

Palm Hunting in Malaya's National Park

J. DRANSFIELD¹ AND T. C. WHITMORE²

To a palm hunter, Gunong Tahan is a mountain of great interest because of its two endemic palms, *Livistona tahanensis* and *Eugeissona brachystachys*, both described by H. N. Ridley after the classic ascent by himself and the zoologists Boden Kloss and Robinson in 1906. The mountain, 7,186 feet, is the highest in Malaya, a large rolling plateau surrounded by gleaming quartzite cliffs, and deeply incised to the south by the spectacular, deep Teku Gorge. Tahan is one of the most remote mountains in Malaya and is situated in the middle of Taman Negara, Malaya's National Park—a large area of more or less untouched forested country in the States of Pahang, Kelantan and Trengganu, with a rich fauna.

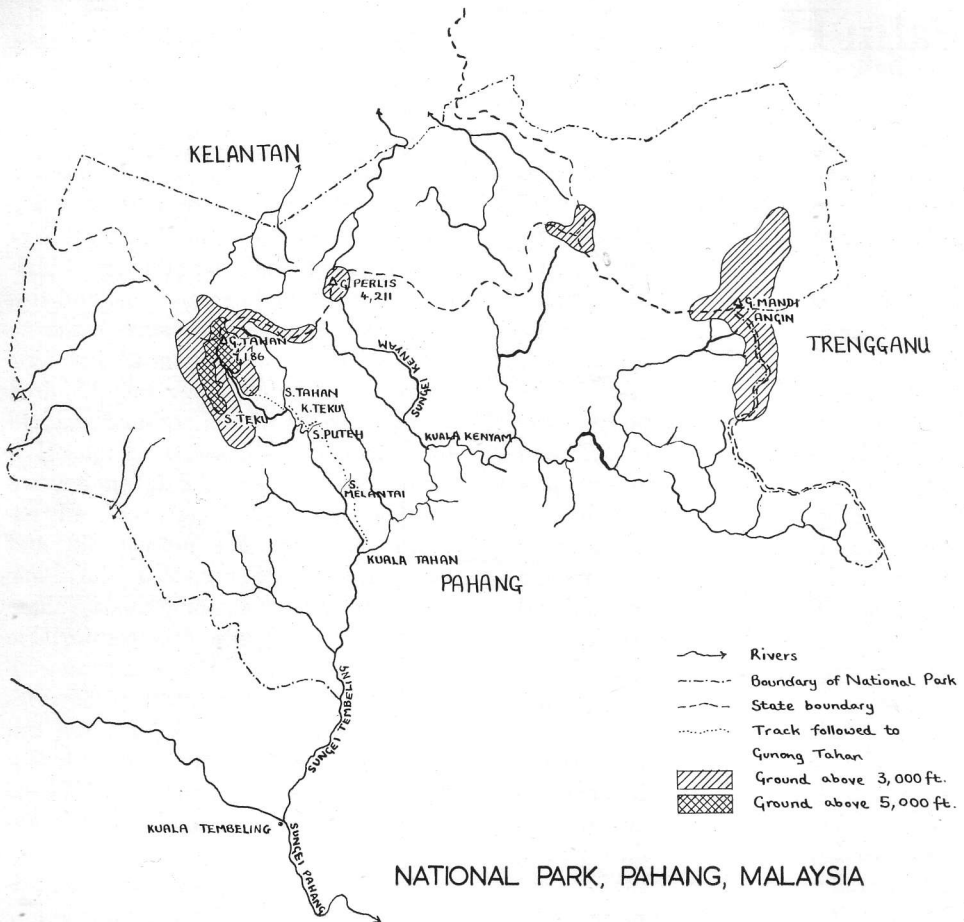
In February, 1968, we made an expedition to Gunong Tahan in order to collect *Livistona tahanensis* and *Eugeissona brachystachys* and other palms, and to study anew the so-called Tahan Woods at the foot of the mountain which are an important locality to Malayan botany. On February 15th we left the Forest Research Institute, Kepong, near Kuala Lumpur, with four aborigine tree climbers—Gerus, Gesak, Gi and Paling—and drove over the Main Range of Malaya into Pahang to Jerantut where we met Mohammed Shah of the Singapore Botanic Gardens, and then on to Kuala Tembeling, a village at the confluence of the great Pahang River and the Tembeling River. Here we were met by two park game rangers with a Malay

river boat driven by a powerful outboard motor. We were soon speeding up the Sungei Tembeling in a boat very heavily laden with food (Christmas puddings, steak puddings and tins and tins of curried chicken we soon came to dread) plant collecting gear and nine men—but not for long: one hundred yards upstream we ran aground and had to disembark to push the boat off a sandbank. No rain had fallen for two months and the rivers were all exceptionally low. We pushed off, and three hours later reached the Park headquarters at Kampong Kuala Tahan, where we stayed in a very comfortable rest-house for two nights while arranging for eight porters to carry food supplies and equipment the walk of three full days to Kuala Teku at the foot of Gunong Tahan, centre of the Tahan Woods and type locality of *Eugeissona brachystachys*.

