

XIV. BOOK NOTICES
(contd from p.929)

Abstracts of papers presented at the meetings of the Botanical Society of America, in *Am.J.Bot.* 49 (1962), as far as these relate to Malaysian botany. Author's addresses are found in the Journal.

Canright, J.E. & M.P. Paden: Contributions of pollen morphology to the phylogeny of the Annonaceae, Eupomatiaceae, and Myristicaceae: p.674. -- Palynological evidence supports Sinclair's view that *Desmos* and *Dasymaschalon* should be merged. The African genera *Isolona* and *Monodora*, however, should probably be placed wider apart as their grouping together in the *Monodoroideae* seems unnatural. Palynologically as well as anatomically, *Eupomatia* is suspected not to link *Annonaceae* with *Eupomatiaceae* as Hutchinson suggested. Relationship of *Myristicaceae* with *Annonaceae* is confirmed.

Haller, J.R.: Variation in needle number in *Pinus ponderosa*: p.675. -- There is a geographic variation, but also it is shown that the number of 2 and 3 needles varies with their place on the tree, and from year to year.

Hu, Shiu-Ying: Phytogeographical affinities of China and the western United States: p.676. -- There are four types, 1) *Torreya*, *Pseudotsuga*, *Mahonia*, *Chamaesaracha*, limited to China and western U.S., 2) *Larix*, *Philadelphus*, *Fritillaria*, twin species of wide-spread genera, 3) *Paeonia*, *Ixeris*, *Crepis* & *Ixeridopsis*, closely related sections, 4) *Sequoia* and *Metasequoia*, small isolated genera of some families. In America, mostly the areas go 5-10 degrees further northwards than in China.

Laubenfels, D.J. de: Cotyledon morphology in Podocarpaceae and the light it sheds on the primitiveness of polycotyledony: p.675. -- Normally there are 2, each being bivascular throughout the family, suggestive of a fusion from 4 ancestral cotyledons; various other kinds of fusion have taken place in other families. Primitive leaves and polycotyledony concur. It is suggested that dicotyledony has a definite survival value.

Raven, P.H.: Amphitropical relationships in the herbaceous flora of the Pacific coast: survey of the Onagraceae: p.677. -- *Boisduvalia tasmanica*, from Tasmania, should more properly be referred to *Epilobium*, thus leaving *Boisduvalia* entirely confined to the New World.

Rogers, D.J.: Origins and development of Manihot esculenta and allied species: p.678. -- Native species in several South American areas have contributed genetic material to the cultivated complex. The cultivars of *M. esculenta* are morphologically not distinguishable, there being no correlation with the HCN-content. A number of "native" species seems to have been derived from the cultivated species. This group of species occurs in disturbed habitats and is extremely polymorphic.

Wagner, W.H., Jr: Interspecific crosses and spore characteristics in the genus Psilotum (Psilotaceae): p.680. -- In Hawaii the two *Psilotum* species grow together, and there are intermediates found which combine the characters of the presumably parental species. Chromatograms support the idea that the plants are hybrids. Over 90 % of the spores are empty. No evidence of interspecific crossing in *Psilotum* has been observed in other regions.

Backer, C.A. & R.C. Bakhuizen van den Brink Jr: Flora of Java. Vol.1. Groningen, 1963, xxiv + 648 pp. 8vo. Clothbound. Dfl. 59,50; US \$ 16,75; £ 6.-/-.

Volume 1, the first of three, contains a preface by Dr. H.J. Lam, a short biography of the late Dr. C.A. Backer and a bibliography, a general key to all families, and a treatment of the first 110 families according to Hutchinson's system. The original text, of outstanding quality, largely prepared by Dr. Backer himself, was issued in Dutch by the Rijks-herbarium in mimeographed form. The junior author worked up the nomenclature (never Backer's strongest point) and spent much time on the final production of the book, which for many decades will be the standard work on the flora of Java. Its impact is, however, much wider, because Java harbours more wide-spread tropical species than any other Malaysian island. The volume is expected to appear about November 1963. Orders are accepted (only for the complete work, volume 2 and 3 being expected in 1964 and 1965) by N.V. Erven P. Noordhoff, P.O.Box 39, Groningen, Netherlands.

