

V. EXPEDITIONS AND OTHER EXPLORATION  
(contd from p.808)

S e y c h e l l e s

Mr C. J e f f r e y of the New Herbarium, who works on Cucurbitaceae, has been to the Seychelles for botanical collecting and exploration. His letter of Jan.20, 1962 is interesting enough to quote the following passage from:

"You may be interested in a few impressions of the Seychelles flora. Discounting introduced naturalized species, which now I fear cover most of the islands, I gain the impression that here we have a number of long-isolated and endemic species (perhaps some may prove subspecies?) of mixed African, Mascarene, and SE.Asian affinities, and mostly confined to higher ground on the larger islands, together with a number of indigenous non-endemic species which formed most of the original lowland vegetation, but some of which also occur in the higher parts, which are mostly (but not all) otherwise SE.Asian to Malaysian in distribution (the others are mostly Afro-Mascarene) or palaeotropical.

Extant vegetation is in a terribly degraded state, most of the original communities are now replaced by relict patches only; of the lowland (below 1000') formations practically nothing now exists. Exotics, such as (specially) cinnamon, Chrysobalanus, Anacardium, Albizia, Adenanthera, and Pterocarpus, now dominate large areas, in which native species occur as scattered individuals. Even the forest communities of original vegetation on the highest mountains have not escaped invasion by exotics, of which cinnamon is the chief.

So far I have found only about 42 of the recorded number of endemic species - I fear some have become extinct; after nearly 3 months I have 400 numbers, over 2000 specimens. Collecting on this steep terrain is very exhausting work, and drying in the prevalent wet and high humidity a nightmare! Nevertheless, I hope the collection will prove useful."

A u s t r a l i a

Queensland. The Annual Report of the Queensland Department of Agriculture and Stock (1960/61) stated that a collection of about 1500 plant specimens was made in the Bloomfield River area, South of Cooktown.

## S u m a t r a

Mr S o e p a d m o of the Bogor Herbarium visited Pakanbaru in Central Sumatra in August-September 1961, collecting 251 numbers. One set was kept at Bogor, one set goes to Leyden, the other sets went to Copenhagen, where the funds for this trip had been provided.

## J a v a

Dr.A. K o s t e r m a n s made trips to Sw.Bantam in West Java, where on July 19-20, 1961, he collected at the Danau marsh (21 numbers), and on Dec.28, 1961 to Jan.2, 1962 he collected on the lower western slope of Mt Hondje (124 numbers). During these tours many very rare species, thought to be extinct in Java, were secured for the second time; a few Sumatran species new for Java were also collected. This shows the great botanical importance of nature reserve Udjong Kulon and the interesting vegetation on the islands off its coast.

## L e s s e r S u n d a I s l a n d s

Dr.A. K o s t e r m a n s made a second trip to Sumbawa (cf. p.802), accompanied by Dr.L.Berthe, a French ethnologist, Mr Sioe, B.Sc. of Bandung University, Mr Mamad, of the Forest Res.Inst., and two assistants of the Bogor Herbarium. The period between Oct.19 and Nov.8, 1961, was spent in the same places as before, in order to collect fertile material of species formerly only found sterile. This attempt was very successful: 184 numbers were taken. The Sumbawa collections contain a good number of interesting records and species, probably some new.

## Komodo.

By the same ship went to Komodo a small party of the Bogor zoological Museum; accompanied by Mr M o c h t a r, an assistant at the Herbarium Bogoriense. He collected 60 numbers in the same period as above.

## B o r n e o

Sarawak. Dr.B.L.B u r t t planned to stay in Malaya and largely in Sarawak, onwards of April or May 1962, for collecting in limestone areas, mainly for the purpose of locating gesneriaceous plants.

North Borneo. Dr.W. M e i j e r of Sandakan reports that early in 1962 he made a 3-weeks tour on Mt Kinabalu with Prof.E. A b b e, Mr R. K a u l, and Mr and Mrs L. B o g l e of Minnesota University. About 3000 numbers were collected between 1200 m and the summit, and more than 400 botanical photographs were taken.

In 1961, Dr. Meijer was for 170 days on tour, including a short trip to Sarawak and Brunei, collected 1084 numbers, 265 of them being dipterocarps. He visited various logging areas and swamp forest on the East coast, explored Beaufort hill, Mt Kinabalu and Mt Tambuyokan, walked from Ranau to Sandakan, and visited the Dent peninsula. Botanical and local district assistants also made a substantial contribution in exploring and collecting in various places.

