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# Palm Collecting in the South Pacific: Island Hopping to Australia and Back

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My wife, Phyllis, and I had taken permanent leave from our two-acre garden in Jamaica, in March, 1977, to reestablish ourselves in Miami, Florida. Leaving our palm collection in the island, much of which stemmed from seeds furnished over the years by The Palm Society Seed Bank, as well as the gleanings of numerous collecting trips, was a melancholic experience. Yet, lack of our own garden notwithstanding and now blessed only with a patio  $6 \times 15$  feet, by the fall of 1977 we had "itchy" feet and certainly had not lost our desire for palm collecting. Perhaps the itch could be assuaged with a bit of collecting for the Seed Bank and for Fairchild Tropical Garden.

Not enough praise has been given the Seed Bank, which next to the dissemination of information about palms is perhaps the most important function of The Palm Society for its members. Its inception goes back to 1957, about a year after the society was established. It was envisaged originally by Mr. Nat. J. De Leon, then an officer of the society, and subsequently implemented and managed by Mrs. Lucita Wait, the society's former Executive Secretary. She pursued this "labor of love" for two decades, assisted in recent years by Mr. DeArmand Hull and such volunteers as she could cajole into the operation, until November 1978, when Mrs. Wait retired and the function was assumed by Mrs. Lois Rossten, of Huntington Beach, California, an ardent member of the society.

The Seed Bank's main sources of accessible supply over the years have been the output of Fairchild Tropical Garden, which has the largest collection of palm species found in any of the world's recognized botanic gardens, the U.S.D.A. Plant Introduction Station here, and certain private gardens with large and varied collections, as well as donations by members. Lately, because of ravages of the lethal yellowing disease, which has devastated most coconut varieties as well as attacking certain other palms in South Florida, these traditional seed sources have been set aside until research in progress rules out the probability of transmission of this disease by seed.

In the meanwhile, the Seed Bank has relied on sources outside the restricted lethal yellowing area of Florida—not only for rather common palm species but for rare ones that never were available here. In light of this, Palm Society members, worldwide, might well communicate with the Seed Bank regarding viable seeds of palm species they may be able to collect in quantity to send in for distribution. The new address of the Seed Bank is 6561 Melbourne Drive, Huntington Beach, CA 92647, USA.

With strictly altruistic intentions, we got our gear ready for a trek into the South Pacific. The palms were there and, if we could time it properly, seeds for the Seed Bank and, we hoped, some "goodies" for Fairchild Tropical Garden. What follows is not a travelogue;



1. Dick Phillips and Phyllis at entrance to botanic garden in Suva, Fiji.

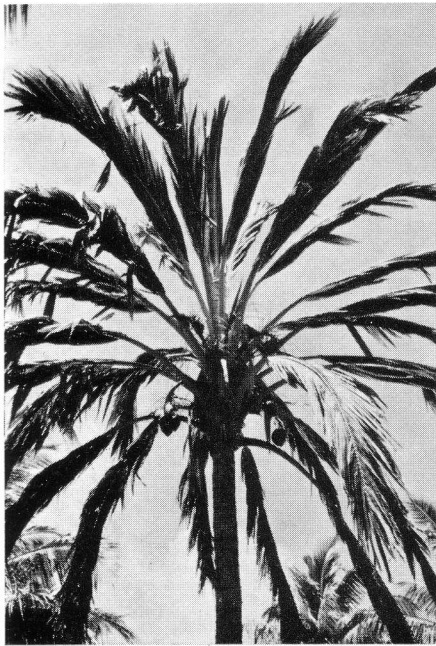
perhaps it's a "palmologue" (with apologies to Dent Smith, the Society's founder, who coined the term). It is supplemental to previous articles in *PRINCIPES* detailing the palms in places visited; it focuses on Palm Society members as well as palms they helped us collect.

### Fiji

We left Miami 9 November 1977 for Fiji. After 24 hours traveling and "loss" of a day crossing the international date line, we were on the ground in Nadi (Nandi) early morning the 11th. After a bit of rest and local exploration, we flew the 135 miles to Suva, Capital of the islands. We were met there by Dick Phillips, a member of The Palm Society. An Australian, he had been in Fiji some 25 years, and lost no time getting us in a seed-collecting mood.

He started us out in the Thurston Gardens in Suva (Fig. 1) which adjoin the Government House grounds and have interesting individual plants but no extensive palm collection. Conspicuously present and thriving there, however, were several specimens of the so-called "weeping coconut" reported on by Hodge and Kiem some 20 years ago (see *Principes* 3: 140, 1959). The trees were unique and attractive (Fig. 2). We had not seen this form elsewhere.

*Neoveitchia storckii* is indigenous to the Rewa River Valley a few miles out of Suva on Viti Levu, the main island, and we were eager to see it. Dick Phillips drove us there over a dirt road, and we only had to trudge a short distance through low bush to start collecting. The palm is very attractive (Fig. 3) with large red fruits that look like those of most *Veitchia* species. The area gradu-



2. A "weeping coconut" at Suva.

ally is being cut over and the *Neoveitchia* may be obliterated unless protective action is taken. But when we were there, a considerable number of the trees were seen and we got seeds for the Seed Bank.

Dick took us back to Suva via a former homestead area of his to show us a fine *Balaka* species, *Balaka longirostris*. It was a beautiful, slender-trunked palm (Fig. 4) from which we collected seeds. Several of these delicate small trees had been knocked down by animals, or otherwise, and probably were doomed. We also visited a private garden which had a most attractive specimen of *Areca vestiaria* (*A. langloisiana*) with eight stems bearing orange crownshafts and loaded with unripe fruits.

