

REVIEWS

Recent Literature : Botany

Auctores

1972. Notes on the Systematy of Malayan Phanerogams XI-XVII
Gard. Bull. Sing. **26** (1) : 49-61, 4 figs.

Dealing with following families : Annonaceae, Apocynaceae, Euphorbiaceae, Flacourtiaceae, Leguminosae, Rutaceae, and Tiliaceae. In the family Apocynaceae, T.C. Whitmore has the opinion that the genus *Tabernaemontana* should be retained instead of splitting into *Ervatamia* (DC) Stapf and *Pagiantha* Mgf., and thus it is in need of revision. One new species of *Glycosmis* (Rutaceae), 2 species of *Pentace* (Tiliaceae), and one species of *Schoutenia* (Tiliaceae) are proposed by B.C. Stone, and K.M. Kochummen respectively.

Airy Shaw H.K.

1971. Notes on Malesian and other Asiatic Euphorbiaceae.
Kew Bull. **25** (3) : 473-553.

This paper comprises 29 parts (CXX-CXLVIII); the last part is by A.R. Smith. Many new taxa are proposed; following taxa are from Thailand : *Aporusa incisa*, *Croton sepalinum*, *Claoxylon putii*, *Strophoblachia glandulosa* Pax var. *cordifolia*, *Trigonostemon pachyphyllus*, *T. albiflorus*, *Euphorbia saxicola*. Two new records from Thailand are: *Richeriella gracilis* (Merr.) Pax & Hoffm. from Pang-nga; *Drypetes subsessilis* (Kurz) Pax & Hoffm. from Chiang Mai, and *D. ochrothrix* Airy Shaw from Krabi. *Phyllanthus orientalis* (Craib) Airy Shaw is a new combination based on *Chorisandra orientalis* Craib; the plant is endemic to Thailand.

1972. The Euphorbiaceae of Siam.
Kew Bull. **26** (2) : 191-363.

Being a comprehensive account of the Euphorbiaceae of Thailand, keys to genera and species are provided, important diagnostic characters of every species are given. The genus *Antidesma* is treated as a separate family, Stilaginaceae; the genus *Bischofia* is omitted whereas *Galearia*, *Microdesmis* are belonging to Pandaceae, and *Hymenocardia* has its own family, Hymenocardiaceae.

Airy Shaw H.K.

1972. New or noteworthy species of *Antidesma* Linn. (Stilaginaceae). II.

Kew Bull. **26** (3) : 457-468.

Describing 8 new species with a critical note on one species, 3 are recorded from Thailand.

1972. Notes on Malasian and other Asiatic Euphorbiaceae.

Kew Bull. **27** (1) : 3-93.

This paper comprises 21 parts (CXLIX-CLXIX) dealing with many new plants, but none is from Thailand.

Baas, P.

1972. The vegetative Anatomy of *Kostermansia malayana* Soengeng. Reinwardtia **8** : 335-344, with figs.

The anatomy of leaves, twigs, wood and seedlings is described.

Balasure, K.M.

1971. Some additions to our knowledge of the plants of Ramtek (Maharashtra).

J. Bomb. Nat. Hist. Soc. **68** (2) : 363-377.

An additional list of 112 species is given.

Banerji, M.L. and B.B. Thapa

1971. Orchids of Nepal — 4.

J. Bomb. Nat. Hist. Soc. **68** (1) : 29-36.

Ibid. **68** (3) : 660-665, 2 figs.

1. *Chrysoglossum* (1 sp.), *Liparis* (5 spp.), *Malaxis* (5 spp.) and *Oberonia* (9 spp.) are reported. Artificial keys to the genera and species within each genus are provided.

2. *Agrostophyllum* (1 sp.), *Cryptochilus* (2 spp.), *Otochilus* (3 spp.), *Pholidota* (4 spp.) are reported with keys to species.

Bennet, S.S.R.

1971. The Taxonomic status of the genus *Pongamia* Vent. (Papilionaceae)

J. Bomb. Nat. Hist. Soc. **68** (1) : 302-303.

The genus *Pongamia* Vent. (1803) is reduced to a section of the genus *Derris* Lour. (1790), hence *P. pinnata* (Linn.) Pierre is now known as *Derris indica* (Lamk.) Bennet.

Beri, R.M. and S.C. Pharasi

1971. Studies on the bulbs of *Urginea indica*.

Ind. For. **97** : 408-411.

The proximate analysis of *Urginea indica* bulb powder and that of the mucilage isolation from its 2% solution by precipitation in alcohol is described. Bulb powder possesses good adhesive properties. It was tried as a thickening material in calico printing and has indicated great possibilities for its use as a thickening agent for colours to be used in screen printing of textiles.

Bhatt, R.P., S.J. Bedi and S.D. Sabnis

1971. Botanical exploration of the Gora Range of the Rajpipla forests, Gujarat State.

Ind. For. **66** : 477-486.

An enumeration of 460 species in the Mixed Dry Deciduous forests with *Tectona grandis* as the major constituent is made.

Bir, S.S. and Surinder Mohan Vasudeva

1972. Pteridophytic Flora of Kodaikanal.

J. Bomb. Nat. Hist. Soc. **68** (1) : 169-195.

An enumeration of the fern flora of Kodaikanal, a beautiful health resort of South India is undertaken comprising 132 species in 56 genera. The distribution and ecology of ferns in this area is also discussed.

Bruggen, H.W.E. van

1970. Revision of the genus *Aponogeton* (Aponogetenaceae). IV. The species of Asia and Malesia.

Blumea **18** : 457-486, 3 pls., 7 figs, 3 maps.