Despite the botanist's spending half of his time in the field, it is improbable that even a cursory exploration of many forest areas can keep pace with their rapid disappearing. Over 100,000 acres of forest near Tawau are now in process of being destroyed. Both for science and for the country it is hoped that the Botanist's efforts will be successful to put plots of all sorts of forest under protection in order to prevent the complete extinction of any particular ecological formation (with, of course, also a particular economic potentiality) which would mean an irreplaceable loss.

#### N e w G u i n e a

western part. Airplane explorations (see p.807). We received an internal mimeographed report (1961?) by Ir.E.J.G. S w e l l e n g r e b e l, dealing with airplane explorations in the Apawar-Tor area, S of Sarmi, E of the Apauwar river. Subsequently a terrestrial exploration was made to the promising areas from April 20 to June 7, 1961, and material collected.

Exploration flights over the Vogelkop peninsula were carried out from Oct.17-21, 1957, as was recorded in an internal mimeographed report by Ir.J.F.U. Z i e c k, with photographs and map.

Field explorations. In the last quarter of 1959 an exploration was carried out of the Sekoli plain near Hollandia, under the direction of Ir.P.J. F a b e r, Dr.Ir.J. L u i t - j e s, and Mr Chr. V e r s t e e g h. Collections amounted to 297 trees and 57 herbs. An internal mimeographed report issued under number 359 deals with the results, gives also rain figures, maps, etc.

We received also an internal mimeographed report by Ir. J.F.U. Z i e c k containing various data about the hydrobiological forest reserve "Tafelberg" near Manokwari, 3½ sq.km in area, which in 1957 was vouchsafed by government order. Geology, topography, maps, tree flora, regeneration, are dealt with, and in a special paper by Dr. G.F.M e e s, the ornithology is discussed and a list of bird species given.

Eastern part. Messrs S c h o d d e, P u l l e n, and D a r b y s h i r e will in 1962 probably make a survey of the Moresby hinterland, for the C.S.I.R.O., Canberra, section Land Surveys.

Father Ernst B o r g m a n n SVD, a student of the Max Planck Institute für Züchtungsforschung at Cologne, spent several months in the Eastern and Western Highlands, Terr. of New Guinea, collecting herbarium specimens and the corresponding cytological material. In May/June 1960 he stayed for 4 weeks on the E.slope of Mt Wilhelm in the alpine zone, and again there in September and November 1960, climbing the top (4700 m) three times. Other collections were made in the Upper Chimbu R. valley between Mogl (near Kundiawa) and Denglagu, above Keglsugl airfield up to Komanemambuno (the Pengagl R. camp of the 1959 Archbold Expedition), and in the Middle and Upper wahgi R. valley (Mt Hagen, Fatima, Banz, Nondugl, Minj, Mingende, Kondiu, Nera Gaima). In all 454 numbers were collected; there are three sets, one of which is deposited in Lae, another in Leyden.

### Itinerary of the second Rijksherbarium New Guinea Expedition

The second New Guinea Expedition of the Rijksherbarium, Leyden, financed by the Netherlands Organization for the Advancement of Pure Scientific Research (Z.W.O.), The Hague, and the Treub Maatschappij (now: Society for Scientific Research in the Tropics), Amsterdam, carried out about 9 months of field work in Netherlands New Guinea, combined with short visits to the Philippines (Luzon) and the Australian part of New Guinea, between May 6, 1961, and Febr. 9, 1962. The expedition consisted of Dr. H. S l e u m e r and Dr. P. v a n R o y e n, both of the staff of the Rijksherbarium. Mr J. D i j k s t r a (May/August 1961) and Mr F. S c h r a m (Oct./Dec. 1961) from the Netherlands New Guinea Forest Service helped as field assistants.

During a stay in Luzon from May 6-21 collecting together with Mrs Dr. M. L. S t e i n e r, Manila, was done in the Mountain Province at Baguio (Mt Santo Tomas), in the Mt Data National Park, along the road to Bontoc-Banaue, and on Mt Polis.

