liquid and soft endosperm sucked out. In consistency and taste I found the endosperm to be very similar to that of green coconuts. Each of the fruits is no larger than a hen's egg, however, and therefore almost not worth the effort to open it. Only a few sellers in the Iquitos market carry the green fruits.

An excursion into the tropical forest upriver from Iquitos revealed that *yarina* is one of the most common palm species. Gatherers of edible *yarina* walk through the forest and cut into infructescences to determine if the endosperm is still soft. If it has already hardened, as in Fig. 3,



3. An infructescence of *Phytelephas macrocarpa* which has been cut into to determine the ripeness of the fruits.

it has no value and is left on the tree. Anyone who can think of a use for vegetable ivory could easily obtain a supply from the Iquitos area.

A final note of interest to palm researchers is the Botanical Garden at Tingo Maria. It is small but rather well stocked with local palms, especially *Iriartea*.

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## WHAT'S IN A NAME?

*Kentia* (kén tee a) (f.) was named by Blume in memory of William Kent (1779–1827), once curator (1817–1825) of the botanical gardens at Buitenzorg, Java (now Kebun Raya Indonesia at Bogor) under C. G. C. Reinwardt who founded the gardens in 1817. Kent had previously assisted Reinwardt in the capacity of curator of the garden when he was professor at Harderwijk, Holland, and he accompanied Reinwardt on many journeys in the East Indies. Unfortunately, an earlier use of the name *Kentia* by Adanson in 1763 makes *Kentia* Blume illegitimate and it has been replaced by *Gronophyllum* (see *Principes* 3: 111, 1959, for explanation of name). *Kentia* persists, however, in such combinations as *Actinokentia*, *Brongniartikentia*, *Burretikentia*, *Cyphokentia*, *Dolichokentia*, *Kentiopsis*, *Microkentia*, *Physokentia*, *Satakentia*, and *Siphokentia* as elaborated below. These names are all feminine in gender as is *Kentia*.

*Actinokentia* (ák tin o kén tee a) is composed of the prefix *actino*, from the Greek *aktis*, *-inos* meaning a ray or beam, and the generic name *Kentia*. The name was not explicitly explained by Dammer but apparently comes from the radially symmetrical nature of the



male flowers as well as the circular scar at the tip of the fruit.

*Brongniartikentia* (bron nyár tih kén tee a), a genus restricted to New Caledonia, combines with *Kentia* the name of Adolphe Théodore Brongniart (1801–1876), a French botanist who, in addition to studies on fossil plants, published two important articles on palms of New Caledonia.

*Burretiokentia* (boo rét ee o kén tee a) unites with *Kentia* the name of Max Burret (1883–1964), a German botanist who worked for many years with palms in the herbarium at Berlin-Dahlem. He was the subject of a biographical sketch in *Principes* 2: 87–91, 1958, and is also commemorated in the genus *Maxburretia* (máx boo rét ee a).

*Cyphokentia* (sý fo kén tee a) is from the Greek *kypchos* (hump, bump) and *Kentia* in allusion to the protuberant lateral to nearly basal stigmatic residue on the fruit.

*Dolichokentia* (dóll i ko kén tee a) comes from the Greek word *dolichos* (long) and *Kentia*, apparently in reference to the elongate, curved fruit, though Beccari did not explain the name.

*Kentiopsis* (kén tee óp sis) is from *Kentia* and the Greek *opsis* which means aspect, appearance, and, by extension, resemblance, probably from a supposed resemblance to *Kentia* Blume.

*Microkentia* (mý kro kén tee a) combines the Greek word *mikros* (small, little) with *Kentia*, presumably because of the small size of plants in this genus relative to other palms of New Caledonia. *Microkentia* is now known by the earlier name *Basselinia* which was explained in *Principes* 14: 36, 1970.

*Physokentia* (fý so kén tee a) is taken from the Greek *physis* (bellows, bubble) and *Kentia*, probably because of the large, globose fruit.

*Satakentia* (sá ta kén tee a) combines the names of Toshohiko Satake

(1910–), a Japanese industrialist who grows and studies palms as a hobby, and *Kentia*, intentionally utilizing the final and initial “ke” of each name as one syllable. Mr. Satake has had a long and special interest in this palm which comes from the Ryukyu Islands.

*Siphokentia* (sý fo kén tee a) combines the Latin *sipho*, *-onis* or Greek *siphon*, *-os* (pipe, bent tube) with *Kentia* because the sepals and petals of the female flowers are each united basally in a tube.

H. E. MOORE, JR.

### Help! S O S! AIDEZ-NOUS!

Do any of you palm lovers collect stamps? We need some help immediately. A couple of us are preparing a book on Plants on Stamps. It turns out that no one in the American Topical Association knows any palms except coconut, date, and royal. I didn't realize how bad the situation was until I started working on the final (?) draft this winter. A lot of palms identified as one of these three just aren't. With the help of *Hortus Secund* and McCurrach's *Palms of the World*, I have been able to figure out a few. But I am no expert. The only palms I have met personally are dates, and a *Washingtonia* in the Milwaukee Horticultural Domes.

Do any of you have a checklist of palms by Scott number? Even an incomplete set? Could any of you identify palms if we sent you the stamps? Some of the artists used a lot of license, so you'd have to know what ones grow where, and what they look like.

We could use an article on palms for our journal, Bio-Philately. Most of us in the colder parts of the world simply don't know about palms. But a checklist first, *please*.

For any help you can give us—many thanks.

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