

V. EXPEDITIONS AND OTHER EXPLORATION
(continued from p. 1401)

C e y l o n

Field work on the Ceylon Flora. Trimen's "Handbook" on the flora of Ceylon, published between 1893-1900, is one of the finest floras ever written of a tropical area. It is a five volume descriptive work that served very adequately for many years. It is now not only out-of-date, but completely unobtainable.

The Smithsonian Institution, in cooperation with the University of Ceylon and the Royal Botanic Gardens, Peradeniya, is initiating a project to bring up to date and republish the Trimen "Handbook" by providing an opportunity for field work in Ceylon.

The joint project proposes to enlist taxonomists from all parts of the world to participate in this enterprise. Specialists in any of the families represented in the Ceylon flora, and competent taxonomists willing to undertake families for which there is no specialist available or interested, will be provided with the means to carry on three months or six months of field and herbarium work in Ceylon, to collect and study their groups. Air transportation to and from Ceylon, as well as field and living expenses while in the country will be provided. The recipient will be expected to bring the "Handbook" treatment of the family up to the current state of knowledge and provide a publishable manuscript, following essentially the "Handbook" format. The University of Ceylon will undertake to publish the treatment when it is ready, as well as an abbreviated "school flora" version of it. Working facilities will be provided by the University and the Botanic Gardens. Collections will be shared by the U.S. National Herbarium, the Peradeniya Gardens Herbarium, and the taxonomist or his institution. In this way it is hoped that not only will a new edition of the "Handbook" be produced, but materials for future more detailed monographic studies in the families concerned will be accumulated, and more knowledge will be obtained of a remarkable, and fast disappearing tropical flora.

Botanists interested in further information on this project may write to Dr. F.R. Fosberg, Smithsonian Institution, Washington, D.C. 20560, U.S.A.

T h a i l a n d

Kyoto University Biological Expedition operated in Thailand from 7 Aug. 1967 till 11 Oct., when they moved to Malaya. Leader is Professor J. A s h i d a, members are M. T a g a - w a (pteridophytes), M. H i r a n o (fresh water algae), S.

U é n o (entomology), T. S h i m i z u (limestone flora), N. K i t a g a w a (bryophytes), H. K o y a m a (cytotaxonomy), N. F u k u o k a (phytogeography), M. H u t o h (pharmacognosy), K. I w a t s u k i (pteridophytes). The expedition cooperates with the Forest Herbarium at Bangkok, collecting 20,000 sheets (it is not clear whether these are numbers or the total amount of duplicates), 1500 packages of bryophytes, 300 bottles of algae, and also materials for anatomy and cytology. The first set is intended for the Kyoto-Herbarium (KYO), the second one for Bangkok (BKF).

In addition to the brief communication on the Thai-Danish exploration in July-August 1966, on p.1390 of this Bulletin, we mention the printed report by K.Larsen & E.Warncke, Nat. Hist.Bull.Siam Soc. 21 (1966) 251-262, pl.24-28, map. The materials are deposited at Aarhus (AAU) and Bangkok (BKF). Collection numbers amount to 1872.

The report on the Thai-Dutch Botanical Expedition 1965/66 (see p.1390 of this Bulletin), by E.Hennipman & A.Touw, has appeared in print in the Nat.Hist.Bull.Siam Soc. 21 (1966) 269-281, incl. map.

M a l a y a

Perak. Dr. C h e w W e e L e k, who joined the Kepong/Leyden party of Dr. Ding Hou on 11-21 August 1966 to Gunung Bubu, collected 51 numbers for Herbarium, 3 numbers for cultivation.

During a trip with a party that included Mr. E.J.H.Corner, on 29 Sept. to 6 Oct. 1966 to the Cameron Highlands, he collected 45 numbers for Herbarium, 60 fungi for Herbarium, 4 numbers for cultivation.

Johore, Pahang, Selangor. Mr. H. M. B u r k i l l and party collected 54 numbers of marine algae and 11 numbers of orchids for cultivation, while on Pulau Pemanggil, Johore, on 4-10 July 1966.

On Fraser's Hill, Bahau, Batu Caves, and Cape Rachado, during casual leave between 28 July and 5 Sept. 1966, he collected 23 numbers, mostly Trentepohliaceae, for Herbarium.

