

## V. EXPEDITIONS AND OTHER EXPLORATION

*(continued from page 2167)*

### I n d i a

The Botanical Survey of India is conducting field work in the districts of Kameng, Subansiri, and Lohit in NE. India, the western Himalayas, and the Andamans & Nicobars.

During 1970-1973, field work in Goa by the Botanical Survey of India resulted in about 1500 specimens, 400 of them woody.

### M a d a g a s c a r

Dr. A. G e n t r y of Missouri collected in the mountains in the N; climbed the Tsaratana Massif, the highest of the island. The same issue of Mo. Bot. Gard. Bull. 3(7) (Sept. 1974) 5, 10 mentions a visit by Dr. M. C r o s b y, also of Missouri, of 6 weeks in 1972 to collect mosses.

### T h a i l a n d

Mr. Robert G e e s i n k (born 1945, educated at Leiden, M.Sc. 1971, then in the service of the Netherlands University Foundation For International Cooperation in a project on the Flora of Thailand; see pages 2160-2161) made another trip, this time accompanied by Mr. T. A. H a t t i n k who, however, did not collect in his own name. The tour was in collaboration with the BKF-Herbarium, field work took place between 20 April and 27 June. Visited were the Peninsula, SE., Central, and NE. Thailand. Various persons accompanied the trips. Numbers amount to 1100, mostly in 8 sets. Report to be published in Nat. Hist. Bull. Siam Soc.

Professor Kai L a r s e n and Mrs. Supee S. Larsen of Aarhus during 1974 collected about 3000 numbers all over Thailand.

### I n d o - C h i n a

Laos. Dr. J. E. V i d a l of Paris visited for one month in 1974 an artificial lake in the Nam Ngum River 80 km N of Vientiane. Hydrilla verticillata was about the only aquatic

species; c. 250 collections were taken in the surrounding dipterocarp forest (rather run down, with 5 species of bamboo).

### S u m a t r a

In February 1974 Dr. J. D r a n s f i e l d and party botanized in West Sumatra, visiting the gorge of Sg. Kuantan near Muaro, Sijunjung area with interesting limestone vegetation, Air Sirah above Padang, where a tiny Pinanga was found with stems 40 by 0.4 cm, and further to the South, between Tapan and Sungei Penuh, one of the richest palm areas of the island.

During his 3-year stay in the Gunung Leuser Reserves (see page 2185) Mr. H. D. R i j k s e n collected 100-150 numbers of plants that he saw orang utans take for food. These plants (mostly unicates) have been deposited at the Rijksherbarium, where Dr. W.J.J.O. de Wilde will identify, number, and label them and prepare a list of the names.

Mr. B. K. M a l o n e y, Dept. of Geography, University of Hull, U.K., worked between 28-IX-1973 and 1-II-1974 S of Lake Toba, mainly in the Siborongborong area, ecologically on lake and peat-swamp sites. Cores were taken of 8-10 m long, for the study of micro-fossils to assess man's influence on the vegetation. In 31 ecological plots 20 by 20 m soils were described. A total of 378 plant numbers were taken, in 6 sets, for BO, L, K (ferns to BM) and A. Further results are to be presented in a Ph.D. thesis at Hull, late in 1975.

Dr. N. S t e i n, a German for 3 years in Malaya, till March 1975, has made eco-geographical studies in the Batak Lands, N. Sumatra, to result in a thesis.

### M a l a y a

In May 1974 a party of Kuala Lumpur explored Pulau Tioman, going all over the island. E. S o e p a d m o took 150 numbers, B. C. S t o n e 154 numbers, D. W. L e e over 100, and the Botany Honours Class over 100. It is intended to publish a report of the results.

### J a v a

The region SW of Bogor has always been a temptation to botanists for the richness of what was known of its primary forests, and the difficulty to get there, since the area is thinly populated and shrouded in superstition, so nobody wanted to come along. However, Dr. J. D r a n s f i e l d and Mr. Gregory G a r n a d i H a m b a l i from the Bogor

Herbarium accompanied by a few others, succeeded in making a reconnaissance on two brief trips in May and September 1974.