We finally left the kampong early in the morning accompanied by one guide, two young apprentice rangers, eight porters, four tree climbers and Md. Shah, and were soon out of the scrub surrounding the village and into good forest, following up the Sungei Tahan. Palms in evidence included the very common wild sugar palm, *Arenga Westerhoutii*, *Calamus castaneus*, and the attractive *Arenga* sp. (*Didymosperma Hookerianum*), a small dark green palmlet not growing more than two feet tall, with pretty toothed leaflets and erect flower spikes. We made camp that evening at Sungei Melantai, a small river in a deep valley. Here *Oncosperma horridum* was abundant as clusters of small individuals on the hill slopes. The cab-

¹ The Botany School, Cambridge University, Cambridge, England.

² Forest Research Institute, Kepong, Selangor, Malaya.

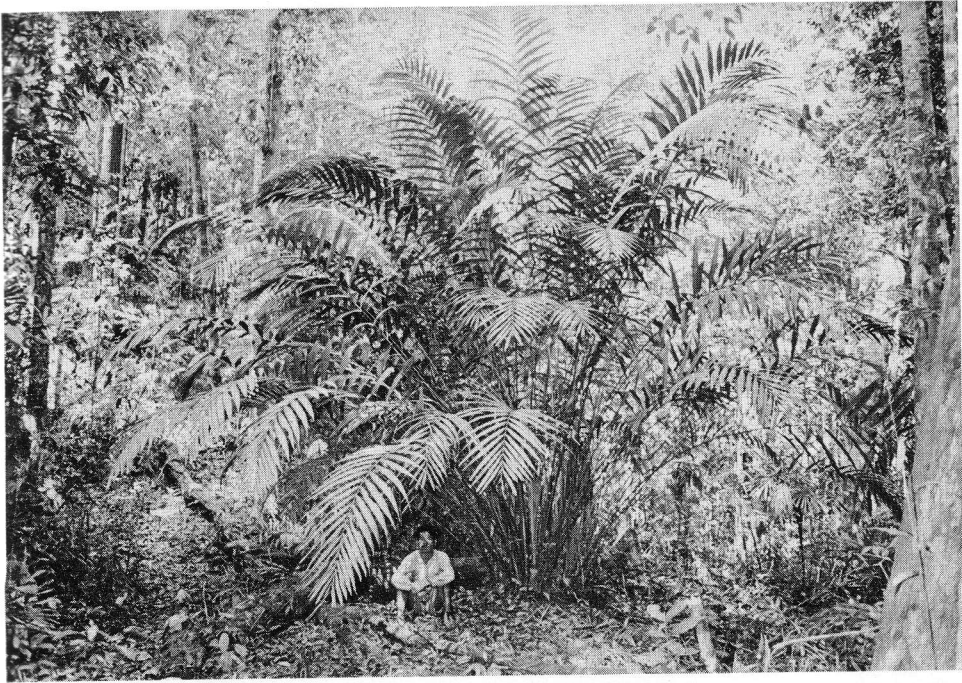


bage of this palm makes very good eating and successive expeditions up Gunung Tahan have robbed the forest of all the old specimens near the track.

Next day we set off on the most dreaded part of the walk to Gunung Tahan—a high waterless undulating ridge like a saw, with 27 teeth, each one steeper and higher than the one before. The traverse took all day, and proved to be almost too much for us; it was with relief that at about 4 P.M. we finally slithered down the last slope past *Salacca glabrescens* with bright crimson male flowers, and *Cornera Lobbiania* to Ulu Sungei Puteh, where we

made the second camp. *Cornera* is a very common and distinctive palm on valley slopes and is rather decorative with its yellowish spines and pure white lower leaf surface. Its fruit is covered with black scales and the flesh surrounding the seed is delicious, in taste reminiscent of the lychee.

The map we were following proved to be very inaccurate—the Sungei Puteh was marked two full miles further south than its actual position; this accounted for the surprisingly long second day, and made the third day a much easier day than we had expected. On the last day of the walk to Kuala Teku, we fol-

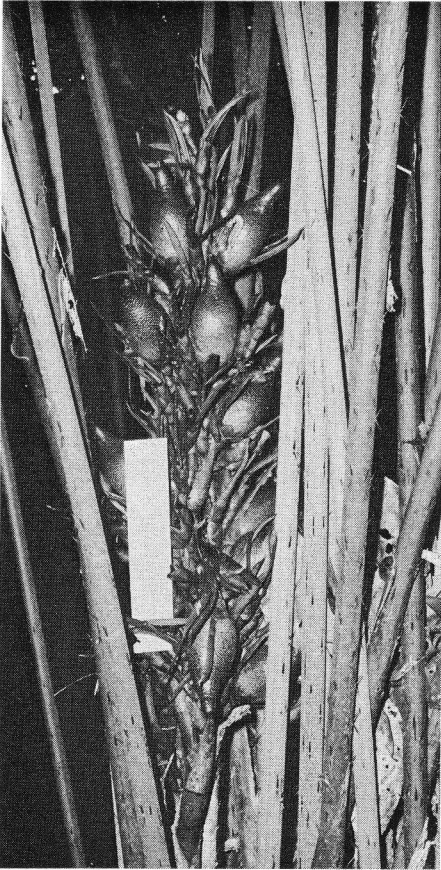


1. *Eugeissona brachystachys*. Gi sits under a fine clump on the trail to Gunong Tahan.

