

III. EXPEDITIONS AND OTHER FIELDWORK

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Malay Peninsula

The Malayan Nature Society is organizing a *Scientific Expedition to Belum* on the Northern border of Perak with Thailand to take place for one year after about August, 1993. It is intended to prepare an inventory for biodiversity for the proposed National Park, not a general collecting trip. Specialists and other serious visitors are expected within a reasonable period to stay for an extended time to study a defined, limited subject and to prepare a report for the inventory as soon as possible. For further information please contact the Executive Secretary of the Society, Miss Lee Su Win, POB 10750, 50724 Kuala Lumpur, Malaysia.

Sumatra

Between 18 October and 19 November, 1992, Mr. CHAIRUL (Puslitbang Biologi) conducted a survey of plant species suspected to have biologically active substances. He collected 150 samples for further study.

Between 21 June and 17 August, 1992, Mr. T. PARTOMIHARDJO (BO) did ecological studies in the Krakatau group, looking especially at epiphytes in permanent plots established in the area by scientists from LTB. He made 146 collections.

Lesser Sunda Islands

In January, 1993, Dr. E. A. WIDJAJA and Mr. D. SAPUTRA (BO) collected bamboos in Timor, Flores, Sumbawa, and Bali. They returned with 130 herbarium specimens and 50 living plants.

Borneo (s.l.)

Kalimantan

Between 10 and 23 November, 1992, Dr. H. WIRIADINATA and Messrs. H. M. SANGAT and SUNARDI (BO) collected 267 herbarium specimens in the Kasongan, Tumbang Manggo, and Camp Kecubung area in Central Kalimantan.

Sabah

Dr. W. MEIJER (KY) returned to Borneo (May 18–September 17, 1992) at the costs of the National Cancer Institute and with some support from MO and the University of Kentucky. In Sabah he took samples of 145 SAN-numbers for testing against AIDS and cancer. This was done in cooperation with staff of the Sepilok Herbarium of the local Forest Department with Dr. K. M. WONG as Chief Curator. He collected almost an equal amount of plants for the local herbarium from the ultrabasic areas, the foot hills of Kinabalu, the coastal islands near Kota Kinabalu, the seashore along the Klias Peninsula, and the remaining lowland and hill forests near Sandakan, including Sepilok Forest Reserve, which now has more than 700 trees in its Quatro Pro Database.

Collecting for the AIDS–cancer project centered this time very much on the interior ultrabasic hills North and South of Telupid. Especially in the extensive Tavai Mountains many species occur that are absent from the surrounding sandstone shale areas. Five days were spent on Bukit Rara, an unexplored ultrabasic mountain in the heart of Sabah. Here he also collected bryophytes and got illusions to revise his Dipterocarp book.

For the Sabah Parks he collected on the islands around Pulau Gaya and prepared a preliminary checklist of the flora, including 30 species of dipterocarps. *Exocarpus latifolius* on Pulau Manukan was a most exciting discovery.

A short tour was made to Brunei, as guest of Dr. K. A. SALIM from the local University. Three days in the Ulu Belalong Proposed National Park showed the great dipterocarp diversity there. *Rhizanthus lowi* was found not very far from its type locality.

Mr. H. O. ISMAWI, an old-time assistant of KUCH, showed a locality near Lundu, Sarawak, of *Rafflesia arnoldi* in its tuan-mudae form. It was growing under a huge banyan

tree in the middle of a rubber garden at 50 metres from an asphalt road. Most buds there were so suppressed by the roots of the banyan that they never could open.

In Kinabalu he explored an ultrabasic hill North of Ranau and West of the burnt-over Bukit Hampuan, and found a new locality of *Rafflesia keithii* (with an open flower) and many other interesting plants, but no dipterocarps at all which suggests that the forest is an old secondary one. — Summary of a report by Dr. W. Meijer. (Ed.)

