V. EXPEDITIONS AND OTHER EXPLORATION

Field Work *(continued from page 3202)*

I n d i a

During 1979 the Botanical Survey of India had again collections made, which we list in the same manner as on *page 3195*. In Andaman: Baratang I., Dhanikari, Great Nicobar I., Katchal I., Wright Myo, 1037 specimens. In Andhra Pradesh: Srikakulum District, 1314. In Arunachal Pradesh: Banderdewa, Doimukh and Selly Lake, Itanagar, 4272. In Assam 200 living plants. In Jammu and Kashmir: Dachigam Game Sanctuary, 1740. In Karnataka: South Kanara District, 2080. In Kerala: Agasthiakudam, Allepady, Aryankavu, Bonaccord, Cannanore, Chemunji, Erumeli, Idukki, Kasargod, Muthukulum, Nelliampathy R.F., Palghat, Silent Valley R.F., 10802. In Madhya Pradesh:

Bilaspur District, Damoh District, 1400. In Maharashtra: Manyana District, Mahabaleswar, 3000; Kolaba District, Kolhapur, 4760. In Meghalaya: Cherrapunji, 66. In Panjab: Hoshiarpur, 1780. In Rajasthan: Bhilwara, Chittorgarh, Jalore, 3626. In Sikkim: Gangtok region, 1000. In Tamil Nadu: Anaikathy, S. Arcot, Kanyakumari, Madurai, Papamalai, Ramanathapuram, 5907. In Uttar Pradesh: Chamoli, Tehri Garhwal, 1300; Dehra Dun, Hemkund, 3230.

Dr. K. M. M a t t h e w, S.J., St. Joseph's College, Tiruchirapalli 620 002, India, sent this note on The Carnatic Flora Project, Tamilnadu (Madras), S. India: "The area under exploration is situated between 77°.45'–79°.45' E. and 10°.50'–12°.50' N. The significance of the choice lies in that the area is large enough to be a phytogeographical unit and small enough to be exhaustively explored by a private foundation in about six years' time. By the term 'phytogeographical unit' is meant that the vegetation of peninsular India excluding the evergreen is adequately covered in the tract: it comprises nearly every type of vegetation of the Deccan east of the western ghats — the hill ranges of the Pacchaimalais, the Kollimalais, the Kalrayans and the Servarayans (Shevaroys) rising to over 1500 m on the latter, together with the typical foothill scrub jungles, the deltas of the Ponnaiyar, the Cauvery and the Kollidam (Coleroon) rivers, mangroves (Picchavaram), the 50 km of coastal and dune vegetation (Chidambaram to Cuddalore) and a sector of the plains vegetation. In fact the coverage is so adequate and representative that the finished Flora will virtually represent the entire State of Tamilnadu, nay even the Deccan, excluding the evergreen element of the western ghats. Though this exclusion is a limitation in terms of extension, it is taken for a strength in that the constituent species will represent a well-defined and compact phytogeographical unit.

Begun in November 1975, 24,475 field numbers in six duplicates representing over 2500 species of vascular plants have been collected to date. The exploration will be concluded by May 1980 at about 30,000 collection numbers. By late 1980, the materials for the flora of the Carnatic will be published documenting the herbarium materials for the 'Carnatic', besides those of the present series, available in the main south Indian herbaria: FRC, MH, HIFP, PCM, RHT and Annamalai University, Chidambaram.

The publication by late 1982 of the Flora of the Carnatic with about 1000 illustrations (one plate for each genus) is the immediate goal in response to a pressing regional need, but the final aim is the accumulation of adequate and good material for the revision of the predominantly south Indian taxa. It is for this that such extensive collections covering every nook and corner of the tract have been made, and the Materials is to be published.

As announced in Taxon 27 (1978) 314-315, two sets of duplicates will be sold at competent prices the proceeds of which will go for establishing research scholarships in the herbarium."