By jeep they went from Bogor S, past Cicurug, then at Pameungpeuk turned W, continuing on a bad road (but in the process of being improved, which highly increases the threat to the forests), which after 2½ hours from Bogor ends at Pameungpeuk. From there, trails go in various southerly and westerly directions, said to stretch for 3 days' walk through country where the shy, little known Badui tribe lives. From Pameungpeuk to the SW, the first top is G. Pareang (c. 1500 m), the second is G. Halimun (1750 m). There are some abandoned plantations, some shifting cultivation is done, but essentially the area is under primary forest.

From Dransfield's letter on G. Pareang: "The top consists of tall fagaceous forest with very deep humus and a very poor and homogeneous ground flora, with as monocots Cryptostylis arachnites (Orchidaceae), Pinanga kuhlilii and the rattans Calamus heteroideus and C. melanoloma (Palmae), Freycinetia spp. (Pandanaeae), and dicots Sonerila tenuifolia (Melastomataceae) and Argostemma montanum (Rubiaceae). It was very wet, dripping moss everywhere even though a predominantly dry day. These hills pull down the clouds, even more so than Mt. Salak seems to do. On the way down we took a different route and hit some fantastic untouched forest with 60 m trees: rasamala, Fagaceae, laurels, &c. — very little in flower. Interesting plants here were Caryota rumphiana and the rattan Calamus rhomboideus (Palmae), mosses of the orchids Bulbophyllum ovalifolium and B. violaceum in full flower, Galeola javanica, Habenaria salaccana (gorgeous, with huge spur), all Orchids, and Euchresta (Papilionaceae). We suddenly came out into a great wasteland of ladang planted with Agathis ('Tumpang sari'; villagers make a ladang, here I think in an old plantation, after logging, to plant hill rice &c. at the same time as looking after seedlings planted by Forestry). Through this and then back through a plantation to the Forestry Police house (excellent accommodation and very hospitable people).

On the last day we went up a ridge nearer to Pameungpeuk where the forest in structure was so reminiscent of that in Bohorok (on the Medan side of the Gunung Leuser Reserve in N. Sumatra) that it was difficult to believe we were less than three hours from Bogor. Quite glorious forest with huge trees; again very little in flower (in May, this was). Tremendous old trees of Quercus with coppice habit untouched, and with quaint rotting centre, immense Altingia excelsa (Hamamelidaceae) or rasamala, some huge Eugenia (Myrtaceae), Helicia (Proteaceae), Polyosma (Saxifragaceae) — it would all be superb in a flowering period with a supernaturally good tree climber. Plants of interest include Cordyceps and

the super fungus Calostoma orirubrum; the pteridophytes Lecanopteris and Ophioglossum pendulum; the conifer Podocarpus blumeana; the monocots Bulbophyllum binnendijkii, Coelogyne carnea, Cymbidium ensifolium, Taenia speciosa (all orchids), 7 Smilax spp. (Liliaceae), Nenga pumila (Palmae) and the dicot Macrosolen formosana (Loranthaceae). In such forest, we felt helpless even with Gregory who is a good tree climber, however few of the big trees were flowering. We heard gibbons three times. Palms were here disappointing; I think probably better elsewhere in the area. We returned to Bogor in the late afternoon with the jeep bulging with plants. What can you do in three days in such a huge area? But at least we now know how good it is.

There is so much forest that obviously the Forest Department have their eyes on the huge rasamalas &c. I'm very much afraid that some of the nearer areas will be exploited soon - indeed we saw fresh marks on trees for felling. There is a huge mass left. I do think Nature Conservation should get in there as soon as possible and try to claim some. It still must be superb further in. You can walk for three days to Rangkasbitung, two days to Cikotok, one day to Pelabuhan Ratu".