Mr. Hardial S i n g h of the Singapore Herbarium collected in Selangor between 15-26 Jan. 1966, and in Johore between 21-26 Nov. 1966, amounts of 146 and 47 numbers Herbarium material.

Jambu Bongkok, Trengganu. Professor Anne J o h n s o n and Mr. J. C a r r i c k of Kuala Lumpur, made quadrat studies on the Padang area of Jambu Bongkok. General collections of the Padang, Seashore and Ecotone are deposited in the University of Malaya Herbarium, School of Biological Sciences (numbers Anne Johnson 4001-4121). Soil cultures were made to determine the algae in the padang soils (Febr.-March 1967).

Gunong Benom. Professor Anne Johnson made collections of bryophytes, ferns and Euphorbiaceae from Gunong Benom, Pahang, in April 1967 (numbers Anne Johnson 4122-4300). These collections are deposited in the University of Malaya Herbarium, School of Biological Sciences.

Langkawi. General collections of the flora of Langkawi were made by Professor Anne Johnson and Dr. B. C. Stone assisted by Honours students in May 1967. These collections are being deposited in the University of Malaya Herbarium, School of Biological Sciences.

S a r a w a k

From 1 to 23 Febr. 1966 Dr. Chew Wee Lek and Dr. J. A. R. Anderson visited Gunong Api, Benarat, in the 4th division, collected 230 herbarium numbers in the limestone vegetations.

Mr. H. M. Burkhill, during a visit to Mersing, Tk. Sari, from 1 to 3 Jan. 1966, collected 6 phanerogams and 14 algae for the Herbarium.

Mr. B. L. Burt and Mr. A. M. Martin of the Royal Botanic Garden, Edinburgh are visiting Sarawak from July to Oct. 1967. The month of August is being spent on an expedition to the Hose Mountains, in the headwaters of the Rejang River; after which an expedition to Gunong Murud, Sarawak's highest mountain, is planned. Gesneriaceae is the special objective.

S a b a h

Cambridge Kinabalu Expedition, 1967. Three 3rd year students spent their 2 months summer vacation on Kinabalu. The botanist, Mr. J. M. B. Smith, concentrated on 4 alpine herbs: *Ranunculus lowii*, *Potentilla parvula*, *P. leuconota*, and *P. mooniana*. Autecology and communities were studied; seeds, buds, and root tips were fixed as well as whole plants collected. Chromosome counts will be made. Flowers were emasculated, or isolated in bags to determine extent of self-incompatibility or apomixis. Soil samples were collected and meteorological data were scored.

Mr. A. G. Alphonso and Sidek bin Kiah, who visited Mt Kinabalu from 13 to 30 Sept. 1966, collected 178 numbers of orchids for cultivation at Singapore, and 54 numbers for the Herbarium.

Dr. B. C. Stone from Kuala Lumpur visited Sabah from 15 to 28 March 1967, and collected a good series of Pandans near Sandakan in the Sepilok F. R. and near Jesselton, together with Dr. John Gaudet who collected aquatics.

Botanical fieldwork concentrated on collection of wood samples in logging areas. In one area of 30 acres at Silam, Lahad Datu, 92 species of trees were found left behind after logging, practically all were identified, collected and enumerated in a joint research project with Ecologist (Mr. Fox) and Entomologist. Similar work was done in 10 acres at Bakapit (Lahad Datu) and at Lungmanis. It is hoped that it will be possible to stimulate this way the Timber Companies to improve utilisation. Ninety-six percent of the export timbers come from Dipterocarps while the volume of Dipterocarps above 5 ft girth is about 75% according to enumerations made by Mr. Fox at Lungmanis. About 20% of the volume of the Dipterocarp forests is left behind and destroyed in girdling operations.

As the overall result of field work during 1966 an amount of 2272 collections were added to the Sandakan Herbarium.

Labuan was revisited by Dr. W. Meijer of Sandakan; one of his assistants discovered what might be the last remains of Dryobalanops aromatica forests in Sabah, South-West of Weston. Attempts are being made to reserve this area.