Bodard, M.: Contribution à l'étude systématique du genre Cola en Afrique Occidentale. Thesis, Univ. Dakar, 1960, 188 pp., 12 pl., 6 maps, 40 fig. -- Morphological, cytological, distribution, but no clear key to the species.

Brunig, E.F.W.O.: An introduction to the vegetation of the Bako National Park, Sarawak, Report of the Trustees for National Parks 1959-1960, pp. 13-35, vegetation map.

This is an extension of a sketch of the Park vegetation in the 1956 Report. In that Report 8 vegetation types were distinguished. Here we find no 9, scrubland being an addition. The others are: exposed cliffs on the coast, mangrove,

forests, beach forests, alluvial forests, lowland Dipterocarp forest, Kerangas forest, fire padang, and unstable rocky slopes. The view is still held that not all padang in the Park is secondary, the open scrubland having developed partly as the direct result of poor site conditions, partly (then true fire padang) as a result from poor site conditions combined with fire. Lists of genera and of some species have been added for some of the discussed vegetation types; a glossary of Malay plant names and a diagram of the vegetation are given at the end.

Burkill, H.M.: Annual Report of the Botanic Gardens Department for 1961. Govt Printer Singapore, 1963, 26 pp., 8 fotogr., map. Mal. \$ 1.--.

"The most marked feature of the year was the relatively small rainfall, being 30 per cent below normal. It was the driest year since 1914 when reliable recording was begun in the Gardens", and the second consecutive dry year. "The dry weather has continued to produce unusually abundant flowering." Moreover, the report records a variety of activities, several of them already mentioned in this Bulletin; it also gives a map with relevant places, and meteorological records.

Chowdhury, K.A. & S.S. Ghosh: Indian Woods, their identification, properties and uses. I. Dilleniaceae to Elaeocarpaceae. Dehra Dun, 1958, liii + 304 pp., 34 pl.

"It has been planned to bring out the 'Indian Woods' in six volumes, each dealing with about 250-300 species. The aim of the book is to give all up-to-date information on secondary xylem or wood of the tree species that grow in the Indian sub-continent and which are represented in the Indian wood collection of the Forest Research Institute." (from the Preface). Ample introductory and explanatory matter, keys to the woods of genera in each family, many vernacular names, value and properties are discussed; bibliography; photographs of cross-sections of 180 spp.

Conert, H.J.: Die Systematik und Anatomie der Arundineae. J. Cramer, Weinheim/Germany, 1961, 208 pp., 9 fig.

A complete revision of this tribe of the Gramineae.

Copeland, E.B.: Fern Flora of the Philippines. Vol. 2. Manila, 1960, pp. 193-376.

This volume (received August 1962) contains the representatives of three families, Plagiogyriaceae (Plagiogyria), Cyatheaceae (Cyathea, Gymnosphaera), and Aspidiaceae (29 genera, Diacalpe-Cyclosorus). The style is as in the first volume, with keys, synonymy and descriptions. There are various new combinations and names.

Correll, D.S.: The Potato and its wild relatives. Texas Research Foundation, Renner, Texas, 1962, 606 pp., 212 fig., 32 pl., 3 tables.

A complete monograph with keys, descriptions, etc., with which the author is warmly congratulated.

Duvigneaud, P. & S. Denaeyer-de Amet c.s.: Cuivre et végétation au Katanga. Bull. Soc. Bot. Belg. 96, 1963, 93-231, 20 fig., 34 fotogr.

Important elaborate survey of vegetation on cupriferous soils; absolute indicators are infraspecific taxa.

Fosberg, F.R.: Check list of the seed plants of Guam. Military Geol. Branch, U.S. Geol. Survey, Washington, D.C., 196?, 51 pp.

Stencilled preliminary list.

Galis, K.W.: Bibliografie van Nederlands Nieuw-Guinea. 3rd ed. The Hague, 1962, 275 pp.