Eleven species are enumerated including one new species from Papua. Two species are recorded from Thailand. An identification key is provided.

Burgess, P.F.

1969. Preliminary observations on the autecology of *Shorea curtisii* Dyer ex King in the Malay Peninsula.

Mal. For. **32** : 438.

An abstract. The species appears to fruit every 7-10 years, after severe drought, and from flowering to seed-fall is some 4 months. Weevil attack on the developing fruit is severe, and on average only about 20% of seed is viable.

Germinating seeds are severely damaged by foraging ants. The cutting of undergrowth appears to produce conditions too dry for successful germination.

Chew, Wee-lek

1972. Studies in West Malesian Piperaceae. I.
Blumea 20 (1) : 145-149, 1 fig.

Recording 4 species of the genus *Piper* from West Malesia.

Chvahan, Udai Singh

1971. Aquatic and marshy angiosperms of Roorkee Sub-Division.
J. Bomb. Nat. Hist. Soc. 68 (3) : 750-755.

An enumeration of 78 species belonging to 46 genera under 31 families is appended; the family Cyperaceae is dominant.

The area is adjacent to Dehra Dun, Muzaffarnagar and Saharanpur occupying an area of 1425 sq. Km.

Clayton, W.D.

1972. The awned genera of Andropogoneae. Studies in the
Gramineae : XXXI.
Kew Bull. 27 : 457-474, 6 figs.

The awned genera of Andropogoneae are grouped into sub-tribes with the aid of numerical taxonomy. Seven sub-tribes are recognized, including Germainiinae W.D. Clayton.

Corner, E.J.H.

1972. Studies in the basidium. Spore-spacing and the *Boletus* spore.
Gard. Bull. Sing 26 (1) : 159-194, 12 figs, 4 tables and one
appendix.

"A geometric analysis of the 4-spored homobasidium is made on the assumption that spore-spacing is determined by sterigmata spacing on the basidium-apex". Values in ratios of spore-width are tabulated in an appendix.

Corner, E.J.H.

1972. Merulioïd fungi in Malaysia.

Gard. Bull. Sing. 25 (3) : 355-381, 3 figs. 2 plts.

Meiorganum (1 sp.), *Merulius* (8 spp.) and *Phaeophlebia* (1 sp.) are recognised; 5 species in the genus *Merulius* are proposed as new to science. *Serpula* and *Gyrodontium* are reduced as synonyms to *Merulius*. A list of specific names in *Merulius* is supplied.

Deb, S.B. and R.M. Dutta

1971. Contribution to the flora of Tirap Frontier Division.

J. Bomb. Nat. Hist. Soc. 68 (3) : 573-595.

The Tirap Frontier Division, lying between Burma and Assam in the precipitous Patkoi ranges, remained unexplored until recently. Since 1955 three explorations were made by the Botanical Survey of India.

An enumeration of 905 species in 503 genera under 157 families of fern and flowering plants is provided.

The fern flora is similar to that of northern Thailand; flowering plants recorded in this installment is also related to Thailand except members of Lauraceae, Rosaceae and Hydrangeaceae of which temperate elements are prevalent.

Dransfield, J.

1972. The genus *Johannesteijsmannia* H.E. Moore Jr.

Gard. Bull. Sing. 26 (1) : 63-83, 5 figs, 6 plts.

A revision of the genus *Johannesteijsmannia* (Palmae) is presented. Of the four species described, three represent new species. The genus is confined to West Malaysia with its northernmost limit of distribution in Kelantan.

1972. The genus *Borassodendron* (Palmae) in Malesia.

Reinwardtia 8 : 335-363, 6 figs.

Dealing with 2 species, a Bornean species *B. borneensis* is described as new to science, the other *B. machadonis* is widely distributed.

Dyphon, Pauline

1971. La végétation du sud-ouest Cambodgien (fin).

Ann. Fac. Sc. 4 : 1-77, 1 fig., 4 plts.

This installment comprises 3 chapters: classification of the vegetation of high altitude; ecology, dynamism and comparative characters of vegetation groups; the flora.

Forman, L.L.

1971. A synopsis of *Galearia* Zoll. & Mor. (Pandaceae).
Kew Bull. 26 : 153-165, 2 figs.

An identification key to the 6 species is provided. All Thai materials are referred to *G. falva* (Tul.) Miq.

The genus is closely related to *Panda* Pierre, shown by *G. celebica* Koord. and *G. maingayi* Hk. f.

1972. Menispermaceae of Malesia and adjacent area. VI *Pycnarrhena*, *Macrococculus* and *Haematocarpus*.
Kew Bull. 26 : 405-422.

The genus *Pycnarrhena* (9 spp.) is represented in Thailand by 3 species; *Macrococculus* a monotypic genus confines to New Guinea; 2 species of *Haematocarpus* are enumerated.

1972. The Menispermaceae of Malesia and adjacent areas : VII.
A revision of *Legnephora* Miers.
Kew Bull. 27 (2) : 275-280.

Dealing with 5 species from Australia and New Guinea, an identification key is provided.

Fosberg, F.R. and M.-H. Sachet

1972. *Thespesia populnea* (L.) Solander ex Correa and *Thespesia populneoides* (Roxburgh) Kosteletsky (Malvaceae).
Smithsonian Contributions to Botany No. 7. Pp. 12.

An identification key to these 2 species, which are also occurring in Thailand, is provided. *T. populneoides* seems to be an inland species; the diagnostic criteria are the shallowly cordate to subtruncate leaves, and pedicels tending to droop, 5-12 cm long.

