

tone plates and line drawings. The author has collected most of the species himself and provides more complete descriptions than have heretofore been available for many species. This is the only recent full floristic study of palms for South America based on field experience. Vegetative characteristics are relied upon heavily in keys to genera and species which will make them especially useful in the field, though perhaps less so in the herbarium where so much identification has to be done. However much one may disagree with Wessels Boer's taxonomic concepts, we should be indebted to him for assembling much information from a critical region in a compact volume.

HAROLD E. MOORE, JR.

The Rediscovery of *Carpentaria*

In *Principes* 9: 145, 1965, I erroneously attributed the rediscovery of *Carpentaria acuminata* to Mr. Caulfield and Mrs. Eddy when I should have credited Mr. George Trapnell, who is foreman of the Botanic Gardens at Brisbane and who has done all his field work on his own initiative and in his own time at

his own expense. Mr. Everist has forwarded me the story as follows:

"In July, 1958, Mr. George Trapnell and Mr. Keith Williams were travelling through Northern Territory on a private collecting and photographing trip. When they called at Berry Springs, Mr. Trapnell recognized that the *Carpentaria* was different from *Archontophoenix*, but he could not convince Mrs. Eddy of this. Next day he returned to the grove and brought down some fruits with a shotgun. These specimens were subsequently identified by Dr. Blake as *Carpentaria* and Mrs. Eddy was then convinced that the plant was not *Archontophoenix*.

"The material subsequently sent . . . was collected by Mr. Frank Lewis at some cost to himself. He fell off the roof of his truck whilst collecting the seeds, broke his ankle and spent several months in Darwin hospital as a result."

My apology is extended to Mr. Trapnell and his associates for having provided an erroneous account which I am most happy to be able to correct.

HAROLD E. MOORE, JR.

Palm Hunting Around the World*

HAROLD E. MOORE, JR.

V. New Guinea to the New Hebrides

New Guinea has long seemed to the writer, as to so many others, a "last frontier." Thus to arrive at Lae, the capital of the Territory of New Guinea early on March 1st, 1964, after a night flight from Brisbane was the realization of a long-held ambition. Mr. and Mrs. John Womersley met the plane, shepherded me to the TAA Transit Lodge, and that afternoon drove me to see na-

tural stands of *Metroxylon Sagu* in swamps along the road to Bulolo and Wau. The candelabra-like old inflorescences rising above the green of new stems make a striking effect from a distance but to reach and collect them through the swamp is another matter, and one which was not attempted that afternoon.

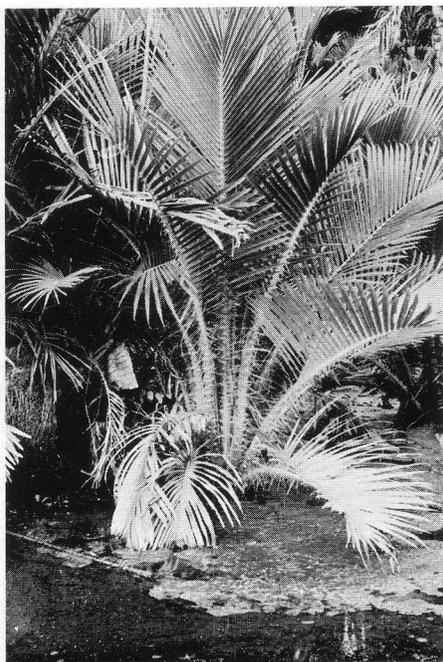
The first full day in New Guinea was spent getting acquainted with personnel and collections at the herbarium, and in a short trip with Curator Ted Henty to collect *Arenga microcarpa* in secondary

*From field work supported by National Science Foundation Grant GB-1354.



1. *Metroxylon Sagu* with its terminal inflorescences near Lae.

woodland opposite the entrance to Nadzab airstrip on the road to Goroka. Meanwhile Mr. Womersley, who is Chief of the Division of Botany, Department of Forests, and Mrs. Andrée Millar, Technical Assistant at the Botanic Garden, had been making final arrangements for a trip to Bupu Village which



