

III. EXPEDITIONS AND OTHER FIELDWORK

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Malaysia

A report has been published that *Vanda hookeriana* was found again outside Gopeng, ca. 20 km from Ipoh, Perak. The species was abundant at the end of the 19th century, but mining operations have destroyed most of its natural habitat. It grows in swampy ground by clinging onto *Crinum asiaticum* leaves. (OSSEA Bull. 6/6, 1988; Hawaii Orch. J. 17/4, 1988, 7.)

Kalimantan

For a period of 3 years, starting in November 1989, Messrs. D. DARNAEDI (B), M. HASABE, and M. KATO (TI) will be studying rheophytes in East Kalimantan.

Sarawak

SAR organized four major trips in 1990. In March 606 herbarium specimens and 216 living ones were collected in the Hidden Valley and G. Mulu. In May 306 numbers were made in the Simalajau National Park Bintulu. In October a trip was made to Batang Ali, Sri Aman, where 368 herbarium specimens and 81 living ones were found. In November there was a joint expedition with the BM and E to the Eastern part of the G. Mulu, see below.

Smaller trips were made as well. In March an ethnobotanical collecting trip was made to Limbang and Bekenu (297 specimens). Various assessments were made: in June that of the Rattan Trial Plot in Semengoh and Sampadi and of the Mangrove Ecological Transect at Sematan Stateland Mangrove Forest; in July that of the Forest Arboretum, Semengoh; and in August that of the Ecological Plot in Heath Forest Sabal Kuching. — H.S. LEE.

A team of 10 people from BM, E, and SAR spent 21 days (8–29 November 1990) on the western side of *Gunung Mulu N.P.*, an area not visited by the Sarawak–Royal Geographic Society Expedition of 1977/78. The expedition was lead by YII PUAN CHING, botanist of the Forest Herbarium (SAR), Forest Department Sarawak, and included botanist RUNI SYLVESTER and four Forest Guards/tree climbers (SAR), and JOSEPHINE CAMUS, CLIVE JERMY (BM), and MAUREEN WARWICK (E), and HARRY TAYLOR (BM), who accompanied the party as a photographer.

The party was able to approach the western boundary of the Park (the Sungei Ubung) by logging road (not possible in 1979) from the Sungei Rumpit Logging Camp on the Tutuh River, and was grateful to the Sin Yang Timber Company for providing free transport for this phase. Penan porters and guides were hired at Long Iman where the Penan that normally live inside the Park have established, at their request, a longhouse; many had relatives living in the forest in Ulu Ubung and knew the area well.

Once in the Park the party made for the mountain ridges between Tapin, Macong, and Ubung Rivers. The objective was to approach the summit of G. Mulu from the East, but steep and dense vegetation in the upper montane forest zone made this impossible in the time available. Collections were first made in the alluvial forest by S. Ubung and in the logged area on the lefthand bank of the river where several trees were in flower.

The Mixed Dipterocarp Forest formation was narrow on this East side of the Park, due to the steepness of the ridge. A camp was made at 1051 m, and both the lower montane and

upper montane (short facies) forests were worked to a height of 1450 m. There was an obvious rain shadow on this side of the mountain compared with much wetter 'moss forests' of the West route.

The UK party spent a further ten days based at Park Headquarters on the Melinau and at Camps 4 and 5 making specialist collections. The following specimen numbers were collected: YII & RUNI S. (297 nos, SAR, dupl. E), JERMY (no 18941–19076) & CAMUS (332 pteridophytes, 287 bryophytes, 116 phanerogams: BM, dupl. SAR, bryophytes L). Living plants were collected for E, K, and SAR.

