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A Revised
Moss Checklist
of Peninsular Malaysia
and Singapore

K.T. Yong, B.C. Tan, B.C. Ho, Q.Y. Ho & H. Mohamed

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All enquiries should be forwarded to:

Director-General
Forest Research Institute Malaysia
52109 Kepong, Selangor Darul Ehsan, Malaysia
Tel: 603-6279 7000
Fax: 603-6273 1314
<http://www.frim.gov.my>

K.T. Yong
Institute of Biological Sciences, University of Malaya
50603 Kuala Lumpur, Malaysia

B.C. Tan, Q.Y. Ho
Department of Biological Sciences
National University of Singapore, Singapore 119267

B.C. Ho
Nees-Institut für Biodiversität der Pflanzen
Rheinische Friedrich-Wilhelms-Universität Bonn
53115 Bonn, Germany

H. Mohamed
University of Brunei Darussalam
Gadong BE1410, Brunei Darussalam

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A timely and important event that took place in the botanical scenes of Malaysia in recent years is the formal initiation of the project The Flora of Peninsular Malaysia in 2006. The aim of this project is to produce a complete and updated flora consisting of some 8,500 species of vascular plants with taxonomic synonymy, keys to the identification of genera and species, species description and distribution information in Peninsular Malaysia. The project is funded by the Government of Malaysia through the Ministry of Natural Resources and Environment and is based and headed by the research staff at the Herbarium of Forest Research Institute Malaysia (FRIM) at Kepong in Selangor.

Although the non-vascular bryoflora was originally not a part of the Flora of Peninsular Malaysia project, its diversity, especially the mosses, with a recorded 512 species in 158 genera, is an integral part of the rich flora of Peninsular Malaysia. Recognizing this, FRIM has generously funded a companion production of a new checklist of mosses with updated nomenclatures, synonymy, taxonomic bibliography, family classification and distributional

records. Since the moss flora of Singapore is an extended portion of the Peninsular flora, the project has included the reported moss taxa of this island state in the checklist.

The present checklist is the outcome of this funding and the result of joint research efforts conducted for several years by a number of researchers residing in Peninsular Malaysia and Singapore.

The scientific investigation of the Peninsular Malaysian moss flora started in late 19th century under the British Colonial rule. The study of the local moss flora has gone on and off through the independence years of the two countries. The effort culminated in a moss checklist published in 1988 by Prof. Haji Mohamed at the University of Malaya and Dr. B C Tan at the National University of Singapore. This milestone publication of Malaysian muscology entitled “A checklist of Peninsular Malaya and Singapore” was published in vol. 91 (pp. 24-44) of the American journal, *The Bryologist*. In it, 475 species of mosses were reported.

Nearly 25 years have passed, the ecological and the economic importance of bryophytes, including mosses, have become better known and more appreciated. To provide the latest scientific data, a new and updated moss checklist is therefore needed to assist the government planners in utilizing properly the plant group in a sustainable way and to protect species from extinction. It is hoped that this new checklist of moss species will also guide conservation programmes in Malaysia and Singapore.

In view of the fact that many species of mosses listed in the checklist are widespread in the floristic region of West Malesia, it is believed that this new checklist will serve further as an important bibliographical reference for workers and botanists in the neighboring countries in their study of the regional moss biodiversity.

Lastly, we thank specially Dr. Saw Leng Guan, Director of the Tropical Forest Biodiversity Centre at FRIM for his encouragement and support given to the preparation and the publication of this updated moss checklist.

Haji Mohamed



In compiling and updating the moss checklist, we are indebted to many colleagues who had provided us with information about the newly reported moss taxa from Peninsular Malaysia and Singapore. We thank especially Dr. Z. Iwatsuki for giving taxonomic comments on moss taxa of little known occurrence. We would also extend our gratitude to Ms. Cheng Pei Leng, Ms. Ching Li Xian, Ms. Gan Hui Hoon, Ms. Lee Gaik Ee, Ms. Lim Sui Sian who have assisted us in compiling part of the database in which the present work is based on; to Mr. Benjamin Lee for the colour photo of the Nee Soon Swamp in Singapore. We are extremely grateful to Ms. Aslina Baharum for her competent, error-free page setting of the checklist.

The financial support provided by the Forest Research Institute of Malaysia (FRIM) Research Program and the office of DBS-RMBR of National University of Singapore, University of Malaya, University of Brunei Darussalam are acknowledged.



More than two decades have passed since the first modern checklist of mosses of Peninsular Malaysia and Singapore was published (Mohamed & Tan 1988). To accommodate the many new and scattered taxonomical and nomenclatural changes taking place in recent years due to revisions and molecular interpretation of taxa, it is necessary to produce an updated checklist for Peninsular Malaysia and Singapore.

This updated moss checklist follows basically the same information format and bibliographical citation used in the 1988 version and provides: (1) the source publications dealing with the binomials of each of the included taxa, and (2) an enumeration of the states/country where the taxon has been collected and reported. The listing of the states of Peninsular Malaysia, where a taxon is reported, is in alphabetical order. All accepted taxa and their synonyms are incorporated into one listing for easy reference. A section of Excluded Taxa, Annotation and Literature Cited conclude the checklist.

2 INTRODUCTION

There are several differences between the two moss checklists. The first difference lies in the arrangement of taxa — the updated checklist follows strictly an alphabetical order, and not by family grouping like its predecessor. The second difference is seen in the abbreviation of cited authority names of binomials, which in the new version, follows Brummitt & Powell (1992). Also, some of the listed family and generic concepts of mosses have changed based on recent DNA phylogenetic studies. While we accept many of the newly proposed familial and generic concepts brought forth by DNA evidence, we also do not accept a few when morphological characters and DNA evidence are not in congruence. All taxa accepted by us are printed in bold. A triple equal sign (\equiv) indicates a homotypic synonym.

For a summary of the climate, vegetation type, natural history, and history of muscology of Peninsular Malaysia, see Mohamed & Tan (1988). For background information of the moss flora of Singapore, consult Tan & Ho (2008).

