

II. PROGRESS IN MALESIAN BOTANY

(continued from page 32)

Bryophytes

Dr. Si He (MO) has put an annotated list of Thai mosses on the web. Especially many Peninsular species are Malesian as well. The introductory chapters are of general botanical interest. <http://www.mobot.org/MOBOT/moss/Thailand/thailand.htm>

Dr. A. Touw (L) has started a survey of all 19th century specimens of Musci from Indonesia kept at L, in order to trace and mark original specimens of the c. 350 new species and varieties described by F. Dozy, C.F. Hornschuch, J.H. Molkenboer, C.G.C. Reinwardt, R.B. van den Bosch, and C.M. van der Sande Lacoste. This matter has become urgent because of the future loss of local expertise resulting from the discontinuation of research on extra-European bryophytes at L.

At present, many originals remain hidden and are often untraceable by the curatorial staff because of insufficient collecting data in some of the original publications, incomplete or otherwise divergent labels, inconsistencies due to nomenclatural changes, and altered identifications. Moreover, Dozy and Molkenboer confused matters by labelling many specimens 'type' that are not types in the sense of the Code.

The searching for specimens among the c. 1100 boxes of specimens is almost done, but the completion of the project rests with the inclusion of relevant specimens currently sent on loan. Therefore, researchers are kindly requested to return their loans including nineteenth century Musci from Indonesia as soon as the material is not really needed any longer.

Pteridophytes

Dr. D. Darnaedi (Kebun Raya Bogor) is continuing his study on rheophytic fern species in Java. Exploration was made in Baturaden, C Java, and G. Halimun, W Java. Some species of e.g. *Hymenophyllum* and *Lindsaea* were collected. Some are newly collected. Cytological work is in progress.

Angiosperms

Acanthaceae — Mr. J.R. Bennett (OXF) wrote a PhD Thesis on the Strobilanthinae of SE Asia, focusing on the species from Java with up to 4 seeds per capsule, excluding the yellow-flowered species (*Sericocalyx*), pollen morphology of SE Asian taxa, and a molecular analysis using trnL-trnF and nuclear ITS. 25 species are recognized for Java, 2 new. Variation in pollen morphology was greater than known and more or less continuous. Molecular analyses suggest that all Strobilanthinae should be included in *Strobilanthes*. (Oxford Pl. Syst. 9 (2002) 4.)

Ms. E.C. Moylan (OXF) obtained a PhD with a thesis on the systematics of the 18 spp of *Hemigraphis* in the Philippines (1 new). Based on morphological, but especially molecular analyses, she, too, supports a single genus *Strobilanthes*. (Oxford Pl. Syst. 9 (2002) 4, illus.)

Annonaceae — The *Annonaceae* Newsl. 13 (2002) contains the proceedings of the Workshops of Utrecht 2000 and Bogor 2001.

Apocynaceae — In the last few years it has become increasingly accepted that the *Asclepiadaceae* should not be a separate family. However, it seems judicious to publish the *Apocynaceae* s.s. separately as *Apocynaceae* part 1, subfamilies *Apocynoideae* and *Rauvolfioideae*. This will encompass about 350 species. All genera so far published by Middleton have been converted to FM format, as well as Hendrian's account of *Rauvolfia*. Leeuwenberg has completed several revisions of Asian *Apocynaceae* as well as *Chilocarpus*, *Leucontis*, and *Melodinus*. Middleton will now study *Chonemorpha*, *Dyera*, *Epigynum*, *Lepinia*, *Lepiniopsis*, and *Trachelospermum*.

Callitrichaceae — During the Course on Taxonomy in Bogor (2002) a species of *Callitriche* was (re)collected in Cibodas (*C. verna* of the FM I, 4 and Fl. Java). It is now studied in a multiple discipline approach (anatomy, molecular analyses, karyology, morphology, etc.) by a team coordinated by Dr. B.E.E. Duyfjes (L) to see whether it represents an undescribed taxon.