We flew in a light plane the 100 miles from Suva to the small "Garden Island" of Taveuni, where other species were collected, including what we believed to be *Veitchia simulans*, the fruits of which were smaller than other *Veitchia* species



3. Collecting *Neoveitchia storckii* on Viti Levu.

with which we were familiar. Much of Taveuni was explored during three days there, though we were unable to obtain a four-wheel-drive vehicle that is necessary if one is to avoid considerable exertion getting up above the 2,500-foot level for the best palm hunting. We collected *Calamus vitensis* but had no luck with *Clinostigma exorrhiza*, whose fruits were not ripe, nor did we find *Cyphosperma trichospadix* (*Taveunia trichospadix*), high on our want list, during treks up the slopes.

Taveuni not only is a pleasant island with fine vistas but the only place in the Southern Hemisphere where one can motor across the international date line. This presents an occasion when one can



4. *Balaka longirostris* on Viti Levu.

do something utterly ridiculous today, on one side of the line, step across it and repeat the action a day later! Dick Phillips photographed the author the

day we were there and Phyllis the day before—both at the same time (Fig. 5).

Our interests were not confined to palms as we admired the wild ground



orchids and melastomas in the mountains. High in tree tops at an elevation of 3,000 feet, appearing at a distance like scarlet bougainvillea, trailed the epiphytic and indigenous *Medinilla waterhousei*. Closer examination revealed flowers containing three colors, red, white and blue. We collected interesting seeds of two seaside trees, *Hernandia peltata* and *Xylocarpus granatum*, also known as "puzzlenut" tree because the seeds are fitted into a spherelike shell and can be taken apart. We brought back a curious (though not viable) seed of the so-called *Vuni vono vono* tree, which apparently grows on but one of the smaller Fiji islands. This very hard seed looks exactly like a small turtle shell, and is a collector's item. We never saw the tree.

### New Caledonia

On November 17 we went on to New Caledonia which, despite being cut over or burned over in many areas, affords some of the world's most interesting flora, including its palms. The island is strictly and delightfully French, with fine climate and good beaches, especially in Nouméa, the capital. It is a vacation haven for New Zealanders and Australians, and has been close to the heart of our Editor, Dr. Moore, whose work has added so much to an understanding and appreciation of the palms there (see *Principes* 10: 114-121, 1965; also Kenneth Foster in *Fairchild Tropical Garden Bulletin* 33, No. 2, 15-21, 1978).

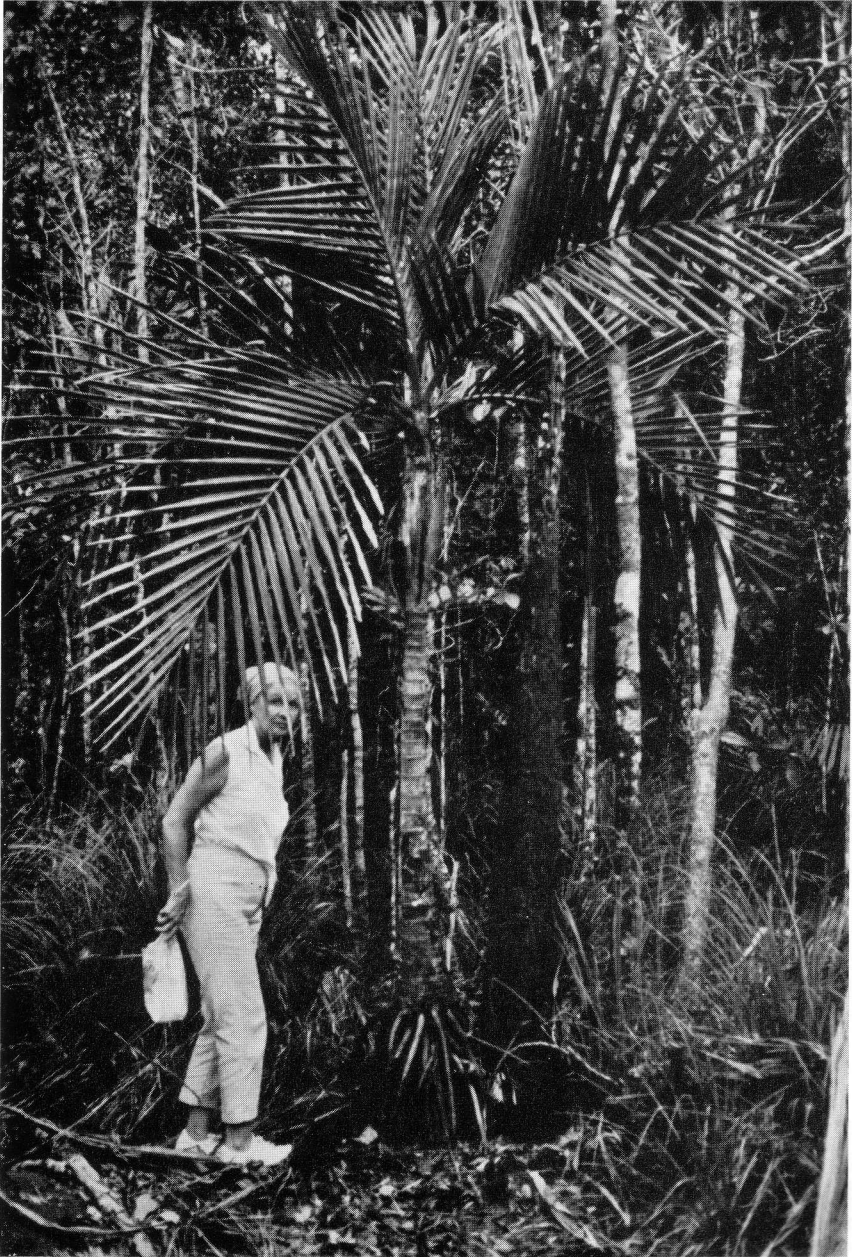
In a rented car we explored the Nouméa area and inland, fanning out in a radius of perhaps 100 miles. We had maps showing the location of palms, some of which sites we ignored because of the roads or our unwillingness to climb the slopes involved. Also our visit did not coincide with the fruiting time of some of the cherished species and we did not elect to scramble for naught. In