lowed the Sungei Puteh down to the Sungei Tahan, here a splendid rocky river full of rapids, lined with great *neram* trees (*Dipterocarpus oblongifolius*) leaning over the river and occasionally meeting overhead. The trees often have a rich epiphyte flora of such plants as *Cymbidium atropurpureum*, *Grammatophyllum speciosum*, *Psilotum complanatum*, *Lycopodium nummularifolium*, *Medinilla* spp, and a wealth of other plants. We followed up the Tahan, sometimes taking short cuts over small ridges, and it was on one of these that we first caught sight of the Tahan *bertam*, *Eugeissona brachystachys*, looking remarkably different from the common weedy *E. triste* which is found all over the west of Malaya but is known in the park from only one hillside. *Eugeissona brachystachys* is a stemless palm with beautiful leaves arching up to 25 feet.

The petiole and rachis are only sparsely spiny and are covered with hairs and peltate scales giving the rachis a mushroom pink tinge. The leaflets are broad and acuminate in a long drip-tip, and are of a lovely rich dark green. Vegetatively it makes a strong contrast to the dingy common *bertam*, *Eugeissona triste*. In flower, it is strikingly different—instead of the funereal dark brown flowers the flowers have shiny green petals of the same woody texture and the pollen is clear yellow as opposed to purply-brown. The curious egg-shaped fruits covered in minute scales are very similar to those of *bertam*. From Kuala Puteh north to Kuala Teku we found the Tahan *bertam* very common on hill slopes.

Climbing down one of the last hills we discovered a fine colony of *daun payong* or *koh* (umbrella leaf) *Johan-*



2. Close-up of the infructescence of *Eugeissona brachystachys*. Note the minutely scaly fruit, and the paucity of spines on the leaf rachis: 6-inch rule as scale.

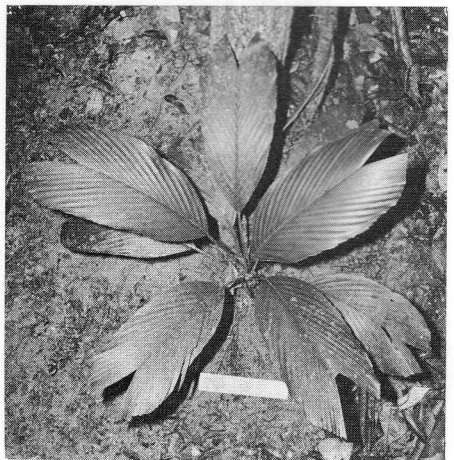
nesteijsmannia altifrons, that most regal of all Malayan palms, in old flower and young fruit. We later saw this palm in great abundance on the slopes of Gunong Tahan.

After losing our way for half an hour, we finally found Kuala Teku, the most idyllic camp site imaginable. All around us the great *neram* and *Tristania* trees soared, the rivers Teku and Tahan joined in a deep pool full of fine fish, and the sandstone rocks were lined with the delicate fern, *Dipteris Lobbiana*, forming a beautiful fringe to the river.