To provide visual impression of the natural landscape and diversity of forest vegetations in Peninsular Malaysia and Singapore, we have provided selected pictures of locations specifically rich in moss flora (Plates 1–3).

This checklist reports 46 families, 159 genera, 522 species, 20 subspecies, 72 varieties and 7 forms of mosses for Peninsular Malaysia and Singapore. Of these, Singapore has 24 families, 58 genera and 153 species of mosses. It is interesting to note that one genus, 8 species and three varieties of mosses reported from Singapore (i.e., *Barbula subcomosa* Broth., *Bryum bicolor* Dicks., *Clastobryophilum asperifolium* (Thwaites & Mitt.) B.C. Tan, *Fissidens autoicous* Thér. & Dixon, *F. gymnogynus* Besch., *F. pallidinervis* Mitt., *Leptotrichella miqueliana* var. *longifolia* (Baumgartner & J. Froehl.) Ochyra, *Leucobryum aduncum* var. *teysmannianum* (Dozy & Molk.) T. Yamag., *Ochrobryum kurzianum* Hampe, *Pterogonidium pulchellum* (Hook.) Müll. Hal. ex Broth., *Splachnobryum temasekensis* B.C. Tan, B.-C. Ho & B.K.-B. Seah and *Trichosteleum brachypelma* var. *compactum* Dixon) have no record from Peninsular Malaysia. This means that the total number of moss taxa known from Peninsular Malaysia are 46 families, 158 genera and 512 species. Compared to the previous list of 475 moss species (see Mohamed & Tan, 1988), the new checklist records an increase of 37 species reported from Peninsular Malaysia and Singapore. Many discoveries of new records were made in recent years. As the listing is based mainly on old and new publications, the definitive number of surviving taxa today can not be fully ascertained.

Based on this new moss checklist, large genera with more than 20 species include *Fissidens* (30), *Syrrhopodon* (27), *Acroporium* (23), *Ectropothecium* (21), and *Calymperes* (20). These are followed by medium sized genera, like *Macromitrium*

(15), *Trichosteleum* (14), *Distichophyllum* (13), *Mitthyridium* (11), *Campylopus* (10), *Taxithelium* (10), *Leucobryum* (9), *Bryum* (8), *Dicranoloma* (7), *Neckeropsis* (7), *Papillidiopsis* (7), *Chaetomitrium* (6), and *Clastobryum* (6). The remaining majority (~89 %) are small genera with 1–5 species. About half the total number of reported genera (~47 %) are represented by a single species. Photographs of some selected moss taxa are provided in Plates 4–11.

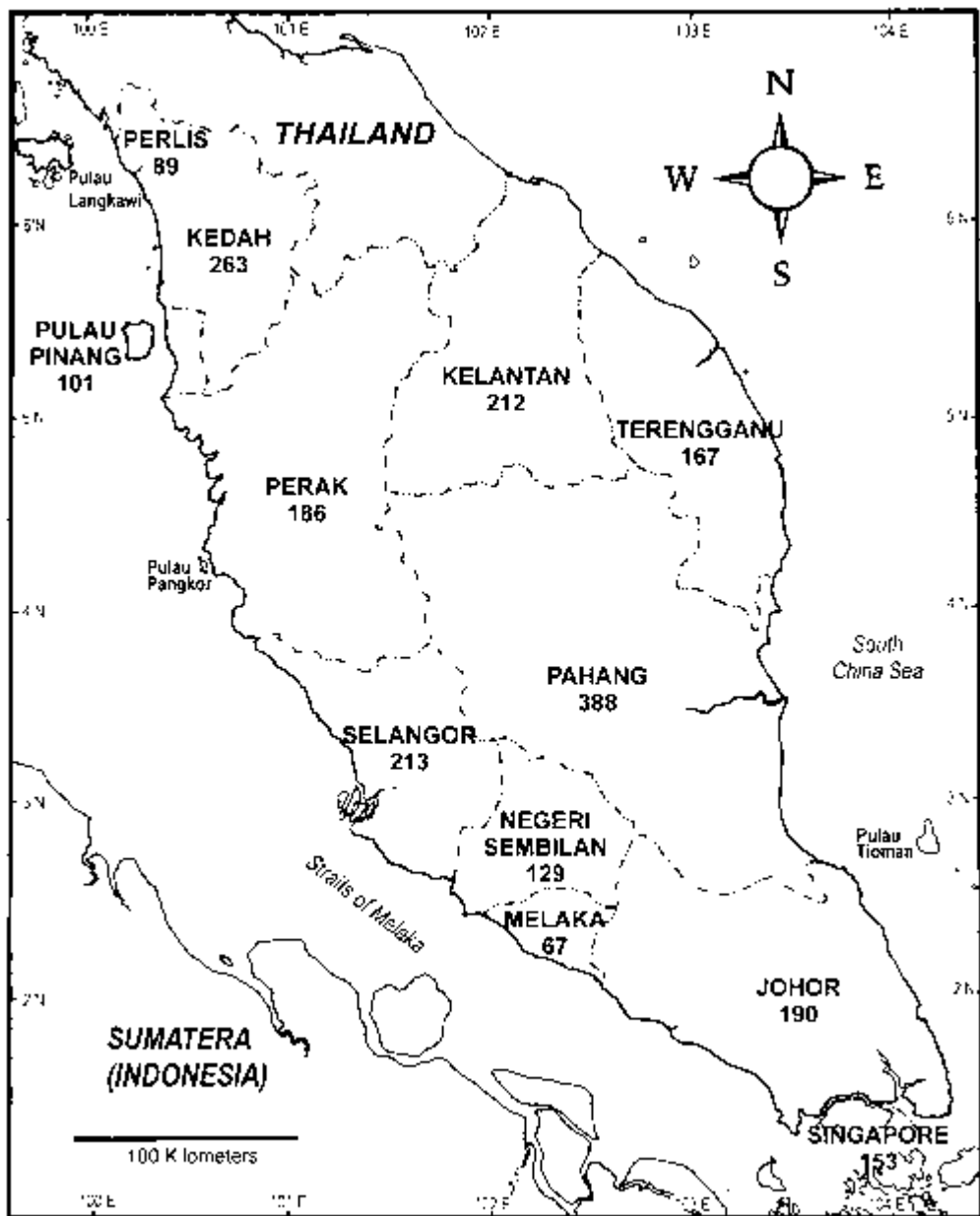
The geographic area covered by this checklist has seven endemic taxa, namely, *Calymperes woodii* L.T. Ellis, *Fissidens benitotanii* Z. Iwats., K.T. Yong & Tad. Suzuki, *F. subdiscolor* Dixon, *Schistomitrium sparei* Dixon ex A. Johnson, *Trichosteleum fleischeri* B.C. Tan, B.C. Ho & B.K.-B. Seah, *Trichosteleum fruticola* Tixier and *Splachnobryum temasekensis* B.C. Tan, B.-C. Ho and B.K.-B. Seah. The last mentioned one is the only known Singapore endemic moss at present.