S u m a t r a

Gunung Leuser area. In continuation of their exploration in 1972 (see *page 2162*) and in 1975 (see *page 2549*) Dr. W. J. J. O. d e W i l d e and Dr. B. E. E. d e W i l d e - D u y f j e s (of L) stayed in the area from 8 June to 13 August 1979. The exploration was again supported by a WOTRO-grant, and executed in cooperation with the Bogor Herbarium, which joined with the assistants Messrs. M o c h t a r and M a s k u r i. Base camp was again made at Ketambe, Alas Valley, where the working facilities have been greatly augmented by the recently built field station.

Besides incidental collecting in the forests on the foothills surrounding Ketambe, and especially in the valley of the nearby Guhra river (a tributary of the Alas river), with hot springs, three major areas of collecting were visited, viz. 1) the upper Mamas river valley, in the interior of the Leuser Reserves, at 1200-1800 m alt., 2) the lowland forest areas near the southern border of the Reserves, near the mouths of the Bengkong and Renun rivers (both tributaries of the Alas river), and 3) in the lowland forests of the Sikundur forest reserve, in the eastern part of the Leuser Reserves, NW of Medan.

The visit to the upper Mamas river basin lasted 13 days, 20 June-2 July. To pass the water shed, the first day, a stiff climb of over 1000 m had to be made. Collecting in undisturbed montane forest yielded about 400 numbers, among which a new species of Premna (Verbenaceae), with large, sessile, subcircular leaves, and possibly a new genus of grasses.

The lowland forests in the vicinity of the mouth of the Bengkong river, at c. 100 m alt., on undulating land of sandy loam soil, appeared much diversified, rich in Dipterocarps, Euphorbiaceae, and Annonaceae. Here grows the superb Knema hookeriana (Myristicaceae), and the rare saprophytic Thismia clavigera, otherwise only known from one collection from Sarawak, and one from Langkawi I. Altogether about 450 collecting numbers were made here, from July 13-22.

Very profitable was the botanical inventory in the Sikundur forest reserve, 3-8 August, in rich forest at c. 50 m alt., in the area of the upper course of the Besitang river, flowing to the east coast. Collecting was facilitated by the roads made for selective cutting, and over 300 collections could be made. These include interesting aquatics as a Cryptocoryne (Araceae), and Barclaya kunstleri (Nymphaeaceae) from the tiny forest streams, the rheophytic Pandanus dorystigma (sect. Asterostigma) (Pandanaceae) from the bed of a larger rivulet, and a new Vatica (Dipterocarpaceae).

In total over 1500 numbers, 18,000-19,593, were collected; the first three sets will be distributed to BO, L, and K, other sets will be forwarded to KEP, PNH, and US.

More botanical exploration seems necessary and very profitable in the marshy forests at the mouth of the Alas river and in the Kloet-area on the West Coast, and in the Langkat area in the East of the Reserves.

A Krakatoa Centenary Expedition, led by Dr. J. R. F l e n l e y (Geography, University, Hull HU6 7RX, U.K.), with 10 participants (3 from Bogor) and several field assistants, camped on Rakata I., the main remaining fragment after the 1883 eruption, from 3 to 20 September 1979. They collected 600 numbers, including 100 fungi and 50 bryophytes, also from Anak Krakatau. The plants will be deposited at Bogor, Hull, and Kew.

After their Krakatau visit, Dr. J. R. F l e n l e y and Ms. J. W h i t e h e a d, both from Hull, surveyed 20 vegetation plots near Alahan Panjang in the Padang Highlands. They collected 300 numbers, for Bogor, Hull, and Kew. The data will serve to interpret Ms. W.'s pollen core from Danau di Alas, which covers the last 30,000 years.

M a l a y a, B o r n e o, P h i l i p p i n e s

Rattan collecting was done by Dr. John D r a n s f i e l d from Kew between mid-March and mid-May 1979, in N. and S. Thailand, Luzon and Palawan, and Sabah or North Borneo, together 150 numbers, also some other palms and some bamboos.