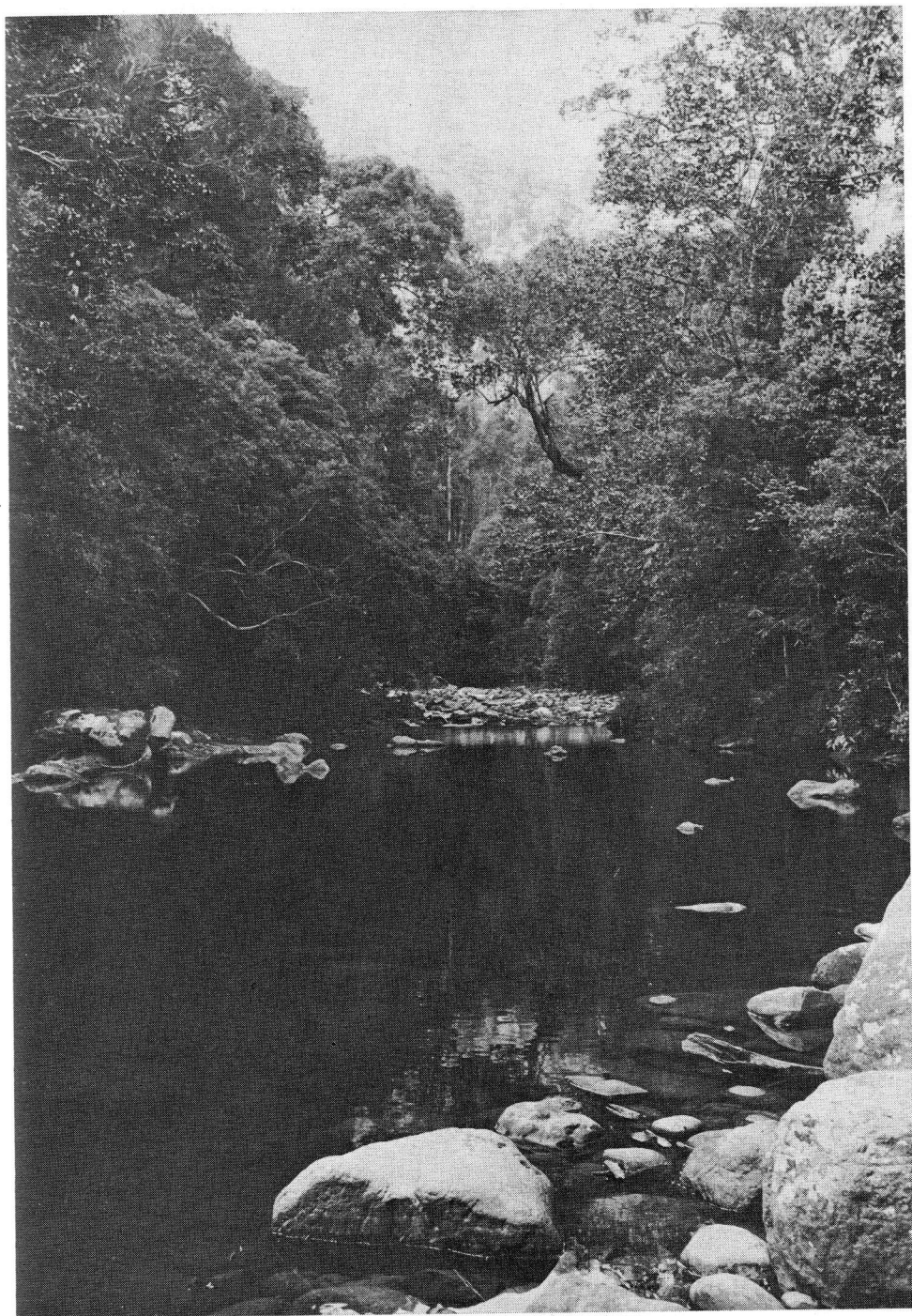


3. *Iguanura geonomaeformis*—broadly pinnate stemless form, Kuala Teku: 6-inch rule as scale.

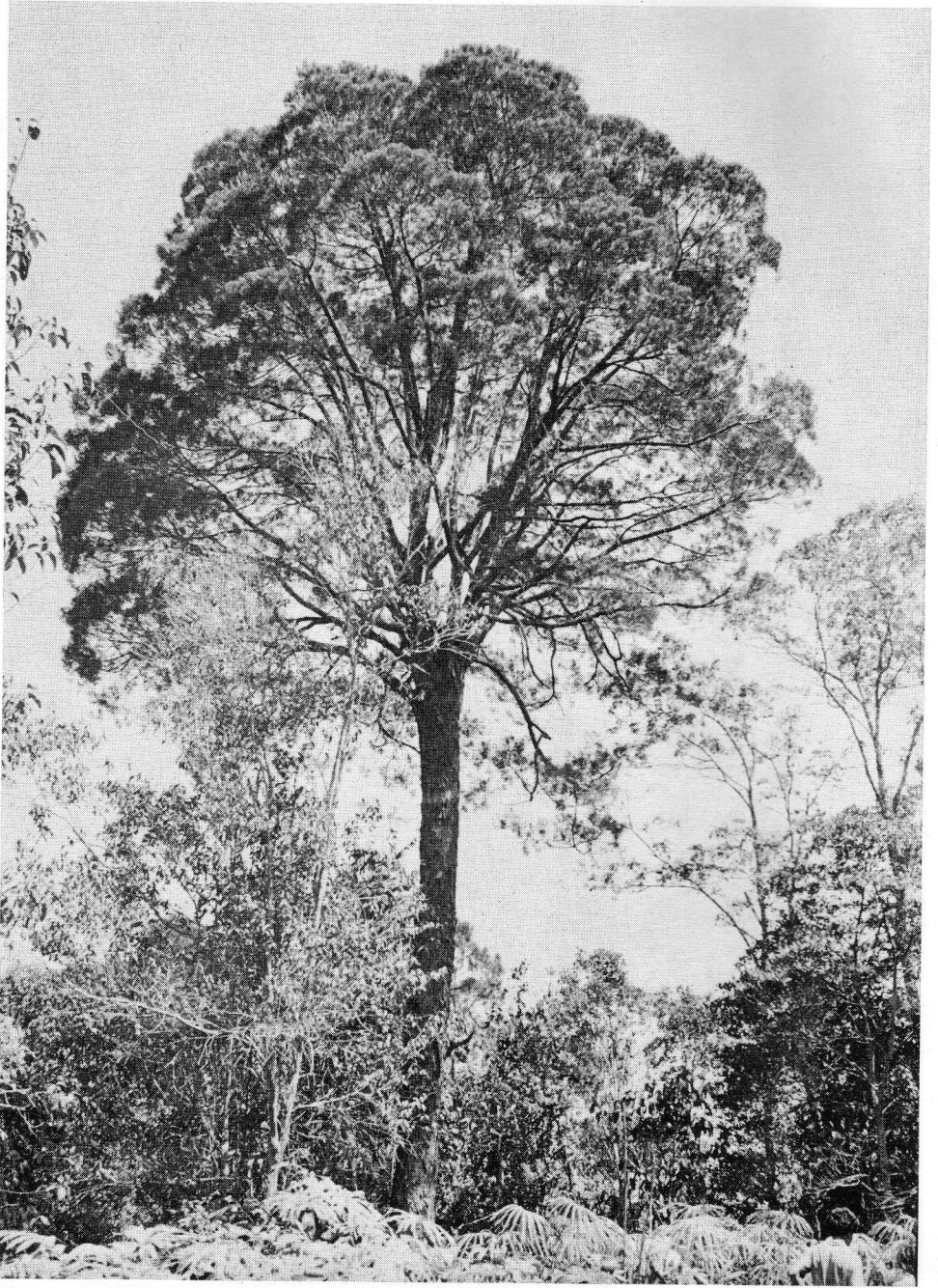
We planned to spend three days collecting around Kuala Teku, and then to shift camp partly to Wray's Camp at 3,000 feet at the lower limit of the