On the second trip, Mt. Halimun was visited. "Again the orchids quite unbelievably rich, e.g. Bulbophyllum angustifolium, B. binnendijkii, B. scotiifolium, B. triflorum, B. undeciflorum, B. violaceum, Dendrochilum raciborskii, Habenaria salaccensis, &c., an enormous number in all and including many things described in Flora of Java as little known or very rare. Obviously the whole Halimun area deserves intensive collecting now, and it is most gratifying to see the tremendous enthusiasm of H a m b a l i for collecting there. The area of course is in danger from logging, especially as the road recently has been upgraded. I think it of paramount importance that this area should be designated a Nature reserve. It would be of much greater value to pour in resources for the conservation of this area rather than to dissipate them on small almost defunct reserves!"

Dr. J. D r a n s f i e l d also collected S of Bandung near Cibarengkok: "Large area of superb hill forest with rich orchid and palm flora including an undescribed Daemonorops collected long ago by Backer S of Tasikmalaya and never again until this year."

At G. Karang near Cibeber, also West Java, "Phalaenopsis javanica was re-found by Dedy Darnaedi of the Bogor Herbarium; following this several day trips were made to this fascinating hill with Corybas pictus var. karangensis in great abundance. Ceratolobus concolor, Calamus rhomboideus, and Pinanga javana, all very rare in Java, are found here. This magnificent little hill which owes its survival to the

presence of a 'kramat' on the summit is in great danger, from cutting of the forest by villagers."

## B o r n e o

Sarawak. The SAR-Herbarium at Kuching kindly communicated the following items:

(i) A botanical team visited the proposed Pelagus National Park, Ulu Kapit in the 4th Division from 10 to 24 September 1973. The park covers an area of 2000 ha with the highest peak (Bkt. Wong) rising to 1,066 ft. A vegetation study of the park was made at the request of the National Parks Officer, and 224 numbers collected.

(ii) Collecting trip to Lanjak-Entimau P.F., in 2nd Division (4 to 26 March 1974). This was the first exploration to the area, and a few rare and interesting plants were collected, 441 numbers in all. This is probably one of the few areas in Sarawak where Orang utans are found; nests were seen.

(iii) The Gunong Pueh trip in 1st Division (10 June to 2 July 1974); the 2nd visit. The vegetation is mainly kerangas (heath). The highest peak in the region rises to 4,200 ft. Collected were 236 numbers including 41 ethnobotanical items.

(iv) Trip to Gunong Gading in 1st Division from 17 Sept. to 7 Oct. 1974; the 2nd visit. The total number of collections was 257; a flower of Rafflesia tuanmudae, 2½ ft across, was taken.

(v) The first major botanical expedition in 1974 was to the Dulit Range and Merurong Plateau in the 4th Division, from 29 July to 13 Sept. 1974. The lower Range is dominated by rich mixed Dipterocarp forest; poor mossy kerangas (heath) forest is higher up. Some big Agathis borneensis occur. There is no mossy kerangas vegetation in Merurong Plateau but the M.D.F. is better stocked with bigger trees and more Dipterocarp species.

Duplicates collected from all the above trips were distributed to herbaria in Leiden (L), Kew (K), Kepong (KEP), Bogor (BO), Singapore (SING), Sandakan (SAN), and the Missouri Botanic Gardens (MO).

Mr. D. M a b b e r l e y of Oxford paid a short visit to Sarawak in April 1974, to collect Chisocheton on some short trips.

Kalimantan. In June 1974, Dr. J. D r a n s f i e l d did little collecting near Banjarmasin, finding Philydrum lanuginosum in great profusion, a new record for the island. Another curiosity was the use of a species of Linostoma (Thymel.) as a female contraceptive. In August he visited a logging camp near Balikpapan, observed 65 palm species with many nov-

elties, including Caryota no, Calamus spectatissimus, and abundant Borassodendron borneense.

## P h i l i p p i n e s

Luzon. Mr. H. G. G u t i e r r e z of Manila, together with Mr. Ernesto J. R e y n o s o and Mr. Wilfredo V e n - d i v i l collected marine algae at Siquijor I. from February to March 1974, and at Casiguran in April, in connection with inventory-taking of economic algae of the country.