Dransfield again worked in Sabah from 14 August to 17 November 1979, to prepare an inventory of the rattans of Sabah and to make recommendations on rattan cultivation. The three months were spent in intensive collecting of rattans all over the state including Banggi (350 numbers). Rattan flora of Sabah now stands at about 100 taxa of which 25 were recorded for the first time during this survey. On the survey he was joined by A.J. Hepburn (Forest Department, Sandakan), Nustafa bin Abdul Rahman (Sabah Forest Development Authority), and plant collector Dewol bin Sundaling (Sandakan). Sabah now appears committed to rattan cultivation. Material to be distributed from Sandakan. Results to be written up as a forester's Manual.

Palms in Banggi Island off North Borneo were discovered: rotan batu, Calamus inermis, valuable for furniture, and Livistona rotundifolia.

From the W-Herbarium, Vienna, Prof. Stefan V o g e l and Mr. A. W e b e r journeyed to Malaya, Sarawak, and Sabah from 25 July to 11 October 1979. Vogel filmed the pollination of Momordica (Cucurb.); its flowers produce no nectar but oil, which is foraged by highly specialized bees of Ctenoplectra. Weber studied Gesneriaceae and other forest herbs, concentrating on shoot and inflorescence morphology of Monophyllaea. They collected c. 200 numbers.

Sarawak, 1979. A 5-week trip was organized to Niah National Park for a Vegetation Study of the Park and 11 temporary ecological plots of 200 x 20 m were established. A total of 138 specimens were collected for the SAR-Herbarium.

A similar vegetation survey was also carried out at the new Samunsam Wildlife Sanctuary in April. Ten plots each of 200 x 20 m were set up. Only 6 specimens were collected.

A 2-week botanical trip was made to the Pelagus Rapids at Kapit where about 170 specimens were collected for the Herbarium.

A Kyoto-Bogor expedition to Kalimantan was held from 24 December 1978 to 27 February 1979, by K. I w a t s u k i, G. M u r a t a, and M. K a t o from Kyoto, and J. P. M o g e a from Bogor. Visited were Tarakan: Sekatak; Samarinda; Sebulu; Tabang: G. Batukenye, G. Mendam; Balikpapan: G. Beratus; Banjarmasin: G. Besar. In March, work was done in west-Java.

More than 4000 numbers were collected, including some bryophytes and lichens. Sets will go to BO, KYO, and L, also to K, MO, TI, and other Herbaria.

Pioneer species were studied by SAN-botanists on landslips and otherwise bare areas on Mt. Kinabalu. A notable pioneer at 2100-3000 m is Rhododendron rugosum, while R. fallacinum, R. crassifolium and R. quadrasianum are also common in the early succession stages. Tristania grandifolia and Adinandra verrucosa are common on almost bare rocky sites.

Dr. Dan H. Nicolson, Botany, Smithsonian Institution, Washington, D.C. 20506, U.S.A., compiled a typescript of the field notes to A. D. E. E l m e r 's collections 20003-22694, from Tawao in North Borneo and Mt. Pinatubo in Luzon. The data were on pencilled slips made available by Dr. R. McVaugh (MICH). The majority are cryptogams, often unnamed but with reference to the host number.

C e l e b e s (= Sulawesi)

Leiden-Bogor Expedition. When the intended expedition to Ceram fell through, an effort was made in Central Celebes, also a joint enterprise of the Rijksherbarium, Leiden (financed by WOTRO) and two Bogorian institutes. The participants were 6: Dr. M. M. J. v a n B a l g o o y (L, leader), Mr. Dedy D a r n a e d i (BO), Dr. E. H e n n i p m a n (L), Mr. G. J. d e J o n c h e e r e (L), Dr. I. G. M. T a n t r a (Forest Research Institute, Bogor), Dr. E. F. d e V o g e l (L). Help was received from various sides.

On 18 April 1979 the team landed in Palu; collecting lasted till 19 July. Altogether, nearly 6000 numbers with many duplicates were taken; this brought the 'density index' for the island as a whole, which was 18 in 1950 and 19 in 1972, to 22 (cf. Fl. Males. i 8: iii). Each of the botanists collected in his own name series; the D and T materials will be distributed from Bogor, the B, H, J, and V materials from Leiden. H and J specialized in ferns.