Current floristic data shows that the moss flora of Peninsular Malaysia and Singapore remains Sundaic in origin with a strong affinity to the moss flora of Sumatra (see Ho et al. 2006). Since more than 75% of the taxa in this checklist are also found in neighbouring countries in southeast Asia, this checklist will surely be an important reference in the study of taxonomy and nomenclature of the regional moss flora.

In the peninsula, Pahang has the highest number of species recorded, while Melaka has the least number of mosses known (Map 1). The reduced figure for Melaka (26 species) in comparison with the figure of 84 species reported in the previous checklist (see Mohamed & Tan 1988, Fig. 1) is the result of correction of past inaccurate reports and counting.

Has the moss flora of Peninsular Malaysia been exhaustively documented? The absence of regionally widespread taxa, such as species of *Aerobryum*, *Brotherella*, *Entosthodon*, *Herpetineuron* and *Hookeriopsis*, indicates a need for more field studies.

One new noteworthy observation is the increasing number of introduced species of mosses reported from Singapore. Examples are *Atrichum androgynum* (Müll. Hal.) A. Jaeger, *Leptobryum pyriforme* (Hedw.) Wilson, *Ochrobryum kurzianum* Hampe, *Pterogonidium pulchellum* (Hook.) Müll. Hal. ex Broth., *Taxiphyllum barbieri* (Cardot) & Copp.) Z. Iwats. and *Thuidiopsis sparsa* (Hook.f. & Wilson) Broth. (see Tan & Tan, 2000; Tan & Buck 2002; Tan & Kee 2005; Tan & Loh 2005; Tan & Ho 2008). Their presence in Singapore Botanic Gardens and city parks on the island shows their introduced, albeit not intentionally, and adventives nature. In this checklist, we have included two of these alien species that had escaped from cultivation.



Map 1. The current number of moss species in the states of Peninsular Malaysia and Singapore as of April 2012.



The Checklist

Acanthocladium Mitt. (Family Pylaisiadelphaceae)

A. alboalare Tixier \equiv *Wijkia alboalaris* (Tixier) Manuel (fide Manuel 1981a: 161)

A. bifarium Mitt., *nom. nud.* = *Trichosteleum bruchii* (Dozy & Molk.) Broth. (see Dixon 1926: 40) \equiv *Papillidiopsis bruchii* (Dozy & Molk.) W.R. Buck & B.C. Tan (fide Buck & Tan 1989: 12).

A. polymorphum Dixon \equiv *Wijkia polymorpha* (Dixon) H.A. Crum. (see Tan & Iwatsuki 1993: 328).

A. scabrifolium Broth. \equiv *Acanthorrhynchium scabrifolium* (Broth.) B.C. Tan & Y. Chang (fide Tan & Chang 2004: 307).

A. tenuisetum Dixon, *nom. nud.* (see Dixon 1926: 36).

***Acanthorrhynchium* M. Fleisch. (Family Sematophyllaceae)**

***A. papillatum* (Harv.) M. Fleisch.** — Fleischer 1915–22: 1334; Möller 1919: 328 (as *Trichosteleum papillatum*); Dixon 1926: 35 (as *Taxithelium papillatum*); Fröhlich 1953: 110; Tixier 1971: 340;

Noguchi 1973: 303; Tixier 1974: 21; Wee 1979: 61; Manuel 1980b: 40; Tixier 1980: 387; Manuel 1981a: 113; Tixier 1982: 86; Mohamed 1987a: 56; Mohamed & Mohamad 1987: 188; Mohamed & Tan 1988: 34; Wolseley et al. 1996: 80; Damanhuri 1999: 219; Damanhuri & Ajamain 1999: 410; Tan & Mohamed 1999: 74; Damanhuri 2000: 220; Maideen & Damanhuri 2000: 110; Damanhuri & Maideen 2001a: 27; Damanhuri & Maideen 2001b: 214; Damanhuri & Nizam 2001: 221; Ho & Tan 2002: 71; Yong et al. 2002: 247; Damanhuri et al. 2004: 260; Damanhuri et al. 2005a: 73; Damanhuri et al. 2005b: 64; Damanhuri et al. 2005d: 278; Damanhuri et al. 2005e: 243; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 85; Mohamed et al. 2005: 253; Yong & Damanhuri 2005: 100; Damanhuri et al. 2006: 168; Yong et al. 2006: 119; Damanhuri et al. 2007: 93; Lee & Damanhuri 2008: 176; Mohamed et al. 2009: 376. Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

***A. papillatum* (Harv.) M. Fleisch. fo. *penangense* (Harv.) M. Fleisch.** — Tixier 1974: 21; Mohamed & Tan 1988: 34. Kedah.