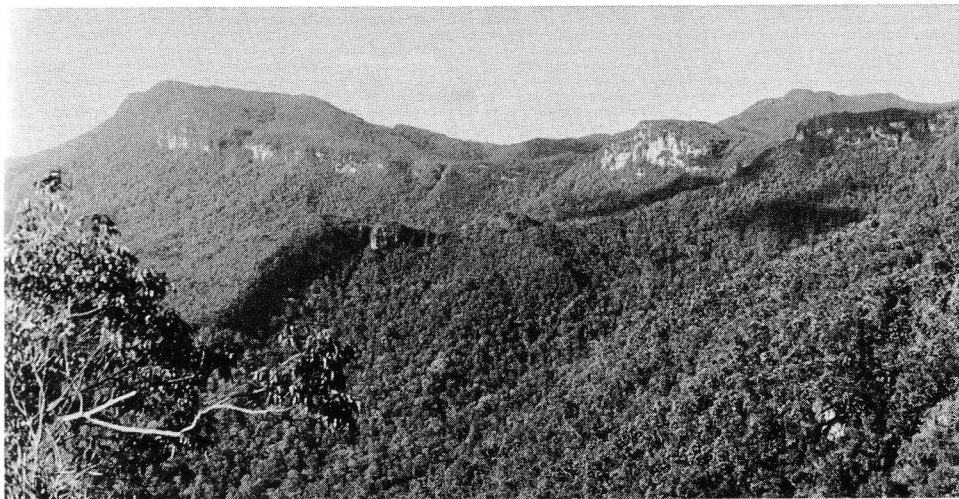
4. *Iguanura geonomaeformis*—entire-leaved stemless form, Kuala Teku: 6-inch rule as scale.



5. The Sungei Teku at Kuala Teku—our camp was on the right bank in the background. *Neram* trees lean over the river.



6. Wray's Camp, alt. 3,000 feet on Gunong Tahan, is graced by a beautiful old tree of *Dacrydium*: the mountain ferns *Matonia pectinata* and *Dipteris conjugata* below, and Paling as scale.