Work was done in two main areas: from Palu to Lore Kalamanta Reserve (see *pages 3027-3029*), in the NW. part of central Celebes, and in the Soroako region, in the N. of the SE. peninsula, by Lakes Matano and Towuti, E. of Malili.

Equipment was flown in by a chartered Hercules of the Indonesian Air Force. After some preluding in the dry Palu valley, a base camp was built at the eastern end of the Sopu Valley, 80 km SE. of Palu, at 1000 m altitude. From here various collecting trips were made both in the Sopu Valley and up to the western slopes of Mt. Roroka Timbu, to c. 1300 m. A second camp was constructed on the western slope of Mt. Roroka Timbu at

2000 m, and was occupied by 2-4 botanists on 5-20 May, who operated between 1700 m and the summit, which was determined as being 2450 m. On most maps, this mountain is indicated as Gunung Tokosa (2610 m), but actually Tokosa is one of the peaks of the Nokilalaki complex to the West. The other botanists continued work around the base camp, and in the Palolo Valley at 500-700 m, also around Lake Tambing at 1700 m. Thus most collecting was done in the catchment area of the Sopu River, and inside the area proposed as an extension of the Lore Kalamanta Reserve. The party returned to Palu on 31 May, and left for Soroako on 7 June, with a harvest to be shipped of 3000 numbers.

The forest in the Sopu Valley is tall, with a closed canopy at 35-40 m, and emergents to 45-50 m. Eucalyptus deglupta (Myrtac.) was found dominant along the rivers, which from afar could thus be distinguished by the light-coloured foliage. Otherwise the forest is truly mixed, although at 2000 m there is a rather abrupt change. Agathis gaining a c. 20% dominance, to peter out rapidly at 2250 m. Eight species of Rhododendron were found, the rare endemic R. bloembergenii among them.

Soroako lies at c. 400 m on the shore of Lake Matano; Lake Towuti is at 300 m. Ultrabasic rock in the vicinity accounts for a pH of 8 of the water. Geologically the region is complex, and scattered depressions hold ponds and marshes. The surrounding mountains go up to c. 1250 m. For 14 days, a camp was used in the limestone complex Ladu Ladu, West of Soroako at 900-1200 m. Other areas where collections were made are: the environs of Wasuponda, along the road to Wawondula, Tabarano, the hydro-electric plant near Larona, Lake Towuti, and on the road to Malili. Here, too, the total harvest amounted to c. 3000 collections.

Tall mixed forest is found over shales, mixed and alluvial soils, with trees to 50 m, but little of such forest is left. The vegetation on limestone varies from shrubby on exposed rocks to very tall forest in the deep everwet valleys where large amounts of humus accumulate. There is much local floristic variation. As far as could be ascertained, the limestone and ultrabasic have but very few species in common. On the latter, Myrtaceae dominate. The large lakes are fringed with Kjellbergiodendron and other Myrtaceae.

Only when the whole harvest has been identified to a reasonable extent and detail can the results be worked out. Dr. Van Balgooy is to visit Bogor in May 1980 to write up some of the results in collaboration with Dr. Tantra. A 9-page preliminary report has been compiled for internal use.

The Opa Swamp in the SE. Peninsula was the goal of a 17 day exploration trip. Dr. M. J a c o b s of Leiden could accompany Mr. S. P r a w i r o a t m o d j o of the Bogor Herbarium and Mr. Soetrisno S o e w o k o of the Directorate of Conservation (PPA) in Jambi, Sumatra. Essential for the success was the collaboration given by Mr. Zainal M a k m u r, Head of the PPA-office in Kendari. The entire trip lasted from 8 to 29 November 1978, and yielded 390 numbers, collected in the name of Prawiroatmodjo & Soewoko, numbers 1614-2006. Two sets were prepared, one for Bogor, one for Leiden, with an occasional 3rd duplicate in families wherein a specialist is working outside these Herbaria.