***A. scabrifolium* (Broth.) B.C. Tan & Y. Chang** — Dixon 1926: 36 (as *Acanthocladium scabrifolium*); Ho & Tan 2002: 73 (as *Mastopoma scabrifolium*); Tan & Chang 2004: 306 (as *M. scabrifolium*); Damanhuri et al. 2005d: 279 (as *M. scabrifolium*); Akiyama 2006: 9. Johor, Kelantan, Pahang.

***Acroporium* Mitt. (Family Sematophyllaceae)**

***A. aciphyllum* Dixon** — Dixon 1924: 253; Dixon 1926: 44; Tixier 1971: 340; Noguchi 1973: 301; Tixier 1980: 385; Manuel 1981a: 110; Mohamed & Tan 1988: 34; Tan 1994: 261; Yong et al. 2006: 119. Kedah, Pahang.

***A. adpersum* (Hampe) Broth.** — Damanhuri et al. 2005e: 243; Damanhuri et al. 2007: 93; Lee & Damanhuri 2008: 176. Kedah, Pahang.

A. albidissimum Dixon = *A. downii* (Dixon) Broth. (fide Tan 1994: 268).

***A. asperifolium* (Thwaites & Mitt.) Dixon** — Dixon 1926: 41; Wee 1979: 61; Johnson 1980: 107; Manuel 1981a: 110; Mohamed & Tan 1988: 34. Peninsular Malaysia, Singapore.

A. bogoricum (Bosch & Sande Lac.) Dixon ≡ *Clastobryophilum bogoricum* (Bosch & Sande Lac.) M. Fleisch. (fide Fleischer 1915–22: 1201).

A. brevipes (Broth.) Broth. = *A. secundum* (Reinw. & Hornsch.) M. Fleisch. (fide Tan 1994: 280).

A. clastobryelloides Dixon, *nom. nud.* (see Dixon 1926: 41).

A. complanatum Dixon ≡ *Warburgiella complanata* (Dixon) Broth. (see Tan & Iwatsuki 1993: 328) ≡ *Papillidiopsis complanata* (Dixon) W.R. Buck & B.C. Tan (fide Buck & Tan 1989: 12).

A. condensatum **E.B. Bartram** — Tixier 1980: 385; Mohamed & Tan 1988: 34; Yong et al. 2006: 119. Kedah, Pahang.

A. convolutum (**Sande Lac.**) **M. Fleisch.** var. *convolutum* — Dixon 1926: 42; Wee 1979: 61; Tixier 1980: 385; Manuel 1981a: 110; Mohamed 1987a: 56; Mohamed & Tan 1988: 34; Tan & Mohamed 1999: 74; Damanhuri et al. 2005d: 278; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 85; Mohamed et al. 2005: 253; Yong & Damanhuri 2005: 100; Damanhuri et al. 2006: 169; Yong et al. 2006: 119; Lee & Damanhuri 2008: 177; Mohamed et al. 2009: 376. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu, Singapore.

A. convolutum (**Sande Lac.**) **M. Fleisch.** var. *elatum* (**Dixon**) **B.C. Tan** — Dixon 1924: 254 (as *A. longicuspis*); Dixon 1926: 43 (as *A. longicuspis*); Tixier 1971: 340 (as *A. longicuspis*); Tixier 1974: 20 (as *A. longicuspis*); Wee 1979: 61; Tixier 1980: 386 (as *A. longicuspis*); Manuel 1981a: 110; Mohamed 1987a: 56; Mohamed & Tan 1988: 35; Tan 1994: 265; Tan & Mohamed 1999: 74; Damanhuri et al. 2006: 169; Yong et al. 2006: 119. Kedah, Kelantan, Pahang, Perak, Selangor, Terengganu, Singapore.

A. decipiens (Dixon) Broth. = *Sematophyllum saproxylophilum* (Müll. Hal.) M. Fleisch. (see Tan 1994: 292) ≡ *Trichosteleum saproxylophilum* (Müll. Hal.) B.C. Tan, W.E. Schofield & H.P. Ramsay (fide Tan et al. 1998: 220).

A. denticulatum **Dixon** — Dixon 1924: 252; Dixon 1926: 44; Mohamed & Tan 1988: 35; Tan 1994: 291. Pahang.

A. cf. dicranoides **M. Fleisch.** — Tixier 1974: 19; Mohamed & Tan 1988: 35. Kedah.

A. divaricatum Dixon, *nom. nud.* (see Dixon 1942).

A. diminutum (**Brid.**) **M. Fleisch.** — Dixon 1926: 41 (as *A. subulatum*); Tixier 1971: 340; Johnson 1972: 19; Noguchi 1973: 301; Tixier 1974: 19; Tixier 1980: 385; Mohamed 1987a: 56; Mohamed & Tan 1988: 35; Tan 1994: 267; Damanhuri et al. 2004: 261; Damanhuri et al. 2005d: 278; Mohamed & Yong 2005b: 85; Yong & Damanhuri 2005: 100; Damanhuri et al. 2006: 169; Yong et al. 2006: 119; Lee & Damanhuri 2008: 177; Mohamed et al. 2009: 376; Suleiman et al. 2010: 64. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Selangor, Terengganu.

A. downii (**Dixon**) **Broth.** — Dixon 1924: 251 (*A. obscurum*), 255 (as *A. albidissimum*); Dixon 1926: 42 (*A. obscurum*), 44 (as *A. albidissimum*); Tixier 1971: 340 (as *A. albidissimum*); Tixier 1974: 19 (as *A. albidissimum*); Tixier 1980: 385 (as *A. albidissimum*); Manuel 1981a: 110; Mohamed & Tan 1988: 34; Tan 1994: 268; Damanhuri et al. 2004: 261; Damanhuri et al. 2005d: 278; Damanhuri et al. 2005e: 244; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 85; Mohamed et al. 2005: 253; Damanhuri et al. 2006: 169; Yong et al. 2006: 119; Mohamed et al. 2009: 376; Suleiman et al. 2010: 64. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Terengganu.