Mr. Domingo A. M a d u l i d, assisted by Mr. Francisco d e l a C r u z collected about 200 numbers on Mt. Manleluag, Mangatarem, Pangasinan prov., in February and March 1974, mostly in 5 sets, taking down the vernacular names for the 'Dictionary of Philippine Plant Names'. For the same purpose, another trip was taken to Mt. Mayon, Albay, and in the Bicol National Park.

Dr. Romualdo d e l R o s a r i o collected mosses in the National Botanic Gardens at Real, Quezon, in connection with his 'Moss Flora of the National Botanic Gardens'.

Leyte under-collected. In the Cyclopaedia of Collectors, this island was assigned a density index of 164 specimens on an average of 100 sq.km. This figure, however, was found to rest on an error; the actual figure being close to 1800, which would make an actual density index of 25. This is nearly twice as much as that of neighbouring Samar, but first, Samar is twice as large as Leyte; second, collections from Samar might have been under-estimated; third, most material collected in Leyte is from low altitudes, while Leyte has about 50 peaks of over 1000 m (the highest about 1350 m), and Samar is low. The mountains of Leyte are botanically still much terra incognita. Material from them would be welcome.

## M o l u c c a s

Mr. E. F. d e V o g e l of Leiden University accompanied by Mr. M o c h t a r of Herbarium Bogoriense and Mr. A g u s w a r a of Kebun Raya, Bogor, supported by grants from NUFFIC, Greshoff's Rumphius Fund, Treub Maatschappij and from Missouri Botanic Gardens, made a collecting trip in the Northern Moluccas. Most of the work was done in the central parts of Halmaheira. The party left Bogor 17 September 1974, and returned 15 December. They went by air to Ternate, to which they returned after each trip for restocking and for dispatching the collections (over 1000 kg) by air. During a short stop in Dodinga while waiting for the boat to Ekor collections were made in disturbed forest.

Ekor on the S. side of the bay of Kao was the next site

visited. A magnificent forest on the alluvial flat under fresh water in the wet season, in some places containing up to 50% Palms, and three low hills were sampled.

The second trip went to Mt. Sahu near Susupu, where camp was made at 500 m alt. Here 93 collections were made. Due to unwillingness of the guide (danger because of snakes up to 20 m long) the top could not be reached, and after 5 days the party shifted to Mt. Jailolo, where camp was made at the fringe of the forest at 250 m alt. 137 collections were made from 150 m alt. up to the summit at 1000 m. Both mountains are of volcanic origin with very porous soil. Streams are not present, rain water was just enough for drinking and cooking, so that the party had only one bath in 12 days.

Next was proceeded to the island of Bacan (formerly Batjan), where Mt. Sibela was climbed from Waiaua, said to be the only easy way up. Camp was made at 900 m, from here the ridge was worked up to the top, on the map 2100 m, according to the altimeter only 1500 m. At 1100 m a flat area with peaty soil covered with sterile sedges, with a *Paphiopedilum* and a *Burmannia* common, the forest rather low and open. At 1150 and 1250 m two small lakes were found, unfortunately they were dry and without vegetation save one Composite. A third lake, said to be richer in plants, was missed by the guide. From here the ridge ascends slowly to 1500 m, with forest to 30 m high. Little in flower or fruit. The top was reached after a steep climb of 80 m, the trees here crooked and up to 25 m, forming an open forest, the soil and the bases of the trunks covered with moss and ferns, especially *Hymenophyllaceae*, were common.

After 6 days collecting, resulting in 187 numbers, the camp was moved to 250 m, where five days collections were made in tall primary forest. A rich harvest of 103 collections, mainly of trees, was taken. The entire mountain consists of grey schists.

One day was spent on the alluvial flat near Waiaua, five days in Amasing Kali on dry low hills up to 200 m alt., resp. 32 and 137 numbers.

From Bacan was proceeded to the island of Obi, the first place to collect there was Mt. Batu Putih near Anggai, where camp was made at 500 m. From 550 m upwards the bedrock consists of limestone, covered with a thin mat of roots and dead leaves, downwards the soil is clayey, under undisturbed forest from 200 m up. In total 231 collections were taken. In the lower regions much white meranti, from 350 m upwards much red meranti, sometimes with a diameter of 2 m or more. Four logging companies work the area, with licences for meranti only. The area is dangerous because of small, but deadly poisonous snakes; one of the porters was bitten, fortunately only in the sole of his shoe.