5. International date line marker on Taveuni, Fiji.

the principal collecting areas one must have official permission to enter the precincts, which presents no great difficulty, but is a requirement, nevertheless. M. Ph. Morat, of the Laboratoire Botanique at O.R.S.T.O.M. in Nouméa, was most helpful in this regard and we had no problem in obtaining permission to enter the areas scheduled.

On one excursion out of Nouméa we pursued the island's main highway past the airport, which is 35 miles out, to La Foa, thence on to Koh, Canala, and finally to Thio on the coast at the other side of the island, which is 250 miles long by 40 wide. Off the main highway, New Caledonia's roads are nothing to "brag about." Not only that but the available highway maps do not tell it all. They did tell us that the road from La Foa to Thio had two segments which were one-way at certain hours.



6. *Campecarpus fulcitus* in the forest reserve at Rivière Bleue, New Caledonia.

So on up into the mountains we went, and while coursing the first one-way segment—and truly it was strictly a one-way, rutted road that edged around the

outside contours—we found ourselves in a forested area of palms, tree ferns as tall as palms, and a plethora of other interesting plants. Many of the palms,

including, we believe, *Actinokentia*, were rising up out of deep ravines into which there was no easy access.

We became so enamored with the area we forgot about the one-way road time limits, although in all fairness it should be said that the road signs only announced when one could enter the stretch. No mention was made of elapsed time to be observed in negotiating the journey. Before we got through the trail, around a blind curve we came bumper to bumper with an on-comer. But it turned out all right since the author didn't understand what the startled approaching driver rather belligerently said in French, and managed to maneuver the small car into a rock depression on the cliff side enabling the opposition to proceed, albeit along the edge of a precipitous declivity. Thank goodness traffic was light; only two cars were on-coming!

We garnered various seeds most places we visited, but the best collecting and perhaps the most accessible major area was the Forest Reserve of Rivière Bleue, where permission to collect is required. This is some 80 miles in a northeasterly direction from Nouméa. Earlier, M. Morat had made arrangements for us to accompany M. Veillon and an assistant who were going to the reserve on a mission for the laboratories. They guided us all the way, some of it over an unsurfaced section of road under construction, to the reserve headquarters and on to the palm areas.

After orienting us, they went on and we went into the forest which abutted the road on each side. We had a "field day" admiring the palms but little success in collecting because of our timing. We were intrigued with *Campecarpus* (Fig. 6) but found no seeds nor early prospects of any. There were many *Actinokentia divaricata* in fruit but the fruits were green. We fell in love with

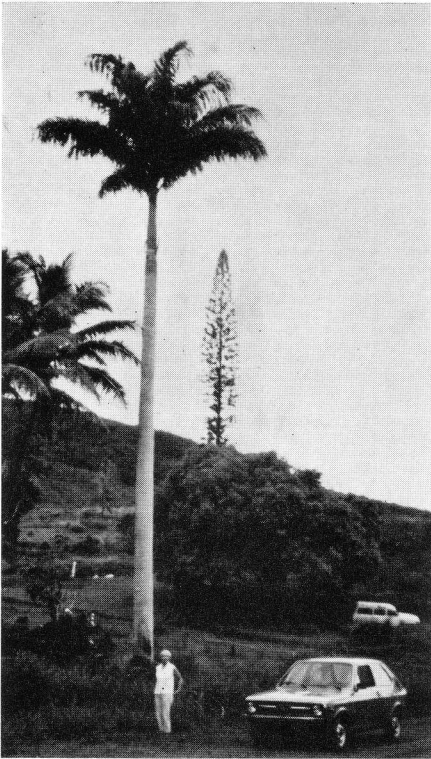


7. *Basselinia pancheri* in the forest reserve at Rivière Bleue.

*Basselinia pancheri* (Fig. 7) but no collecting that either.

Another thing that drew our attention in New Caledonia was the prominence of roystoneas in the landscaping—sometimes in small groups of short rows but often as individual specimens. Unlike other places we have visited where roystoneas, usually cultivated in avenues, have been prominent, the fine specimens in New Caledonia were mostly *R. oleracea*, whereas elsewhere *R. regia* has predominated. Magnificent specimens and stands of different *Araucaria* species are seen generally over the island. Not only in Nouméa, but also back into the island as well, one frequently encounters a combination of the two (as in Fig. 8).

We weren't far from "down under" and on 23 November flew to Sydney, realizing full well that if we hadn't been chained to a schedule we could have en-



8. *Roystonea oleracea* with *Araucaria* in the background along an interior road off the main highway from Nouméa.

joyed further pursuit of unfinished business in New Caledonia. But the land of kangaroos, koalas, splendid palm collecting, and helpful Palm Society members beckoned, and we eagerly answered the call.