Celebes

Between 2 and 15 February, 1993, Dr. H. WIRIADINATA, J.J. AFRIASTINI, P. KRAMADIBRATA and A. SADILI (BO) made a survey in the Kaluku subdistrict of Mamuju (S. Celebes). Over 100 living specimens of orchids and other plants were collected for the newly established Sumba Opu Botanical Garden, Ujung Pandang. They brought back 202 herbarium specimens, including 40 of palms collected by KRAMADIBRATA.

Philippines

From 19 to 23 April Dr. D.A. MADULID, Mr. E.J. REYNOSO, and Ms. M.G. AGOO made a survey of the vegetation of Coron Island, a limestone island near Busuanga. A more thorough inventory was planned to take place in early 1993. See also Philipp. Fl. Newsl. 4 (1993) 3.

Between 28 July and 16 August, 1992, Messrs. H.G. GARCIA, E.J. REYNOSO, and E.C. SAGCAL Jr. explored the Banaue, Ifugao, and Mayoyao areas in N. Luzon. See also Philipp. Fl. Newsl. 4 (1993) 4.

Between 5 and 24 August, 1991, Messrs. J.A.S. ALVAREZ, E.B. BARBON, and R.E. FUENTES went to the Biliran, Samar, and Leyte islands.

Between 19 August and 7 September, 1992, Messrs. L.S. FERNANDO, F.J.M. GAERLAN, and E.M. ROMERO worked in the Pico de Loro and Mt Quebrada area out of San Isidro, Bangui, and Dumalneg in Ilicos Norte. See also Philipp. Fl. Newsl. 4 (1993) 4.

Between 5 and 24 October, 1992, Messrs. J.A.S. ALVAREZ, E.B. BARBON, R.E. FUENTES, and Dr. S. VAN DER KLOET visited the regions of Mt Santo Tomas and Mt Pulog, Benguet, and the Pugo and Santa Rita areas, La Union.

Between 8 and 27 October Messrs. H.G. GARCIA, E.J. REYNOSO, and E.C. SAGCAL Jr. collected in W. Samar.

Moluccas

Between 28 April and 16 May, 1992, Dr. J.P. MOGEA and Mr. WARDI (BO) searched for rattans in Kairatu, Wahi, and Ambon. Although there were numerous species, only 20 were in flower and could be collected. Seeds of another 3 were obtained for planting in the Kebun Raya.

New Guinea (s.l.)

Aru Islands

From 7 to 10 April 1993, Drs. M. M. J. VAN BALGOOY, H. P. NOOTEBOOM, and Mr. H. TURNER (L) attended a seminar and workshop on 'Coastal Zone Management of Small Island Ecosystems' organized within the framework of a collaboration between the National Research Centre for Oceanology (P3O) in Jakarta, the Environmental Studies Centre of the Pattimura University (PSL-UNPATTI) in Ambon, the Foundation AID Environment in Amsterdam, and the Centre for Environmental Science, Leiden University (CML). As a result of the workshop, recommendations/guidelines were drawn up regarding the protection of coastal ecosystems, which are to be presented to the Indonesian authorities and to the International Conference on Coastal Zone Management to be held in the Netherlands in November 1993 under the auspices of the Intergovernmental Panel on Climatic Change (IPCC).

Following the seminar, a small excursion to the Aru Islands was made between 12 and 30 April, at the onset of the dry season. On this trip about 700 botanical collections comprising roughly 350 taxa were made by the Leiden botanists, assisted by Ms. J. A. B. MAMESAH (PSL-UNPATTI). This means an increase of about 30% of the total number of collections known from these out-of-the-way islands (cf. Van Steenis, *Flora Malesiana* I, 1: cxii). Till now only Beccari, Moseley, Warburg, and especially Buwalda did any serious collecting here.