Jikodolong on Obi is situated on red, clayey, nickel containing soil which is very porous and dry, and liable to burn. 145 collections were made in the disturbed parts on the hills, on the alluvial flat, and on a hill with an underground of stones covered with a mat of roots and dead leaves. The latter biotope contained a peculiar low forest up to 20 m high, microphyll species with very hard wood, all more or less alike in appearance, similar to mountain forest but for the absence of mosses, here at 50-100 m alt. Two closely related Palm species showed leaf-dimorphism; all transitions present between entire leaf and much-divided leaves in one species, but constant in the different specimens.

Finally, 7 days were spent in Ake Lamo, Halmaheira, with a result of 185 numbers in wet alluvial flat and dry hills up to 100 m alt., an area that was logged for ironwood.

Altogether 1523 numbers were collected in the name of De Vogel, including almost 200 collections of seeds for growing in the Kebun Raya. The first set goes to the Rijksherbarium, Leiden, the second to BO, the third to MO; the others are still to be decided on. A more extensive report is in preparation. Mr. Mochtar collected fungi in his own series for Herbarium Bogoriense, Mr. Aguswara living orchids for the Kebun Raya.

The area is very expensive, prices for food are almost double those in Java. Boats are for hire in Ternate, but due to their shortage and because fuel is all imported the prices are high. It is advisable to make contact with one of the big companies that operate in the area, as they know the local conditions. The party received the most valuable help from the logging company PT POLEKO.

Almost all population lives along the coast; the inlands are solid forest, in Halmaheira live five wild, primitive tribes. The vegetation in the area is fairly untouched, except for the volcanic islands in front of Halmaheira, where the boundary of the forest is at about 700-800 m alt. In the other islands a small fringe along the coast is converted into gardens, but lowland forest is still present, and nowhere has one to walk more than half an hour to reach the forest. Due to logging operations, the forest is disturbed in some places. The damage in those places seen was not very severe, as the companies only have concessions for one or two species, and strictly observe the regulations. Except for some supply roads made by logging companies, very few roads exist. Paths for damar collecting have not been used for a long time, as damar is not economical any more to exploit.



## New Guinea

West. Mr. J. R a y n a l of Paris from March to May 1973 could make an expedition for the Fonds Leopold III pour l'Exploration et la Conservation de la Nature. From 15 March to 2 April he worked near Jayapura (formerly Hollandia), at Lake Sentani, and the S. foothills of the Cycloop Mts. (244 numbers). From 3 to 18 April he visited the Baliem Valley, botanizing from Wamena at 1500-2400 m (303 numbers). From 19 to 26 April, the Merauke area was visited (133 numbers). From 27 April to 19 May, thanks to cooperation of the mining company Freeport Indonesia which is exploiting the large copper deposit in the Carstensz Mts., a transect could be made from the sea up to 4100 m. The flora high up was found so rich, "that it certainly would take several years of work to collect everything". However, such a study would depend on cooperation with the mining company which "notwithstanding the kindness of reception, does not show any particular interest in this sort of fundamental research." In this period, 465 numbers were taken. From 20 to 27 May, things were packed up. The harvest was 1145 collections (sets will go to Bogor, Brussels, Paris, and others) with many alcohol specimens and hundreds of photographs.

East. In 1973 a party of Lae visited the area where in 1935-36 C. E. C a r r had collected many (sometimes scrappy) specimens. Botanists were Messrs. Jim C r o f t, Don B. F o r e m a n, and Stewart I s l e s, with field assistants Yakas Lelean and Artis Vinas. On 9 September equipment was flown from Port Moresby into Efogi (c. 1500 m). Croft's party went to Lake Myola II, the eastern of two intermontane grasslands E of Mt. Kenive, c. 1800 m, for work in the swampy grasslands and surrounding forest, and along the Kokoda trail near The Gap. Isles's party worked for a week in the foothill rain forest of Manumu at 550 m (182 numbers). On 20 September both parties came back to Efogi; Isles was replaced by Foreman, and collecting was done in the hills (77 numbers). On 27 September Foreman's party flew to Boridi (c. 1400 m; 257 numbers), Croft's to Lake Myola I (both localities 501 numbers). A week was spent in collecting, and an attempt made at Mt. Kenive, which failed because of dense thickets of Nastus productus. On 4 October it was over; total harvest 1017 numbers.