Cyperaceae — Mr. J.R. Starr (OXF) obtained a PhD with a study of *Uncinia*. This appeared to be monophyletic within a paraphyletic grade of *Cymophyllus*, *Kobresia*, and reduced members of *Carex* subgen. *Carex*, *Vignea* and *Primocarex*. There seems to be a fundamental split between dioecious and androgynous unispicate *Cariceae*. *Kobresia* and *Schoenoscypium* are to be distinguished. *Uncinia* consists of 2 major groups: sect. *Uncinia*, mainly Australasian taxa, against a group with S American ones. Classification of *Uncinia* on molecular data is incompatible with those on morphological ones, therefore groups that are easily diagnosed by traditional means are not possible. Silica body characters seem inappropriate for cladistic analyses and are best used for circumscribing species in the *Cariceae*. (Oxford Pl. Syst. 9 (2002) 4–5.)

Elaeocarpaceae — Dr. M.J.E. Coode (K) is in a deep struggle with the *Elaeocarpus sphaericus/angustifolius* complex in the Malesian area.

Flacourtiaceae — Molecular research has shown that the family ought to be split in two. One part is included in the *Achariaceae*, the other, incl. *Flacourtia*, in the *Salicaceae*, whereby for nomenclatural reasons the family ceases to exist. (Chase et al., Kew Bull. 57 (2002) 141–181.)

Labiatae — Dr. D.J. Mabberley (L/NSW) is working on *Clerodendrum* in New Guinea.

Lauraceae — Dr. F.S.P. Ng (Kuala Lumpur) completed a revision of *Litsea* for the Tree Flora of Sabah and Sarawak. This revision is provisional, pending revision of *Iteadapne*, *Lindera*, and *Neolitsea*. The four genera are so interconnected that they may have to be merged into one.

Leguminosae — Dr. F.A.C.B. Adema (L) finished the treatment of *Alysicarpus* (5 spp) and *Smithia* (3 spp). The differences between *A. vaginalis* and *A. ovalifolius* were not confirmed. The recently described *A. aurantiacum* proved to be more common in Papua New Guinea than the original description indicates. A specimen from Luzon, the

Philippines, belongs to *A. monolifer*. Adema is currently working on *Crotalaria*: up to now 6 species have been revised. Most species have some surprises which may necessitate the description of new taxa.

Dr. I. de Kort and Dr. J.W.A. Ridder-Numan (L) finished the CD-ROM for Caesalpinioideae. It was published in late June 2002.

Dr. K. Larsen & S.S. Larsen described *Bauhinia aureifolia* (Nord. J. Bot. 11 (1991) 633) from a single locality in S Thailand in evergreen rain forest. It is an extraordinary beautiful species with large golden (sometimes silvery), shiny leaves. It is a large climber, on the type locality the largest specimen had a diameter at base of c. 1 m! Regrettably it was not included in the revision for the Flora Malesiana. It has now been found on more southern localities in the Yala and Narathiwat Provinces of S Thailand very close to the Malaysian border. It should be searched in the Belum Reserve in northern Peninsular Malaysia. It is now also planted as an ornamental in S Thailand and as far north as Bangkok, where it thrives well and flowers.

Dr. J.W.A. Ridder-Numan (L) reformatted her treatment of *Spatholobus* to FM standards.

Dr. B. Sunarno (BO) submitted his treatment of *Dalbergia*.

Magnoliaceae — The Proceedings of the 1998 Symposium have been published, see Bibliography sub Liu Y.-H., et al.

Malvaceae — Mr. B.E. Pfeil (CANB) is continuing his research into the phylogeny and evolution of *Hibisceae*.

Meliaceae — Dr. D.J. Mabberley (L/NSW) has submitted the family account to Kubitzki's 'Families and genera of flowering plants'-series. Together with Dr. C.M. Pannell (OXF) and Ms. A.M. Sing (OXF) he is preparing an account for the 'Tree Flora of Sabah and Sarawak'.