This mimeographed bibliography covers all the literature dealing with western New Guinea under Dutch government; it contains c. 6300 numbers, the bulk of them being Dutch. Under "Anonymus" a great many of newspaper and magazine articles have been incorporated. The arrangement is purely alphabetical under author; there is no systematic arrangement.

Gupta, K.: Marsilea. Counc. Sc. & Industr. Res. Bot. Monogr. n. 2. New Delhi, 1962, vii + 113 pp., 1 table, text illustr. 8°.

Hasle, G.R.: Phytoplankton and ciliate species from the Tropical Pacific. 1960, 50 pp., 44 fig., 8 pl.

Listed.

Japing, C.H.: Houtsoorten van Nieuw-Guinea. Wageningen, 1961, 2 folio mimeogr. vol., 220 pp.

In all 63 spp. treated; compiled from literature, habitat, names, habit, timber, its qualities and structure.

Kalkman, C.: Timber species of Netherlands New Guinea. Summary of data collected from literature and practice concerning 28 of the major timber species of Netherlands New Guinea. Forestry Division, 1959, 44 pp.

28 spp. characteristics of wood, its properties and uses, durability class; synonymy; vernacular names; distribution; remarks.

Krieger, W. & J. Gerloff: Die Gattung Cosmarium. Part 1. J. Cramer, Weinheim/Germany, 1962, xviii + 112 pp., 22 tables.

About 100 spp. described.

Leach, D.G.: Rhododendrons of the world and how to grow them. London, 1962, 544 pp. Kr. 145.

Léonard, J.: Euphorbiaceae. In Robijns, Fl. Congo Belge 8, 1, 1962, pp. 1-214.

Comprises trib. Brideliaceae, Crotonaceae, Clusiaceae, Guttiferaceae § Hippomaneaceae, Chrozophoreae, and Dalechampiaceae. An important account of use to Malaysian botanists for the conception of generic delimitation.

Mitra, J.N.: Flowering plants of Eastern India. Vol. 1. Monocotyledons. Calcutta, 1958, xx + 388 pp., 1 map. Rs. 30.--.

A modern edition of Prain's Bengal Plants, with the addition of East Himalaya and Assam. Sort of Excursion Flora; description of families and genera; spp. listed with brief description.

Munoz Pizarro, C., E. Sierra Ráfols & F. Sudzuki: Sinopsis de la flora chilena. 1959, 312 pp., 238 pl.

Keys to families and genera; no synonymy or references. Full bibliography and indexes.

Nath, Dewan Mohinder: A numbered analytical dichotomous key to the families of Burmese flowering plants, with a glossary of botanical terms. Rangoon, 1962, vi + 273 pp. Small 8vo.

Obviously a precursory publication to the author's MS, Catalogue of Burmese Flowering Plants, counting over 10,000 records. This key leads to the 231 of Burmese plants here recognized.

Nelson, E.: Gestaltwandel und Artbildung erörtert am Beispiel der Orchidaceen Europas und der Mittelmeerländer insbesondere der Gattung Ophrys. 1962, 249 pp., atlas.

Magnificent work dealing with Ophrys. The labellum of the orchids is supposed to be a metamorphosis of 3 stamens, while the unpaired sepal is reduced.

North Borneo Forest Department Annual Report 1961. Jesselton, 1962, v + 75 pp. Mal. \$ 3.--; Sh. 6/8.

This report contains many interesting particulars for an orientation about North Borneo. There is an annual rainfall map, and a map of the forest reserves of the country. Eighty per cent of the area is under forest. By 1961 33.6 % of the total area was constituted (22.0 %) or notified or purposed as forest reserve. The forests of North Borneo make a mighty profitable business. Expenditure has remained much the same (Mal. \$ 1.2 million in 1956; 1.6 million in 1961), but revenues have soared up (2.3 million in 1956; 9.7 million in 1961). Over 96 % of the exploited wood is dipterocarpaceous; most of the export goes to Japan. There was a light but fairly wide-spread fruiting of dipterocarps in 1961. After the fire in the Herbarium (see photograph opposite p. 8) fresh collecting drives were undertaken, and over 6,000 duplicates distributed. The activities of the forest botanist have been recorded in this Bulletin on p. 885. As an appendix, there is a useful glossary of words connected with forestry.