7. The view from Wray's Camp, over the slopes of the mountain—acres of *Livistona tahanensis* on the slopes below.

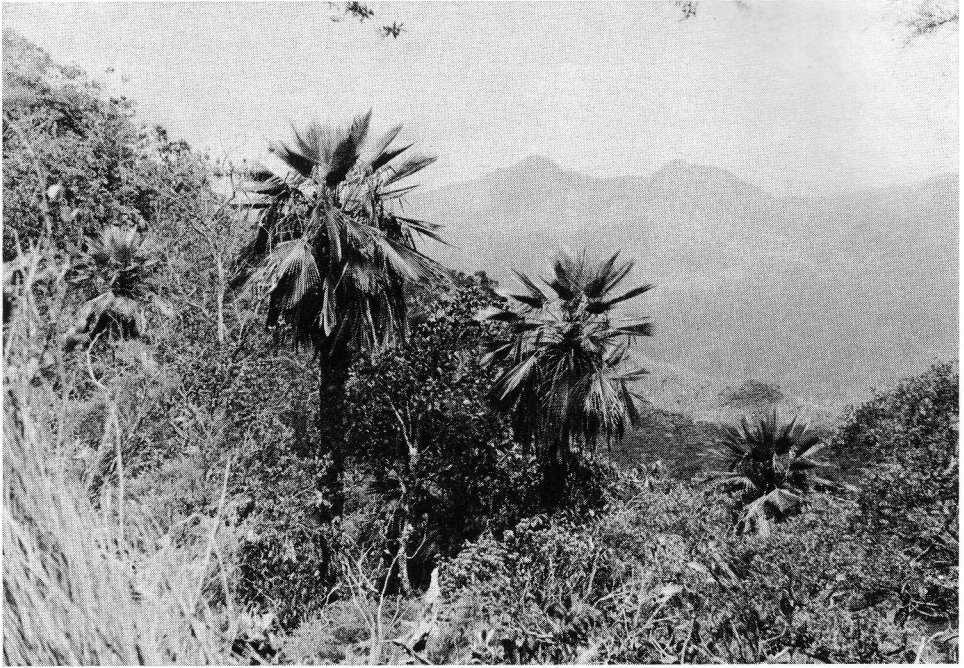


Upper Montane Forest, and then to work out from there collecting plants. The weather was superb—in fact, almost unprecedentedly good for expeditions up the mountain; we had only one half-hour shower the whole time we were in the Park—this kept at bay the leeches for which the Park is notorious.

Eugeissona brachystachys proved to be very abundant all around us at Kuala Teku, on steep hill slopes and ridgetops. Other common palms in the same habitat included *Licuala triphylla*, a very small *Licuala* with three- to five-partite leaves, the whole plant not more than 40 centimeters (16 inches) in height, *Licuala glabra*, a common rather variable species, *Pinanga disticha* common on slopes just above the river, the young leaves beautifully mottled with pale and dark green, and often flushed purple, and *P. simplicifrons*. Among the rattans we found *Calamus javensis* and *C. ramosissimus* and many species of *Dae-*

<

8. A fine *Livistona tahanensis* silhouetted. Note the stiff leaves.



9. A group of *Livistona tahanensis* in the mountain forest: Gunong Perlis in the background.

monorops. On the lower slopes and riverside alluvium was the decorative palmunculus *Iguanura geonomaeformis* which occurs in a wide range of forms: plants may produce fruit when they are stemless or not till they are trunked: leaves vary from entire through broadly pinnate with rhomboid leaflets to very finely pinnate. Every intermediate can exist between these extremes. The inflorescences are unbranched and arch out from amongst the leaves; fruit is white and fleshy when mature.

The walk up the ridge between the rivers to Wray's Camp only occupied half a day and so we were able to botanize as we went. The *Tahan bertam* was common up to about 2,000 feet and *Johannesteijsmannia altifrons* was very common locally up to 2,900 feet, a remarkably high record for this palm. At 2,900 feet it grows in Lower Montane Forest with *Dacrydium*, the ferns *Matonia*

pectinata and *Dipteris conjugata*, and many typically montane plants. As yet we could see no sign of the *Livistona*. When we reached Wray's Camp we came suddenly out into Upper Montane Forest, here very low for Malaya, and there, stretching for miles ahead of us, we could see the massif of Gunong Tahan with gleaming quartzite cliffs and stunted twisted montane forest through which emerged the crowns of *Livistona tahanensis* in extraordinary abundance—thousands upon thousands glittering in the sunshine as the wind blew over the mountain. We were soon out in the mountain forest collecting plants. *Livistona tahanensis* is found on Tahan up to about 5,000 feet. It reaches about 20 feet in height with a skirt of dead leaves in which grow epiphytic rhododendrons, medinillas, orchids, and ferns in profusion. The leaves are stiff and slightly glaucous and the flowers a rich golden



10. A gully filled with *Pinanga polymorpha*. Cerus as scale.

yellow in sprays. The fruits are shiny green. As the sun set that night, the mountainside flushed pink and mauve and the livistonas silhouetted against a pearly sky made an unforgettably beautiful sight.

Wray's Camp, perched on an exposed ridge-top proved to be windy and rather chilly, and we were very thankful the weather was clear. Even so we were grateful for the leaves of *Johannesteijsmannia* which made excellent wind shields and supplemented our rather flimsy polythene sheet tent. The peaty soil on which we were camping was so dry after the drought that the tree climbers set fire to the peat while they were cooking the rice one evening—a minor panic ensued in which we had visions of our tents, plants and the whole mountain top going up in flames, but we managed to extinguish the fire before it spread.