Myrtaceae — Mr. E. Biffin (CANB) has commenced a PhD program in which the generic complex centred upon *Syzygium* will be studied using molecular as well as morphological and anatomical data. As many of the generic segregates as possible (e.g. *Acmena*, *Acmenosperma*, *Cleistocalyx*, *Piliocalyx*, *Waterhousea*, etc.) will be included.

Mr. L. Craven (CANB) is working on the gelpkeoid species of *Syzygium* in Papuaia.

Nepenthaceae — *Nepenthes albomarginata* of Sumatra, Peninsular Malaysia, and Borneo is named after the collar of white hairs around the mouth of the beaker. The function was not known but has now been discovered to be a delicacy for some species of termite (*Hospitalitermes*). When scouts discover the hairs they return to gather their fellows who then arrive in such a number that they push each other into the trap. When the beaker is filled with perhaps a thousand termites, the hairs have been finished and the insects further ignore it. The attraction by itself is not an active lure: when not directly discovered the termites will ignore it even when passing by at a centimetre's distance — Merbach et al., Nature (3 Jan. 2002: 36–37).

Mr. A. Wahyudi (Herbarium Universitas Bengkulu) has studied the biodiversity and spatial distribution of *Nepenthes* in 8 localities of the Kerinci National Park (5 in Bengkulu, 3 in Jambi Prov.). Thirteen species, of which possibly one undescribed were

encountered: 3 at low altitude, 10 in the highlands: *N. ampullaria*, *N. aristolochioides*, *N. bongso*, *N. cf. diatas*, *N. dubia*, *N. gracilis*, *N. inermis*, *N. mirabilis*, *N. pectinata*, *N. rafflesiana*, *N. reinwardtiana*, *N. singalana*, and *N. spec.* The survey will continue.

Orchidaceae — Dr. B. Gravendeel (L) obtained a grant from the Dutch Science Foundation (NWO) for a four years research project on *Bulbophyllum*. From October 2002 onwards, she will start with the reconstruction of a molecular phylogeny of this speciose orchid genus in cooperation with Dr. J.J. Vermeulen (SING).

Ms. M.W.K. Goh (SINU) will soon be completing her research on the molecular systematics of *Phalaenopsis* under the supervision of Dr. P.P. Kumar (SINU) and Dr. H.T.W. Tan (SINU).

Dr. H. Pedersen (AAU) is now in charge of the Seidenfaden collection in the Botanical Museum, Copenhagen. This collection consists of over 12,000 spirit collections of mainly Thai orchids. There are thousands of colour slides and line drawings from all over SE Asia and a large library on the family.

Oxalidaceae — Dr. B. Gravendeel (L) in cooperation with Dr. M.W. Chase (K) and Dr. J.F. Veldkamp (L) is making a molecular analysis. So far the family seems to be monophyletic and sister to the Connaraceae.

Palmae — Dr. A.S. Barfod (AAU) continued his work on the genus *Licuala*. He is working up his extensive collections from Papua New Guinea.

Ms. S.L. Look (SINU) is studying the genetic variation and systematics of *Johannes-teijsmannii* under the supervision of Dr. P.P. Kumar (SINU), Dr. L.G. Saw (KEP) and Dr. H.T.W. Tan (SINU) in collaboration with Dr. J. Dransfield (K) and Dr. W. Baker (K).

Dr. A.H.B. Loo (SINU) completed his study on the varieties of *Licuala glabra* for his PhD and completed his postdoctoral research at K on the molecular phylogenetics of the *Arecinae* with Dr. J. Dransfield (K) and Dr. W. Baker (K).

Rosaceae — Dr. D.J. Mabberley (L/NSW) has completed his nomenclatural studies on *Fragaria* and *Potentilla*. All go to the latter genus.

Rubiaceae — Ms. J.T. Pereira (SAN) is revising the genus *Rothmannia* for the Tree Flora of Sabah and Sarawak as part of a thesis for her PhD.

Rutaceae — Dr. D.J. Mabberley (L/NSW) has revised the *Citrus hystrix*-group.