### Australia

Dr. Ian Daly, an enthusiastic member of The Palm Society, made our brief stay in Sydney a delightful experience. We began with an escorted tour of the Royal Botanic Gardens, which feature a fine palm collection of some 90 species, many of them mature and well tended (Fig. 9). Joining us here were Palm Society member Tony Rodd, Horticultural Botanist at the gardens, and Peter

Hind of the staff. Established in 1873 on 38 acres, the gardens are outstanding not only for the palm collection but also because one can see there (at least when we visited) an incongruous assemblage of plants combining flora of the tropics with that of the temperate zones. While Sydney can become quite cool, freezing temperatures are unknown. In one vista in the gardens we saw lush, blue-flowering *Jacaranda* trees, backed up with the blazing red of the Illiwarra flame tree, spirea, forsythia, iris and lilacs—punctuated with palms in fruit, such as *Archontophoenix*, *Howea* (which were numerous), *Laccospadix*, and *Microcoelum*. Ian Daly showed us natural stands of *Livistona australis* up the coast not far from Sydney, as well as his own palm collection at his new home fronting on an arm of Sydney Harbor.

We continued on to Cairns in northern Queensland on 26 November for an enjoyable visit in this very tropical area. Thanks especially to Palm Society member Maria Walford-Huggins, with whom we had corresponded and exchanged seeds over the years from Jamaica, we met other members of the Society there and were taken into the fine collecting areas that lie mostly in a radius of some 80 to 100 miles north and west of Cairns. Also, our timing was good as we found most of the indigenous species in full fruit.

Maria and her husband, Allan, are proprietors of the Kamerunga Biological Laboratories, near Cairns, furnishing specimens for teaching and research purposes. In a sturdy, four-wheel-drive truck, Maria at the wheel, we were picked up early morning for a collecting excursion to the Cape Tribulation area, some 80 miles north of Cairns. Accompanying us was Palm Society member and Cairns nurseryman Peter Woodman.

We didn't have to go all the way to Tribulation to start collecting. A splen-





9. Some of the palm collection in the Royal Botanic Gardens in Sydney, Australia. In foreground, from left to right: Peter Hind, Dr. Ian Daly, Phyllis, and Tony Rodd.

did *Livistona* sp., fruiting profusely, loomed up along the road (Fig. 10) and in no time we had bagged the seeds. Farther along we saw *Hydriastele wend-*

*landiana* in fruit near the road, and striving for the seeds provided an amusing incident. The metal pole we had with a cutter attached wasn't quite



10. Peter Woodman, Maria Walford-Huggins, and Phyllis collect *Livistona* north of Cairns, Australia.

long enough to reach the fruit stalk, so since this very slender-stemmed palm should be willowy enough to bend, we looped a cord around it about 15 feet up, with a view to pulling it within reach. After a few tugs on the cord the bending was insufficient, whereupon the author strode into the fray, wrapping the cord around an ample waist like the anchor man in a tug of war, and down came the fruits along with the tree! (A shallow drainage ditch alongside had undermined the roots.)

We drove on to a rugged, forested area to find *Normanbya normanbyi* with ripe fruits. Access to the place was through the homestead of an acquaintance of Maria's, whose pineapple cultivation was producing some of the largest and tastiest fruits we have en-

countered anywhere. Hills rose up about a quarter mile back of the residence clearing, laced with graceful *Ptychosperma elegans* and *Normanbya*, the latter a majestic palm with large, round and heavy, red fruits (see profile in Fig. 11). We departed with a full gunny sack of these coveted seeds.

To reach Cape Tribulation, one takes a side road to the small vehicular ferry crossing the Daintree River, which at this point, near its mouth, is wide and beautiful. Once on the other side, palm collecting was excellent. *Laccospadix australasica* was there, but it was even more abundant in the Mt. Lewis area where we visited another day. This slender, graceful palm has a strikingly attractive spadix, unbranched, five to seven feet long, with small fruits and



11. *Normanbya normanbyi* in fruit north of Cairns.

resembling a very elongated ear of hybrid corn. Similar to *Calyptrocalyx*, it is unique among palms. One can draw the long spadix through a clamp of thumb and forefinger, shelling off the fruits into a bag held underneath (Fig. 12).

We also collected *Linospadix monostachya* and *Calamus* sp. in the Tribulation area, but the pièce de résistance there was *Licuala ramsayi* (*L. muelleri*). This beautiful palm, with full-circle leaves, towers up into the forest canopy where specimens are hard to photograph. We were in a gorgeous stand of them which stretched several acres back into the forest (Fig. 13). But collecting was nil; not even a dead fruit stalk was visible, much less any oncoming new ones. Apparently the palm fruits sporadically there, perhaps in three-year cycles. As a curiosity, we photographed one that had fallen but persisted in sur-



12. The author bags fruits of *Laccospadix australasica*, Cape Tribulation area.

vival after growing along the ground to make a right-angle bend and head up again (Fig. 14).

Later, Maria and Allan arranged to take us on a hunt into the forests of the Mt. Lewis area, northwesterly out of Cairns, entailing a beautiful drive of some 70 miles up the hills into the good collecting areas. Again we persuaded Peter Woodman to accompany us.

But, palms notwithstanding, one does not visit Australia without some urge to



13. A beautiful stand of *Licuala ramsayi* in forest, Cape Tribulation.



14. *Licuala ramsayi* down but growing up again, Cape Tribulation.





