

V. EXPEDITIONS AND OTHER EXPLORATION
(continued from p. 1789)

C e y l o n

The Flora of Ceylon Project (continued from p. 1784). Dr. W. M e i j e r spent 3 months in the island for the study of Anacardiaceae, Meliaceae, Sapindaceae, Dr. P.S. A s h t o n visited the island for Dipterocarpaceae, and Mr. C.F. v a n B e u s e k o m for Gaertnera and Sabiaceae.

T h a i l a n d

Prof. K. L a r s e n made an exploration in the extreme southern parts of Thailand, predominantly working on the peculiar limestone hill flora.

In Jan. 1969 Mr. H.P. N o o t e b o o m, Leyden, and Mr. Chamlong P h e n g k h l a i collected north of Chiangmai:

Doi Pui, Doi Sutep, Doi Inthanon near Fang at the Burmese border. The main purpose was to hunt for *Symplocos*.

Mr. & Mrs. v a n B e u s e k o m, who started in the fall of 1969 on an extensive exploration of Thailand, starting with a fortnight exploration in Ceylon and interrupted by a trip to Kuala Lumpur-Singapore-Bogor, stayed in Thailand from 4 Oct. 1969 to 2 Jan. 1970 and from 2 Febr. to 28 March 1970. Their objectives were several small trips in the vicinity of Bangkok, Mt Khao Soi Dao in Chantaburi Prov., and a search on Mts Doi Inthanon, Doi Pui, Doi Sutep, and the places Fang and Mae Sariang. This was followed by an exploration in the south to Prachuab Khiri Kan, and in the west to Prov. Kanchanaburi, and finally to the islands in the Gulf of Siam.

M a l a y a

The Herbarium staff of the Singapore Botanic Gardens led by Dr. E.A. H e a s l e t t collected plants on day trips on Gunong Pantl, along the Mersing Road and the rivers Bantan, Jurasseh and Panjang in the Labis District in Johore. They also joined the staff of the Forest Research Institute in their expedition to Taman Negara (Pahang) led by Dr. T.C. W h i t m o r e and a second one led by Dr. Peter G r u b b of the University of Cambridge to Gunong Blumut (Johore). A party led by Dr. R. H i l l of the Geography Department, University of Singapore, collected plants at Bukit Tangga Tujoh in Johore. Altogether 600 numbers were collected.

A major expedition was made by Dr. T.C. W h i t m o r e to the northeastern part of Taman Negara, N. Pahang in July jointly with Mohd S h a h from the Singapore Botanic Garden. *Indotristicha malayana* was found at a third locality midway between the other two. Simultaneously Mr. P.F. B u r g e s s explored the highest limestone hill in Malaya in W. Taman Negara, Gua Peningat, and Mr. B. E v e r e t t went in to the southeastern part.

S u m a t r a

In 1971 Mr. W.J.J.O. d e W i l d e of the Rijksherbarium, Leyden, will spend four months in North Sumatra, for the exploration of the very large Mt Losir Nature Reserve, sustained financially by W.O.T.R.O.

B o r n e o

Sarawak. In 1968 botanical staff of the Forest Department collected in the following localities: (i) *Dipterocarp* for-

est in the Kapit District (261 numbers), (ii) Dipterocarp forest and Tropical Heath Forest in the Sempadi Forest Reserve in West Sarawak (260 numbers), (iii) Dipterocarp forest in the Bintulu District (258 numbers), (iv) Bukit Sela-bor, an outlying limestone hill in the Serian District (102 numbers).

In June 1969 Dr. J.A.R. Anderson and I l i a s b i n P a i e proceeded on an expedition to Bukit Batu Ti-bang in the Nieuwenhuis Mountains in the extreme headwaters of the Balleh river. This small igneous mountain range is the topographical centre of Borneo; tributaries of the Maha-kam and Kayan flow to the south and east, whereas the Balleh and Balui, principal tributaries of the Rejang river, rise on the north west side of the mountain. After four and a half days travelling by boat from Kapit a base camp was established at Nanga Balang. Three further camps were made along the Balleh Balang watershed ridge. The summit ridge (the Indonesian Sarawak border) was reached without difficulty.