Green, P.S.

1972. *Passiflora* in Australasia and the Pacific.
Kew Bull. 26 : 539-558.

Dealing with 24 species, 5 of which are indigenous; an identification key to species is provided.

Gould, Frank W.

1972. A systematic treatment of *Garnotia* (Gramineae).
Kew Bull. 27 : 515-562, 2 maps, 2 figs.

The mainly Asiatic and Pacific grass genus *Garnotia* is revised; 29 species and 6 varieties are recognised, arranged in two sections. Two new species are described.

Species occurring in Thailand are : *G. thailandica* Gould and *G. tenella* (Arn. ex Miq.) Janowski.

Govindarajalu, E.

1971. Studies in Cyperaceae—V. Novelties in *Fimbristylis* (Linn.) Vahl.
J. Bomb. Nat. Hist. Soc. 69 (1) : 159-164, 3 plt.

Three new species are described, *F. multinervia* is likely to occur in Thailand along the Tenasserim.

Grey-Wilson, C.

1971. New Plant Records from Thailand.
Kew Bull. 26 : 141-151.

Seventy-one taxa in 31 families are recorded for the first time from Thailand.

Gupta, Rajendra

1971. Medicinal and aromatic plants of Bhandal Range, Chural Forest Division, Chamba District, Himachal Pradesh.
J. Bomb. Nat. Hist. Soc. 38 (3) : 791-803.

A systematic survey reveals that some 15 species are regularly exploited with an additional 44 species of occasional collected. Among these *Viola serpens* Wall. (also frequent in Thailand) is employed as a household remedy against common cold, bronchitis and fever; the part used is the flower.

Hansen, Bertil

1972. Notes on some parasitic phanerogams from the Indochinese Peninsula.
Bot. Tidssks. 67 : 146-151, 3 figs.

Mitrastemon yamamotoi is newly recorded from Thailand, besides *Sapria himalayana*.

Hansen, Bertil

1972. The genus *Balanophora* J.R. & G. Forster a taxonomic monograph.

Dansk Bot. Ark. **28** (1) : 1-188, 8 pls. and 44 figs.

A world monograph deals with 15 species, of which 4 occurs in Thailand; scanning microscopic photographs showing cuticles of epidermis of spadices and pollen grains are beautifully provided.

Heel, W.A. van

1972. The taxonomic position of *Papuodendron* C.T. White as elucidated by anatomical characters.

Reinwardtia **8** : 319-321.

The study confirms that the genus *Papuodendron* is congeneric to *Hibiscus* to which synonym is reduced.

Hiepko, Paul

1971. Die Gattungsabgrenzung bei den Opiliaceae.

Ber. Dtsch. Bot. Ges. **84** (11) : 661-663.

The genus *Urobotrya* Stapf is reinstated and segregated from the genus *Opilia*; two taxa formerly put under *Lepinurus* by Gagnepain in 1910 and 1947 are transferred to *Urobotrya* together with another 2 taxa from Africa.

1972. Zwei neue *Urobotrya*-Arten (Opiliaceae) aus Süd-Ostasien, mit 4 Abbildung.

Willdenowia **6** : 471-478.

The genus *Urobotrya* is closely related to the genus *Opilia* differing in its peltate bracts and the ringed disc, hence the formerly known taxa have been transferred; 2 new species also described from Thailand (*U. siamensis*) and North Borneo (*U. parviflora*).

Hirano, Minoru

1966. Freshwater Algae of Bhutan 2.

Acta Phytotax. Geobot. **22** (1 & 2) : 44-48, 1 fig.

Dealing with 24 species with one new species, *Cosmarium nakaonum* from Pame Tso.

Hirano, Minoru

1972. Desmids from Cambodia, with special reference to phytoplankton of lake Grand Lacs (Tonle Sap).

Contr. Biol. Lab. Kyoto Univ. **22** : 123-158, 13 pls.

One hundred and forty six species in 16 genera including one new taxa are enumerated.

Holttum, R.E.

1971. Studies in the family Thelypteridaceae III. A new system of genera in the Old World.

Blumea **19** : 17-52, 20 figs.

Twenty-three genera are accepted; a key to the genera is provided.

Five new genera and one new name are described.

Cyclosorus Link is retained only to accommodate 2 species: *C. gongyloides* and *C. striatum*.

Thelypteris Schmidel is splitted into many genera, only 4 species are retained with *Th. palustris* Schott. as the type species.

1972. Studies in the family Thelypteridaceae IV. The genus *Pronephrium* Presl.

Blumea **20** (1) : 105-126.

The genus is divided into 3 sections: *Pronephrium*, *Dimorphopteris* and *Grypothrix*.

In Thailand the Section *Pronephrium* is represented by *P. repandum* (Fée) Holttum, *P. lakhimpurens* (Rosenst.) Hoett., *P. nudatum* (Roxb.) Holtt. and possibly *P. penangianum* (Hook.) Holtt.; the Section *Dimorphopteris* by *P. articulatum* (Houlst. & Moore) Holtt. and *P. affine* (Bl.) Presl; the Section *Grypothrix* by *P. triphyllum* (Sw.) Holtt. and possibly *P. parishii* (Bedd.) Holtt.

1972. The genus *Davallodes*.

Kew Bull. **27** (2) : 245-249.

Dealing with 9 Malesian species, a key to species is provided.

Holttum, R.E. and P. Chandra

1971. New species of Thelypteridaceae from India, Ceylon and Burma.
Kew Bull. **26** : 79-82.

Three new species are described and one new combination is made.