2. Suckers of *Metroxylon* show fierce armature.



3. Loading for the trip to Bupu Village.

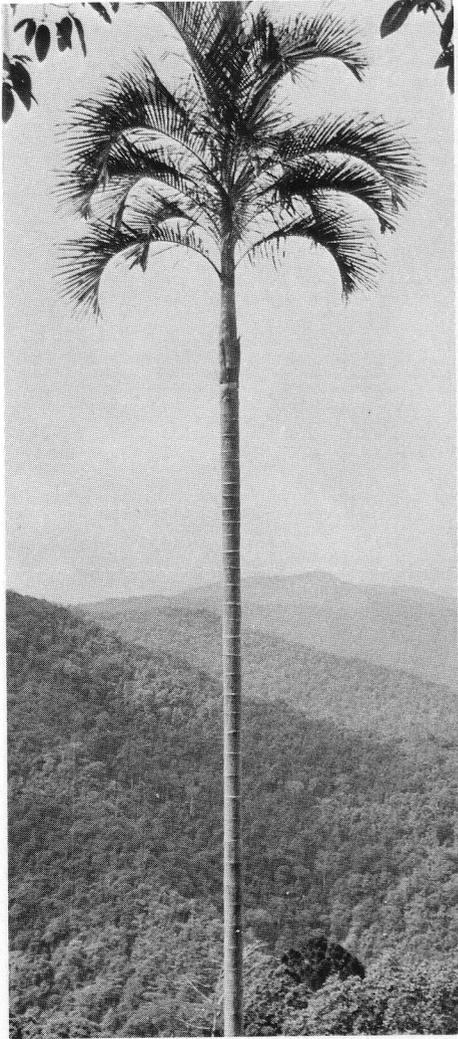


4. Bystanders at Bupu Village. Police house and cook house in background, our quarters at right.

lies some two hours by foot above the Wampit River about 35 miles from Lae on the Bulolo road. Mrs. Millar had arranged for porters—men, women and children—to come down from the village and carry our baggage and provisions upon our arrival by truck the next morning. Much commotion attended the selection and loading of burdens but soon we were all scrambling up the steep and slippery trail which took us from near sea level to an altitude of nearly 2,500 feet and “home” for two days. Camp was established in the thatched huts used by the District Patrol Officer and his assistants when they make their periodic visits, but with the addition of a work area protected by a tarpaulin roof set up between the huts and the important cook house. Here plants were sorted and prepared for specimens and we dined as well.

When camp was set up, I set out with John Koibua, who assisted me with

palm collecting, and followed by several small boys, to survey the trail that runs southwest from the village along a ridge on the track to Engabu. Much of the forest near the village was second growth but palms enough had been left in the cutting to keep us busy. Beside the trail, framed against the seemingly unbroken expanse of forest covering the mountains to the Markham River and beyond to the Finisterre Range, we came first upon a palm called *gumba* locally, a tall, slender, gray-boled tree some 50 feet high and eleven inches in diameter with about 17 leaves arcuately ascending above a brown crownshaft. The shape of the inflorescence suggested that we had come upon a species of *Gronophyllum*, and shortly thereafter we found second and third trees in flower and fruit, one of which John managed to climb for an inflorescence in flower despite the slippery trunk. The flowers certified to the iden-



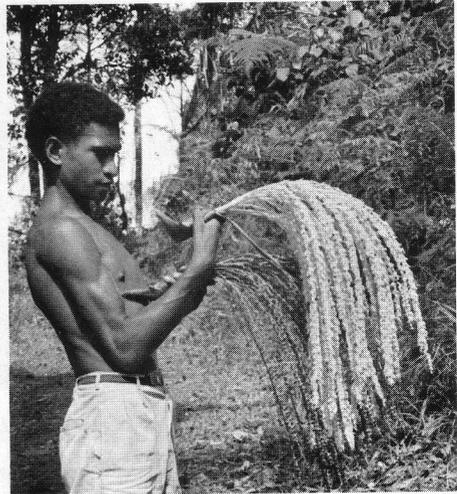
5. *Gronophyllum chaunostachys* stands like a sentinel before the mountains.

tification — the males cream-colored and fragrant, the female buds coral-pink with the elongate petal-tips characteristic of the genus. Months later, after comparison with published descriptions, the tree proved to be *Gronophyllum chaunostachys* described in 1936 by Burret as *Kentia chaunostachys*. But fruit and leaves were needed so the next day we managed to fell an individual which bore dull red-brown immature

and red mature fruit. Only then was it possible to see how beautiful the leaf sheaths composing the crownshaft are, for at close range the protected inner ones are beautiful burgundy-red at the base, the exposed outermost ones nearly black and covered with light brown woolly hairs.

Near the *Gronophyllum* was a small species of *Areca* related to if not identical with *A. macrocalyx*. The solitary green stems, about eight feet high, were topped with four to five spreading leaves below which were inflorescences in bud and in green fruit.

The last palm of the day was a species of *Ptychococcus* called *val* by the boys which has since been described as a new species, *P. lepidotus* (*Principes* 9: 10. 1965). Nine inflorescences in various stages of flower and fruit were densely clustered below the grey crownshaft which, like the *Gronophyllum*, was covered with soft brown hairs. Not only is the habit of this tree attractive, but the large orange-red fruits two inches long are a bold contrast to the green flowers and the large pinnate leaves with blunt pinnae like those of *Ptychosperma*.