The first part of the expedition in New Guinea started in the Cyclops Range, May 31, from a base camp at Ifar (c. 380 m) with the use of a jeep at the base of the mountain along the road between Hollandia-Sentani-Ifar and Sentani-Kemiri-Dozai, and with a various number of native carriers on the steep slopes. Five major trips were made from Ifar, the first along the trail to Ormoe, with camps at the Faita R. (c. 990 m) and below the saddle (c. 1220 m) on the S. slope, and from there to the highest summits in the Central part (Mt Rara, 1700 m; Mt Raveni, c. 1880 m) between June 6 and July 5. Another trip was made in the western part as a transect from Dozai via the Baimungun creek (and Mt Dafonsero, c. 1570 m) to Tablasufa-Cape Tanahmerah and back to Dozai from July 29 to Aug. 8. In the eastern part of the Cyclops Range two ascents from Kotanica resp. the Kujabu River on the S. slopes of Mt Makanoi up to 800 m were made from July 17-23 resp. Aug. 16-19. Numerous minor trips were made from Ifar within the lowlands on the S. side of the Cyclops Range on to Sabron and Depapre, along Lake Sentani, around Ifar, Kemiri, Kotanica, along the Jabau and Kujabu R., and around Hollandia (Pinksterbivak, Skyline, Base G), up to Aug. 28, all resulting in a collection of c. 1000 dried herbarium numbers with numerous duplicates.

Dr. v a n R o y e n then left for Wewak-Manus Island-Kavieng-Rabaul, collecting on the volcanoes near Rabaul-Kokopo, and finally staying in Lae up to Oct. 5. Dr. S l e u m e r went to Lae to meet Mr J. S. w o m e r s l e y; they collected in the Bulolo area (Edie Creek, Merri Creek, Mt Kaindi (c. 2200 m) and several miles along the old army road

from Edie Creek to Bulldog) between Aug.30 and Sept.3, and around Marafunga (2400-2500 m) near Goroka from Sept.5-8. Alone Dr. S l e u m e r visited Kundiawa and the Upper Chimbu R. valley up to Dengalagu (= Toromambuno, 2280 m) Mission station (Sept.9-11), and climbed from there on Sept.12 with 4 natives via Pengagl Creek the E.slope of Mt Wilhelm, staying in the grass-hut near Lake Aunde (c.3350 m) up to Sept.16, and collecting and photographing mainly Ericaceae near and above the Lakes up to c.3800 m. From Sept.17-22 he visited the lower part of the ascent near Keglsugl and along the Pengagl Creek again up to c.2800 m. He flew from Keglsugl to Madang-Hollandia and arrived at Manokwari on Sept.25.

The second part of the expedition started Oct.6 in Andjai, Kebar valley, after equipment and food had been flown in there from Manokwari by a DC-3. At first minor trips were made, the pasangrahan of the Netherlands New Guinea Forest Service at Andjai (c.550 m) serving as base camp, both into the grassland and the primary forest (logging area) of the Kebar plain, and into the lower part of the mountain encircling the latter up to c.1000 m (Mt Tobi-Nertoi area; Mt Nettoti). On Oct.18 the expedition turned from Andjai via Amboaki River bivouac to Soeroerem on the Aifat R., where the Forest Service has built a rather comfortable house from bamboo and palms (atap), which served as a secondary base camp for all further activities of the expedition westwards. From there a major group with Dr. v a n R o y e n, Mr S c h r a m, the Papuan mantri C a r u b a b a, and c.35 carriers started on Oct.25 along the northern foothills of the Tokiri Range, the Aifat R. and the Ischon R., passing the villages of Aifatfeka, Son, Sudjak and Bamfot, and exploring Mt Kusemun (1400 m) in the central part of the Western Tamrau Range. This group returned to Andjai on Nov.16. Dr. S l e u m e r with the Papuan mantri M o t e and 10 carriers first collected on the crest of the eastern part of the Tokiri Range at 1250 resp. 1400 m, and on Sept.30 marched along the Aifat R. westwards to the Waumi River, camping at 700 m. From there he followed a native hunters path on a ridge W of and + parallel to the Waumi R., and from a transitory camp at 1420 m reached the waterdivide in the eastern part of the Tamrau Range (Wamsuf massif) at c.2100 m on Nov.2, collecting intensively in the open swamp and heath-like vegetation between 1950 m and the crest which covers c. 7 hectares within the stunted mossy Nothofagus-forest there and contains representatives of temperate genera normally found at much higher altitude. Back at Soeroerem, he camped on the northern flank of the eastern part of the Tokiri Range at 1100 m and reached from there its densely forested summit at c.1550 m on Nov.8.

From there, he had to return in 3 days to Andjai due to shortage of food.