Hotta, Mitsuru

- 1966-1967. Notes on Bornean plants, I-II.
Acta Phytotax. Geobot. **22** (1 & 2) : 1-10, figs. 1-3;
ibid. **22** (4 & 6) : 153-162, figs 4-7.

1. Forty-one species are treated with 7 new species from Sarawak.
2. Twenty-nine species are recorded with 6 new species, from Brunei and Sarawak.

Hou, Ding

1972. A new species of *Mangifera* (Anacardiaceae)
Reinwardtia **8** : 323-327, 1 fig.

M. decandra is described; the plant occurs in Sumatra, Brunei, Sabah and Kalimantan.

Hozumi, K., K. Yoda, S. Kokawa and T. Kira

1969. Production ecology of tropical rain forests in southwestern Cambodia. I. Plant biomass.
Nature and Life in Southeast Asia **6** : 1-51, 20 figs, photos.

Evergreen seasonal forest, heath forest and *Melaleuca* swamp forest were studied in the vicinity of Chékô, southwestern Cambodia, of which biomasses are estimated. The biomass of the evergreen seasonal forest is equivalent to other rain forests.

Hozumi, Kazuo, Kyoji Yoda, and Tatu Kira

1969. Production ecology of tropical rain forests in southwestern Cambodia. II. Photosynthetic production in an evergreen seasonal forest.
Nat. Life S.-e. Asia **6** : 57-81, 10 figs.

Photosynthetic and respiratory activities of leaves of all component tree layers of the forest prove to differ from other types of forests, using Saeki's formula. The daily rates of gross and net photosynthesis are given.

Hunt, P.F.

1971. Notes on Asiatic orchids : VI.
Kew Bull. **26** : 171-185.

A number of new combinations have been made to species belonging to *Galearis*, *Chusua*, *Peristylus*, *Diplocaulobium*, *Ephemerantha*, *Cadetia*, *Trichotosia*, *Tainia*, and *Sunipia*.

The genus *Sunipia* has been previously treated under *Ione*.

Hunt, P.F. & C.G. Vosa

1971. The cytology and taxonomy of the genus *Pleione* D. Don
(Orchidaceae).
Kew Bull. **25** (3) : 423-432, 1 fig.

The result of the work on cytology and taxonomy is to reduce the number of species in this genus to 9 species; *P. hookerana* (Lindl.) B.S. Williams, *P. maculata* (Lindl.) Lindl. are present in Thailand.

Iwatsuki, Kunio

1972. Phytogeography of the pteridophytes in Northern Thailand.
Acta Phytotax. Geobot. **25** (2 & 3) : 69-78, 5 figs.

About 250 species of pteridophytes are presently known in northern Thailand with the Sino-Himalayan elements predominating in the Lower Montane forests.

Doi Inthanond and Doi Chiang Dao is rich in the fern flora, and is different in edaphic and physiographic conditions; the differentiation is due to climatic condition.

Johnson, L.A.S.

1969. The families of cycads and Zamiaceae of Australia.
Proc. Linn. Soc. N.S.W. **84** (1) : 64-117.

The general classification of the Cycadales is reviewed and grounds are put forward for the recognition of three families : Cycadaceae (*Cycas*), Stangeriaceae, *fam. nov.* (*Stangeria*) and Zamiaceae (remaining genera). A taxonomic revision of the Australian members of the Zamiaceae is provided.

Kachecheba, J.L.

1972. The cytotaxonomy of some species of *Hibiscus*.
Kew Bull. 27 : 425-433, 2 pls.

Chromosome number and ploidy of *Hibiscus* are reviewed and the chromosome numbers of six species are recorded for the first time.

Kanis, A.

1971. A revision of the Ochnaceae of the Indo-Pacific area.
Additional notes and corrigenda.
Blumea 19 : 16

Ochna moonii Thw. is transferred from the synonymy of *O. obtusata* DC. to that of *O. jabotapita* Linn.

Keng, Hsuan

1972. Two new theaceous plants from Malaysia and a proposal to reduce *Tutcheria* to a synonym of *Pyrenaria*.
Gard. Bull. Sing. 26 (1) : 127-135, 3 pls, 2 figs.

Two new species of *Pyrenaria* are described from Sabah and Pahang, Malaysia; the genus *Tutcheria* is reduced to a synonym of *Pyrenaria*, resulting in new combinations of Chinese plants.

Kitamura, Siro

- 1968-1969. Compositae of Southeast Asia and Himalaya. I-IV.
Acta Phytotax. Geobot. 23 (1 & 2) : 1-16; 24 (1 & 2) : 1-19.

1. *Ainsliaea pteropoda* DC. is now known as *A. latifolia* (D. Don) Schulz-Bip., with a new locality reported from Thailand at Phu Luang in Loei. *Artemisia dubia* Wall. ex DC. is reported from Chiang Mai, Muong Khu (Doi Suthep); *A. indica* Willd. is reported from Chiang Mai, Khun Khong, 1100 m.

Aster benthamii Steetz is treated as a synonym of, *A. ageratooides* Turcz. spp. *alato-petiolata* Kitam.

2. *Blumea densiflora* DC. is a new record for Thailand (Chiang Mai, Mung Khu-Huai Tat); *B. lanceolaria* (Roxb.) Druce is a new record for Thailand (Mae Hong Son, Nam Phiang Din) also *B. lanceolaria* var.

spectabilis (DC.) Randeria from Chanthaburi (Khao Soi Dao) and Nakhon Nayok, *B. saxatilis* Zoll. & Mor. ex Geneesk from Doi Suthep., *B. sessiliflora* Decaisne from Mae Hong Son (Doi Bitcha).