15. *Archontophoenix* towers into the forest at Mt. Lewis, northwest of Cairns.

see the continent's "trade mark" marsupials. Maria and Allan took care of this, without going out of their way, by permitting Sam, their pet wallaby (it's a medium-sized kangaroo) to greet us early morning at the outer border of their palm collection, just before we mounted the truck for Mt. Lewis. He was a belligerent, fun-loving rapsca-lion who delighted, among other things, in chewing up all the reachable leaves of Maria's palms. Bless his palm-loving heart!

As mentioned above, we found *Laccospadix* as well as different species of *Linospadix*, *Calamus*, and others at Mt. Lewis. This also was a prime area for

*Orania*, which was loaded with immature fruits, and for *Archontophoenix* in the majesty of its habitat (Fig. 15). We collected the latter, presumably *A. alexandrae*, but came away from Cairns convinced that *Archontophoenix* needs further study and reclassification of species. Perhaps this is being done, though we have no published source of information about it. The knowledgeable Palm Society members in the Cairns area, including nurseryman Jerry Strooper, proprietor of the Urlba Nusery at Cairns, can point rather convincingly to at least three apparently different species that are growing in the area from Cairns to Mt. Lewis, alone. The traditional spe-



16. Jerry Strooper, Maria, and Phyllis in a section of his large palm nursery at Cairns.

cies *A. cunninghamiana*, *A. alexandrae*, and var. *beatricae*, in our view, should be reexamined.

Jerry Strooper has a splendid, young private collection of palms, many of them from seed, and his large nursery is devoted almost exclusively to raising popular species of palms for wholesale outlets in Australia. (See portion of nursery's seedlings area in Fig. 16).

One day we indulged in a ferry trip from the docks in Cairns for the 10-mile cruise to Green Island. This little spot of land in the northern reaches of the Great Barrier Reef is a local vacation mecca, with a good, white sand beach together with undersea viewing of some of the intrigue that goes on in the reef's environs. We saw all that, but took the trip primarily to see *Arenga australasica*, which is indigenous there. Not many of the palms are left; our hurried count, coursing the island, was 12 ma-

ture ones. Perhaps there were more—but none were in fruit.

While in Cairns we were privileged to meet Hon. Vince Winkle, a longtime associate of The Palm Society, through the Cairns City Council, and one whose practical knowledge of palms and the flora of that area may be unexcelled. Early one morning he arranged to pick us up and conduct us on a complete tour of the Cairns Botanic Garden as well as the extensive landscaping of public lands throughout the Cairns area, both of which he supervises. The public landscaping in Cairns is impressive and extensive, much of it involving palms. The older sections of the Botanic Garden have a good collection of palms and newly developed areas are emerging with emphasis on indigenous plants as well as exotics (see Fig. 17). Vince Winkle oversees one of the finest nurseries in diversity of plants we have seen anywhere. It supplies the botanic garden



17. Vince Winkle and the author with palms in new section of the Cairns Botanic Garden.

and government landscaping projects in the Cairns jurisdiction.

Vince introduced us to the Mayor of Cairns, Hon. DeJarlis, with whom we very much enjoyed visiting to discuss our impressions of the hospitality shown in Cairns. Then we went on to other compelling attractions. Of these, perhaps the most unusual were individual specimens of *Archontophoenix alexandrae*, dispersed over a two-block area in residential Cairns, which had "freaked off" into branching stems. We counted four to nine branches on some of them (Fig. 18), but left Cairns with no plausible explanation for the "freaking."

We didn't need any explanation; we would be eternally grateful for the privilege we had had of meeting Palm So-



→  
18. A specimen of curiously branched *Archontophoenix alexandrae* in a residential section of Cairns.



19. A general view of palms in Brisbane Botanic Garden.

ciety members in Cairns. Our time schedule grabbed us and reluctantly we pursued it, on to Brisbane on 4 December 1977.

In Brisbane it was hot, as we were approaching the Christmas season down under, and Phyllis picked up a virus there that made her uncomfortable. Our



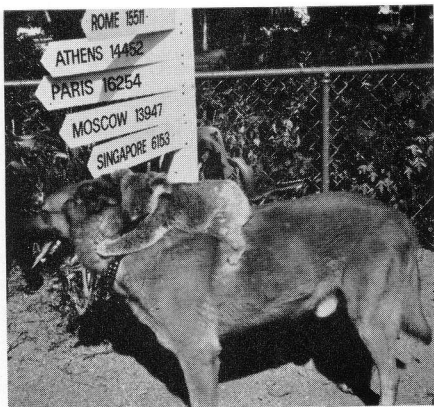
lodging was directly across the street from the Brisbane Botanic Garden, which we explored on two occasions. It's attractive, easy to get around in, and has a fair collection of palms, notably *Phoenix* species, *Archontophoenix*, *Jubaea* and others (Fig. 19).

Through arrangements made earlier with the Queensland Department of Forestry, we were able to acquire a good quantity of indigenous cycad seeds which we promptly mailed on to Fairchild Garden.

Also here we had easy access to a boat trip on the Brisbane River, past the University grounds, landscaped with palms, to a koala sanctuary. Still curious about Australia's marsupials, despite Sam the Wallaby's extraordinary activities at Maria's place back in Cairns, we boarded the boat. Arriving at the sanctuary's dock we were met by an obedient dog with a koala astride (Fig. 20). Unlike busybody, palm-loving Sam, the koalas hardly move at all, and they insist on eucalyptus leaves, only certain species at that, for food. They wouldn't go near a palm leaf, which casts doubt on their judgment!

