

V. HERBARIA, GARDENS, ORGANIZATIONS

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Brunei Checklist Project — Mr. A. DAVIES started on 1 January 1994 at K. His main priority is to name specimens, edit the taxon list, and bring 'neglected' groups up to the standard of worked-up groups. Following an introductory period with Mr. L.L. FORMAN he began on *Ficus* and *Myrtaceae*, both of which were completed. He then collaborated with Mr. P. BYGRAVE on the *Melastomataceae*, and embarked on the *Rubiaceae*. Some statistics: c. 33% of all Bornean *Syzygium* species occur in Brunei; there are c. 70 species of *Ficus*.

Shell Brunei is interested in using the Data Base to help with environmental impact work. A subset of specimen records (c. 4000 numbers) will be used in conjunction with geology maps, GIS, etc. to produce digitized maps. Mr. D.W. KIRKUP (K) has a list of software packages designed for this type of project. Overall it seems that Shell Brunei is keen to maintain the image of a 'green' organization with projects to rehabilitate disused inland oil drilling sites, etc.

At Cebu the flora of the Mananga watershed area (71 km²) is being studied. So far 1428 species have been seen. The watershed holds some forest remnants, such as cliff forest and forests on karstic limestone towers. In addition there is a wide variety of secondary vegetation types on limestone formations, metavolcanics (Cansi volcanics), serpentine, shale, sand-stone, and river sediment. Some remarkable species are *Derris cebuensis*, described by Merrill in 1912, but the flowers were unknown at that time, *Cinnamum cebuense*, the only known locality of this species, rare trees such as *Gomphia serrata*, *Helica* spec., *Lithocarpus* spec. A special cliff shrub vegetation has a high number of *Ficus* spec., and *Derris* cf. *multiflora*. Several species differ from the descriptions in the Flora Malesiana or the Flora of Java.

Computerized database of Legumes of South Asia — An international workshop was held in March, 1994, in Lucknow (LWG) to discuss an effective work plan. The broad objectives are:

- to design and establish a computer database of technical botanical information;
- to provide access to available data useful to industry and pharmacy.

DELTA — Under the training aspect of the Tree Flora of Sabah and Sarawak Project a Workshop on DELTA (DEscriptive Language for TAXonomy) was conducted from 29 March to 2 April, 1994, at Sandakan. It was led by Dr. M.J. DALLWITZ, Division of Entomology,

CSIRO, Canberra, one of the developers of the program, and attended by 30 local and overseas participants. During and immediately after the workshop Dr. KAMARUDDIN MAT SALLEH (UKSM) successfully completed the task of translating the menu system and help interface of INTKEY into Malay, the third non-English version of the package. There are also French and Portuguese versions.

It may be noted that DELTA is a very powerful system of organizing characters and their states on any subject, not necessarily taxonomic. I use it all the time in my revisionary work for the Flora Malesiana. It is especially good for the generation of descriptions, comparison of taxa, identification, setting up of basic files for cladistic analyses, etc. (the so-called INTKEY module), but not so much for making keys. For this PANKHURST's DEDIT program is far superior. The handling of data by DELTA is quite bothersome, but has become a piece of cake now with the program TAXASOFT, developed by Mr. E. GOUDA, Botanic Gardens, Utrecht, NL-3508 TD Utrecht, The Netherlands, fax +31-30-535177, E-mail gouda9cc.ruu.nl. For anyone seriously using DELTA this program is an absolute must.

5th Plants Committee Meeting, San Miguel de Allende, Mexico, May 1994

— Held in preparation for the 9th meeting of the Conference of the Parties (COP9) for CITES, Fort Lauderdale, November 1994. One of the topics most deeply analyzed and discussed was Nursery Registration for orchids. It has been widely recognized that the artificial propagation of endangered plant species is an important tool for their conservation. Plants can relatively easily be propagated in large quantities. Once the artificially propagated specimens are available in large quantities there is no longer a need to collect them from the wild. A draft proposal for a resolution was made, which pertains only to nurseries which artificially propagate species of Appendix-I for export purposes. It is a voluntary registration, and nurseries that find the current system of CITES permits appropriate can continue to use the current system.

The IUCN/SSC/Orchid Specialist Group would have liked to see a much simplified system for nurseries exporting only artificially propagated plants of either Appendix-I or -II species and hybrids. This unfortunately is complicated by national regulations which go much beyond the scope of CITES, often even within countries.