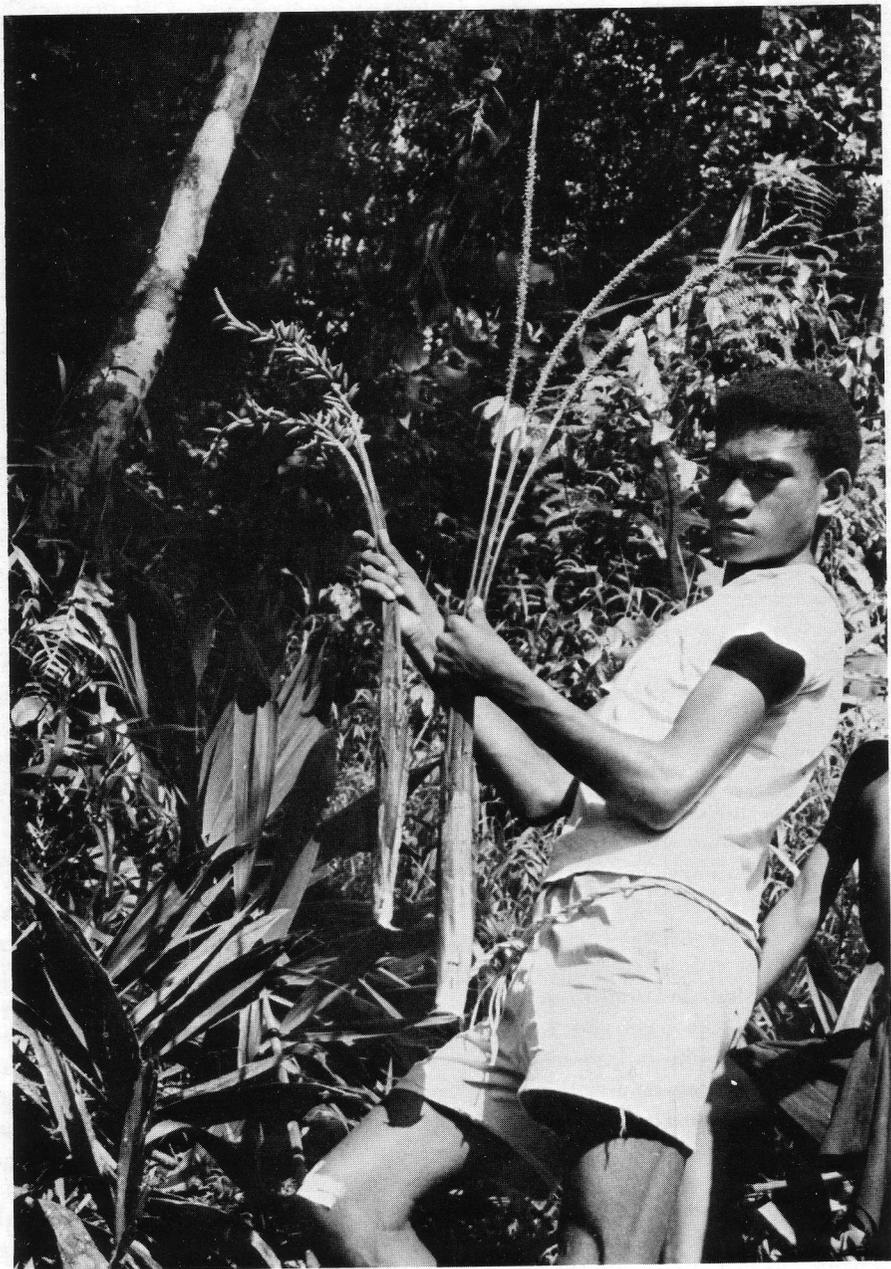
6. John holds inflorescences of *Gronophyllum chaunostachys*.



7. The pinnae of *Calyptrocalyx Lauterbachianus* are borne in several planes.

Preparing specimens required most of the evening and as the village people had brought in quantities of other plants — orchids and gesneriads among them

— Mrs. Millar had also been busy from the time camp was set up until we gratefully climbed onto our air mattresses. Here, as in most other places in Borneo



8. John holds the clustered inflorescences of *Calyptrocalyx*, that at left in young fruit.

and the Islands, we cut, trimmed, and fitted specimens into folded newspapers which were tied in bundles, placed in large plastic bags and doused with al-

cohol. So treated, the material would keep until it was transported to a base, the herbarium in this instance, where it could be air-dried at leisure by assist-



9. Fruits of *Calyptrocalyx* vary in size depending on ripeness.

ants. Thus we were able to take full advantage of working hours — always long in the field.

Early the next morning, another procession of myself, John and small boys headed up the ridge again, this time to an elevation between 2,800 and 3,000 feet where two small palms held our attention. One was *Calyptrocalyx Lauterbachianus*, a solitary species with stems about eight feet high and less than two inches in diameter. The green leaf bases flecked with dark scales do not form a crownshaft but split to within a few inches of the base and from their axils long spike-like inflorescences hang down, three to an axil within a single lower bract and each with a long, terete upper bract. Stages from axes in male bud, in pistillate flower, and in immature fruit were found on a single individual. The male buds are cream-colored with purplish bases, the female flowers translucent, pink-tinged, cream-colored, and ripe fruit from another plant was bright crimson, about $1\frac{3}{8}$ inches long with a thick white or pinkish pulp. Leaves of this species have

pinnae grouped and in several planes, and when newly developing are red though at maturity they are deep green.

The second palm, which appears to be *Heterospathe humilis*, is apparently stemless because the short stems are prostrate and root from the base. These stems may be solitary or clustered and bear at their tips seven or more long-petioled pinnate leaves with erect little-branched inflorescences among them. Light yellow male flowers, greenish-yellow female flowers, and small crimson fruits were found among the numerous plants growing on steep slopes.

