VI. RESEARCH AND PUBLICATIONS

(continued from Volume 9, page 401)

Brown, R. — Dr. D.J. MABBERLEY (see Bibliography) reported that several of Brown's publications are antedated by preprints, e.g. pamphlets associated with Horsfield's Plantae javanicae rariores, On the Asclepiadaceae, Observations on the natural family of plants called the Compositae, Chloris melvilliana, On the female flower and fruit of Rafflesia arnoldi (!) and on Hydnora africana, Botanical appendix to Captain Sturt's expedition to Central Australia.

Drake del Castillo, E. — Ms. Dr. M.-H. SACHET (see Bibliography) reported that there is an earlier edition of the Flore de la Polynésie française, and that many of his new taxa were previously published in his Illustrationes.

Ecology and taxonomy of Nepenthes in Borneo. — A research project is underway on pitcher plants (*Nepenthes*) in Sabah and Sarawak. The genus has about 70 species, with greatest variety occurring in Borneo. Many species are known from only a few herbarium specimens and attempts are being made to increase the material so far available for study and to extend our knowledge of the ecology of individual species. Species diagnoses have been based primarily on pitcher morphology and this opportunity is taken to evaluate some additional potentially useful taxonomic characters. Work on pollination biology, a comparison of pollinators and pitcher prey, the effect of pitchers on growth, sex ratios, and habitat preferences of some selected species in Sabah is being undertaken by Mr. J.H. ADAM for his Ph.D. under the supervision of Drs. M.D. SWAINE and C.C. WILCOCK (ABD).

The Endau-Rompin Expedition. — Some literature may be found in K. RUBELI. Endau-Rompin: a refuge for Malaysia's rain forest. Habitat (Austr.) 14/4 (1986) 19–22, 6 col. phot., while the whole issue of the Mal. Nat. 40/2 (1986) is dedicated to the general assessment of the expedition.

Enumeration of the flora of Mt. Kinabalu. — Dr. J.H. BEAMAN and his collaborators have scanned the holdings of a great number of herbaria (e.g. in L and K 6,700 specimens of 160 families), but at least 6,000 more will have to be checked. Together with Beaman's own collections (ca. 2,300 specimens) the data have been placed in a database system in which the information from the literature, e.g. previous checklists (by STAPF, GIBBS, MERRILL) will also be included. A series of computer programs have been developed that will prepare a nearly finished and formatted enumeration.

Flora of the Philippines Project. — A workshop was held in Honolulu to discuss the plans for this flora (see Fl. Males. Bull. 9, 1987, 396). Further discussions were held in Los Baños, the Philippines, between 29 February and 8 March 1988. Further discussions are planned for autumn 1988.

Flora Malesiana. — Volume 10^3 is now with the printers and expected to appear by the end of the summer of 1988. It is going to be a thick one this time, 300 pages. The contents have been changed again and it will now definitely contain treatments of the *Coniferales* (D.J. DE LAUBENFELS), *Cruciferae* (B. JONSELL), *Linaceae* s.l. (*Linaceae, Ctenolophonaceae* by A.M.N. VAN HOOREN & H.P. NOOTEBOOM; *Ixonanthaceae* by R. KOOL), *Magnoliaceae* (H.P. NOOTEBOOM), and *Polygalaceae* (R. VAN DER MEIJDEN, *Epirixanthes* by T. WENDT). The *Chrysobalanaceae*, a dedication to C.L. Blume by C.G.G.J. VAN STEENIS, and perhaps the *Sabiaceae* are planned for 10^4.

Flore du Cambodge, Laos et Viêtnam. — The publications planned for the next few years are:

1988: *Caryophyllales* (K. LARSEN, AAU).
1989: *Dipterocarpaceae* (P.H. HÔ, J.E. VIDAL, P; T. SMITINAND, BKF).
1990: *Juglandaceae, Proteaceae, Thymelaeaceae* (P.H. HÔ, P).
1991: *Ericaceae* (P.H. HÔ, P; T. SMITINAND, BKF).

Guide to the Standard Floras of the World. —Dr. D.G. FRODIN (PH) is far advanced with a supplement.

Periodical flowering in Sericocalyx timorensis (Acanthaceae). — The Acanthaceae *Sericocalyx timorensis* (Nees) Bremek. apparently has a 7-years rhythm of simultaneous flowering and death, a periodicity also known for species of *Strobilanthes*, e.g. *S. cernua* (see also Van Steenis, Trop. Natuur 29, 1940, 88–91; Ann. Roy. Bot. Gard., Calcutta 150 Aniv. Vol., 1942, 91–97). The flowering took place in W. Flores between June and August 1987, while in at least March 1988 there was not a trace left of the species, not even seedlings! This phenomenon is well-known to the people of the village of Sarong, as the vernacular names show, *reso-* or *mengga-woko,* meaning 'periodically flowering woko', 'woko' being the general name for plants with *Strobilanthes*-like flowers. The same prefixes are also in use for some periodically flowering bamboos. If any

body has data on the flowering of this species, I would be very happy to receive them. — E. SCHMUTZ S.V.D., Tromolpos 2, Ruteng - 86501, Indonesia.