The swamp lies at an altitude of 20-50 m; it drains towards the NE. Most of it is covered by a floating mat; there is little open water. The mat is burnt over every several years. In the West, there is tall swamp forest; in the North, where most of the work was done, some rather poor swamp jungle remained. Because of the short time available, collecting was concentrated on the surrounding hills N of the swamp, on the eastern face of Makaleo Range which goes up to c. 240 m. Following cultivation in the plain, this was covered with alang-alang, against which the forest stood sharply demarcated. It is a truly mixed forest, to 35 m tall, with a two-layered canopy, and contains some semi-deciduous elements; Dipterocarps were not met.

The party moved to the western side of the swamp, also to work on the hills there, W. of Polipolia, where the forest is more luxuriant, but also more man-influenced, by some hand-logging of Cratoxylon.

A 25-page preliminary report was compiled by M. Jacobs, but will become final only when the plants have been identified. This is projected in the course of 1980.

A general description in Indonesian was given in Laporan survai inventarisasi Satwa di Rawa Opa and Sekitarnya / Sulawesi Tenggara, 36 p. + 2 maps (1978, PPA, Bogor).

N e w G u i n e a (East)

The UPNG-Herbarium in 1979 organized local collecting as well as a class field trip to the Bensbach area in Morehead District, Western Province, conducted by I. M. J o h n s t o n e and G. L e a c h with 16 students. From the latter trip, enough duplicates were collected to ensure fairly wide distribution: L, LAE, K, A, QRS, MO, WRSL.

Until new quarters are available, however, the acquisition of new material must be kept to a low level due to shortage of space. For 1980, attention will continue to be paid to the Port Moresby region.

I. M. J o h n s t o n e participated on a cruise of the 'Alpha Helix' in the Torres Strait and Arafura Sea in May 1979. A number of collections of mangroves, seagrasses and algae were made.

Cibotium found in East New Guinea. In Fl. Males. ii 1 (1963) 164 the genus was recorded from Central America, Mexico, Hawaii, Assam to South China, West Malesia, Philippines. Now the Fern Gazette 11 (1978) 428 reports that in May 1977 C. barometz was collected at 800 m at Oomsis range: B.S. Parris 5962 (CGE, L, LAE).

Hunting for Monimiaceae. Dr. W. R. P h i l i p s o n of Christchurch, New Zealand, compiled the following travel report:

"When I undertook to revise the Monimiaceae (in the broad sense) for Flora Malesiana, both Professor van Steenis and I thought it essential that I become better acquainted with the family in the field. So I was fortunate to be able to spend the months of July and August, 1979, in Papua New Guinea, where the family is well diversified. I made only a small collection — a hundred numbers of Monimiaceae in five sets — but these represent an estimated sixty species with several examples of

Levieria, Palmeria, Kibara, Steganthera, and Anthobembix, as well as one species each of Trimenia and Piptocalyx (Trimeniaceae) and Dryadodaphne (Atherospermataceae). The only genus recorded from New Guinea not collected was Lauterbachia, still known only from the original gathering of Rodatz & Klink in 1899. By the end of the trip the facies, habitats and altitudinal ranges of these genera were becoming familiar and meaningful, and field photographs and spirit material of all genera were obtained.

I am greatly indebted to the Flora Malesiana Foundation for the grant which made this trip possible. The venture would not have succeeded without the willing help of many people in Papua New Guinea. Mr. Michael Galore, Assistant Director of the Division of Botany, Office of Forests, in Lae provided transport and also made available the services of members of his staff to assist me in the field as well as the plant-drying and other facilities of the Herbarium. Mr. Godley, Director of the PNG College of Forestry in Bulolo also provided transport as well as field assistance. Mr. Robert Johns of the College (now at the University of Technology, Lae) very kindly invited me to stay with him and did much to help me during the three weeks I was in the Bulolo area, and also provided transport when official vehicles were not available. Mr. Alister Hay, also of the College Staff, took me out on two very rewarding days, and Mr. Kapi Rau assisted me in the herbarium and in the field. Professor D. Walker, Department of Biogeography and Geomorphology, Australian National University, kindly allowed me to make use of the A.N.U. transit house during my first period in Lae (but this facility is no longer available). I am grateful to Dr. Sy Sohmers (of University of Wisconsin, seconded to Division of Botany, Lae) and his wife Sarah for hospitality during later periods in Lae. For most of my trip I had the pleasure of the company of Dr. Jany Renz, the orchidologist of Basel. The skill of the field assistants was uncanny. In particular Mr. Aubita Kairo of the College and Mr. Paul Katik and Mr. Karl Karenga of Division of Botany were responsible for spotting nearly all the Monimiaceae I collected.