Mr. E. HAGSATER, the Chairman, noted that in spite of nearly 20 years having elapsed since CITES was instituted, each country tends to implement it in different manners, often going far beyond the original intent. Much has been gained, but it should be stressed that the convention is not about conservation of biodiversity, but about trade in endangered species, only, and thus it is important that countries do not try to manipulate it as a tool for their own internal conservation of biodiversity and other local interests.

The Holttum Memorial Pteridophyte Symposium on 17–21 July, 1995, at K is of course dedicated to ferns, not orchids, as was erroneously stated on p. 124 (it might be a good idea to have one at some time, anyway). It will address all aspects of pteridology in relation to both extant and fossil pteridophytes worldwide: it is NOT restricted to Flora Malesiana pteridology! The second and final circular has been circulated. For those who are interested but have not received one, please contact Ms. J.M. Ide, c/o Dr. R.J. Johns, The Herbarium, The Royal Botanic Gardens, Kew TW9 3AE, U.K. Tel. +44-81-332-5289/332-5403, fax +44-81-332-5278/332-5197.

Lichens — Ms. P. WOLSELEY, Leverhulme Research Fellow (BM), contributed to the M.Sc. Course on Environmental Risk Assessment at Chiang Mai University, Thailand, with a third workshop on the use of lichens as indicators of forest health. A field key to characteristic and indicator epiphytic species in northern Thailand with black and white illustrations and colour photographs allowed students from China, Indonesia, Laos, Nepal, the Philippines, Thailand, and Vietnam to make preliminary identifications of these difficult organisms. The key has been prepared to launch a wider monitoring program concerned with identifying environmental changes, first in Thailand, in collaboration with the Chaiyong Limthongkul Foundation. The key will be published in Thai and English. Dr. B. AGUIRRE-HUDSON has prepared a bibliography of lichen records in SE Asia, which is now in press in the J. Hattori Bot. Lab. 76.

The Malaysia / U.K. Forest Biodiversity Management Programme is aimed to develop human capabilities for assessing the effect of intervention practice on biodiversity and involves collaboration between leading Malaysian and UK scientific institutes.

Subprogramme A addresses the conservation of biodiversity and sustainable use of forest genetic resources. Important components are the development of efficient methodologies for the inventory and conservation of biodiversity in Malaysian forests and strengthening of collaborating institutions through transfer of information and technology, and through training programmes in Malaysia and overseas. The scientific coordinators are Dr. N. MANOKARAN (KEP) and Dr. I.D. GAULD, Department of Entomology (BM). The first demonstration and development area selected is in the Pasoh FR, Negeri Sembilan. A data-handling system is being developed to ensure that the data collected by the research elements will be made available in an appropriate form to those planning forest management strategies. Inventory and monitoring of target groups of organisms by specialists from a number of Malaysian and UK institutes has begun in accordance with projects scheduled over the first four years of the Programme.

Subprogramme B addresses evaluation of the costs and benefits of non-timber forest products and services, and involves collaboration between several Malaysian organizations and the International Institute for Environment and Development (IIED), London.

Dr. D.J. GALLOWAY (BM) visited Kuala Lumpur in March 1994 to liaise with colleagues at FRIM, KLU, and UKMB over setting in train the lichenological component of the epiphytic plant communities project. Dr. H. MOHAMMED (KLU) is the local coordinator and will shortly select a Ph.D. candidate to undertake lichen work at the Pasoh FR.

In order to encourage interest in Malaysian lichens a bibliography has been compiled together with Dr. A.M. LATIFF (UKMB) and an illustrated key to genera and an introductory guide is in preparation. It is hoped that lichen workshops using these materials will be held in Kuala Lumpur in the near future.

In January 1994, the **National Museum of the Philippines (PNH)** has received a grant from the John D. and Catherine T. MacArthur Foundation to establish a Biodiversity Information Center in the Philippines. It will harbour a database and mini-library on plant and animal conservation, systematics and related subjects, training seminars on practical plant and animal conservation will be organized, and pamphlets and popular publications will be produced. The Center is headed by Dr. D.A. MADULID (Botany) and Mr. P. GONZALES (Zoology). For more information write to the National Museum, P. Burgos St. P.O. Box 2569, Manila.