Returning to camp in the afternoon, we found still a third palm awaiting us, a delicate species of *Linospadix* with clustered stems, undivided leaves, and bright red fruits on erect spike-like inflorescences. These plants had been brought in by the villagers but were not seen by us in the forest. However, time and light did not permit further searching so we had to be content with these collections, some of them fortunately of the whole clump.

March 5th saw us breaking camp and returning to the road with our booty, augmented by specimens of a high-climbing fierce *Calamus* and another cluster palm, *Paralinospadix Hollrungii*, related to *Calyptrocalyx* and *Linospadix*. Once freed of our load, the party divided, Mrs. Millar to return to Lae, I to stay with Mr. Womersley, who had come to meet us, in order to collect in swamps at the foothill forest near Wampit two species of *Calamus*, *Korthalsia Zippelii* with its prickly leaf sheaths and terminal inflorescences loaded with developing scaly fruits, and what appears to be *Orania macropetala*. The last is a stately grey-trunked palm 65 feet high or more with a crown of about twelve ascending pinnate leaves, the pinnae drooping at an angle of about 60° , and



10. Our assistants from the village look at the camera rather than at *Heterospathe humilis*.

large inflorescences among the leaves, some with white flower buds, others bearing fruits the color and size of a small orange. A few seeds of this *Orania* were sent to the Fairchild Tropical Garden where they germinated and where hopefully the species may be established.

From Lae, shorter trips were made in two directions. The first was back along the Bulolo road beyond the Markham River to slopes and wet lowland forest where logging roads permitted access. Here we found good material of *Caryota Rumphiana*, one of the single-stemmed species rather like *Caryota urens* in aspect, a handsome *Hydri-*

astele, as yet unidentified, with clustered slender stems as much as twenty feet high, pinnate leaves and inflorescence with clear currant-red fruits becoming black at maturity, *Gulubia costata*, and what appears to be an undescribed species of *Cyrtostachys*, *C. glauca* (P. 86). The *Gulubia* grows in swampy areas and reaches 50 feet or more in height, 10½ inches in diameter. Handsome crowns of long pinnate leaves with pendulous regularly arranged pinnae stand above the stout crownshaft with silvery grey sheaths (but these almost lilac on the inner leaves) and great inflorescences with drooping branches covered by cream-colored flowers. Un-



11. *Heterospathe humilis* has small red fruits and the upper bract is borne just below the branched portion of the inflorescence.

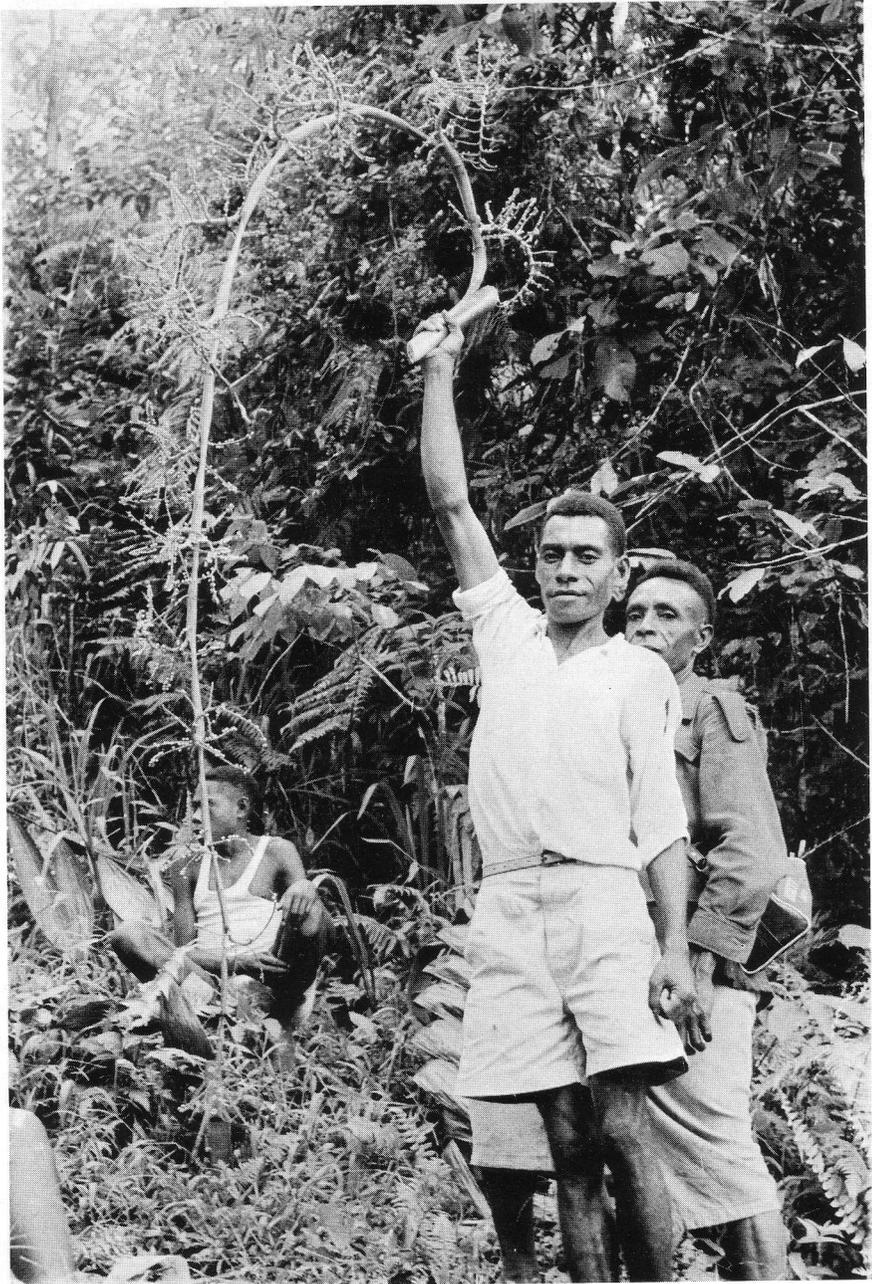
like *Gronophyllum*, to which *Gulubia* is related, this species, at least, seemed to mature slightly unpleasantly scented male and female flowers at the same time. The large bracts, covering the inflorescences in bud are used as vessels, the dry old inflorescences as brooms, and the split trunks for flooring according to our informants.