My collecting began with a species of Kibara on the day I arrived in Bulolo, during a brief visit to lower montane forest containing many Araucarias (7 Sept.). The following day we descended to lowland forest along the Wampit, and soon discovered that my collection, like so many before, would contain many sheets with fruit, but relatively few with flowers. Three species were found with fruit only, in spite of a prolonged search for flowering material. The fruit are much more conspicuous than the flowers, and of course they persist for much longer. However, the day was saved by finding a Steganthera in flower and coming on a population of an Anthobembix, complete with male and female flowers and fruit, and well provided with symbiotic black ants, small but vicious, which parasitise scale insects on the inner surface of the hollow stems. Other collecting trips from Bulolo took me to Mt. Kaindi, Wau, and Edie Creek, to the hills above Bulolo on several occasions, to Mt. Missim, and to Kaisenik. An attempt to reach Aseki was frustrated by a bridge over the Watut being down for repair, but a logging area east of Bulolo produced good material on the return journey.

I was particularly anxious to visit Mt. Shungol, as that is one of the

two known localities of Piptocalyx. So I arranged to spend a few nights at the village of Wagau, where the school teacher allowed us to use a derelict, but waterproof, house. From here we secured local guides and collected thoroughly as far as 2100 m where material of Piptocalyx was at length found in flower and fruit.

On moving down to Lae (30 July) a week was spent in day collecting trips in the vicinity (Busu, Oomsis, Boana, Markham Point, Wampit, etc.) as preparations were made for an extended journey through the Highlands. These short trips from Lae were principally devoted to securing a full suite of specimens of a plant I had earlier collected in fruit along the Wampit. Specimens of it in the Bulolo and Lae herbaria had only male flowers, but clearly they represented an undescribed genus not uncommon along the coastal forests of the Huon Gulf. At first, only more male flowers in bud could be found, but on the third day good material of expanded male flowers disclosing the very numerous stamens covering the receptacular cup, and a few female flowers were secured. These showed that the plants were monoecious and that the female flowers abscissed their perianth as a calyptra — characters essential for generic description. Both male and female flowers are essential for generic identification in the Monimiaceae. Collecting difficulties arise through some genera being dioecious, when only one sex may be available, or through the sexes maturing at slightly different times in monoecious species, or by the male flowers being inconspicuous or ephemeral as in many Kibaras. It should be remembered, too, that the precise time of anthesis is not obvious in most Monimiaceae, as the flowers do not open, in the usual sense. Once the calyptra is shed anthesis is past, and male flowers may wither before they appear to have reached even the bud stage.

I left for the Highlands by road (6 August) and during the next week collected in the following localities with Karl Karenga: three forest remnants along the Okapa road; near Goroka (with Father Cruttwell) on a shoulder of Mt Otto; from Banz onto and over the Wahgi–Jimi divide; and from Mt. Hagen to the Mur-Mur Pass. In the latter two localities we secured fruits and female flowers (but no males) of a species very similar to the new genus from the Huon Gulf. A subsequent search of the Lae Herbarium revealed several specimens, all from the ridges around Mt. Hagen, some of which provided male flowers. These confirmed this as a second species of the undescribed genus.

Plans to reach Laiagam were frustrated through the breakdown of the vehicle. After it had been repaired, I returned rapidly to Lae and arranged an alternative trip, with Paul Katik, to the lowland forests on either side of the upper Ramu River (foothills of the Finisterre and Bismarck Ranges). I wished to sample this area because most of the described species are from comparatively low altitudes on the northern half of the island, whereas most of the collected material is from the central Highlands. I also hoped to encounter Lauterbachia.