A. falcifolium (M. Fleisch.) M. Fleisch. = *A. strepsiphyllum* (Mont.) B.C. Tan (fide Tan 1994: 288).

A. hamulatum (M. Fleisch.) M. Fleisch. ≡ *A. stramineum* (Reinw. & Hornsch.) M. Fleisch. var. *hamulatum* (M. Fleisch.) B.C. Tan (fide Tan 1994: 285).

A. hamulatum (M. Fleisch.) M. Fleisch. fo. *procumbens* M. Fleisch. = *A. stramineum* (Reinw. & Hornsch.) M. Fleisch. var. *hamulatum* (M. Fleisch.) M. Fleisch. (fide Tan 1994: 285).

***A. hermaphroditum* (Müll. Hal.) M. Fleisch.** — Noguchi 1973: 301; Tixier 1974: 19; Tixier 1980: 385; Manuel 1981a: 110; Mohamed & Tan 1988: 35; Damanhuri et al. 2004: 261; Damanhuri et al. 2005d: 278. Kedah, Kelantan, Pahang.

***A. johannis-winkleri* Broth.** — Tan 1994: 270; Damanhuri & Maideen 2001a: 27; Ho & Tan 2002: 71; Damanhuri et al. 2004: 261; Tan & Chang 2004: 306; Damanhuri et al. 2005d: 278; Mohamed & Yong 2005b: 85; Mohamed et al. 2005: 253; Damanhuri et al. 2006: 169; Yong et al. 2006: 119; Damanhuri et al. 2007: 93; Mohamed et al. 2009: 376. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Selangor, Terengganu.

***A. lamprophyllum* Mitt.** — Dixon 1926: 41 (as *A. punctuliferum*), 44 (as *A. oxyporon*); Noguchi 1973: 301; Tixier 1974: 19, 20 (as *A. oxyporum*); Tixier 1980: 386; Manuel 1981a: 110; Mohamed & Tan 1988: 35; Tan 1994: 270; Damanhuri 1999: 219; Tan & Mohamed 1999: 74; Damanhuri & Maideen 2001a: 27; Ho & Tan 2002: 71; Damanhuri et al. 2004: 261; Damanhuri et al. 2005d: 278; Damanhuri et al. 2005e: 244; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 85; Mohamed et al. 2005: 254; Yong & Damanhuri 2005: 100; Damanhuri et al. 2006: 169; Yong et al. 2006: 119; Mohamed et al. 2009: 376. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu.

A. laevibogoricum Dixon = *Clastobryophilum rufoviride* (Besch.) M. Fleisch. (fide Tixier 1977: 406).

A. leucophyllum Dixon ≡ *Clastobryum leucophyllum* (Dixon) B.C. Tan (fide Tan 1994: 292).

A. longicuspis Dixon = *A. convolutum* (Sande Lac.) M. Fleisch. var. *elatum* (Dixon) B.C. Tan (fide Tan 1994: 263).

A. longicuspis Dixon var. *elatum* Dixon ≡ *A. convolutum* (Sande Lac.) M. Fleisch. var. *elatum* (Dixon) B.C. Tan (fide Tan 1994: 263).

***A. macroturgidum* Dixon** — Tan 1994: 271; Damanhuri et al. 2005d: 278. Kelantan, Pahang.

A. malayanum Dixon ≡ *Rhaphidostichum malayanum* (Dixon) Dixon (see Mohamed & Tan 1988: 37) ≡ *Papillidiopsis malayana* (Dixon) B.C. Tan (fide Tan 1994: 292).

***A. microcladum* (Dozy & Molk.) B.C. Tan** — Dixon 1926: 38 (as *Rhaphidostegium microcladum*); Tixier 1974: 19 (as *Sematophyllum microcladiellum*); Wee 1979: 62 (as *S. microcladiellum*); Johnson 1980: 112 (as *S. microcladiellum*); Manuel 1981a: 111 (as *S. microcladiellum*); Ho & Tan 2002: 71; Damanhuri et al. 2005e: 244. Johor, Kedah, Singapore.

A. monoicum (Sande Lac.) M. Fleisch. = *A. stramineum* (Reinw. & Hornsch.) M. Fleisch. (fide Tan 1994: 283).

A. obscurum Dixon = *A. downii* (Dixon) Broth. (fide Tan 1994: 268).

A. oxyporum (Bosch & Sande Lac.) M. Fleisch. = *A. lamprophyllum* Mitt. (fide Tan 1994: 270).

A. oxyporon M. Fleisch., *nom. nud.* (see Dixon 1926: 44).

A. perangustifolium Dixon, *nom. nud.* (see Dixon 1926: 41).

***A. procerum* (Müll. Hal.) M. Fleisch.** — Dixon 1926: 45; Noguchi 1973: 302; Manuel 1981a: 110; Mohamed & Tan 1988: 35; Tan & Chang 2004: 306; Damanhuri et al. 2005d: 279; Yong & Damanhuri 2005: 100; Yong et al. 2006: 119; Mohamed et al. 2009: 376; Suleiman et al. 2010: 64. Kedah, Kelantan, Negeri Sembilan, Pahang, Selangor.

A. punctuliferum (Thwaites & Mitt.) M. Fleisch. = *A. lamprophyllum* Mitt. (fide Tan 1994: 270).

A. pycnophyllum (Müll. Hal.) Dixon ≡ *Warburgiella pycnophylla* (Müll. Hal.) M. Fleisch. (fide Fleischer 1915–22: 1256).

***A. ridleyi* Dixon** — Dixon 1924: 256; Dixon 1926: 44; Tixier 1974: 20; Manuel 1981a: 110; Mohamed & Tan 1988: 35. Kedah, Pahang.

A. rigens (Broth. ex Dixon) Dixon var. *dicranolomoides* Broth. ex Dixon = *A. rigens* var. *rigens* (Broth. ex Dixon) Dixon (fide Tan 1994: 275).