The **Philippine Flora Project** after three years (1991–1993) has completed the first phase of implementation. Three field teams have made 42 field trips in botanically rich localities. 12,220 specimens were collected with approximately 104,064 duplicates, which will be distributed to various institutions, e.g. BISH, BO, BRIT, K, KEP, L, SING, and US.

In its second phase (1994–1996) the team expects to collect about 50,000 more specimens in 10 duplicates.

The Project is financially supported by the American NSF and USAID.

A severe loss was suffered with the death of its principal investigator, Dr. B. C. STONE. Work will be continued, however, even more vigorously as a tribute to his memory. A reward received from the American NSF has funded a workshop in May, 1994, at BRIT where the third and final component of the Project was discussed, i.e. the research, writing, and editing of the new Flora. A second session was held in Manila, in September 1994.

The Regional Training Course in plant taxonomy: Methods and approaches on the preparation of the flora of biosphere reserves and other protected areas in South-East Asia will be held in September to October, 1995, at the Herbarium Bogoriense. The course can be attended by about 12 participants from the Flora Malesiana area and adjoining Asian countries, e.g. Thailand, Burma, and Vietnam. Lectures will be given by scientists from Indonesia, The Netherlands, India, and UNESCO. The organization is in the hands of BO, UNESCO-MAB Indonesia, and L. The subjects of the course will include techniques of plant collecting, herbarium preparation, systematics, ecology, and some computer programs related to those subjects. Please make your interest known as soon as possible in order to arrange for lodging, grants, etc.

Systematics, Biogeography, and Ethnobotany of the flora of Mt Kinabalu — The American NSF has awarded a four-year grant to the Michigan State University with Dr. J.H. BEAMAN (now in Sarawak) as Principal Investigator (PI). Collaborators at present are R.S. BEAMAN, University of Florida (for GIS and evolutionary studies), Ms. C. ANDERSON, University of Michigan (enumeration of the flora), Mr. S.M. NOR (F, UKMS), Mr. T.J. BARKAN, University of Texas (evolution of *Dendrochilum*), and Mr. A. THOMAS, University of Florida (for GIS).

Taxonomic databases accessible by international networks are being developed for all vascular plants. The specimen database includes more than 20,000 specimens that have been inspected by the PI. Mt Kinabalu is thought to have the richest flora in the world, which contention is being supported by a database that includes more than 4,500 species, about 10% of the Malesian flora! Much of it is threatened with imminent destruction, but only about 30% has thus far been documented in enumerations by the PI and collaborators. An enumeration will be made for the remaining 70%, citing types, synonyms, characterizing habit, habitat, elevational distribution, and listing specimens seen with an index.

A major reason for the species-richness appears due to special edaphic conditions (ultramafic substrates) and frequently occurring droughts that result in the selection of well-adapted genotypes, and small populations with limited gene flow because of the precipitous geography. Three genera (*Dendrochilum*, *Orchidaceae*, *Elatostema*, *Urticaceae*, and *Polyosma*, *Saxifragaceae*) will be analyzed by cladistic and GIS (geographical information system) techniques in an effort to trace evolutionary lineages in groups of closely related species that may have undergone recent speciation.

GIS will be used to produce a map that documents and names collecting locations, land-forms, and settlements. Satellite imagery and global positioning system (GPS) data will be used to interpret the occurrence of paths, roads, ultramafic substrates, and vegetation types. Surface modeling techniques will be used to predict where taxa will occur in unexplored areas, based on topographic and edaphic characteristics of where they are known to occur. Biogeographic relationships between ultramafic areas and similar outcrops elsewhere in Borneo will be analyzed in the context of phylogenetic relationships among ultramafic and non-ultramafic taxa. The GIS will facilitate integrating taxonomy, ethnobotanical and phyto-chemical databases into Kinabalu Park activities and monitoring aspects such as ecotourism development and (il)legal harvesting activities.

Applications have been made to the John D. and Catherine T. MacArthur Foundation for a grant for research on the ethnobotany previously supported by WWF, UNESCO, and AID. The Kinabalu Ethnobotany Project (PEK) is under the direction of Ms. L. MAJUAKIM. The survey is being made to determine how the local Dusun people classify and use the flora. They are making extensive collections of useful plants in their communities and enter ethnobotanical information in an electronic database housed at the Kinabalu Park HQ. This aids researchers and personnel to identify culturally significant resources and to detect which are most vulnerable to over-harvesting or habitat destruction. The survey strengthens the link between Park and local communities and enriches programs for the 200,000 (!) annual visitors.