Cyrtostachys glauca grows principally on well-drained slopes where the bright blue-green leaf-sheaths make it readily discernable. Like its brighter relative, *C. Lakka*, the stems are usually clustered but the ripe fruits are dull black seated in a yellowish or reddish cup formed by

the sepals and petals.

The second short trip was made in the opposite direction to a logging road east of the Bumbu River near Lae where, with Ted Henty, we located *Paralinospadix Hollrungii* in some quantity and two species of *Calamus*, one probably *C. Lauterbachii*. It was helpful to note here that the leaves of the *Paralinospadix* were sometimes undivided, sometimes split into several pinnae, suggesting that leaf division is scarcely a reliable specific characteristic.

On March 10th Mr. Womersley and I with assistants set out by landrover for the last trip in New Guinea with Bulolo



12. Duna holds the inflorescence of a *Calamus* collected on the Bupu trail.

our first objective. Apart from seeing some handsome specimens of *Caryota Rumphiana* and the now familiar *Metroxylon*, the only palms we saw were a

few growing in scrub bush at the edge of a banana patch about five miles beyond Mumeng beside the Snake River. These palms had solitary grey-brown



13. The viciously armed leaves of *Calamus* are not made for easy collecting.

trunks 40-45 feet high and about 10 inches in diameter near the base with a mass of much-branched inflorescences below a green crownshaft and a crown

of about twelve spreading leaves with the tips arched downward. About 100 glossy green pinnae in regular arrangement were borne horizontally in the



14. *Paralinospadix Hollrungii* would make a handsome ornamental. Notice the slender inflorescence across the chest of the man at right.

lower portion of the blade but ascended in the upper portion. Only green fruits were found, these the size and shape of a small hen's egg, but fortunately the

seeds were ripe enough to show ruminant endosperm and this, with the male flowers, helped to determine the genus to be *Actinorhytis* though the species is yet uncertain.



15. Two trees of *Orania macropetala* emerge from the swamp forest near the Bulolo road.

We arrived at Bulolo in good time for the evening meal where we were joined by Mrs. Millar. The next morning Mr. Womersley and I set out for the *Araucaria* forests at about 2,600 feet elevation on the Bulolo-Watut Divide to find, at lower elevations, two species of *Calamus*, more *Hydriastele*, a slender solitary *Ptychosperma* scarcely as high as



16. Inflorescences of *Orania* are borne among the leaves and are covered in season with pale flowers.

a man and, near the summit of the Divide, more *Areca* and a few individuals of *Ptychococcus lepidotus* before returning to Bulolo for the night. On the 12th, in the company of Mrs. Millar, we continued to Wau where the Forestry Department maintains McAdam Memorial Park some five miles south of the town at an elevation of 4,000 feet. The forest in and near the Park, which itself is beautifully landscaped about a pond margined with waterlilies, was extensive enough to keep us busy with collections of *Areca macrocalyx*, *Calyptricalyx Lauterbachianus* and another species of *Calamus* while Mrs. Millar supervised grass cutting and other work in the landscaped area. Lunch in the thatched pavillion at the park was followed by an afternoon on the road from Wau toward Edie Creek as far as transitable, and by a visit to the very lovely garden



17. An inflorescence of *Orania* stands taller than the assistant.

of Mr. Richard Greatrix in the town. Both Wau and Bulolo were once gold rush towns and one still sees gold dredging activity in the river at Bulolo as well as small family operations on the Edie Creek Road.