Blumeopsis flava Gagnep. is accepted instead of *Blumea flava* DC. and *Blumea falcata* O.K.

Camchaya calcarea Kitam. is a new species from Chiang Dao in Chiang Mai.; *Camchaya calcicola* Kitam. from Doi Pang La, Huay Thak in Lam-pang; *Camchaya eberhardii* (Gagnep.) Kitam. is a new combination basing on *Iodocephalus eberhardii* Gagnep. with *I. glandulosa* Kerr as a synonym.

Cirsium lineare (Thunb.) Sch. Bip. var. *laushanense* (Yabe) Kitam. f. *vestitum* Kitam. is a new record from Tak toong-Huoi Set.

Conyza stricta Willd. is a new record from Mae Hong Son (Doi Bitcha); *Conyza leucantha* (D. Don) Ludlow & Raven is accepted against *C. vicidula* Wall. ex DC.

Crepis lignea (Vaniot) Babcock is recorded from Doi Khuntan.

3. *Dichrocephala integrifolia* (L.f.) O. Kuntze is accepted instead of *D. latifolia* DC.

Eupatorium chinense L. is a new record (Doi Suthep), also *E. lindleyanum* DC. (Doi Chiang Dao)

Ixeris gracilis (DC.) Stebbins is preferred to *Lactuca gracilis* DC.; *Ixeris parishii* (Craib) Kitam. is a new combination based on *Lactuca parishii* Craib.

Kalimeris indica (L.) Sch.-Bip. is preferable to *Aster indica* L. (recorded from Phu Miang)

Microglossa pyrifolia (Lamk.) O. Kuntze is a new record (Bannkikh & Tak toong; Doi Bitcha; Muong Khu; Huay Krasa; Phu Miang).

4. One new species from Himalayas, *Saussurea nishiokae* is described with many species recorded from Thailand.

Saussurea peguensis Clarke is accepted under which *S. phyllocephala* Coll. & Hemsl., *S. leontopodium* Level. & Vaniot, and *S. venosa* Kerr are reduced. The formerly known *Spilanthes acmella* Murr. (non Linn.) is treated under *S. paniculata* Wall. ex DC.

Vernonia squarrosa Kerr (non Lessing) is recognized as a new variety, i.e. *V. squarrosa* (D. Don) Lessing var. *orientalis* Kitam. with *V. teres* Gagnep. (non DC.) as a synonym.

Koster, Josephine Th.

1972. The Compositae of New Guinea III.

Blumea **20** (1) : 193-225, 2 figs.

Dealing with tribes *Inuleae* (9 genera) and *Helenieae* (1 genus). Keys to genera and species are provided. Many species are distributed into Thailand. Some new forms and varieties are proposed with new combinations.

Kramer, K.U.

1972. The lindsaeoid ferns of the Old World VI. Continental Asia, Japan and Taiwan.

Gard, Bull. Sing **26** (1) : 1-48, 9 figs.

A revision of the lindsaeoid ferns containing 3 genera : *Sphenomeris*, (2 spp.) *Tapeinidium*, (3 spp.) and *Lindsaea* (35 spp.).

Many species are recorded from Thailand. One new species is described basing on the plant collected from Vietnam, few varieties are recognized together with new combinations.

Krishnamurthy, V.

1972. The species of *Enteromorpha* from India.

Bot. J. Linn. Soc. **65** : 119-128, 2 figs.

An account of 13 taxa of marine algae in the genus *Enteromorpha* occurring on the shores of the mainland of India is given; a key to the taxa is provided. Of these, *E. ovata* is a new species and *E. linza* var. *bicornuta* is a new variety.

Kurata, Shigeo and Masami Toyoshima

1972. Philippine species of *Nepenthes*.

Gard. Bull. Sing. **26** (1) : 155-158, one figure, one plate.

Dealing with seven species one of which is described as new to science.

Larsen, Kai

1971. Chromosome numbers of some Thai Leguminosae.

Bot. Tidsskrift **66** : 38-50, 39 figs.

Dealing with 39 species, 27 have been counted for the first time. The highly polyploid is found in *Crotalaria ferruginea*.

Leenhouts, P.W.

1971. A revision of *Dimocarpus* (Sapindaceae)
Blumea 19 : 113-131, 1 fig.

A key to 5 species is given, one of which is a new taxon from Borneo. *Euphoria longana* Lamk. is treated as synonymy to *D. longan* Lour., of which many synonyms are listed, including *Xerospermum ferrugineum* C.E.C. Fischer, *Nephelium didynum* Craib, and *Euphoria scandens* Winit & Kerr.

Leeuwen, B.L.J. van

1971. A preliminary revision of the genus *Rotala* (Lythraceae) in
Malesia.
Blumea 19 : 53-56

A key is given to 7 species, six of which occur in Malesia. *Rotala diversifolia* Koehne, hitherto only known from Thailand, appears to occur in several localities in Malesia.

Markgraf, F.

1971. Florae Malesianae Procursores 51. Apocynaceae I. 1. *Carissa*, 2. *Catharanthus*, 3. *Melodinus*, 4. *Leuconotis*, 5. *Chilocarpus*.
Blumea 19 : 149-166, 1 fig.

Dealing with Malesian species, distribution in Thailand is given, namely *Chilocarpus costatus* Miq., *Ch. denudatus* Bl. and *Ch. minutiflorus* K. & G.