Pollination of Rafflesia pricei. — Mr. R.S. BEAMAN, Ms. P.J. DECKER (FLAS), and Dr. J.H. BEAMAN (MICH) aided by a Fullbright Fellowship to JHB and by an NSF grant (BSR-8507843) to the Michigan State University, have studied the pollination of the flowers of *Rafflesia pricei,* a species endemic to the Crocker Range, Sabah, in the field. These were visited by carrion (bluebottle) flies of the genera *Lucilia* and *Chrysomyia.* Experimental data indicate that both visual and olfactory cues are important in attracting flies to flowers. The flies, mostly female *L. papuensis,* obtain loads of the viscous liquid pollen matrix by visiting male flowers and entering the anther grooves on the central column of the flower. They are precisely guided by ridges armed with hairs that force the fly into a position in which the pollen is positioned on the dorsal part of the thorax. 'Windows' on the inside of the perigone diaphragm apparently help orient their flight inside the flowers. Pollen-loaded flies visiting female flowers may enter the infra-discoidal sulcus formed by a broad ring of stigmatic tissue above and the expanded base of the expanded base of the column below. On entering the sulcus the fly is wedged in so tightly that pollen is rubbed off its thorax onto the stigma. Only large flies could be effective in picking up pollen from male flowers and transferring it to the female ones. The pollination syndrome is called 'sapromyophily', in which these flowers closely parallel the trap flowers of several other plant families, although it is not a trap itself. The flowers provide no reward for pollinators, but deceive them by an apparent offering of food, and possibly a brood place. *Rafflesia* plants are extremely rare, perhaps in part because of the infrequency of pollination, which requires neighbouring male and female flowers to bloom simultaneously.

The Royal Society S.E. Asian Rain Forest Research Programme Newsletter (Fl. Males. Bull. 9, 1985, 31, 159, 400) was started in January 1985 and now has had three annual issues. It is published by Dr. A.G. MARSHALL, Department of Zoology, University of Aberdeen, Aberdeen AB9 2TN, Scotland, U.K.

The first issue (1985) is about a research and training initiative, in a collaboration between scientists from Great Britain and S.E. Asian countries: patterns and processes in the recovery of tropical forest following disturbance. Research is centered of course on the Danum Valley, Sabah, which is briefly described.

The program is both international and interdisciplinary, and will thus provide an unusually stimulating and constructive environment in which to work. The results of the program, organized in full cooperation with S.E. Asian researchers and with strong applied and training aspects, are likely to be of practical value to those responsible for the proper management of tropical rain forests. The organizing committee has long-established links with a number of research workers and institutions in S.E. Asia and would be happy to help making further contacts. It is currently unable to finance major projects, but may do so in the future. Through limited funds for reconnaissance and brief research visits about 40 British people have gone to S.E. Asia and 5 S.E. Asian collaborators to the U.K.

The Scientific Centre of the Danum Valley is funded by the Sabah Foundation and the British Royal Society.

In the second issue (1986) more details are given on the scientific aims, information on projects under way, and a more extensive description of the Danum Valley. Brief summaries of various research visits and programs, both in here and elsewhere, are given.

The third issue (1987) gives a continuation of the research projects and development of the Valley.

If you plan to join the programme or want to know more about it, contact MARSHALL stating your name, full address, potential research topic, likely commitment of personnel and time, and possible sources of funding.

Solanaceae Newsletter. — All future issues (volume 3 onwards) will be directed by Dr. M. NEE, New York Botanical Gardens, Bronx, New York, NY 10458, U.S.A. Correspondence relating to volume 2 should be directed to Dr. W.G. D'ARCY (MO), and those previous to 1980 to Dr. J.G. HAWKES, Dept. Geological Sciences, University of Birmingham, POB 363, Birmingham B15 2TT, U.K.

Spatial and temporal dynamics of lowland rain forest in the Danum Valley. — Dr. D. NEWBERY (Dept. of Biological Science, Stirling University, U.K.) is investigating the maintenance of species diversity and determining the changes in floristic composition in time. Two plots of 4 ha each have been established. All trees above 10 cm gbh (ca. 18,000) have been tagged. All dipterocarp seedlings and saplings under 10 cm gbh in 2 subplots have been enumerated. The analysis of the data will provide information on associations between species, patterns in distribution and size, edaphic relationships, and changes in species composition.