We had intended to camp, but found good quarters in the Government Station at Walium, along the Madang road. From here we walked up the Mea River into the Finisterre foothills and reached a ridge at 1000 m, with good forest though few Monimiaceae. One lanceolate-leaved shrub, clearly

a Monim but unlike any known to me, was stubbornly sterile. Could it be Lauterbachia? From near Walium a road leads to the Ramu and Maria river crossings, where boats on wire ropes provide ferries. A chance encounter with the assistant manager of the Catholic Mission at Brahman procured us transport to the first slopes of the Bismarck Range, below Bundi. Again we encountered good forest above the gardens of the villagers. The narrow leaved shrub recurred, but eventually we found these leaves on the lower branches of a tree most of whose leaves were very broad. It was in fact a semi-mature Anthobembix. Obviously, the possibility of distinctive juvenile foliage must not be forgotten. On other occasions young plants of Monims were found with harsher, more sharply toothed leaves than adults, and on several days other shrubs with distinctive foliage that could not be found in flower were also probably juvenile forms of trees that were flowering in the same area. It is interesting that the juvenile Anthobembix shrubs were not inhabited by ants and that even the semi-mature tree had relatively few ants compared with the mature flowering specimens.

The final week in Lae was spent in formalities for departure, in curating the Araliaceae collection (less Schefflera), and in some final work on the Monimiaceae. Before leaving New Guinea it was possible to have only one day's collecting from Port Moresby when Mr. Greg Leach of the Biology Department, University of PNG, very kindly took me to visit the Varirata National Park and over the Sogeri Plateau to several forested localities. Much of the country was Eucalypt savanna, devoid of Monimiaceae, but in rainforest we found five or six species, though only three bore fruit.

During this study of the Monimiaceae difficulties are likely to arise since most of the specimens now in herbaria come from areas uncollected when the family was last revised. In Levieria and Palmeria, where the species appear to be wide ranging, most material can be assigned to known species, but in the more richly speciated Kibara and Steganthera many new entities may need to be recognized. Also some new genera may be expected. It surprised me that a common and conspicuous plant of the coastal forests of the Huon Gulf had escaped the notice of the early German collectors, but a scrutiny of the works of Miss Perkins showed that virtually no specimens of Monimiaceae were known from that area at the time she wrote. A specimen in the Lae herbarium (Foreman & Lelean NGF 48404 from Murray Pass) appeared to represent a distinct genus, but bore only female flowers. On my return to Christchurch a duplicate of this number was found to have both male and female flowers and could be identified as a species of Wilkiea confirming an old record of this mainly Australian genus in the Owen Stanley Range. BW 14198 Sleumer & Vink from Anggi Gigi Lakes also has the appearance of a distinctive genus, but so far only female flowers and fruits have been seen.

As my primary purpose was to see as many Monims as possible, it seemed wise to visit readily accessible places where they were known to occur. This pattern of travel naturally leads one along routes well trodden by previous collectors. I came to realize some drawbacks to this method. Since roads in New Guinea bring one easily to areas of forest, collecting by day sorties from a land cruiser is immediately rewarding, especially

as the road system is being actively extended and improved. However, roads go where there are villages, and where there are villages the forest is never intact. Expeditions setting up bases well into unroaded country are more rewarding and probably no more expensive. Areas which are poorly collected, such as the Bismarck Range and the numerous valleys which drain into the Sepik, would lend themselves to this kind of expedition. Suitable starting points for such probes are provided by the Catholic Mission at Brahman (Father Weighel, Box 787, Madang) where there is an air-strip and good accommodation available to visiting scientists. Similar facilities exist at the Government Station at Aiome, fifty miles further west. May I suggest that plant collectors in New Guinea keep a wheather eye open for Monimiaceae which will always be much appreciated."

A u s t r a l i a (Queensland)

Dr. A. K a n i s (CANB) collected c. 600 numbers during a 5-week vehicular trip along the East coast of the Cape York Peninsula N. of Cooktown, in the dry season from 1 August 1979. He accompanied Mr. K. P a ij m a n s who had organized the trip for his wetland survey of northern Australia.

N e w C a l e d o n i a

Dr. T. G. H a r t l e y (CANB) spent the month of November 1979 in field work, collecting in particular Rutaceae.