After a period of relaxing at Andjai, on Nov.27 a camp was made on the S.shoulder of Mt Nettoti at c.1750 m. From there the crest of the Nettoti Range both to the W and E up to 2100 m within the dense moss-forest was explored; on Dec.3 the party marched over the Nettoti-top (c.1950 m) towards the Wekari R., passing extensive heath-vegetation at c.1750 m. It occupied the resthouse on the Wekari R. (c.1550 m) for 2 days collecting and returned to the 1750 m camp, resp. finally to Andjai on Dec.6 and 7. From Andjai various minor trips were made to complete the collection both in the grassland and the forests of the Kebar plain and its adjacent mountains up to 1000 m altitude opposite Andjai. Departure by DC-3 on Dec.21 to Manokwari with equipment and collections, as far as the latter had not yet been flown to Manokwari in the weeks before. Staying at Manokwari from Dec.21-29, busy with packing there the result of the second part of the expedition - c. 1700 numbers with numerous duplicates. V a n R o y e n returns to the Netherlands on Dec.29.

Dr. S l e u m e r remained in Manokwari to take part in a trip of the Netherlands New Guinea Forest Service to the Arfak Mts. On Jan.8 and 9 the party, which, besides him, consisted of Mr W. V i n k, head of the Section of Botany of the Forest Service at Manokwari, the Papuan mantri C a r u b a - b a and c.750 kg equipment, was flown by the 2 helicopters of the Geological Survey in 6 flights from Ransiki at sealevel over the outer mountain rim of the Arfak Range directly to a landing place near the resthouse "Noordpool" on the shore of Lake Angi Gita at 1840 m. Collecting started in the marshland there and continued on the slopes, especially on the N.slope of Mt Mesenuk along the so-called "Lulofspad" up to the top (c.2150 m) on Jan.9-11. From "Noordpool" the equipment is brought by prow and floats to Testega, a village on the opposite side of Lake Angi Gita, while the botanists followed a trail along the shore, than climbed Mt Kongremotti (2180 m) with its dense Nothofagus forest and heath-vegetation, and descended to Testega. The resthouse at Testega offered a good base for an ascent to the mountain-range between Lake Angi Gita and Lake Angi Gigi, called "Koëbré" (or Kobre-mot) (2300 m) and "Tembrok" (2400 m) on Jan.14. The party followed a trail which apparently was used also by Miss G i b b s in 1913, and collected intensively on the partly burnt summits between the lakes. On Jan.16, they climbed Mt Koëbré again, descended to the village Ukdehot-mamot (2100 m) and reached Surerei on Lake Angi Gigi (1920 m). From there, the NE.slope of Mt Sensenemes was explored on Jan.18 up to 2600 m, and

again via the SE.slope up to the summit (2760 m) on Jan.20. On Jan.21, Mt Gwamongga was visited up to the top (2570 m). On Jan.22, the party marched via the Sikohirie (2200 m) and the villages of Tridaga and Siskado to Iray, the last 2 hours wading through the extense swamp at the mouth of the Dwons R. From Iray, where K a n e h i r a and H a t u s i m a collected intensively in 1940, several trips were made: on Jan. 24 via Tidjei to the NE.part of the Koëbré ridge up to 2430 m, and returned to Iray via Disrebei; on Jan.26 Mt Saru-mot (2350 m) NNW of Iray was climbed and on Jan.28 Mt Tembrok via Tidjei en Koëbré up to 2510 m. Back to Manokwari by helicopter on Jan.29 from Iray. These activities resulted in 350 numbers in the B.W.series (Dutch Forest Service) and 300 numbers in the expedition series. On Febr.7, Dr. S l e u m e r, together with Mr J.F.U. Z i e c k, head of the Department of Bosplanology at Manokwari, had the chance to go by helicopter to a geologist's camp above the warjori R. and to collect there on an almost inaccessible ridge and steep slope at c. 1350 m, where within a rather open fern-covered swampy place several Rhododendron species and their crossings could be studied in full bloom.

Dr. S l e u m e r left Manokwari on Febr.9, returning via Lae-Brisbane(11-13.II)-Sydney(14-16.II)-Hawaii(Oahu,Kauai, Maui,Hawaii,17.II-8.III)-San Francisco(9-13.III)-New York (14-18.III)-Cambridge,Mass.(19-20.III), and arrived at Amsterdam on March 21.

The total collections of the expedition amount to c.3500 numbers with numerous duplicates, of which the first set is deposited in Leyden, from where the duplicates will be distributed.