Medway, Lord

1972. Phenology of a tropical rain forest in Malaya.
Biol. J. Linn. Soc. 4 : 117-146, 2 figs.

Observations were made of flowering, fruiting and foliar activity of 61 canopy trees (representing 45 species) in a large undisturbed tract of Hill Dipterocarp forest. Gregarious flowering is apparently in response to drought.

Melville, R. and H.M. Heybroek

1971. The elms of the Himalaya.
Kew Bull. 26 (1) : 5-28, 9 figs.

Dealing with 5 species, *Ulmus lanceifolia* has a wider range of distribution through Thailand to Sumatra and Celebes.

Monod de Froideville, Ch.

1961. Notes on Malesian grasses IV. A synopsis of *Cenotheca* and reduction of *Ramosia*.
Blumea **19** : 57-60

A key to 4 species is given, one of which is a new combination. *C. lap-pacea* Linn. is treated as synonymy to *C. latifolia* (Osb.) Trin.

Muller, Jan

1971. Pollen morphological notes on the genus *Dimocarpus* (Sapindaceae.)
Blumea **19** : 133-145, 4 plts, 2 figs.

The pollen morphology of all 5 species of the genus *Dimocarpus* is studied.

Murata, Gen

1969. Labiatae of Himalaya collected by S. Nakao, K. Nishioka, O. Namikawa, R. Tujimura, J. Kawakita, T. Namba and K. Itoh.
Acta Phytotax, Geobot. **24** (3) 77-89.

Sixty-six taxa are enumerated, no novelty; some have their distribution range into Thailand.

1970. New Labiatae from Thailand.
Acta Phytotax. Geobot. **24** (4-6) : 105-112, 8 figs.

Coleus calcicola, *Geniosporum siamense*, *Isodon nigropunctatum*, *Orthosiphon tagawai* are described from northern Thailand.

Ngan, Yin Nam

1971. Note préliminaire sur les characées de la région de Phnom-penh.
Ann. Fac. Sc. **4** : 81-86. 3 figs.

Three taxa are recorded from Phnom Penh, no novelty.

Pandey, Yashodanandan

1971. Cassias commonly occurring or cultivated in India.
J. Bomb. Nat. Hist. Soc. **68** (2) : 311-318, 38 figs. in 2 plts.

An account of 19 species of *Cassia* is given with an artificial key for identification.

The difference between *C. nodosa* and *C. javanica* as given in the key is reversed; *C. nodosa* is deciduous and *C. javanica* is semi-evergreen. *C. nodosa*, *C. javanica*, *C. bakeriana* and *C. agnes* are closely related and tended to misinterpretation.

Polhill, R.M.

1972. Some observations on generic limits in Dalbergieae-Lonchocarpaceae Benth. (Leguminosae).
Kew Bull. 25 (2) : 259-273, 2 figs.

After a thorough study, the African genus *Lonchocarpus* sect. *Caudaria* is transferred to *Millettia*, the Australian *Lonchocarpus* to *Kunstleria*. The genus *Derris* section *Aganope* is restituted to generic level, a member of which is represented in Thailand by *A. heptaphylla* (Linn.) Polhill (Syn. *Derris exserta* Craib, type Kerr 8785), but the author notes that the Thai collection might be a distinct species.

Rataj, Karel

1972. Revision of the genus *Sagittaria*, Part I. (Old World Species).
Annot. Zool. Bot. 76 : 1 : 31, 13 figs.

The genus is divided into 2 subgenera : *Lophotocarpus* and *Sagittaria*. An enumeration of 9 Old World species is given, three of which are recorded from Thailand.

Ratnasabapathy, M.

1972. Algae from Gunung Jerai (Kedah, Perak), Malaysia.
Gard Bull. 26 (1) : 95-110, one figure, 4 plts.

The list contains 102 species and many varieties under 57 genera; no novelty.

Rodenburg, W.F.

1971. A revision of the genus *Trimenia* (Trimenaceae).
Blumea 19 : 3-15, 2 figs.

This small genus of only 3 species, confining to eastern Malesia, is fully treated.

Rojo, Justo P.

1972. *Pterocarpus* (Leguminosae-Papilionaceae). Revised for the world. Phanerogamarum Monographiae Tomus V : 1-119, 14 figs.

J. Cramer, Lehre (Germany).

A world-wide revision of the hitherto 20 known species; only two species, *Pterocarpus macrocarpus* Kurz and *P. indicus* Willd. are recognized. The rest are reduced as synonyms of *P. macrocarpus* Kurz.

Sabnis, S.D. and S.J. Bedi

1971. *Ceropegia odorata* Hook. f. (Asclepiadaceae) a little-known plant of western India.

Kew Bull. 25 (1) : 57-59, one figure.

A full description of this little-known plant is provided.

Satakopan, Savitha

1972. Keys to the identification of plant remains in animal droppings.

J. Bomb. Nat. Hist. Soc. 69 (1) : 139-150, 3 pls.

A diagnostic key, using the microscopic characters of the plant debris present in the droppings of the wild animals, is provided to be used to ascertain the diet plants of these animals.

Methods of preparation of materials are given.

Schaeffer, J.

1971. Revision of the genus *Endospermum* Bth. (Euphorbiaceae).

Blumea 19 : 171-192, 1 tab., 5 maps.

A key to 12 species is given; *E. diadenum* (Miq.) Airy Shaw [Syn. *E. malaccense* Benth., *E. ovalifolium* Pax & Hoffm., *E. beccarianum* Pax & Hoffm., *E. malaynum* (Pax & Hoffm.) Chatterjee], *E. chinense* Benth., and *E. peltatum* Merr. are recorded from Thailand.