At Wau next morning, Mr. Womer-



18. *Caryota Rumphiana* is an imposing tree with its doubly pinnate leaves.

sley, Mrs. Millar, her assistant, and I wedged into a small charter plane which took off from the rather amazingly angled slope of the air strip, over the mission at its base, and upward to clear the rimming mountains for a short air-mile, but long foot-mile flight to a little village called Wagau where an air strip had only recently been established to enable the transport of produce to and from the village. Though Mrs. Millar continued to Lae, Mr. Womersley, Duna and I descended to be met by a procession of villagers who carried our baggage to the new District Officer's hut at the edge of the village. Having set up camp and arranged for fresh vegetables and guides, we set off to check on a cluster of palms noticed on slopes



19. This somewhat worn leaf of *Caryota Rumphiana* is 23 feet high including the four-foot sheath.

near the air strip as we arrived. These turned out to be *Gronophyllum chaunostachys* (here called *gomu*) in excellent fruit. But since the trunks were too wet and slick to climb and the trees were the property of the villagers, we continued to the hills northeast of the air strip where mature *Gronophyllum* yielded to the axe; its forty-foot trunk, waxy grey and slippery, stretched out full length, enabled us to make a second collection of this species in fruit. Also on the slopes we encountered quantities of *Heterospathe humilis*? and an occasional clump of *Calyptrocalyx Lauterbachianus*, here with stems only rarely solitary, while by a stream we found one individual of an *Areca* in which the leaves were very evenly divided into narrow pinnae, though otherwise it seems to be of the *A. macrocalyx* alliance.

Clambering, slipping, cutting, and pressing our way over the mountain slopes filled the day, although the number of palms was limited, and it was with pleasure that we spread air mattresses to sleep on the supple floor of split *Gronophyllum* trunks after our supper of tinned beef and local vegetables.

Morning mists make Wagau cool and damp and delayed access of a plane directed to meet us long enough so that we could pack and transport our gear and make an attempt to collect *Ptychococcus lepidotus* which grew in the bush beside the airstrip. Though only fruits and seedlings were obtained, there seemed no doubt of the identity of the *wakal* which is said to provide sturdy wood for spears. Thus loaded, we returned to Lae in only a few minutes instead of hours on foot over mountain ridges on which trees of *Gronophyllum chaunostachys* stand out like sentinels guarding the wilderness.

Returning to Lae with the knowledge that commitments in the Solomon Islands necessitated continuing onward only made the taste of New Guinea the more sweet, and strengthened not only the desire but the determination to return to this land of unusual palms.

The Solomon Islands

Dr. Timothy Whitmore, Forest Botanist at Honiara in the British Solomon Islands Protectorate, had invited me to visit the Solomons before I left the United States and during the trip arrangements had been worked out to permit a two-week survey of palms there. The plane for Honiara had been scheduled to leave early on the 17th of March, but did not get under way until noon, necessitating an unexpected overnight stop at Rabaul on New Britain where the Forestry representative, alerted by Mr. Womersley, waited to drive me to the Experiment Station at Kerevat. After



20. Even the largest palm can be reduced to size as demonstrated here with *Caryota*.

a brief visit there, we returned to Raubaul via Toma and collected *Licuala Lauterbachii*, a most attractive undergrowth palm, a variety of which was to appear in later collections from the Solomons.

We did get off the next morning in good time and with perfect weather. The smoking volcanos, crater lakes, and forests on Bougainville were closely visible as were the reefs, shallows, and deeps of the sea incredibly blue under the sun and framing islands, islets, and rocks, as we passed by Choiseul, over the New Georgia group and on into Honiara on Guadalcanal where the coral base of Henderson Field, once a familiar name in the news, serves as the airport.

Dr. and Mrs. Whitmore with their little daughter Katie met me and escorted me to their quarters in a modified quonset hut near the center of town.

There we lunched and discussed the full program that lay ahead. Tim had arranged passage to Santa Ysabel on a government boat which was to depart that night, so calls were made at the Forestry Office during the afternoon. By departure time, a heavy rain had started to come down which made for some scurrying in and out of landrovers and into the boat where Wendy, Katie and I filled the single cabin. Tim slept on a cot on deck outside the upper berth at my feet and our assistants — Ramu, Masu'u, Nakisi and Enalo — on the aft deck. Thus loaded we passed a stormy night but arose to find ourselves in quiet waters under a sunny sky approaching Tatamba Bay on the Bogotu Peninsula where we were to make the former District Officer's residence our headquarters. This was luxury indeed — beds in bedrooms, a kitchen, dining room, airy screened



21. Stems of *Cyrtostachys glauca* are left standing by the logging road.

porches, bath house and, toward the bay, one of the most magnificent views I've seen anywhere in the tropics.

Travel in the Solomons is largely by boat, for a majority of the inhabitants now live near the coast and inland trails are nearly nonexistent, at least on Santa Ysabel. Fortunately, we had the use of the launch Tevai, complete with boatswain and helper, for a week. Mornings we would wind out of the bay, past a coconut-fringed village, which in my mind's eye remains the epitomy of the



22. *Gulubia costata* grows in swampy areas near the Markham River.