The vegetation of the lower slopes of the mountain is typical Mixed Dipterocarp Forest on sedimentary rocks of the Rejang Series. The steep, almost precipitous, valleys contained a very rich herbaceous flora with an abundance of Gesneriaceae and Urticaceae. Floristically the most interesting area is the lower limits of the igneous rock which is first encountered at an altitude of 2800 ft (850 m) and collecting was concentrated here for ten days. Above c. 4000 ft (1220 m) mossy forest occurs. Compared with mossy forest at a similar altitude on other Sarawak mountains composed of sedimentary rocks the vegetation was remarkably deficient in Nepenthes and species of Ericaceae and Melastomataceae. The party returned by the same route having collected 556 numbers.

Late in Aug. 1969 the Assistant Forest Botanist, O t h m a n b i n H a r o n, proceeded on a month's collecting expedition to the middle reaches of the Balleh river (Nanga Menyong) and then went overland to Bukit Mersing, an igneous hill in the Fourth Division, for a further month of collecting and ecological work.

In 1970 Mr. H.P. N o o t e b o o m and Mr. P. C h a i explored in the 4th and 5th Divisions: vicinity of Bario (25-29 March) and went to the base of Mt Murud from 30 March -4 April. The ascent and exploration took from 4-11 April; return at Bario at 13 April. From 22-27 April they were on the Apo Batu Buli Range and the plateau towards Batu Lawei. Especially the latter plateau proved fruitful in locating some Kinabalu-endemic Symplocos species or their nearest allies. On Mt Alab they found *S. curtisii*, formerly only known

from Malaya. Nooteboom's total Borneo collection (1969, 1970) amounts to 1600 numbers.

Drs. J.A.R. A n d e r s o n, P h u n g T r u n g N g a n and W. S o e g e n g R e k s o d i h a r d j o went on a 6-weeks survey and collecting trip to Kutei Nature Reserve in May 1970, sponsored by the Regional Centre for Tropical Biology (BIOTROP, Bogor).

Prof. Hans W a n n e r, Zürich, visited Bako National Park in June 1970 to continue studies on respiration and productivity in tropical rain-forest.

From June to Sept. 1970 three Cambridge University students, Mr. L. R y m e r, Mr. P.F. L e h m a n n and Mr. J.E. J o h n s o n visited Sarawak to undertake micro-climatic studies on the vegetation of limestone hills. Initially work was concentrated at Bukit Jebong at Bau, but in August they proceeded to the large Melinau limestone massif in the 4th Division.

Sabah. Mr. H.P. N o o t e b o o m explored - in first instance for hunting *Symplocos* - early 1969 on Mt Alab (19-27 Jan.), Mt Lumaku (2-10 March), and Mt Trusmadi (15-22 March). Owing to an accident he had to discontinue his trip. He could continue it in 1970: collected on Mt Kinabalu (5-14 March).

J a v a

Dr. A.J.G.H. K o s t e r m a n s, Dr. J. D r a n s - f i e l d, and Miss Soejatmi S o e n a r k o made several field trips to many areas in West Java where they discovered many plants (mostly Lauraceae and Palmae) which represent new records for the flora of Java.

P h i l i p p i n e s

Mt Apo, Davao. The National Museum, in collaboration with the Osaka Museum of Natural History, Osaka, Japan, undertook a joint natural history survey of the Philippines. From Nov. 19 to Dec. 20, 1969, the team composed of Mr H.G. Gutierrez (leader), Mr. E.J. Reynoso and Mr. F.R. dela Cruz (assistants) of the National Museum and Messrs. Ko Seto (Botanist), I. Hiura and Y. Miyatake (Entomologists) of the Osaka Museum conducted a field exploration at Mt Apo in Mindanao. Emphasis of collection was on pteridophytes. The party collected in all types of plant formations prevalent in the area from beach-swamp forest, in grasslands and in second-growth, and up to the summit of Mt Apo. Specimens obtained from the survey will be shared equally and deposited at the Osaka Museum

of Natural History and the National Museum of the Philippines after processing and study are over. A brief report about this survey was published in the Bulletin of the Osaka Museum of Natural History, No 23, March 31, 1970.