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

Timor. Mrs. C. Friedberg (married Berthe), in the course of her ethnobotanical work, collected + 550 numbers of vascular plants, in May-Oct. 1966, in the central part of Timor, on both sides of the frontier. The first set will go to the Laboratoire d'Ethnobotanique du Muséum National d'Histoire Naturelle, 57 Rue Cuvier, Paris (not in the Index Herbariorum). A. Chevalier was director of this institute; at present it is R. Portères. The second set was deposited at the Rijksherbarium; the third set was directly from Timor sent to Lisbon (LISC).

P h i l i p p i n e s

The National Museum, Manila, is setting up, with American aid, a project 'Ecology of southern Samar', in which the departments of Botany, Zoology, Geology, and Anthropology will cooperate. Samar is the least studied of all the major Philippine islands, at the same time it is relatively small and can therefore be covered sufficiently. The main stress of the project will be on beneficial plants in primary and secondary forests, bodies of water, swamps, and open lands. The project will start at the end of 1967.

The Rijksherbarium and the Philippine National Herbarium will cooperate in an exploration of the mountain area in central Luzon, of which Mt Pulog (2960 m) is the highest. Botanical work in this area has been very casual, while this

mountain region is very important as a plant-geographical link connecting Taiwan, Mt Kinabalu, Central Celebes, and New Guinea, as far as cold-loving plants are concerned. The field work is scheduled to start on 15 Jan. 1968 and to last for one month, during which camps will be set up and both the forests on the slopes and the open vegetations on the summits will be investigated and intensive collecting done by Dr. M. J a c o b s with two botanists of Manila. A number of novelties are expected. The National Research Council of the Philippines has already voted a substantial grant; the balance will be supplied, we hope, by the Netherlands Organization for Research in the Tropics (WOTRO).

When the Pulog exploration has been finished, the team hopes to undertake extensive exploration work in the badly known virgin forests of the Sierra Madre in eastern Luzon.

Banaue, Ifugao Province, Luzon. Messrs. D. R. M e n d o z a and R. M. D e l R o s a r i o who are preparing the materials for the Flora of Banaue made a month's trip there from 11 May to 11 June 1967 for collecting and for verification of over 1500 Ifugao names formerly taken down by Dr. H.C.Conklin and others. To date, about 2000 field numbers have been collected and distributed from the Manila Herbarium (PNH) to Cambridge (A), Kew (K), and Leyden (L). The virgin forests of Banaue and the ranges of Mt Polis are still waiting for further exploration.

Biliran Island, Sub-province of Leyte. Mr. P. A. C o r d e r o Jr undertook a marine field trip to this part of the southern Philippines from 2 May to 3 June 1967, collecting 175 numbers of mostly algae. The red-wiry thalloid alga Gelidium was noted in the town of Almeria. It is very abundant during the cold months from August to late January forming thick growths in the neck-deep waters; it is processed by the natives into sweet gelatin desserts.

Dalton Pass, Luzon. Messrs. D. R. M e n d o z a, R. M. d e l R o s a r i o and P. A. C o r d e r o visited this area in Nueva Vizcaya Prov. from 3-18 March 1967. Collections were made of 201 numbers of flowering plants, 68 mosses, 10 lichens; all are to be distributed in due course.

Dalton Pass is a ridge separating the northern valley towards Isabelita-Cagayan and the southern valley of Nueva Ecija. It was observed that the vegetation consists mostly of grasslands, which is dominated by the tall reeds, namely Saccharum spontaneum, Miscanthus floridulus, Thysanolaena maxima, Setaria palmifolia, Pennisetum polystachyon, and the notorious Imperata cylindrica. These grassland areas crept up to the summit of high mountains which are being utilized by the natives for pasture lands. The more inaccessible areas are still covered with virgin mixed forests dominated by the oaks (Lithocarpus spp.), tuai (Bischofia javanica), Viburnum odo-

ratissimum, some members of the dipterocarp family, the genera Syzygium, Elaeocarpus, Myristica, and Terminalia. The forest floors are littered with Cyrtandra, Elatostema, and some members of the composite family. The stranglers and lianas are the members of the genera Ficus, Inetum latifolium, Cayratia, climbing bamboos (Schizostachyum and Dinochloa) and a few species of commercial rattan (Calamus).