"South Seas" starting back about 4:00 in the afternoon, laded with specimens and munching on a sandwich wet down with a thermos of tea. Morning had passed on our first day, March 19th, so it was after lunch when we boarded the Tevai for the short jaunt to a point one-half mile west of the Tatamba Pier. No sooner had we set foot on shore than we found a patch of *Strongylocaryum latius*, a very near relative of *Ptychosperma*. Nakisi climbed the slender grey-brown trunk to bring down leaves.

inflorescences in flower and fruit. The yellow-green flowers are very similar to those of *Ptychosperma* but the seed inside the orange-red fruit is not permanently grooved though extremely low ridges are present on the fresh seed.

Climbing up the ridge to the top where ultrabasic soils are present, we came upon *Gulubia Hombronii*, a solitary tree over 50 feet high with an expanded base, olive-green crownshaft tinged orange at the apex, and crown of leaves with light green pinnae directly upward from the main axis. Our first encounter with this species produced only trees in bud, the staminate flowers a beautiful rose against white inflorescence branches. Later we obtained open male flowers which are rose-pink with paler tips and fragrant with a suggestion of the May-flower of New England (*Epigaea repens*). Inflorescences in fruit were also obtained, the dull red fruits arranged in four precise rows along the branches. Our assistants, who came from the Island of Malaita, called this tree *Bulatari* in the Kwara'ae language and said that the trunks were split to make floor boards. This species is common and characteristic of ultra basic soils.

Our first full day took us again down the bay to Nangalao village where we scrambled through thick second growth to collect *Caryota Rumphiana*, known as *fufuri* or, on the Bogotu Peninsula, as *badha*. Higher on the ridge back of the village, we obtained *Licuala Lauterbachii* var. *bougainvillensis* in full fruit, the orange-red berries half an inch in diameter, more *Strongylocaryum latius*, *Heterospathe minor*, a solitary brown-trunked tree 15 feet high, and most exciting, what has proved to be a new species of the endemic genus *Rehero-phoenix* which is described elsewhere (page 93) as *R. subdisticha*. This tree



23. Inflorescences of *Gulubia* are swathed in bracts which drop to the ground when the inflorescence expands. The dried ones are sometimes used as containers.

was not abundant and we were fortunate in obtaining enough material to describe the species with flower and fruit.

On the 21st of March we landed in Tanagoba Harbor where the Longuhutu River enters the sea at the southeast corner of the Bogotu Peninsula. Here we had to use the launch's small boat to get up river to swamps where *Metroxylon salomonense* grows in some abundance. Some of the trees were in fruit which on maturity drops into the stinking mud, adding an unexpected ease to the search for material. The green to brownish-green fruits resemble baseballs with scales, being three inches high and a

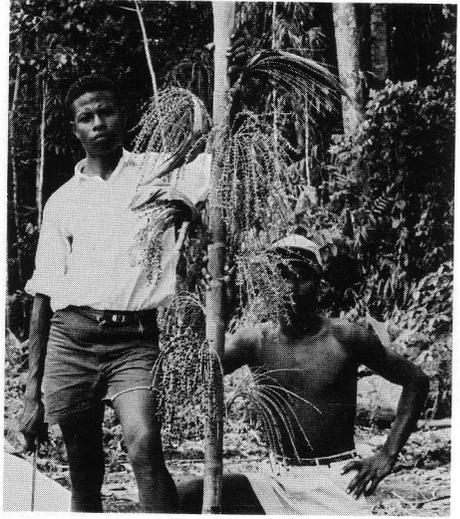


24. Male flowers of *Gulubia costata* form a distinctive overlapping pattern.



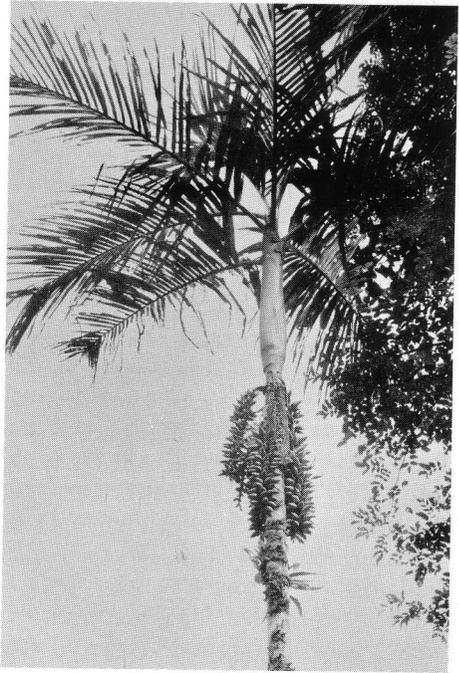
25. *Hydriastele* sp. forms clumps of slender stems in swampy forest.

little broader. Trunks of the species are armed with whorls and clusters of flat yellowish spines up to twenty inches long



26. Mature fruits of *Hydriastele* are clear currant-red to black; nearly all stages are present here.

on the older leaves. Also on the margins of the swamps we collected *Areca macrocalyx* and *Licuala Lauterbachii* var. *bou-*



27. An *Areca* near Wagau had leaves much more dissected than most. The fruit is a handsome orange.



28. The Noula, which took us to Santa Ysabel (left) and the Tevai (right) which served as transport about the Bogotu Peninsula.

gainvillensis again, the latter with straw-colored flowers.