A. rigens* (Broth. ex Dixon) Dixon var. *rigens — Dixon 1924: 252 (as *A. rigens* var. *dicranolomoides*); Holttum 1924: 252 (as *Sematophyllum rigens*); Dixon 1926: 42 (as *A. rigens* var. *dicranolomoides*); Noguchi 1973: 302; Tixier 1980: 386; Manuel 1981a: 110; Mohamed & Tan 1988: 35; Tan 1994: 275, 277; Tan & Chang 2004: 306; Damanhuri et al. 2005d: 279; Yong et al. 2006: 119; Suleiman et al. 2010: 64. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak.

A. ruficaule (Thwaites & Mitt.) Dixon ≡ *Clastobryum ruficaule* (Thwaites & Mitt.) Tixier (fide Mohamed & Tan 1988: 37) ≡ *Trichosteleum ruficaule* (Thwaites & Mitt.) B.C. Tan fide Tan 1991: 101).

***A. rufum* (Reinw. & Hornsch.) M. Fleisch.** — Dixon 1926: 42, 43 (as *A. secundum* var. *minus*); Wee 1979: 61; Johnson 1980: 107; Tixier 1980: 386; Manuel 1981a: 110; Mohamed & Tan 1988: 35 (as *A. secundum* var. *minus*); Wolseley et al. 1996: 80; Damanhuri et al. 2004: 261; Tan & Chang 2004: 306; Damanhuri et al. 2005d: 279; Mohamed & Yong 2005b: 85; Yong & Damanhuri 2005: 100; Damanhuri et al. 2006: 169; Yong et al. 2006: 119; Damanhuri et al. 2007: 93; Mohamed et al. 2009: 376; Suleiman et al. 2010: 65. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu, Singapore.

A. secundum (Reinw. & Hornsch.) M. Fleisch. var. *angustifolium* M. Fleisch. = *A. strepsiphyllum* (Mont.) B.C. Tan (fide Tan 1994: 288).

A. secundum (Reinw. & Hornsch.) M. Fleisch. var. *latifolium* M. Fleisch. = *A. strepsiphyllum* (Mont.) B.C. Tan (fide Tan 1994: 288).

***A. secundum* (Reinw. & Hornsch.) M. Fleisch. var. *longisetum* Dixon** — Dixon 1926: 43; Mohamed & Tan 1988: 35. Kelantan.

A. secundum (Reinw. & Hornsch.) M. Fleisch. var. *minus* (Renauld & Cardot) M. Fleisch. = *A. rufum* (Reinw. & Hornsch.) M. Fleisch. (fide Tan 1994: 277).

A. secundum* (Reinw. & Hornsch.) M. Fleisch. var. *secundum — Holttum 1924: 252 (as *Sematophyllum secundum*); Dixon 1926: 42; Tixier 1971: 340; Tixier 1974: 20; Wee 1979: 61; Tixier 1980: 385 (as *A. brevipes*), 386; Manuel 1981a: 110; Mohamed 1987a: 56; Mohamed & Tan 1988: 35; Damanhuri & Nizam 2001: 221 (as *A. brevipes*); Tan & Chang 2004: 306 (as *A. brevipes*); Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 85; Mohamed et al. 2005: 254; Yong & Damanhuri 2005: 100; Damanhuri et al. 2006: 169; Yong et al. 2006: 119; Lee & Damanhuri 2008: 177; Mohamed et al. 2008: 43; Mohamed et al. 2009: 376. Johor, Kedah, Negeri Sembilan, Pahang, Selangor, Terengganu, Singapore.

A. serrulatum Dixon = *A. ruficaule* (Thwaites & Mitt.) Dixon (fide Dixon 1926: 41) ≡ *Trichosteleum ruficaule* (Thwaites & Mitt.) B.C. Tan (fide Tan 1991: 101).

***A. sigmatodontium* (Müll. Hal.) M. Fleisch.** — Dixon 1926: 44; Tixier 1974: 20; Manuel 1981a: 110; Mohamed & Tan 1988: 35; Tan 1994: 289; Damanhuri & Nizam 2001: 221; Damanhuri et al. 2005d: 279; Yong et al. 2006: 119; Mohamed et al. 2008: 43. Kedah, Kelantan, Pahang, Penang.

***A. stramineum* (Reinw. & Hornsch.) M. Fleisch. var. *hamulatum* (M. Fleisch.) B.C. Tan** — Dixon 1926: 44 (as *A. hamulatum* fo. *procumbens*); Tixier 1971: 340 (as

A. hamulatum); Noguchi 1973: 301 (as *A. hamulatum*); Tixier 1974: 19; Tixier 1980: 385 (as *A. hamulatum*); Manuel 1981a: 110; Mohamed & Tan 1988: 35; Yong & Damanhuri 2005: 100; Damanhuri et al. 2006: 169; Mohamed et al. 2009: 376; Suleiman et al. 2010: 65. Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu.

A. stramineum* (Reinw. & Hornsch.) M. Fleisch. var. *stramineum — Dixon 1926: 44 (as *A. monoicum*); Tixier 1974: 20; Tixier 1980: 386; Manuel 1981a: 110; Mohamed & Tan 1988: 35; Tan 1994: 285; Tan & Mohamed 1999: 74; Tan & Chang 2004: 306; Damanhuri et al. 2005d: 279; Damanhuri et al. 2006: 169; Yong et al. 2006: 120; Mohamed et al. 2009: 376; Suleiman et al. 2010: 64. Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Terengganu.

***A. stramineum* (Reinw. & Hornsch.) M. Fleisch. var. *turgidum* (Mitt.) B.C. Tan** — Tixier 1980: 386 (as *A. turgidum*); Mohamed & Tan 1988: 35. Pahang.

***A. strepsiphyllosum* (Mont.) B.C. Tan var. *divaricatum* (E.B. Bartram) B.C. Tan** — Damanhuri et al. 2005d: 279. Kelantan.