### Papua New Guinea

Interspersed between collecting at Cape Tribulation and Mt. Lewis, while in Cairns, we flew to Lae, via Port Moresby. Visiting the National Botanic Garden there had been high on our "must do" list, although getting advance flight reservations, even though Pan Am's efficient worldwide computer network, months earlier, proved futile. So we played it "by ear" and managed to board an Air Niugini flight, on 28 November, late afternoon, for Port Moresby, where we cleared immigration, then on to an after-dark arrival at Lae. We had left Cairns without return flight reservations, but with many friendly admonitions to get to the ticket counter "first"



20. Dog with koala jockey at sanctuary near Brisbane.

and "get onto the plane" upon our return. By limiting our stay in Lae to two days because of the infrequency of flights, we made it over there and back.

Although there were antecedent events, the superb 100-acre garden at Lae dates back only to circa 1949, after the area was bombed in World War II. Dr. Fred Essig, who has spent much time in Papua New Guinea, catalogued and photographed the garden's palms a few years ago (*Principes* 16: 119-127, 1972). There are well over 100 mature species of palms, featuring those indigenous to New Guinea, as well as a wide and exceptionally fine collection of other native flora and exotics from other tropical areas.

We met Ted Henty, of the Botany Division, Department of Forests, who welcomed us to the garden and got us started on a tour of the plants. It was a misty, humid day—Lae being some 6° off the equator, with 180 inches rainfall annually. We certainly appreciated his taking the time he did on our behalf. Later, Mr. Manu Kapu of the garden helped us find and collect seeds. He is shown along with young *Lodoicea maldivica* (Fig. 21) which has been introduced subsequent to publication of Dr.



21. Young *Lodoicea maldivica* in the National Botanic Garden, Lae, Papua New Guinea. With the author is Mr. Manu Kapu of the staff.

Essig's earlier listings. The garden had good specimens of choice ornamentals, such as *Cyrtostachys lakka* (Fig. 22), *Copernicia holguinensis* (Fig. 23), and *Latania lontaroides* (Fig. 24). The native gulubias were impressive, and *Actinorhytis calapparia* was spectacular (Fig. 25). But before leaving the garden, after two excursions through it, our hearts belonged to *Paralinospadix hollrungii*, which was fruiting but without collectible seeds (see the beauty of it in Fig. 26). From our bus returning to the airport we saw in forests back from the road some towering *Gulubia* and *Metroxylon* species, the latter of which we had seen with terminal inflorescences back in the garden.

All palm seekers adventuring into the far reaches of the Western Pacific should include Lae on their itinerary, not only to visit the garden but to explore beyond its confines. Perhaps it might

be expeditious to plan in advance to proceed there from Brisbane, which is a better hub than Cairns for possible flight connections. Our regrets were that failure to obtain advance reservations, undoubtedly due to Air Niugini's inability to respond to international communications, made it impossible for us to spend more time in Papua, and yet adhere to our commitments ahead.

### New Zealand

On 8 December, about one-third of the way nonstop from Brisbane to Auckland, we passed Lord Howe Island, the source of palm seeds that have been the mainstay of commercial nurserymen for many years. We weren't prepared to parachute from about 30,000 feet, nor did we have a visa for official scrutiny upon landing. But it was tempting (see the island from above, in Fig. 27 and re-



22. A fine cluster of *Cyrtostachys* in the garden at Lae.

fer to Dr. Moore's succinct and interesting treatment of the palms there in *Principes* 10: 13-21, 1966).

We arrived in Auckland to be met at

the terminal by Mrs. Joy Amos, Horticultural Advisory Officer for the Ministry of Agriculture and Fisheries, and currently a most helpful member of The



23. *Copernicia holguinensis* at Lae.

Palm Society. We had corresponded, but it was a delightfully unexpected surprise to have her greet us upon landing, then take us on a very thoughtfully arranged orientation drive around the Auckland environs.

Not only that, but knowing our interest in palms, she lost no time maneuvering us to an easily accessible stand of *Rhopalostylis sapida*, the only palm, albeit another of our favorites, indigenous to New Zealand. The trees in Figure 28 were fruiting but seeds would not be viable until perhaps February, some two to three months beyond our visit. Two other species of this "feather duster" palm are indigenous to outlying islands: *R. baueri*, in Norfolk, and *R. cheesemannii*, in the Kermadecs.

Although we ran into untimely rainy weather during our week in New Zealand it didn't dampen our spirits. Thanks to

Joy Amos we met other members of The Palm Society there, and were privileged to visit with New Zealanders who are more knowledgeable, and perhaps more enthusiastic, about plants and flora of all kinds than any other group of people, collectively, we have encountered.

Dick Endt, now a member of The Palm Society as well as the International Rare Fruit Council, went out of his way to show us his interesting cultivations several miles out of Auckland. Brian Roome, an early Palm Society member there, showed us his young collection, which we thoroughly enjoyed, and presented us with two of his fine recordings. Brian not only likes palms but spends the rest of his time directing New Zealand's most popular dance band.

Most knowledgeable of the flora, not only of New Zealand but also South Africa, from whence came many introductions into New Zealand, Dr. Max Goody, taking time from his busy practice, along with Mrs. Goody, showed us outlying environs and introduced us to flora unfamiliar to us. It was a most rewarding experience.