Working near Tatamba on the 22nd, we walked from the shore to the first ridge on the mainland, opposite Horara village, where we were rewarded with a second species of *Gulubia*, *G. macrospadix* (p. 88), which is called *niniu* and which never grows on ultrabasic soils. Here we also saw stilt-rooted palms, never in flower or fruit, which belonged to the Tribe Clinostigmatae and probably to an undescribed genus if they are like those from Guadalcanal or Kolombangara. In fact, there appear to be two kinds, one called *manisilae* on Santa Ysabel and Kolombangara, the other called *garagara* on Guadalcanal.*

Ridges back of Koloajoa village at the head of the bay west of Tatamba

were our objective on the 23rd, a wet-tish day but rewarded by seeing *Licuala*, *Areca*, *Gulubia macrospadix*, and collecting a fine series of *Heterospatha Woodfordiana* which is known as *araramai*. This was especially satisfying, for the species appears to have been known heretofore only from some fruiting branches in the herbarium at Kew. It is a solitary slender brown-stemmed palm to twelve feet high with about ten spreading leaves. The new leaves are deep red, in handsome contrast to the very deep green mature leaves and brown or black-splotted sheaths. Erect inflorescences bear waxy or pinkish staminate flowers and at length bright red ellipsoid fruits half an inch long. If introduced seed survives, the species should make a fine addition to our ornamental palms.

Returning to Guadalcanal, after a nearly fruitless foray on the 24th, we posted seeds and did the innumerable

*This palm (*garagara*) has just been identified as a species of the genus *Physokentia* hitherto known only from the Fiji Islands and Vanua Lava in the New Hebrides. H.E.M.



29. Flowering trees of *Metroxylon salomonense* differ strikingly in appearance from *M. Sagu* (see Fig. 1).

necessary chores that follow on days in the field while planning for trips in the vicinity of Honiara. Geoffrey Dennis, Tim Whitmore and I with helpers set

out on the 27th to collect palms in gully forest a mile from the coast and a mile east of the White River headwaters. Here, not far from the Forest De-

partment Headquarters, we collected a *Strongylocaryum*, *Areca macrocalyx*, *Caryota Rumphiana*, a *Calamus*, and one of the most elegant palms I have seen, appropriately described as *Rhopaloblaste elegans* (page 94). As though an unknown species were not enough, this collection extends the range of the genus *Rhopaloblaste* from the Moluccas and New Guinea well into the Solomon Islands chain and we were later to see it in abundance in the forests at the headwaters of the Matinikau River where it grows with still another palm, the *garagara* (*Physokentia*) mentioned above.

Elsewhere near Honiara we collected another *Heterospatha* very much like *H. minor* from Santa Ysabel in disturbed forest at Mambulu (Mount Austen), *Metroxylon salomonense* in flower along the Matinikau River and in a swamp in grassland near Konga Road, *Metroxylon Sagu* apparently native. Sometimes planted, the species here is used for thatch, not sago and is said not to grow well except in very wet ground.

Departure for New Caledonia had been planned and materials packed when a typhoon disrupted air service between Honiara and Vila in the New Hebrides where one transfers for Noumea. Though the delay caused loss of time both in the Solomons and in New Caledonia, it did provide an opportunity for an afternoon and a morning of collecting on Efate where I had to spend a

night. A hired taxicab took me to the Blidiniere Estate near the airport where, coming in, I had seen *Veitchia* in abundance (as one also sees it near the airport at Santos on Espiritu Santo). With the help of a local boy, a tree was cut and complete specimens obtained which, on study, suggest that the species is very close to *V. Montgomeryana*, if, indeed, it is not that species which has been known only from cultivated plants. What is probably the same species is cultivated in parts of New Caledonia near Noumea where it would be accessible to travelers and might have been sent elsewhere on the assumption that it was *V. Joannis* with which *V. Montgomeryana* has been confused. More collecting is necessary in the New Hebrides, however, before the identity can be more than suggested.

A second palm on Efate, collected near Mele village where both planted and native, proves to be *Metroxylon Warburgii*, noteworthy for its stiff terminal inflorescence more like that of *M. Sagu* than that of *M. salomonense* but with pear-shaped brown scaly fruits several inches long and very bright yellow-green flowers with orange-yellow stamens which, in mass, attract attention from a distance. Also seen was a *Calamus* but always sterile so left for a future visit when hopefully two odd palms on Aneityum may also be obtained. On this trip, time in New Caledonia had been closely planned and that fascinating Island was the next goal.

New Palms from the Pacific

HAROLD E. MOORE, JR.

Several species of palms were collected during my visit in the Pacific Islands early in 1964 which appear to be undescribed. Not all have been

studied as yet but those of which I feel certain are described here. One is from New Guinea, two are from the Solomon Islands and one is from the Fiji Islands.