The project will serve as a basis for Ph.D. dissertations by two Malaysian graduate students, one botanical and concerning the floristics and ecology of a presently unexplored region, the other applying GIS approaches to the small mammal fauna of the mountain. Two American students will prepare Ph.D. theses concerning biogeography, evolution, and speciation in the flora. A third American will base his Master's thesis in geography on the use of a Landsat image for determining occurrence of the ultramafic substrates.

One of the most important events of 1995 will be the **Third Flora Malesiana Symposium**, 9–14 July, to be held at K. If the meetings at Leiden and Yogyakarta were grand, this one promises to be even better. The varied programme offers subjects ranging from *Annonaceae* to *Zingiberaceae*, and from ethnobotany to cladistics. At the workshops you can exchange ideas and experiences with fellow-specialists, a rare and exciting event for most of us who have to explore the taxonomic mysteries of the Malesian flora all by ourselves.

You will probably have received our beautifully executed second and final circular. If not, please contact Dr. R.J. JOHNS, The Herbarium, The Royal Botanic Gardens, Kew TW9 3AE, U.K. Tel. +44-81-332-5289 / -5403, fax +44-81-332-5278 / -5197 (After 16 April 1995 -81- becomes -181- !).

A summary of some salient points follows below, please see the Second Circular for more details.

31 October 1994 – All those wishing to contribute a paper or a poster, *whether or not they have already indicated their wish to do so*, must contact the Scientific Programme Coordinator, Dr. M.J.E. Coode, by this date with a short outline not exceeding one side of A4 paper.

28 February 1995 – Applications, together with the Registration fee and monies for accommodation, the Symposium dinner, the field excursion, as appropriate, to be received by the Executive Secretary. Applications received after this date will incur a *Late Application Supplement of 30%* of the appropriate Registration fee.

28 February 1995 – Completed abstracts, including those of posters, must be received by the Scientific Programme Coordinator.

At the Meeting – All final manuscripts of papers (3 hard copies) for publishing in the Proceedings must be given to the Scientific Programme Coordinator. All will be refereed. A corrected version on disk (DOS compatible) must be provided at a later stage.

Access to the herbaria of K and BM will be available, but as usual you should notify the appropriate curators *at least one month in advance*.

Registration fees:

Full member	– £ 90.00
Student member	– £ 40.00
Accompanying person	– £ 50.00

This will cover the cost of the publication of the Proceedings, the Inaugural Reception, tea and coffee, packed lunches, and daily transport from 9 July on at appropriate times between the Royal Botanic Gardens and St. Mary's College, where most of the participants will lodge.

The maximum number of Student members is 20 and will be on a first come, first served basis.

Accommodation:

You can stay at a number of places in and around Kew, but it would be nice if you would stay at the St. Mary's University College, Strawberry Hill, Waldegrave Rd, Twickenham TW1 4SX. You can then continue to meet all friends and new faces at leisure.

Daily rates for en-suite rooms £ 38.50, rooms with wash basin and shared bathroom facilities £ 33.70, incl. dinner, bed, full English breakfast, taxes.

Visas:

Check in your own country if a visum for the United Kingdom is required!!

See you all there!

Workshop Flora of the Philippines Project — The first session of this Workshop was held 26–28 May, 1994, at Fort Worth, Texas, USA. Session 2 will follow 29–30 September to 1 October in the Philippines. Participants of session 1 included botanists from the U.S.A., the Philippines, France, and the Netherlands. The Workshop addressed the planning of the third component of the project, obviously the most complicated and most difficult one. The first two components, the Philippine Plant Inventory and the Collections Management Project, stand at the base of the research, writing, and documentation phase that will be started as soon as possible. Workshop discussions led to consensus on many points, e.g.:

- that the primary institutions involved will be BRIT and PNH. Dr. S.H. SOHMER and Dr. D. A. MADULID will be (co)chairmen of the 'governing board' (or whatever its name will become);
- that an estimated 5 or 6 full-time plant taxonomists (including one chief editor) will be needed and sufficient to complete the work (a concise, printed, multi-volume flora and a database) in seven years time;
- that 'great entrepreneurial initiative' will be needed and will be shown in seeking funding for research, editing, and computerization, as well at the two primary centers as in other participating/supporting institutions.