Enslaved by our flight schedule, we prepared to go on. It was apparent to us that the environment of North Island, certainly in the Auckland area and beyond, would support numerous palm species which never have been introduced. We came away thinking that the many friendly people there, so enthusiastic about the potential of growing palms, needed a steady source of seeds. We hope that The Palm Society, through facilities of the Seed Bank, can help in this regard.

We left New Zealand, not only with a desire to return, but with special gratitude to Joy Amos, whose helplessness through introductions and otherwise had made our visit so worthwhile (see Fig. 29).





24. *Latania lontaroides* at Lae.

### Tahiti

Our flight to Papeete, 12 December was full of anticipation. Had things changed much since we visited Tahiti and the outer Society Islands, in 1974 (*Principes* 18: 140-143)? There had been changes, of course, but none that bothered us, and having been there previously we felt quite "at home" upon arrival. The beauty of Tahiti, in our view, rarely (if at all) is excelled by tropical islands elsewhere in the world. The coconut palms fringing the sea and lagoons provide a continuous panorama of tropical grandeur, as in Figure. 30.

In terms of palms, Tahiti, for us, is

*Pelagodoxa henryana* which, as one of the world's most beautiful palms, is high on our list of favorites. Yet our enthusiasm for it should not be taken as encouragement for many palm lovers to try to cultivate it. The palm is hard to grow in many environments. Seeds not only are scarce but relatively difficult to germinate. It will not survive low temperatures, nor does it like too much sun or wind. Fairchild Garden recently lost a good specimen sheltered in its Rare Plant House, perhaps because of cold temperatures, although the few specimens protected in private collections in the Miami area seem to have survived.

It was indeed homecoming when we



25. The handsome crown of *Actinorhynchus calapparia*, Lae.

were welcomed by Michel Guerin, Director of the Botanic Garden at Papeari and a member of The Palm Society, whose hospitality had so endeared us to Tahiti when we were there before. Numerous improvements had been made and he had other developments in process in the garden, but knowing our fondness for *Pelagodoxa*, Michel set out at once to show us the status of the garden's collection, with an eye out for mature fruits.

We started out with a *Pelagodoxa* specimen not far from the garden's entrance, which was thriving, although in a more exposed location than others back in more protected sections (Fig.

31). We photographed them all, including the oldest *Pelagodoxa* in the garden, which had soared up into the canopy to some 30–35 ft. This palm was planted early in the garden and may date back to circa 1920, or earlier. It is the tallest *Pelagodoxa* we have seen. Other younger but mature ones in the garden were more attractive than those photographed, our purpose being to record the dispersal as well as appearance of these palms in Tahiti.

Since we were looking for viable seeds, only five of which had been collected in coursing the half-dozen fruiting trees in the garden, we crossed the road to an adjoining area where, though pri-



26. *Paralinospadix hollrungii* in the garden at Lae.

vately owned, Michel had permission to collect. There were some six additional mature trees here along the base of an inclining hillside. One of the oldest of

these yielded another four or five fallen fruits, and we gleaned two others a little farther on. It wasn't a very big haul to mail back, knowing the appetite of the



27. A high-flying bird's-eye view of Lord Howe Island.

Seed Bank and Fairchild Garden's need to get new starts to replace lost ones.

So Michel arranged to accompany us back into Papeete to canvas the other known specimens in an effort to add to our small collection. There are some half-dozen older, mature trees scattered around the town which, if one is there at the right time, can yield a few ripe fruits.

We stopped at an abandoned public park area, whose limited grounds supported an early botanic garden, antedating the government's development of the present site at Papeari. Several old palms dotted this rubble-filled area across from a hospital, including a soli-

tary *Pelagodoxa* that apparently had survived maltreatment, or just lack of care, for many years. A few fruits were up in the crown and we gleaned one on the ground.

At the downtown home of a retired seaman, an acquaintance of Michel's, was another old specimen, albeit sunburnt and windblown, which, thanks to their generosity and help of the whole family, yielded another half dozen fine seeds (Fig. 32). At the backyard garden of another downtown property was another one in full fruit, where we acquired two or three more seeds.

After our all-out collecting effort for this palm, with Michel's knowledge-





28. *Rhopalostylis sapida* at Auckland, New Zealand.

able assistance, we had assembled and cleaned exactly 20 seeds for mailing. All of the 18 to 20 mature trees, which essentially comprise the *Pelagodoxa* pop-

ulation in Tahiti, were fruiting. But it is sheer futility to pluck green fruits off the stalks for the mere sake of acquisition, as almost invariably these will not ger-



29. Mrs. Joy Amos welcomed the author to New Zealand.

minate. One must collect only the fallen fruits, and all of these will not germinate.

Michel continues to estimate, as he did earlier, that he cannot anticipate collecting more than some 150 seeds annually. At least 50 or more of these he sets out for ultimate distribution of plants in Tahiti. He receives numerous requests for quantities of the seeds, often from persons impatient to grow this beautiful palm but with no realization of the limitations on seed supply.

We explored the Botanic Garden where Michel has opened up new planting areas and saw the new nursery which will be beneficial to government and the people of Tahiti. In the garden we also collected quantities of *Socratea durissima* and *Corypha elata* for the Seed Bank. The latter palm had fruited some time before and the ground literally was blanketed with seeds. As before, Michel's hospitality endeared him and Tahiti ever more to us.