The present collections were made in different localities: NOOTEBOOM collected on Pulau Baun, a small island on the eastern side of the archipelago which has been designated a nature reserve, and on the north shore of Pulau Kobroor, one of the main islands, part of which is set aside as 'protected forest'. VAN BALGOOY, MAMESAH, and TURNER collected on the eastern part of Kobroor and the eastern part of Pulau Trangan, the southernmost large island. Baun and Kobroor are covered mainly with lowland rain forest, while Trangan has a (probably natural) vegetation of *Melaleuca* savanna interspersed with small patches of forest. All the islands in the archipelago have a well-developed fringe of mangrove.

The vegetation of the Aru Islands is mostly undisturbed, although it was rumoured that the northern island of Wokam is presently being logged. The local population makes extensive use of the forest for wood, food, and medicine, but the pressure is not yet so high as to threaten the integrity of the vegetation. Especially on Trangan there is still much knowledge about the forest, also amongst the younger people. One of the most striking aspects of the vegetation is the very local occurrence of many species. It was not unusual to find abundant stands of a species in one locality, while it was very rare or completely absent in other sites. Lying on the western edge of the Sahul shelf, many Papuan species could be expected on these islands, particularly in the savanna vegetation of Trangan. Indeed, many *Loranthaceae*, *Myrtaceae*, *Proteaceae*, and *Styliaceae* were noted. Other notable finds included several probably endemic *Hibiscus* species, of some of which the seeds were collected for cultivation in the Leiden Botanic Garden, and endemic *Polygala* spp. New generic records include *Aceratium* (*Elaeocarpaceae*), *Bikkia* (*Rubiaceae*), *Ceropegia* (*Asclepiadaceae*), *Nepenthes* (*Nepenthaceae*), and *Tapeinochilos* (*Costaceae*). As far as possible, four sets were collected. Duplicates will be presented to BO, while the third and fourth sets will be distributed to specialists in various herbaria. In all, this trip provided the participants with a rare opportunity to visit these botanically little known islands. Hopefully, there will

be other chances to visit them again in the near future and make further collections in a different season. — H. Turner (with thanks to Dr. M.M.J. van Balgooy for additional information).

Irian Jaya

Mr. W. VYVERMAN (GENT) funded by the King Leopold III Fund in 1992 made a trip of 2 months to the Anggi Lakes, Mt Trikora, incl. Lake Habbema, Lake Sentani, Wasur Reserve, and Kimaan Island.

Messrs. ISMAIL, T. PARTOMIHARDJO, and WARDI (BO) between 22 September and 17 October, 1992, collected c. 500 herbarium specimens, 50 living orchids, and 21 seed samples on G. Susu, Pass valley, and Kuyawage in the Jayawijaya area.

Dr. E. A. WIDJAJA, Mr. SUBARI (BO) and Ms. E. WALLY (MAN) between 6 October and 7 November, 1992, financed by the WWF collected ethnobotanical information in the Agats Subdistrict. They brought back 610 herbarium specimens as vouchers.

Dr. E. A. WIDJAJA and Ms. R. M. J. SADSOEITOEBOEN (MAN) between 11 and 30 March, 1993, collected bamboos in Japen, Biak, Ransiki, Nabire, and Tembagapura financed by the IDRC and the Indonesian National Committee for Germplasm Conservation. Besides 30 living plants they collected 135 herbarium specimens.

Joint Vogelkop Expedition — The Vogelkop of Irian Jaya will be the scene of a multidisciplinary programme involving Ph.D. studies in Linguistics, Anthropology, Development Administration, Demography, Archaeology, Geology, and Botany. This is a joint undertaking of LIPI and the Netherlands Foundation for Scientific research (N.W.O.), sponsored by the latter organization, coordinated by the Leiden State University, and involving participation of 3 Dutch Universities, and the State Geological Service. The project aims at studying various aspects of culture and daily life of the inhabitants of the area, their history, and their dependence on the area they live in. For that purpose ten Ph.D. studies will take place in the Vogelkop area, in close cooperation with counterpart institutions in Indonesia. Senior scientists of the participating institutions will visit the projects for supervision and support. The various disciplines and projects will cooperate where possible in order to profit from each other's expertise and to enhance the scientific outcome.

