

## SCIENTIFIC NEWS

*Botany Project in Irian Jaya*

The Rijksherbarium/Hortus Botanicus acquired funds through NWO (Netherlands Organisation for Scientific Research) to participate in a 7-year interdisciplinary cooperative programme of Indonesian and Dutch scientific institutions aiming at research in Irian Jaya, Cenderawasih province (the Bird's Head; ISIR: Irian Jay Studies - a programme for Interdisciplinary Research). Participating disciplines are: Linguistics, Anthropology, Development Administration, Demography, Archaeology, Geology and Botany. Several Dutch Universities and Institutions are to participate; the Dutch part of the project is coordinated by Leiden University. Nine PhD students, four postgraduates, and six Senior staff members will carry out subprogrammes that may last 2-7 years with field work in the area. Activities of the various subprojects will be coordinated in order to profit from each other's expertise. The Indonesian Institute of Sciences (LIPI) cooperates in the programme.

The Botany subprogramme, coordinated by Dr. E.F DE VOGEL, is centred in the West Aifat (Ayawasi area). It involves ethnobotanical studies by a PhD student, and the investigation of botanical diversity by a postgraduate and senior staff of the Rijksherbarium/Hortus Botanicus. The subprogramme is in the selection of candidates stage.

DE VOGEL visited LIPI and potential counterpart institutions: Puslitbang Biologi, Herbarium Bogoriense and Kebun Raya in Java, and Universitas Cenderawasih and Kehutanan in Irian Jaya on a fact-finding mission. Logistic lines to Jayapura, Sorong/Ayawasi and Manokwari for forwarding equipment and specimens were investigated, and many contacts were made with local authorities and potential local institutions and persons who expressed interest in the project, including Herbarium Manokwari and Kehutanan. The West Aifat, and the selected research site Ayawasi, is covered by extensive areas of undisturbed forest, and has excellent sites for the investigations intended.

Close contacts are being maintained with the Royal Botanic Gardens, Kew, England, to coordinate this ISIR botanical subprogramme with their fieldwork activities in the Waramoi area in the Bird's Head.

*XV International Botanical Congress, Yokohama, Japan, August 28th-September 3rd, 1993*

During the XV IBC a Flora Malesiana Workshop was held, for the greater part devoted to a Symposium: Flora Malesiana, its regional position and its progress. Dr. S.H. SOHMER (BRIT) spoke about local Flora projects in the Malesian region and their relation to Flora Malesiana, also comparing management and budgeting. Dr. M.C. ROOS (L) reported on the progress of the Flora Malesiana project, concluding that some optimism about a substantial acceleration in the production of family treatments seems justified (see latest issue of the Flora Malesiana Bulletin). Dr. J. VIDAL (P) explained the problems concerning the progress in Indochinese Flora's, which mainly relate to lack of funds. Dr. A. HAY (NSW) presented a management model for internationally coordinated working teams to revise large families

in a quick and planned way, illustrated by the treatment of the Araceae (see below). Dr. J. DRANSFIELD (K), dealing with the challenge of Malesian palms, showed the problems of planning Flora treatments squeezed in between other duties.

The workshop was followed by a very successful Social Hour, organised by the Board of the Foundation. Many people interested in Malesian botany were present and lively discussions took place.

Apart from the workshop, Flora Malesiana was also presented at the poster session. Below the full text is given of the presentation of Dr. HAY, because it deals with a very promising model for the treatment of large and complex families.