Flesch, Arpad: Essais d'acclimatation de plantes tropicales en France. Paris, 1962, 331 pp., 6 pl. with colour fotogr.

An expensively executed list of 3500 tropical plants introduced in France, with vernacular names, assorted remarks, indexes, and a colour plate of the author.

(Royen, P. van): Het Maleise Gebied. Handboek Lijfsbehoud ter Zee en te Land, pp. 69-172, fig. 18-132.

How to survive in Malaysian tropics, New Guinea especially.

Schopf, J.M.: A preliminary report on plant remains and coal of the sedimentary section in the Central Range of the Horlick Mountains, Antarctica. Inst. Polar Stud. Report 2 Febr. 1962, mimeogr. 61 pp., 15 pl., 4 fig.

Map with 9 known coal deposits; Horlick Mts are at 113° WL and 5° N from the South pole. Fossils include *Glossopteris* leaves, microfossils, seeds and stems. Wood sample 9 by 13 cm thick, with growth rings of c. 150 cells each, i.e. c. 6-8 mm annually, hence a treelet 15-20 years old: tracheids pitted. Pollen and wood is gymnospermous. Comparison is made with other Gondwanaland fossils. Age is tentatively Permian. It is said (p.44) that "the anomalies of distribution are even more evident when the same fossil plants are found both in the extreme tropics and extreme antarctic of the present day." The author should realize, however, that *Dacrydium*, *Podocarpus*, *Agathis*, *Nothofagus*, etc. have a comparable range in the recent flora. By the "same fossil plants" the author can at most mean 'genera of fossil plants', as from the fragmentary fossil material of these very ancient strata there is no possibility to come to a 'specific' concept as is usual in recent floras.

Seidenfaden, G. & T. Smitinand: The orchids of Thailand. A preliminary list III. Bangkok, 1961, pp. 327-516a, fig. 249-381, col. pl. 14-21.

Simmonds, N.W.: The evolution of the bananas. Tropical Science Series, Longmans, London, 1962, xii + 170 pp., fig. 8°. Clothbound.

Summary of our knowledge of wild and cultivated spp. Contains a key to genera, sections and species. It is most remarkable that Backer's critical work in his 'Handboek voor de Flora van Java' is left unmentioned, and both new species described therein not evaluated. Morphology, genetics, karyology, and anatomy are amply treated.

Steenis, C.G.G.J. van (ed.): Pacific Plant Areas. Vol. 1. Published by the National Institute of Science and Technology, Manila, P.I., 1963, 297 pp., incl. 26 distr. maps.

The project, which began to take shape one century after Alphonse De Candolle published the first botanical maps, was discussed in this Bulletin on pp. 900-902. There is a brief

introduction in which the method of this work is discussed. The main body is formed by the Bibliography of Pacific plant maps by Mrs. M.J. van Steenis-Kruseman; the newly prepared maps are found at the end of the volume.

Stiles, W.: Trace elements in plants. 3rd ed. Univ. Press, Cambridge, 1961, 249 pp. Sh. 40/-.

Wang, Chi-Wu: The forests of China, with a survey of grassland and desert vegetation. Maria Moors Cabot Foundation Publication n. 5. Harvard University, Cambridge, Mass., 1961, xiv + 313 pp., 79 fig. incl. maps and fotogr., 22 tables. US \$3.-.

Willis, J. Brian (ed.): Agriculture and land use in Ghana. Univ. Press, Oxford, 1962. 4°. £ 3.3/-.

With 26 chapters, 2 columns; including also weeds of cultivation and grazing lands. An exemplary work of its sort of great use to the tropics. A very low price indeed.

VARIA

Truth is the sun, and Knowledge solar light
Streaming from truth, in beams effulgent bright,
To shine upon, delight, adorn, and bind,
By links of love, the human soul and mind.

C.S. Rafinesque, A fragment of a philosophical poem on knowledge (Atlantic Journal and Friend of Knowledge, vol. 1, no 1, 1832, 36).