It may be interesting to mention that Dalton Pass was the last line of defense of the Japanese Army and the scene of fierce battle against the Filipino-American forces. Over 7,000 Japanese soldiers died on the spot, while about 6,000 or more from the allied forces either died or sustained injuries. As a result of this battle, the vegetation was practically wiped out along the ranges, east to west through Dalton Pass (named in honor of General Dalton of the U.S. Army).

Palawan. Messrs. E. R e y n o s o and R. E s p i r i t u, both Aides of the National Museum, Manila, collected at Victoria Mountain from 17 Febr. to 17 March 1967; 135 field numbers of flowering plants, 35 mosses, 7 fungi.

N e w G u i n e a

West

In collaboration with the Indonesian Army, Dr. S o e - g e n g Reksodihardjo of the Bogor Herbarium, accompanied with the mantri N e d i, famous for his knowledge of plants, went in April 1967 to Merauke by boat for an exploration trip, with the frontier survey team. Collecting would be pursued in the clearings made for the helicopters, during 2-weeks stays in each station.

East

In 1964 Prof. Dr. F. E h r e n d o r f e r was awarded a senior fellowship by the Australian Academy of Science. This materialized in the second half of 1966, from Aug. 6 to Dec. 23. The brief itinerary is as follows: Bangkok Aug. 8-15; Singapore Aug. 16-20; Queensland Aug. 21-29; Papua Aug. 30-Sept. 11; Canberra Sept. 12-Oct. 7; S.Australia, Adelaide, Victoria Oct. 8-19; New South Wales Oct. 20-21; Sydney Oct. 22-Nov. 1; New Zealand, Christchurch-Lincoln Nov. 2-25; New Caledonia, Noumea Nov. 26-Dec. 2; New South Wales Dec. 3-5; Canberra Dec. 6-9; SW.Australia, Perth Dec. 10-16; Ceylon Dec. 17-21.

The travel resulted in transplants and fixations (900) of the Australian and Papuan species of Veronica, Hebe, Parahebe, Detzneria, and Pygmaea, and further in similar studies

on Galium, and further in Magnoliales, Winteraceae, Austrabayleaceae. and Monimiaceae. About 1000 herbarium numbers were collected and c. 400 colour slides of plants made.

Cand.med. Wulf S c h i e f e r h ö v e l, Neunkirchen, Germany, spent from Jan.-Sept. 1966 in the Territory of New Guinea as a member of a small scientific expedition conducted by Dr. Schultze-Westrum, zoologist at Munich. Collected and preserved 150 plants in the course of his work about the medical knowledge and practice among the indigenes of a) Gulf of Papua, b) eastern part of Central District, c) area north of Mt Bosavi. The material was sent for pre-identification to Lae and Leyden, but is mostly sterile and not fit for conservation.

Dr. W. A. W e b e r, Boulder, Colorado, is planning to make in 1967/68, partly together with Dr. M c V e a n, Glasgow, an exploration in Tasmania, East Australia, and Mt Wilhelm in Papua, mainly for collecting lichens, but also mosses and other cryptogams.

Mr. R. P u l l e n collected in the Port Moresby area during April and May 1967 in connection with ecological studies undertaken in that area by Dr. P. H e y l i g e r s. Approximately 400 numbers were collected. He left for the savannah area along the Morehead River in the Western District, Papua towards the end of July 1967.

Western District, Papua. Messrs. R i d s d a l e and G a l o r e of Lae were attached to the West Irian/Papua Border Survey Party, run jointly by Indonesian and Australian authorities; for the first fortnight Mr. E. E. H e n t y was with them. They began in the foothills of the Star Mountains at about 4,000' (for about a fortnight), then 3 weeks at Ingembit on the Border at c. 300'. Then a brief stay at Kiunga, another at Angamaruk on the Fly River. They then moved to the Savannah at Weam, a new patrol post on the Bensbach River for about 3 weeks. Extensive collections were made at Ingembit and Weam. Numbers totalled about 1,000.

Northern District, Papua. Mr. C. E. R i d s d a l e of Lae visited the Forestry Helicopter Survey at Ioma for a week; he was then replaced by Mr. M. J. E. C o o d e for a second week. Mr. P. K a t i k remained for the two weeks. Collecting numbers totalled 86.