Sapindaceae — In a previous note (Fl. Males. Bull. 12/7-8, 2001: 399) I mentioned *Blighia sapida*, the A(c)kee apple, as a paradise fruit, i.e. one that sends you there. Well, the people of Jamaica have a very different idea about that. The fruit is one of the ingredients of 'ackee and saltfish', a concoction regarded as the national dish. It is the official national fruit and appears on stamps, coins, billboards, T-shirts, etc. For a special report on its history and ethnobotany, see J. Rashford, Econ. Bot. 55 (2001) 190–211.

Sapotaceae — On 23rd August 2002, Dr. V. Plana was offered the post of Peter Davis Botanical Fellow at the Royal Botanic Garden, Edinburgh. She has accepted the offer and has started work on October 2, 2002. Her main task will be to revise the Old World species of *Manilkara*. In addition, she will work with Dr. M. Newman to raise funding to carry out a revision of the family for the Flora Malesiana.

Symplocaceae — Dr. H. P. Nootboom (L) is in the progress of making an interactive identification key for *Symplocos* of the Old World (more than 220 taxa) with illustrations for nearly all taxa. All taxa described since his taxonomic treatment (1975) will be included. Hopefully he will finish the work in 2002.

Theaceae — Mr. J. B. Sugau (SAN) is revising the family for the Tree Flora of Sabah and Sarawak. He has completed the revision of the *Adinandra* for Borneo and submitted the result as a master thesis at the Universiti Malaysia Sabah.

Urticaceae — The S American species *Coussapoa asperifolia* has a very interesting way of distributing its seeds. The capitules secrete a kind of wax, which is collected by mason bees, and the diaspores attached to it are transported to their nests (C. C. Berg, oral comm.). Does this kind of apichory occur in Malesia as well?

Mr. S. P. Lim (SAN) is revising the family for the Tree Flora of Sabah and Sarawak.

Vitaceae — Mr. C. K. Yeo (SINU) completed his study of the family for the Angiosperm Flora of Singapore under the supervision of Dr. H. T. W. Tan (SINU).

Zingiberaceae — At the workshop on Zingiberaceae held in Sydney at the 5th FM Symposium, it was agreed that a checklist should be the next stage towards revision of the family for the Flora. A great deal of work was done on the checklist by Ms. A. Lhuillier who spent ten weeks at the Royal Botanic Garden, Edinburgh in the summer of 2002. She carried this work out as part of her degree in agronomy from the École Nationale Supérieure Agronomique de Toulouse. Dr. M. Newman is completing the checklist which will be published as a supplement to Blumea.

In the beginning of 2003 three PhD students under the guidance of Dr. K. Larsen (AAU) are coming to AAU to take up or continue revisionary work, mainly on Thai material but also covering the north of Peninsular Malaysia. The genera are: *Alpinia*, *Curcuma*, and *Zingiber*. Several new species have been discovered during their field work in 2001–2002.

Dr. H. Funakoshi (Shinshu Univ.) has revised *Hornstedtia*, *Leptosolena*, and *Vanoverberghia*.

Ms. T. Jenjittikul (Mahidol Univ., Bangkok) has almost finished her work on *Kaempferia* and found an unusual rich diversity on limestone along the Burma border and Central Thailand. Similar environments should be searched in Peninsular Malaysia and Sumatra.

Dr. K. Larsen (AAU) continued work on *Boesenbergia* – also here several new species have been discovered in the border region to Peninsular Malaysia and Sumatra.

Dr. A. D. Poulsen (AAU) from September, 2002, will spend a year in L to study the *Etilingera* for Borneo. A few months will be spent in Malesia for field work.

Mr. T. Wood (Archer, Florida) informed the 3rd Zingiber Symposium, that he has finished his monograph on *Hedychium*, but that it may take some time before it is printed.

Mr. P. Triboun continued work on Thai and Indochinese *Zingiber*. He expects to finish a revision by the end of 2004.