Mt Sohoton. From the period March to April, 1970, the staff of the Philippine National Herbarium, National Museum, Manila, made a collecting trip to Mt Sohoton, Southern Samar and vicinities in connection with the research grant from the U.S. Army 'Ecology of Southern Samar'. The party was headed by Mr. H.G. Gutierrez with Mr. D.A. Madulid as co-leader; together with Messrs. R. Espiritu, E.J. Reynoso and F. dela Cruz as assistants. A scientific illustrator, Mr. R. Candelaria, was also with the party. Some 1000 field numbers of flowering plants, mostly in 10 duplicates were collected from the Dipterocarp forest. Messrs. H.G. Gutierrez, D.A. Madulid and R. Espiritu also collected some algae in Punubulu Island located in the western coast of Samar near northeastern Leyte.

Burgos, Ilocos Norte. Mr. H.G. Gutierrez together with Mr. R. Espiritu, collected marine algae mostly *Porphyra* spp. in Bobon Bay situated in the northwesternmost tip of Luzon from June 12 to 19, 1970. This trip was made in answer to the request of Mr. P. Cordero Jr, a researcher in the Botany Division of the National Museum, who is now in Kagoshima University, Japan, enrolled for Masters degree.

New Guinea (sens. lat.)

Summary 7th Archbold Expedition. Dr. H.M. v a n D e u - s e n expected to have, by Jan. 1971, the summary of this expedition to the big Huon Peninsula in 1964 in the hands of the printers. Dr. R.D. H o o g l a n d has contributed the account of the vegetation.

In Oct. 1970 Dr. P. G r u b b, Cambridge, assisted by Mr. P. E d w a r d s, will proceed to Mt Wilhelm to make observations on the physiological ecology of the upper montane forest.

After attending the 42nd AANZAS Congress in Port Moresby, Dr. M.A. R i f a i spent the third week of Aug. 1970 touring the Territory of Papua and New Guinea, and he picked a few fungi including what appears to be an undescribed species of *Triposporium*.

Dr. W. S c h i e f e n h ö v e l made an exploration in Papua and Territory of New Guinea, July-Dec. 1970, with the purpose of getting information on useful, mostly medicinal plants.

A u s t r a l i a

Bicentenary of Cook's Voyage in Australia. This was a big manifestation. Dr. W.T. S t e a r n had been invited to attend and lecture. On his way he touched a place (Cook's Bay near Birabo) in South New Guinea and collected also in Queensland accompanied by Dr. S.T. B l a k e in the Cooktown area, north of Cairns, where Banks and Solander explored when their ship was careened for repairs within the mouth of the Endeavour R. in 1770. It is rumoured that Dr. Blake contemplates the publication of a list of Banks & Solander collections.

P a c i f i c

Solomon Islands. The large-scale collecting by the Dept. of Forestry, which has led to a building up of c. 18.000 collecting numbers in the past six years will now cease as the whole of BSIP has been covered and there is no longer justification to spend so much skill and money on it. The Honiara Herbarium will be the local reference centre for all queries relating to plant identification. From the botanical standpoint it is highly desirable that collecting on a small scale will go on, especially of herbaceous plants and vines from the forest, as hitherto the main interest was focussed naturally on collecting material of trees.

Dr. J.W. D a w s o n, Reader in Botany, Wellington University, botanized three weeks in Fiji, Aug.-Sept. 1970; in Nov.-Dec. he collected in New Caledonia.