JERMY also had discussions with PAUL CHAI (Min. of Tourism) and Park Development Officer, VICTOR A. LUNA AMEN, on aspects of Park management, developments since 1979, and the future of interpretation and ecotourism in the Park. The Park now attracts some 4,000 visitors a year, mostly Malaysians, but an increasing number of tours from North America and Europe. Considerable sums have been spent by the Sarawak Government to develop the Headquarters complex, and on board walks to project the fragile alluvial forest floor. The caves, Mulu's greatest tourist asset, have been developed successfully and will continue to attract many visitors. Most of these people now want to see, and try to understand, the tropical forest ecosystem.

A database containing the pteridophytes of the Park is now to be extended to include the 1,600 phanerogams, and the bryophyta and lichens collected and identified over the past ten years of botanical exploration of this rich tropical rain forest site. — C. JERMY.

Philippines

The *Philippine Plant Inventory* (PPI) was formally inaugurated in the field during January 1991 as the initial team members (still in advance of the filling of all positions) traveled from Manila to Palawan to spend three weeks in this highly interesting and botanically still relatively intact island. The collecting team (E. REYNOSO, E. SAGCAL, E. ROMERO and F. GAERLAN) accompanied by CO-PI Drs. B. C. STONE and D. A. MADULID visited 15 distinct localities and amassed over 4,200 specimens (435 numbers with mostly 9–10 duplicates each). The localities were mainly along the eastern side of the island (three on the West side), and reached Brooke's Point in the South and Taytay/Pangkol in the North. Vegetation on ultrabasic rocks, on bedded deformed chert, on fine gray clay, on red-brown loam, and on sand furnished the specimens; most collections were from 500 m altitude or less.

Some interesting results included the second known collection of *Pandanus decipiens* Martelli, from the type locality and another from Pangkol; these conform the earlier conclusion that this species is a synonym of *P. basilocularis* Martelli of Sabah and Sarawak. Also the second collection from Palawan (and third all told) of *Pandanus occultus* Merr. (provisional determination) was obtained. Good material of *Pandanus merrillii* Warb. (first specimens collected since 1912) was gathered. Some other species were seen but were not fertile, one of which is almost certainly *P. calamianensis* Merr. (one of only two species of section *Rykia* which occur in the Philippines); this proved to be quite common and widespread in Palawan. Of Myrsinaceae, *Ardisia romanii* Elm. and several other collections were made (including two species of *Embelia*); of Araliaceae, one *Arthrophyllum* (curiously, *Schefflera* seemed very uncommon). *Balanophora* was abundant in one site. A handsome *Kadsura* was obtained in the Irawan valley. There are perhaps a few new records in the material assembled.

During February this material has been processed. A second expedition, to Mindoro, and simultaneously, one to Mt. Kanlaon, was scheduled for March. By this time the full col-

lecting team strength of the Project was completed, so that as planned, three teams (each of 3 staff members) undertake field work, so that at a given time three localities will be worked. We envision a continuous inflow of newly collected materials at the rate of approximately 16,000 collections per team over a three year period.

Duplicates are to be distributed after initial processing, pre-identification, labelling, etc. The main sets will be housed in PNH and BISH, with further sets to be allocated to major herbaria such as K, L, and US, to regional herbaria and BNPG.

Reports of future expeditions will also be noticed in this Bulletin. Potential contributors to the Flora who would program should write to: Ms. MARIBEL AGOO, Admin. Asst., Philippine Plant Inventory, Dept. of Botany, Philippine National Museum, P.O. Box 2659, Manila, Philippines. — B.C. STONE.

Papua New Guinea

A short field trip was organized by the ETH Zürich to collect material for pharmacological investigations. Participants were Drs. O. STICHER, B. BAUMGARTNER, J. ORJALA (ETH), P.H. HOVENKAMP (L), Messrs. P. KATIK (LAE), M. KUDUK, and T. RALI (UPNG). Visits were made to the surroundings of Port Moresby, Mendi, and Lae. Vouchers for the approximately 20 pharmacological collections (1–10 kg dry weight each!), and additional smaller collections will be deposited in L, LAE, UPNG, ZT.