A. strepsiphyllosum (Mont.) B.C. Tan var. *falcifolium* (M. Fleisch.) B.C. Tan & H. Mohamed = *A. strepsiphyllosum* (Mont.) B.C. Tan var. *strepsiphyllosum* (fide Tan 1994: 277).

A. strepsiphyllosum* (Mont.) B.C. Tan var. *strepsiphyllosum — Dixon 1926: 43 (as *A. secundum* var. *angustifolium*), 44 (as *A. falcifolium*); Tixier 1971: 340 (as *A. falcifolium*); Noguchi 1973: 301 (as *A. falcifolium*), 302 (as *A. secundum* var. *angustifolium*); Tixier 1974: 19 (as *A. falcifolium*), 20; Tixier 1980: 385 (as *A. falcifolium*); Manuel 1981a: 110; Mohamed & Mohamad 1987: 188 (as *A. falcifolium*); Mohamed & Tan 1988: 35 (as *A. secundum* var. *angustifolium*); Tan 1994: 289; Tan & Mohamed 1999: 74 (as *A. strepsiphyllosum* var. *falcifolium*); Ho & Tan 2002: 71 (as *A. falcifolium*); Tan & Chang 2004: 306; Damanhuri et al. 2005d: 279; Mohamed & Yong 2005b: 85; Damanhuri et al. 2006: 159; Yong et al. 2006: 120; Lee & Damanhuri 2008: 177; Mohamed et al. 2009: 377; Suleiman et al. 2010: 65. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu.

A. subulatum (Hampe) Dixon = *A. diminutum* (Brid.) M. Fleisch. (fide Tan 1994: 265).

A. surculare Dixon ≡ *Rhaphidostichum surculare* (Dixon) Dixon (see Mohamed & Tan 1988: 37) ≡ *Isocladiella surcularis* (Dixon) B.C. Tan & Mohamed (fide Tan 1993: 228).

A. turgidum Mitt. ≡ *A. stramineum* (Reinw. & Hornsch.) M. Fleisch. var. *turgidum* (Mitt.) B.C. Tan (fide Tan 1994: 286).

***A. cf. vincensianum* (Thér.) Broth.** — Tixier 1971: 340; Tixier 1974: 20; Manuel 1981a: 110; Mohamed & Tan 1988: 35. Kedah, Pahang.

***Actinodontium* Schwägr. (Family Pilotrichaceae)**

***A. adscendens* Schwägr.** — Noguchi 1973: 300; Tixier 1980: 383; Manuel 1981a: 89; Mohamed & Tan 1988: 33; Mohamed & Robinson 1991: 4; Damanhuri & Nizam 2001: 219; Mohamed & Yong 2005b: 84. Johor, Pahang.

***A. raphidostegum* (Müll. Hal.) Bosch & Sande Lac.** — Mohamed & Robinson 1991: 4; Damanhuri & Nizam 2001: 219. Pahang.

***Aequatoriella* A. Touw (Family Thuidiaceae)**

***A. bifaria* (Bosch & Sande Lac.) A. Touw** — Dixon 1926: 29 (as *Thuidium bifarium*); Wee 1979: 61 (as *Pelekium bifarium*); Johnson 1980: 96 (as *P. bifarium*); Manuel 1980b: 39 (as *P. bifarium*); Manuel 1981a: 98 (as *P. bifarium*); Mohamed 1987b: 658 (as *P. bifarium*); Mohamed & Tan 1988: 34 (as *P. bifarium*); Damanhuri & Ajamain 1999: 410 (as *Lorentzia bifaria*); Tan & Mohamed 1999: 76 (as *P. bifarium*); Maideen & Damanhuri 2000: 110 (as *P. bifarium*); Damanhuri & Maideen 2001b: 213 (as *P. bifarium*); Touw 2001: 66; Yong et al. 2002: 246 (as *P. bifarium*); Damanhuri et al. 2005a: 73 (as *P. bifarium*); Damanhuri et al. 2005d: 276 (as *P. bifarium*); Damanhuri et al. 2005e: 241 (as *P. bifarium*); Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 85; Mohamed et al. 2005: 253 (as *P. bifarium*); Yong & Damanhuri 2005: 98 (as *P. bifarium*); Damanhuri et al. 2006: 171; Damanhuri et al. 2007: 92; Lee & Damanhuri 2008: 174; Mohamed et al. 2009: 378. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore.

***Aerobryidium* M. Fleisch. ex Broth. (Family Meteoriaceae)**

***A. aureonitens* (Hook. ex Schwägr.) Broth.** — Manuel 1981a: 84; Mohamed & Tan 1988: 32; Damanhuri & Maideen 2001b: 211; Damanhuri & Nizam 2001: 218; Damanhuri et al. 2005e: 241; Yong & Damanhuri 2005: 93; Damanhuri et al. 2006: 166; Damanhuri et al. 2007: 92. Kedah, Pahang, Perlis, Selangor, Terengganu.

***A. crispifolium* (Broth. & Geh.) M. Fleisch.** — Manuel 1980b: 39; Manuel 1981a: 84; Mohamed 1987b: 657; Mohamed & Tan 1988: 32; Damanhuri 1999: 218; Damanhuri 2000: 218; Damanhuri & Maideen 2001b: 211; Damanhuri & Nizam 2001: 218; Damanhuri et al. 2004: 259; Damanhuri et al. 2005a: 71; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 277; Yong & Damanhuri 2005: 93; Damanhuri et al. 2007: 92. Kelantan, Pahang, Perak, Perlis, Selangor, Terengganu.

***A. filamentosum* (Hook.) M. Fleisch.** — Tixier 1971: 338; Noguchi 1973: 299 (as *A. cf. punctulatum*); Tixier 1974: 18; Tixier 1980: 382; Manuel 1981a: 84; Mohamed 1987b: 657; Mohamed & Tan 1988: 32. Kedah, Pahang, Selangor.