In June-July-August 1974 a helicopter-assisted botanical expedition was conducted on Mts. Albert Edward, Victoria, and Kenive (Nisbet), led by Jim C r o f t of Lae, accompanied by field assistants Yakas Lelean, Artis Vinas and Greg Larivita. Lyn C r a v e n of Herbarium Australiense was present on the Mts. Albert Edward and Victoria stages of the expedition and collected extensively. Geoffrey H o p e of the

Australian National University was a guest on the Mt. Albert Edward stage where many cores were taken from the peat for pollen analysis, and several ecological plots were sampled.

On 15 June things were flown to Woitape; Hope then cored the swamp at Kosipe, while the others went to a patch of remnant forest between the two major peaks, which all were explored, to 3500 m. On 28 June back to Woitape, with collecting stops. On 3-4 June, Hope left, the others going to Isuani grassland, a large terraced intermontane basin S of Victoria at 2700 m; after several days of collecting there, some lesser summits and on 13 July the main summit were explored; then return to Isuani, and later to Efogi, where Craven left for Australia.

On 21 July another effort was made at Mt. Kenive, this time by helicopter, but weather was too bad for success. Further collecting was done at Myola I and much was picked up that had been missed last year. Finally, in the last week of July, Mt. Kenive, c. 3000 m, was climbed. There are several anthropogeneous grasslands on the side of the mountain, which were collected. By way of Myola, the party returned on 5 August to Efogi, and home.

The numbers collected are from Mt. Albert Edward 166, Neon Basin 72, Manumu 23, Isuani 138, Mt. Victoria 140, Efogi 16, Lake Myola I 154, Mt. Kenive 254; Mr. Craven took similar amounts from Albert Edward, Isuani, Victoria, and c. 50 from Kosipe.

Among the notable finds, we list the following. Good *Myrica uncinata* from Boridi; an undescribed *Horsfieldia* with very distinct corrugate fruits from Efogi; *Cycas* prob. *scratchleyana* from Boridi; *Helicia cameronii* in fruit, from Victoria, 3rd coll.; *Euphrasia papuana* on Victoria; *Potentilla adeno-phylla* from Albert Edward, and ample material to clarify *P. habbemana*; *Isoetes neoguineensis* with leaves 4 times the normal length, in a stream at Neon Basin; *Torrenticola queenslandica*, a rheophyte in Roguoia Creek, a tributary of the Brown River, so far known from Laloki river system; *Oreogrammitis*, an inconspicuous fern, in crevices on Albert Edward and Victoria; *Cyathea catillifera* was recollected on Albert Edward.

Dr. Alexander G i l l i of Vienna, an amateur botanist in his sixties, travelled during 2 months in 1973/74 in the highlands, collecting especially *Rhododendron*. He visited Mt. Wilhelm, Fatima, Mt. Hagen, Kandep-Range, Par, Pompobus, Komplan. Finally, he went for 2 weeks to the N. coast at Wewak, and to the swamp lands at Timbunke and Tambanan on the Sepik River. The main set of his herbarium was given to the Vienna Herbarium; duplicates will go to Leiden.

The Revd. N. E. G. C r u t t w e l l, amateur botanist at Agaun, Papua New Guinea, climbed Mt. Dayman in the tail of the island (E. of Mt. Suckling) in July 1974, together with another Rhododendron lover, Mr. Ray W e e k s of Melbourne. Working chiefly above 1800 m, they visited places where Brass had been in 1953, and listed R. beyerinckianum, carringtoniae, cruttwellii, hyacinthosmum, konori, macgregoriae, nummatum, rhodoleucum, tuba, wrightianum, zoelleri, with some hybrids, and some in their type locality. On limestone rocks, hardly accessible but most interesting, they found Gentiana cruttwellii, ettingshausenii, igitii, and Lobelia donanensis. Material will presumably go to Lae, Leiden, and perhaps other Herbaria.