1972. Pollen morphology of the genus *Hydnocarpus* (Flacourtiaceae) with notes on related genera.

Blumea 20 (1) : 65-87, 7 plates.

Pollen grains of 34 species are described.

Seidenfaden, Gunnar

1971. Notes on the genus *Luisia*.

Dansk Bot. Ark. 27 (4) : 1-101, 16 figs.

Eumerating 36 species, 3 new species are described: *L. thailandica*, *L. recurva*, and *L. secunda*, all from Thailand.

L. latilabris Rolfe ex Downies is reduced as a synonym of *L. zollingeri* Rchb. f., *L. siamensis* Kerr of *L. brachystachys* (Lindl.) Bl.

Thirteen species are reported from Thailand. An identification key is provided.

1971. Contributions to the orchid flora of Thailand III.

Bot. Tidssk. 66 (4) : 301-356, 36 figs.

Fourteen species are enumerated of which two are described as new to science, the rests are recorded for the first time.

The new species are *Oberonia nitida* and *Acanthephippium thailandica*.

A key for the identification of the genus *Anoectochilus* is provided.

1972. Contribution to the Orchid of Thailand IV.

Bot. Tidssk. 67 : 76-127, 33 figs.

A revision of the genus *Paphiopedilum* is attempted. The genus *Plocoglottis* is known from Thailand by 5 species, and an identification key is provided. *Aerides krabiensis* is described as a new species. Fourteen species are reported for the first time; some new combinations are proposed, and few taxa are reduced to synonyms.

Singh, V.

1971. Additions to Duthie's Flora of the Upper Gangetic Plain.

J. Bomb. Nat. Hist. Soc. 68 (2) : 339-346.

An additional list of 314 species and 14 varieties of flowering plants belonging to 257 genera and 79 families, recorded since the publication of Duthie's work, is compiled up to the year 1968 from various sources.

Singh V. and H. Singh

1971. A contribution to the flora of Gangolihat Block in Pithoragah District.

J. Bomb. Nat. Hist. Soc. 68 (3) : 773-790.

A total of 368 species representing 279 genera and 200 families are listed.

Sledge, W.A.

1972. The tectarioid ferns of Ceylon.
Kew Bull. 27 : 407-424.

Dealing with 5 genera and 16 species, many of which especially *Tectaria* also occur in Thailand; the genus *Quercifilix* is reduced as a synonym of *Tectaria*, hence *Q. zeilanica* (Houtt.) Copel. is now known as *T. zeilanica* (Houtt.) Sledge.

The common fern, *Tectaria fuscipes* (Wall. ex Bedd.) C. Chr. is now known as *Tectaria paradoxa* (Fée) Sledge.

Sleumer, H.

1972. A taxonomic revision of the genus *Scolopia* Schreb. (Flacourtiaceae).
Blumea 20 (1) : 25-64, 2 figs.

A world-wide revision dealing with 28 taxa, 7 new species and one variety are described as new to science; 15 species occur in southeast Asia and Malesia.

Species recorded from Thailand are *Scolopia spinosa* (Roxb.) Warb., *S. macroplylla* (W. & A.) Clos, *S. chinensis* (Lour.) Clos (*S. siamensis* Warb.) *S. lucida* Wall. ex Kurz, and *S. buxifolia* Gagnep.

Stone, Benjamin C.

1972. A new wild *Citrus* from Malaya.
Planter, Kuala Lumpur 48 : 90-92, 4 figs.

"The discovery of an undescribed species of *Citrus* inhabiting hill forest in Malaya and lower Thailand is reported, and the possible value of the species in relation to citriculture is suggested".

1972. Studies in Malasian Pandanaceae. II. A review of Javanese Pandanaceae, with notes on plants cultivated in the Hortus Bogoriensis.
Reinwardtia 8 : 309-321.

Dealing with 16 species.

Soepadmo, E. (Edit.)

1971. National Parks of Malaysia.
Mal. Nat. J. **24** : 111-262, illustr.

A special double issue dealing with National Parks of Malaysia, descriptions of Taman Negara, Templer, Bako and Kinabalu Parks are given together with ground for conservation and information for visitors.

Steenis, C.G.G.J. van

1972. Note on *Hymenodictyon* (Rub.) and its occurrence in Malaysia, especially in West Java.
Reinwardtia **8** : 333-334.

Hymenodictyon is rather indifferent to climate, its rarity in the tropical rain forest is due to the reproduction and ecology which approach that of a nomad plant.

Sundararaj, Daniel and Girija Balasubramanyam

1972. Occurrence of *Musa ornata* Roxb. in South India.
Kew Bull. **25** (2); 331-333.

A full description of *Musa ornata* Roxb. is given; the plant is formerly referred to *M. rosacea* Jacq. which is an edible banana referable to either *M. balbisiana* Colla, or to *M. sapientum* Linn. and probably the latter.

Tagawa, Motozi

1967. On a small collection of Cambodia ferns.
Acta Phytotax. Geobot. **22** (4 & 6) : 104-108.

Enumerating 51 species, of which *Humata angustata* and *Dryanaria sparsisora* are recorded for the first time from the former French Indo-china; many new records are reported from Cambodia, with 2 new combinations.

- 1967-1972. Ferns of Borneo, collected by M. Hirano and M. Hotta
4-6.
Acta Phytotax. Geobot. **22** (3) 87-94; *ibid.* **22** (4 & 6) :
183-191; *ibid.* **25** (2 & 3) : 61-68.

4. Dealing with 15 genera covering 50 species, the majorities belong to *Cyathea* (14 spp.) and *Lindsaea* (13 spp.)

5. Dealing with 24 genera consisting of 54 species, the majorities are *Lycopodium* (7 spp.), *Pyrrosia* (5 spp.) and *Microsorium* (7 spp.)