The Botany subprogramme involves an inventory of the botanical diversity and a study of vegetations in relation to different geological formations in the West Ayfat in the centre of the Vogelkop, and a study of the ethnobotany around the settlement Ayawasi in that area. The Rijksherbarium/Hortus Botanicus, Leiden (L), is seeking cooperation with the Kebun Raya and the Puslitbang Biologi, Bogor to carry out this subprogramme. Two prolonged field trips in the area are scheduled in 1994 and 1995, in which a team of L together with Indonesian counterparts will collect data on the vegetation and reference specimens of the flora. A Ph.D. student will stay in Ayawasi during 2 years to gather data on all aspects of Ethnobotany. Close cooperation in Ayawasi is anticipated with a Ph.D. student in Linguistics and possibly a Ph.D. student in Anthropology. Botanical support in the form of e.g. naming collected specimens by other Ph.D. projects in different areas of the Vogelkop will be provided where required.

The first Ph.D. students of various disciplines are expected to start their studies in the Vogelkop in July 1993. The Botany subprogramme is planned to start towards end 1993, with a preparatory mission to offices in Java and Irian Jaya, and to Ayawasi. Appointment of a Postdoc and a Ph.D. student is scheduled halfway 1994. The Botany subprogramme is scheduled to be finished in 1998. — E.F. de Vogel.

Papua New Guinea

In August 1990 Ms. T. MULDER-ROELFSEMA and Mr. D. MULDER (Wageningen) made a trip to collect orchids. Material deposited in L. A small report was published in *Die Orchidee* 44 (1993) 70–75.

Dr. E.A. WIDJAJA (BO) between 25 February and 7 March, 1993, collected 29 bamboos representing 14 species in Buano, Bulolo, and the Kuper Range.

Dr. T.F. DANIEL (CAS) made 82 collections of 24 genera of *Acanthaceae* in the Madang and Morobe Prov. during July and August, 1992. *Blechum*, *Odontonema*, and *Pachystachys* from S. America were new generic records for Papua New Guinea.

Drs. P.I. FORSTER and D.J. LIDDLE (BRI) spent 5 weeks in the Madang and Morobe Prov. in July and August, 1992, collecting *Asclepiadaceae*. Over 300 collections were made to be deposited in BRI, L, and LAE.

During September–November 1992 Dr. G. ARGENT (E), Ms. J.M. CAMUS (BM), Ms. M. MENDUM (E), Mr. W. MILLIKEN (K), Mr. D.R. MITCHELL (E), together with Ms. R. TANJUNG (Cendrawasih University), Mr. KISWOYO (Purwodadi Botanical Garden), Mr. I.N. LUGRAYASA (Botanical Garden 'Eka Karya', Bali), and Mr. E.N. SAMBAS (BO) collected in the Jayawijaya mountains, Wamena Subdistrict.

Ms. J.M. CAMUS collected 370 pteridophyte and bryophyte specimens. The first set is in BO, the second at BM, the third in MAN. Other sets will be distributed to L, A, CANB. A small collection of live ferns were deposited at the Cibodas Botanic Garden, and at K.

Mr. W. VYVERMAN (GENT) funded by the Belgian National Fund for Scientific Research made a trip of 3 months to the coastal lakes near Madang, lower and middle Sepik floodplain, and Lake Buntuwamp.

Solomon Islands

During March–April 1992 a group of six students from Cambridge University, U.K., led by Ms. K. FORBES undertook an expedition. They collected data and vouchers of traditional medicinal plants from Kolombangara and Marovo. Duplicates are in K.

Dr. J.C. REGALADO Jr. visited BSIP between 27 February and 3 March, 1993, to discuss plans for a joint expedition between the University of Illinois, Chicago, the Field Museum of Natural History (Botany), and BSIP as host institution, under the program for collaborative research in the pharmaceutical sciences.