### B i s m a r c k   A r c h i p e l a g o

New Hanover, New Ireland. Via Kavieng on New Ireland, where 18 numbers were taken, Mr. Jim C r o f t and Yakas Lelean of Lae joined on 25 September 1974 a forest survey party on the N. coast of New Hanover. Collections were made in the forest surrounding Manimum Harbour and Cape Entrance. On 2 October the helicopter placed the botanists and survey team on a tributary to the Neissu River, about 5 km due south of Tai Bay (+ 100 m). A strip line was cut approximately 2 miles due west. Collections were made along this strip line. Transferred by helicopter to Metemulai Village on the west of the island on 6 October. Collections were made north and east of here before returning to Manimum Harbour on the 9th. The mangrove swamps were collected.

The party returned to Kavieng on the 17th, where a reconnaissance of the Schleinitz Ranges was organised. No landing sites could be found on the northern end of this rugged limestone range, so on the 21st the party drove down to Logagon Village. It took three days to reach the crest of the range (+ 700 m). The party and carriers were forced back to the coast earlier than anticipated due to lack of water, when the gambled on rains didn't arrive. The party returned to Kavieng on the 26th. Collected were 231 numbers on New Hanover, 119 on the Schleinitz Range.

New Britain. During August 1974, Mr. B. C o n n and Mr. Paul K a t i k of Lae collected in Umboi I. (off west New Britain), in combination with a timber survey. Lake Buan in the centre of the island was reached; altogether 260 collections were made, and there is a plan to explore the mountains, which go up to 1600 m and have not yet been collected.

## A d m i r a l t y I s l a n d s

Manus. Mr. Don B. F o r e m a n and Mr. Paul K a t i k of Lae worked here in October-November 1974 with a forest survey team, based on the S. coast, and using a helicopter. Many localities were visited; among the trees was much Terminalia archipelagi, Myristica hooglandii, and what seemed to be new sp. of Helicia and Calophyllum. Also of interest is Cyathea media on Mt. Dremsel. Number of collections 184, in the LAE-series. Some timber concessions will be exploited, but most of the island is too rugged.

## P a c i f i c

Dr. Marie-Helène S a c h e t of the US-Herbarium, assisted by Dr. Bryce G. D e c k e r, made end 1974 a collecting tour to the Marquesas. The material will go to Washington, Paris, and other Herbaria.

Dr. W. A. S l e d g e of the University of Leeds collected during three months in Samoa in 1965, collecting 85% of all the pteridophytes that have been recorded from the islands. The first set is earmarked for Kew; Leiden and other Herbaria will receive duplicates.

## A u s t r a l i a

The Canberra Herbarium has embarked on a collecting program with its own Toyota Landcruiser. Here follows a list of the regions collected, mostly in combination with CSIRO Land Survey.

M. L a z a r i d e s & L. G. A d a m s went to Arnhem Land in July 1972.

L. G. A d a m s went to the S. coast of New South Wales from December 1972 to January 1973.

M. L a z a r i d e s, L. G. A d a m s & L. C. C r a - v e n went to Arnhem Land in February-March 1973.

L. G. A d a m s went to S. coast of New South Wales from March to July 1973.

T. G. H a r t l e y went to Arnhem Land in May-June 1973.

A. K a n i s & P. H e y l i g e r s went to Western Australia N of Perth to the Murchison River, with Miss N. T. B u r b i d g e, in August 1973.

R. P u l l e n & S. J a c o b s went to N. Queensland and adjacent part of N. Territory, April to June 1974.

A. K a n i s went to the N. Territory, Barkly Tableland, Upper Nicholson River, Mt. Isa, Alice Springs, in June 1974.

R. P u l l e n went to Western Australia, southwestern district, with A. E. O r c h a r d, in Nov.-Dec. 1974.