***Araceae: an internationally co-ordinated major family for the accelerated Flora Malesiana Project - ALISTAIR HAY, Royal Botanic Gardens, Sydney, Australia***

While it may be true to say that 'The best way to prepare a Flora Malesiana treatment is undoubtedly a life-long monographic research effort', it has been acknowledged, I think, that this is a luxury we can no longer afford if it is to be at the expense of providing a usable review in a shorter time. With the accelerated FM project aiming to produce useful accounts in the foreseeable future, it was suggested in the 1989 workshop and in discussion afterward that compilations from existing literature might be productive at least for some families. In 1990 Professor KALKMAN wanted to know whether this was the case with the Araceae. As the Malesian representation of the family has on the whole received minimal attention since Engler and Krause's world monograph in *Das Pflanzenreich* was concluded in 1920, and as extensive new collections have been made since then, there was no doubt in my mind that a compilation would be wholly inadequate to deal with the many new taxa that are now quite commonly encountered by field workers, and the many older taxa which are proving, where revisions have been carried out, to be conspecific. I therefore suggested that it would be essential to prepare at least provisional revisions for the FM account.

The 33 genera in Malesia (of which four are post-Englerian) are represented by an unknown number of species, possibly in the region of 600. A lesser estimate, of say 400, would assume that the number of species will not increase over that accounted for by ENGLER & KRAUSE, which is generally the case in recently revised groups (though in *Aglaonema* the number of species has halved!). However, none of the more prolific genera such as *Homalomena*, *Rhaphidophora*, and *Schismatoglottis*, in which it is thought that many new species of very local occurrence may exist, have been revised recently, so that a reliable trend is not yet visible.

Although Araceae have, as has been said, received relatively little attention through much of the twentieth century since ENGLER, there has been an accumulation of interest since NICOLSON and HOTTA began working on Malesian aroids in the 1960's. Consequently I was able to find no less than ten taxonomists who had published on or were known to be taking more than a passing interest in Malesian Araceae in the last decade. It was therefore probable that the family would be a candidate for an approach involving a team of collaborators in the FM project, and Professor KALKMAN did me the honour of inviting me to assemble the group, co-ordinate it and edit the account.

The team now consists of JOSEF BOGNER (M), PETER BOYCE (K), WILBERT HETTERSCHIED (L), NEILS JACOBSEN (C), JIN MURATA (TI), DAN NICOLSON (US), MIKHAIL SEREBRYANYI (MHU), ELIZABETH WIDJAJA (BO), and myself. Genera have been allotted according to responses to requests for expressions of interest.

It has been decided to split the account into two parts, corresponding to groups with bisexual and unisexual flowers, respectively. This results in more easily manageable chunks reflecting what is widely held to be a 'clean' taxonomic division. The division also fortuitously places all the climbing genera in one part so that there is a significant ecological division also.

The manuscript for Part I is scheduled to be delivered by the end of 1997, that of Part II by the end of 1998. These deadlines are perhaps overly optimistic, but they reflect the commitment to an account in which pragmatism should overshadow perfectionism. This does not, in my opinion, indicate a willingness to be sloppy, but it does reflect a willingness to forgo resolving (or forcing into pseudo-resolution) all taxonomic problems. Instead, it is aimed clearly and carefully to circumscribe those that cannot be resolved in the available time. This seems a useful exercise providing focus for future workers, and when viewed in this way I think it can be said that quality is not of necessity compromised in a pragmatic approach, though the product be different from that of more intensive longer-term scrutiny. After all, there can be no last word anyway, since classification is an inexhaustible process without a final destination as such.

There has been a welcome and exciting proliferation of suprageneric classifications in Araceae in recent years, based on different types of data and approaches. While this should be regarded as a richness of complementary perspectives rather than a mayhem of competing hypotheses, clearly it has been necessary to select (or create) one arrangement for the FM account. Following discussion with collaborators, it was decided that the arrangement of tribes and sequence of genera should follow that employed in the forthcoming BOGNER, MAYO & BOYCE, *'The Genera of Araceae'*. If agreement on a scheme had not been reached, alphabetical arrangement would have been used.

At the request of MARCO ROOS, a checklist of the Malesian Araceae will be produced prior to the Flora accounts, with a deadline for submission of contributions to the Coordinator by the end of 1993. This will include currently used names, basionyms, synonyms, references to protologues, types and their location (known or presumed), distribution, and codified revisionary status. Although collaborators will produce entries 'manually', the items in each will correspond to fields in the proposed Leiden database, to facilitate eventual transfer.