30. Palms along the beautiful shore line of Tahiti.



31. Michel Guerin with the author and *Pelagodoxa* make it a "homecoming" in the Botanic Garden at Papeari, Tahiti.

## Samoa

Backtracking a bit because of airline schedules, we flew into Pago Pago after dark, 18 December, our first visit to Samoa. Somerset Maugham knew the area well when he wrote *Rain*. It rained when we landed, kept on raining (at least off and on) while we were there, and it was still raining as we left. We even stayed at the Rainmaker Hotel in Pago Pago, which was directly across the beautiful harbor from Rainmaker Mountain. (Also see palms in the rain, Fig. 33).

We had expected it would be a bit wet there at the time we were to arrive but hardly realized that rain could fall as continuously as it did. Anyway, we weren't much concerned about collecting in American Samoa, since there isn't much there in the way of palms, but the



32. Fruits from *Pelagodoxa* on private property in downtown Papeete.



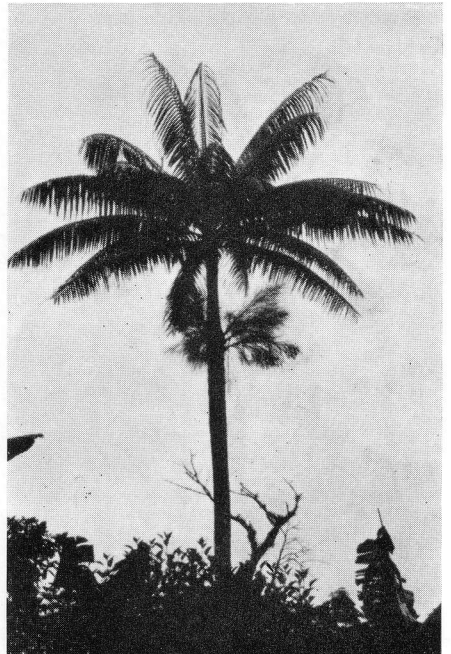


33. Palms with Rainmaker Mountain in background, Pago Pago, American Samoa.

rain did handicap us trudging downtown to mount some of the small, truck-bedded busses that transport everyone around the pretty coastline to settlements along the way.

We had planned to fly on to Apia, in Western Samoa, which we did after the weather cleared up enough to make flying less hazardous in small craft. The ride between Faleolo Airport and Aggie Grey's Hotel in Apia takes longer than the flight time between the islands. Aggie Grey's is unique, as admirers of Robert Louis Stevenson who have visited his home and burial ground near Apia may attest. Not only does the place have an interesting history, but the grounds of the newer additions are beautifully landscaped with palms (see cover) and well attended.

Here we wanted to do some palm collecting and fortunately, the weather cooperated enough to permit it. Hiring a driver, we headed out early one morning



34. *Clinostigma* in fruit, low mountains west of Apia, Western Samoa.



to seek *Clinostigma* and anything else we might find worth collecting. As we drove into the low mountains, not much in the way of palms was seen. Later, at higher elevation, going on by way of the existing through road (which we believe is an extension of the road reported as ending, in 1966, by Mr. Langlois in *Supplement to Palms of the World*, p. 46) we found beautiful stands of *Clinostigma* all over the area.

The region gradually is being cut over and palms are disappearing. In an area of a tremendous gorge, which has a very high waterfall opposite, these palms are abundant and, in the gorge at least, may be safe for some time to come from transgressions of the bulldozer. *Clinostigma* is a very handsome palm (Fig.

34) and we revelled in collecting what we thought would be enough seeds to get the palm started everywhere. Alas, not so! Thousands of these small, ripe fruits we brought in didn't produce one viable seed out of a hundred!

We saw many fine *Metroxylon upolense* and collected seed, but not for Seed Bank distribution, since these fruits are much too large and heavy for mailing.

Back to Pago Pago for Christmas, we welcomed Santa Claus between rain drops (but no snow!), cheered him on his rounds, and then prepared to make our own way back to Miami, grateful for the opportunity given us to meet and to know some of our Palm Society members over the far reaches of the South Pacific.

## PALM RESEARCH

CHARLES P. DAGHLIAN, University of Connecticut at Storrs, is conducting investigations of Tertiary palms. Current research is concerned with the fossil record of coryphoid palms in North America based on foliar anatomy and morphology.

The following investigators at the University of Florida Agricultural Research Center, 3205 S.W. 70th Avenue, Fort Lauderdale, FL 33314 are conducting research on lethal yellowing of coconut palms and similar or identical diseases of other palm species. The group has a broad interest in palm culture and diseases and insect pests of palms. Some members of the group have recently completed studies of sudden wilt of African oil palm.

H. G. BASHAM, Plant Pathologist and Physiologist, is investigating the physiology of lethal yellowing and palm lethal decline.

H. M. DONSELMAN, Ornamental Horti-

culturist, is conducting horticultural research with the objective of finding palms suitable for replacing palms lost to disease.

F. W. HOWARD, Entomologist, is conducting studies to identify the insect vector of lethal yellowing and lethal declines, and studying ecological factors related to the distribution of lethal yellowing and its suspected vectors.

R. E. MCCOY, Plant Pathologist, is studying the etiology, epidemiology, and methods of control of palm diseases.

J. A. REINERT, Entomologist, has recently completed some studies of host plant relationships of a suspected vector of lethal yellowing.

J. H. TSAI, Entomologist, is conducting studies of insect vector transmission of lethal yellowing and lethal declines, and studying the biology of suspected vectors and related insects.

D. L. THOMAS, Plant Pathologist, is studying the ultrastructure of microorganisms pathogenic to palms and the ultrastructure of infected palms.