6. Dealing with 40 species and one variety in 12 genera; one new species is described: *Diplazium hottae* from Sarawak and Sabah.

Tagawa, M. and K. Iwatsuki

1970. Taxonomic Studies of Pteridophyta IX. 12. On the systematic position of the genus *Microchlaena*.
Acta Phytotax. Geobot. 24 (4 & 6): 182-188, 5 figs.

After a thorough study the authors evaluate the genus *Microchlaena* Ching (1938) under which only one species is recognized:—*M. cuspidata* (Bedd.) Ching, having a very wide distribution from the Himalayas through Southwest China to northern Thailand.

1971. New or interesting ferns from Thailand 7.
Acta Phytotax. Geobot. 25 (1): 16-21.

Dealing with 18 species of which following taxa are new to science:—*Asplenium siamense* from Phu Kradueng in Loei, *Cheilanthes delicatula* from Doi Inthanond in Chiang Mai, and *Adiantum siamense* from Thung Song, Nakhon Si Thammarat.

Tixier, P.

1971. Bryophytae Indosinicae. Mousses de Thaïlande.
Ann. Fac. Sc. 4: 91-164, 2 figs.

Enumerating 516 species within 167 genera of mosses known to occur in Thailand up to 1970.

A biogeographical consideration on the moss flora of S-E. Asia is given.

1971. A contribution to bryological knowledge of Fraser's Hill Station (Malaysia).
Gard. Bull. Sing 25 (3): 335-353, 4 figs.

A list of 78 mosses and 67 liverworts is presented; four taxa are proposed as new to science.

- 1971-1972. Bryophytae indosinicae. Mousses de Thaïlande : espèces nouvelles.
Rev. Bryol. et Lichenol., 38 (2): 148-160, 8 figs.

Leucoloma phumiensis, *Pterobryopsis rubrinervis*, *Symphysodon siamensis*, *S. sutepensis*, *S. sutepensis* var. *scaber*, *Trachyphyllum andoi*, and *Taxithe-*

lium enerve are described as new to science. The specific epithet *phumiensis* should be *phumiengensis*.

Full descriptions of *Leucoloma birmense* C. Muell. and *Taxithelium arnottii* Ther. are given.

Touw, A.

1971. A taxonomic revision of the Hypnodendraceae (Musci).
Blumea 19 : 211-354, one plate and 43 figs.

A revision is made of the genera *Hypnodendron* and *Braithwaitea*. The species of *Hypnodendron* are grouped into nine sections, four of which are new; twenty-six species are recognized and provided with identification keys. Following species are recorded from Thailand: *H. subspini-nervium* (C. Muell.) Jaeg. ssp. *arborescens* (Mitt.) Touw from Pattani; *H. junghuhnii* (C. Muell.) Jaeg. from Nakhon Si Thammarat; *H. dendroides* (Brid.) Touw. from Krabi.

Vaid, K.M. and H.B. Naithani

Cuscuta santapau Bannerji & Dao—A new record for India.
Ind. For. 97 : 467-468.

The species hitherto reported from Eastern Nepal, is found occurring in Dehra Dun and Kashmir.

Vardhanabhuti, Sman et al.

1971. Microbial activities in shallow tank retting of green kenaf, stalks.

Thai Nat. Sc. Pap. Biol. Ser. 1, one coloured plate.

Microbial activities in shallow tank retting of green kenaf stalks were found to be most active in the retting bark. Aerobes played a more dominant role than the anaerobes; but the latter enhanced the activity of the former.

Aerobes caused the pectinolysis, whereas ligninolysis could result from the activity of either anaerobes or the aerobes or both.

Veldkamp, J.F.

1971. Notes on Malesian Grasses V. New species and combination in *Pheidochloa*, *Hyparrhenia*, and *Leptochloa*.
Blumea 19 : 61-64.

Diplachne malayana C.E. Hubbard is transferred to *Leptochloa* by Jansen, hence the taxon *L. malayana* (C.E. Hubb.) Jansen.

Veldkamp, J.F.

1971. *Alternanthera paronychioides* St. Hil. (Amaranthaceae) in Indo-Malasia.

Blumea 19 : 167-169, one fig.

A key to *A. ficoidea* and *A. paronychioides* is given; *A. ficoidea* (L.) R. Br. ex Griseb. ssp. *bettzickiana* (Regel) Backer, p.p. is reduced as a synonym of the latter.

Verdcourt, Bernard

1971. The genus *Cardiochlamys* Oliv. (Convolvulaceae).

Kew Bull. 26 : 137-140, one fig.

As *Cardiochlamys* is apparently confining to Madagascar, a careful study of the 2 Asian species is made. *C. sinensis* Hand.-Mazz. proves to be closely related to the genus *Porana* and thus has been renamed *Porana henryi* Verdc; *C. thorelii* Gagnep. differs widely in its floral and fruiting characters from the typical *C. madagascariensis* Oliv. hence a new monotypic genus, *Cordisepalum* Verdc. is created.

Porana henryi has been found in South China (Yunnan) and North Thailand; *Cordisepalum thorelii* is recorded from eastern Thailand and Laos (Bassac) with an illustration.

Webster, Grady L. and H.K. Airy Shaw

1971. A provisional synopsis of the New Guinea taxa of *Phyllanthus* (Euphorbiaceae).

Kew Bull. 26 : 85-109.

Dealing with 35 species, 11 new taxa are recognised. Keys to the subgenera and species are provided.