Palms are not common in the Upper Montane Forest, the *Livistona*, *Pinanga polymorpha*, and a few rattans being the only species noted by us. We found one gully filled with a sward of the decorative *Pinanga polymorpha* which, like many *Pinanga* species, has shiny black fruit borne on a pink axis. Among the rattans was the giant mountain rattan, *Plectocomia Griffithii*—unfortunately long past flowering and only with rotten fruit. This palm, the most massive rattan in Malay, is monocarpic, and many dying palms seemed to suggest that it flowers gregariously on Gunong Tahan. Some young plants showed signs of being mauled by elephant, which are partial to the sweet palm cabbage. Our guide told us that one particular elephant with regular habits goes rattan eating on Gunong Tahan every year—we followed its tracks and piles of old dung all the way up the ridge from Kuala



11. The great mountain rattan *Plectocomia Griffithii*.



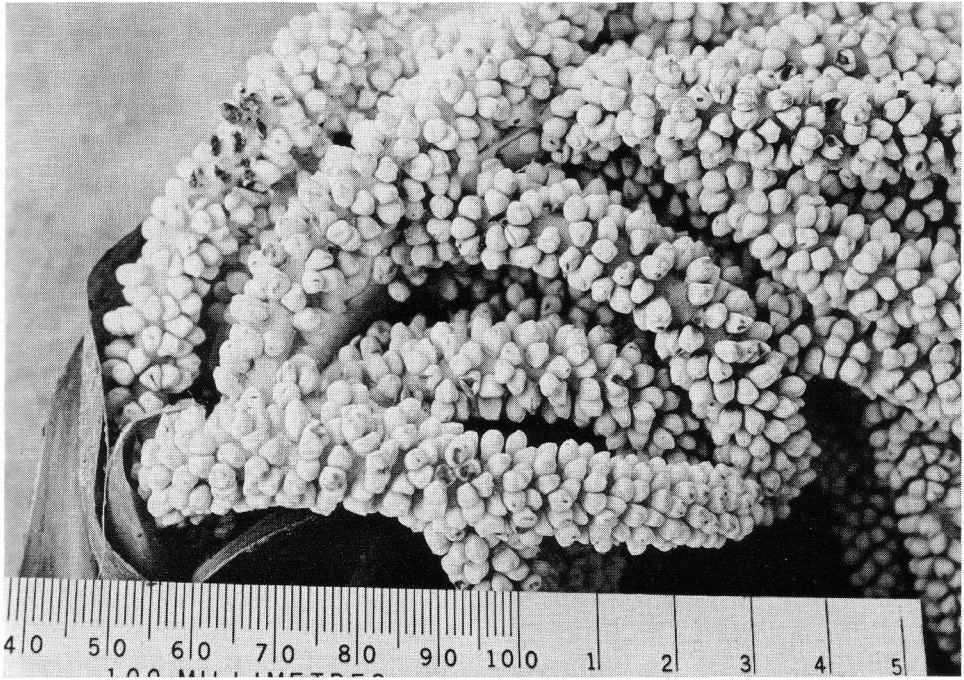
12. *Daemonorops angustifolius* at Kuala Kenyam, a common riverside species.



13. Gi dwarfed by a fine old plant of *Johannesteijsmannia altifrons* near Kuala Kenyam.

Teku to Wray's Camp and beyond. It is difficult to imagine how the elephant manages to extricate the palm cabbage from inside the leaf sheaths which are

covered in a formidable array of spines. *Calamus oreophilus* was abundant along the ridge-tops scrambling over the small trees of *Leptospermum* and *Baekia*.



14. The milky white flowers of *Johannesteijsmannia altifrons*.

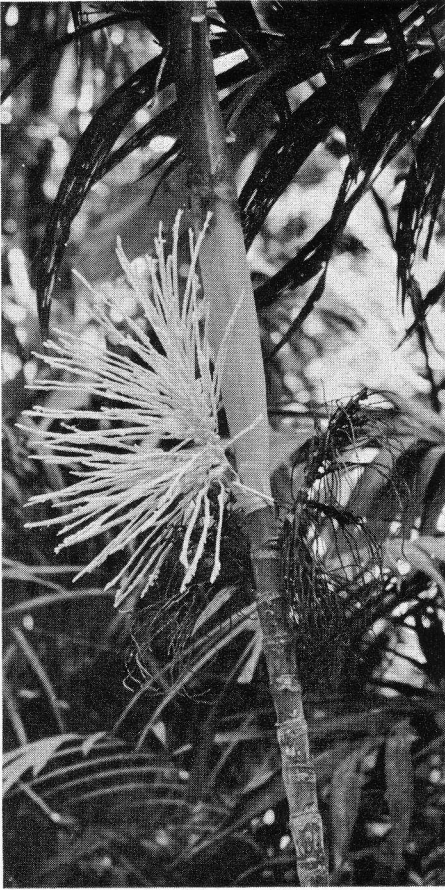
This is a very slender rattan with dark green leaflets arranged in fanlike groups along the rachis; the leaf bases are armed with short spines neatly marked with black, and the long pendulous inflorescences curve out from the stem.

Attractive herbs are abundant in the Upper Montane Forest of Gunong Tahan. *Gentiana malayana*, a small pale blue gentian, *Burmannia disticha*, with mauve flowers tipped with yellow, *Nepenthes gracillima* with white pitchers, and *N. sanguinea* with dark red-flecked pitchers, and small purple-flowered utricularias were particularly abundant. Orchids festooned the trees of *Leptospermum* and *Baekia* and some extremely bizarre mistletoes were conspicuous with flaming orange and crimson flowers.