A bibliography of Araceae in Malesia and adjacent areas will also be produced, with a deadline for contributions at June 1994. This is greatly facilitated by being based on a bibliography assembled by Professor VAN STEENIS which he gave to me in 1982. It has been put on disc and copies circulated to collaborators for update. It will include publications containing at least one protologue of a Malesian aroid, revisions, synopses and monographs, regional accounts, published reports of expeditions enumerating species, nomenclatural publications

discussing or citing any Malesian Araceae, and biological and ecological publications in which one or more Malesian aroid figures significantly.

In addition to the Co-ordinator, it was felt useful to have someone with specialist knowledge of Araceae and involvement in the project who could liaise directly with the Rijksherbarium as 'European Co-ordinator'. Fortunately one of the collaborators, WILBERT HETTERSCHIED, is stationed in the Netherlands. Having a European Co-ordinator has already proved useful in dealing with the matter of developing the format for the checklist, in which repeated consultation with Rijksherbarium staff was necessary. I also foresee that it will be very helpful to have someone close at hand to Leiden who can consult the library and herbarium on behalf of more distant collaborators when necessary.

In order to keep collaborators informed of procedures, timetables and other relevant matters, it was deemed useful to produce a newsletter from Sydney. Initially this was to be six-monthly, but it quickly became occasional - when need arises.

So far, collaborators are individually responsible for obtaining fieldwork funding. However, I have received a pledge of financial support from a private source for field work in all the main parts of Malesia over a five-year period. This is specifically for the collection of living material for scientific purposes. Collaborators are informed of each other's field work intentions in the newsletter, so that requests for living or preserved material can be made. In a family which as a whole fares so badly in herbaria, living or at least spirit material is very important in aiding description. An attempt is being made to compile a list of documented wild-collected accessions in the principal living collections, so that pertinent live material can be distributed to the relevant specialists, or spirit material prepared on request. However, as some major collections are not yet computerised, provision of this data in full is not yet possible.

In a fairly large project such as this, with a tight schedule, there is a risk that delays may result from herbarium material being loaned to researchers not directly involved in the FM work. It is hoped that conflicting loan requests can be avoided by my having forewarned all the main relevant herbaria, asking that the project be given loan priority. Most herbaria have been highly co-operative in this regard. At the same time it is hoped that others with an interest in Malesian Araceae, especially those working from within the region, can be assisted rather than impeded by us while the FM work is in progress.

One of the collaborators, MIKHAIL SEREBRYANYI, has, in conjunction with a Russian company, designed a database for the generation of Flora Malesiana accounts. This is potentially very useful, but it has yet to be evaluated. At this stage problems with back-up are foreseen, unless the Rijksherbarium is the centre for the management of such a system. For the present, collaborators are asked to use Word Perfect or compatible packages. They follow the instructions for authors issued by FM and manuscripts and discs are then sent to the Co-ordinator for editing prior to submission to Leiden.

SIMON MAYO (K) has generously suggested that the composite generic plates being prepared for the forthcoming BOGNER, MAYO & BOYCE, '*The Genera of Araceae*', may be able to be used for the FM account, with possibly some minor modifications. However, this is yet to be confirmed with the relevant authorities.

It has been found useful for collaborators to meet face to face to discuss problems and progress. The first meeting took place at the Araceae symposium held in Moscow in 1992, organised by SEREBRYANYI. A similar specialist meeting organised for 1995 by Professor LI HENG in Kunming, China, will provide another opportunity, as will the next FM symposium itself, also planned for 1995, at Kew, which fortuitously follows directly on from the meeting in China.

I hope that these notes, which deal mainly with common sense matters, may be of some assistance to others planning collaborative efforts with larger FM families.