Milne Bay District, Papua. Messrs. A. N. G i l l i s o n and M. G a l o r e of Lae collected principally in the Islands, in company with Mr. P. E d d o w e s of the Division of Utilisation. Collected were 171 numbers.

Morobe District, T.N.G. Mr. E. E. H e n t y of Lae visited Lake Trist at c. 6,000' in company with a party of American Army pathologists led by Col. Traub. 177 numbers were col-

lected. Henty and Ridsdale also visited Kui, on the coast; about 70 numbers were collected. Mr. R i d s d a l e collected about 160 numbers at Edie Creek above Wau; also in the Wau area Mr. J. S. W o m e r s l e y collected with the Forestry Helicopter Survey of that area.

Sundry trips principally collecting orchids were made by Mrs. A. N. M i l l a r and Mr. A. W. D o c k r i l l, in the Bulolo and Kui area of Morobe District and the Yimas Lakes on the Sepik River, mostly in company of Drs. L u n i n g and L a w l e r.

Mr. M. J. E. C o o d e accompanied Dr. D. M c V e a n and Mr. L. K. W a d e on a trip to Mt Giluwe in the Southern Highlands. Later, Messrs. J. S. W o m e r s l e y and K. R. W i l l i a m s made over 100 collections in the rich forests of the foothills of Giluwe, based with the Helicopter Survey.

From the Oakapa area of the Eastern Highland District, Messrs. J. S. W o m e r s l e y and M. J. C o o d e, accompanied by Yakas L e l e a n, collected + 70 numbers.

The Forestry School at Bulolo continues collecting specimens mainly for the purposes of their teaching Herbarium.

Mr. L. K. W a d e finished his field work on Mt Wilhelm and returned to Canberra to complete his thesis.

N e w B r i t a i n

Mr. C. E. R i d s d a l e of Lae assisted Professor D a r k e in his anthropological work near Cape Gloucester; 280 numbers.

N e w I r e l a n d

Mr. M. J. E. C o o d e of Lae, accompanied by P. K a - t i k and for a time by T. E. C r o p l e y, a temporary member of the staff, made collections with a small Forest survey party in the area SE. of Kavieng, S. of Kapsu and N. of Kaut, with a short trip down the coast to Namatanai and across to Uluputor; + 300 numbers.

S o l o m o n s

Approximately 730 official field collections were made, about 500 of them collected and recorded by semi-literate Solomon Islanders attached to forest survey parties, operating on the islands of New Georgia and Santa Ysabel, under only part supervision of European forest officers. The majority of such collections are tree species, and field data is

necessarily of poor quality. The other approximately 230 official collections were made either personally by Mr. D e n n i s in areas up to 8,000 ft altitude in Central Guadalcanal, or by Melanesian collectors working in the lowlands of the same island under the former's supervision, such collections being accompanied by detailed field data. The latter collections comprise mainly non-tree species, including about 60 multiple bryophyte collections mainly from between 7,000 and 8,000 ft altitudes. Distribution of all duplicated specimens, other than bryophytes, was made to herbaria at Lae, Leyden, Kew, Washington D.C. (Smithsonian Institution), and Singapore. Duplicates of bryophytes were sent to the Swedish Museum of Natural History, Stockholm, from whence some excess material has been sent to the British Museum. In addition, duplicates of 124 collections from Rennell Island, made by visiting Danish geographer Mr. Sofus C h r i s - t i a n s e n of the University of Copenhagen during August and Sept. 1966, were incorporated in the herbarium collections. These included many food plants, e.g. species and varieties of Dioscoreaceae, used by the Polynesian inhabitants of the island.

Botanical visitors. Dr. J. B a r r a u, on behalf of the South Pacific Commission, Noumea, worked on Guadalcanal and Malaita for a week in August 1966, to make a preliminary survey and collection of native customary and medicinal plants.

Mr. T. N e w e l l, sponsored by the Department of Botany, University of Hawaii, worked on Guadalcanal for 9 days in Sept. 1966, to study and collect Flagellariaceae.

Dr. R. M. S c h u s t e r of Massachussetts, who collected many bryophytes from locations up to 500 m in NW. Guadalcanal, during a 2-day visit in June 1967.

Bougainville. Messrs. C. E. R i d s d a l e and P. L a v a r a c k with Y. L e l e a n of Lae collected 410 numbers.