We worked the middle slopes (3,000–5,000 feet) of the mountain for two days and then returned to the camp at Kuala Teku, where we rested for a day

and then began the long slog back to Kuala Tahan along the Sungei Tahan and the interminable undulating ridge. Twelve days after leaving Kuala Tahan we arrived back at Kuala Tahan feeling thoroughly tired and found two days rest at the Park headquarters most welcome.

The second part of our stay in the National Park was partly sabotaged by the very low water in all the rivers—we had hoped to work our way right to the headwaters of the Sungei Tembeling to the borders of Trengganu, but we only just managed to reach Kuala Kenyam on the Tembeling river after pushing the boats over shallow rapids. We set up camp on the alluvial flats just above the Sungei Kenyam near to the confluence of the Kenyam and the Tembeling—certainly not such a beautiful camp site as Kuala Teku, but nevertheless very pleasant. This camp was mem-



15. *Areca triandra* in full flower near Kuala Kenyam.

orable for the mosquitoes, tiger tracks found on the river sand near the tents early one morning, and a false alarm for a crocodile which metamorphosed into a monitor lizard by the time we reached the river bank. We spent five days here working the lowlands and hill slopes. In the forest on low-lying ground near the river, palms were very abundant, particularly a very spiny *Salacca*, differing slightly from *S. glabrescens*, *Iguanura geonomaeformis* and *I. Wallichiana* in every conceivable variant, *Cornera Lobbiana* and *Arenga* sp. (*Didymosperma Hookerianum*). By the

riverside *rotan ayer* (water rattan), *Daemonorops angustifolius*, often formed an impenetrable hedge. In one swamp we found a colony of *Pholidocarpus macrocarpus*, the largest coryphoid palm in Malaya. The colony consisted entirely of young trunkless individuals with gigantic windmill leaves on 15-foot petioles striped with yellow, and armed with massive thorns. We could find no mature plants nor the remains of any dead ones. How the large, heavy fruits six inches in diameter could have reached this isolated swamp is a mystery. More rarely, we found the giant rattan *Calamus erectus* var. *horridus*, *Daemonorops verticillaris*, with its tunnels of spines filled with biting ants, and *D. grandis*, *Pinanga simplicifrons* and the elegant *P. limosa*.

We had been told by negrito aborigines of the occurrence of *Johannes-teijsmannia altifrons* on a hillside near our camp site and we spent one day looking for it. It proved to be locally common on one ridge (Bukit Koh), and absent from the surrounding hills. Growing with it was a group of the decorative palm *Areca triandra*, with bunches of citrus-scented flowers and cherry-red ripe fruit. The leaves of this palm are very variable varying from finely-pinnate to broadly pinnate with rhomboid leaflets to entire. On the return to camp we found scattered individuals of *Nenga pumila* an arecoid palm with brick-red fruit, and a solitary *Orania sylvicola*, a rare palm in the National Park though abundant elsewhere in Malaya.

We reluctantly returned to Kuala Tahan, and on the night before we left were lucky enough to see a herd of eight *seladang*, (wild cattle), including one calf, in a patch of cleared forest just behind the rest-house. As we left the following morning, rain began to fall for the first time in almost three months.



16. *Oncosperma horridum*—a fine clump of this spiny palm near K. Tahan.

We are surely among the few visitors to the Park who have not had to complain of rain and swarms of leeches.

The National Park is readily accessible from Kuala Lumpur, the Federal Capital, and its rich and varied palm flora is by no means completely known.

ACKNOWLEDGEMENTS

Our thanks are due to the Game Department of Malaya for help in or-

ganising the visit, and to all the cheerful porters, tree-climbers and guides, who above all helped to prevent spirits from flagging on the long trek to Gunong Tahan.

GLOSSARY

Bukit—hill

Gunong—mountain

Kuala—confluence of two rivers

Sungei—river

CHECK LIST OF THE PALMS FOUND BY DRANSFIELD AND WHITMORE IN TAMAN NEGARA

Arecoideae

Areca triandra

Iguanura geonomaeformis

I. Wallichiana

Nenga pumila

Oncosperma horridum

Orania sylvicola

Pinanga disticha

P. limosa

P. malaiana

P. polymorpha

P. simplicifrons

Caryotoideae

Arenga sp. (*Didymosperma Hookerianum*)

A. Westerhoutii

Caryota mitis

Cocoideae

Cocos nucifera

Coryphoideae

Johannesteijsmannia altifrons

Licuala glabra

L. triphylla

L. acutifida

Livistona tahanensis

Pholidocarpus macrocarpus

Lepidocaryoideae

Calamus castaneus

C. erectus var. *horridus*

C. javensis

C. oreophilus

C. ramosissimus

Cornera Lobbiana

Daemonorops angustifolius

D. grandis

D. verticillaris

Eugeissona brachystachys

E. triste

Korthalsia spp.

Plectocomia Griffithii

Salacca glabrescens