A. cf. punctulatum (Müll. Hal.) Dixon = *A. filamentosum* (Hook.) M. Fleisch. (fide Noguchi 1976: 290).

***Aerobryopsis* M. Fleisch. (Family Meteoriaceae)**

***A. leptosigmata* (Müll. Hal. ex Broth. & Geh.) M. Fleisch.** — Noguchi 1976: 306; Mohamed & Tan 1988: 32; Damanhuri et al. 2006: 166. Pahang, Terengganu.

A. longissima (Dozy & Molk.) M. Fleisch. var. *condensata* Dixon = *A. wallichii* (Brid.) M. Fleisch. (fide Noguchi 1976: 295).

A. longissima* (Dozy & Molk.) M. Fleisch. var. *longissima — Dixon 1926: 23 (as *A. longissima* var. *condensata*); Tixier 1971: 338; Johnson 1972: 19; Noguchi 1973: 299; Tixier 1974: 18; Noguchi 1976: 295 (as *A. longissima* var. *condensata*); Johnson 1980: 87; Tixier 1980: 382; Manuel 1981a: 82; Mohamed 1987b: 657 (as *A. wallichii*); Mohamed & Mohamad 1987: 188 (as *A. wallichii*); Mohamed & Tan 1988: 32; Damanhuri & Nizam 2001: 218 (as *A. wallichii*); Damanhuri et al. 2005d: 277; Mohamed & Yong 2005a: 115 (as *A. wallichii*); Mohamed & Yong 2005b: 83; Mohamed et al. 2005: 253 (as *A. wallichii*); Yong et al. 2006: 117; Damanhuri et al. 2007: 92 (as *A. wallichii*); Mohamed et al. 2009: 375; Suleiman et al. 2010: 63 (as *A. wallichii*). Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu.

***A. parisii* (Cardot) Broth.** — Hedenäs 1994: 373. Pahang.

***A. subleptostigmata* Broth. & Paris** — Noguchi 1973: 299; Noguchi 1976: 306; Manuel 1981a: 82; Mohamed & Tan 1988: 32; Lee & Damanhuri 2008: 175; Lim et al. 2010: 52. Kelantan, Pahang.

A. wallichii (Brid.) M. Fleisch. = *A. longissima* (Dozy & Molk.) M. Fleisch. (fide Buck 1994: 54).

***Arthrocormus* Dozy & Molk. (Family Calymperaceae)**

***A. schimperi* (Dozy & Molk.) Dozy & Molk.** — Dixon 1926: 9; Johnson 1964: 339; Noguchi 1973: 295; Wee 1979: 57; Johnson 1980: 45; Manuel 1980b: 38; Manuel 1981a: 46; Tixier 1982: 84; Mohamed & Mohamad 1987: 186; Mohamed & Tan 1988: 28; Mohamed & Gidiman 1990: 149; Wolseley et al. 1996: 80; Damanhuri 1999: 215; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 75; Damanhuri 2000: 215; Damanhuri & Maideen 2001a: 26; Damanhuri & Maideen 2001b: 208; Ho & Tan 2002: 71; Damanhuri et al. 2004: 254; Damanhuri et al. 2005a: 65; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 270; Damanhuri et al. 2005e: 235; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 85; Mohamed et al. 2005: 250; Damanhuri et al. 2006: 159; Yong et al. 2006: 110; Damanhuri et al. 2007: 89; Lee & Damanhuri 2008: 168. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore.

***Atrichum* P. Beauv. (Family Polytrichaceae)**

***A. undulatum* (Hedw.) P. Beauv.** — Mohamed & Mohamad 1986: 334; Mohamed & Tan 1988: 32. Pahang.

***Barbella* M. Fleisch. ex Broth. (Family Meteoriaceae)**

***B. enervis* (Thwaites & Mitt.) M. Fleisch.** — Manuel 1981a: 83; Manuel 1981d: 220; Mohamed & Tan 1988: 32. Pahang.

***B. flagellifera* (Cardot) Nog.** — Hedenäs 1994: 373. Pahang.

***Barbula* Hedw. (Family Pottiaceae)**

***B. arcuata* Griff.** — Mitten 1859: 35 (as *B. comosa*); Dixon 1926: 17 (as *B. comosa*); Wee 1979: 59 (as *Hydrogonium arcuatum*); Johnson 1980: 74 (as *H. arcuatum*); Manuel 1981a: 83; Mohamed & Tan 1988: 30; Maideen & Damanhuri 2000: 109; Yong et al. 2006: 118. Kedah, Perak. Singapore? (see Tan & Ho 2008: 137).

B. comosa Dozy & Molk. = *B. arcuata* Griff. (fide Saito 1975: 496).

***B. consanguinea* (Thwaites & Mitt.) A. Jaeger** — Dixon 1926: 17, 18 (as *B. louisiadum*); Johnson 1980: 74 (as *B. louisiadum*); Manuel 1981a: 56 (as *B. louisiadum*); Mohamed 1987b: 656 (as *B. louisiadum*); Mohamed & Tan 1988: 30 (as *B. louisiadum*); Damanhuri & Maideen 2001b: 210; Damanhuri & Nizam 2001: 215; Damanhuri et al. 2004: 258. Kedah, Pahang, Penang, Perak, Perlis, Singapore.

***B. indica* (Hook.) Spreng.** — Fleischer 1900–02: 317 (as *Hymenostomum malayense*), 346 (as *Trichostomum orientale*); Paris 1906: 25 (as *B. orientalis*); Möller 1919: 317 (as *B. orientalis*); Dixon 1926: 17 (as *B. orientalis*); Holttum 1927: 91; Fröhlich 1953: 79; Wee 1979: 59 (as *B. orientalis*); Johnson 1980: 73 (as *Semibarbula orientalis*); Manuel 1981a: 56, 57 (as *Weissia malayensis*); Mohamed 1987b: 656; Mohamed & Tan 1988: 30 (as *W. malayensis*); Mohamad & Gidiman 1990; Yong & Damanhuri 2005: 89; Mohamed et al. 2009: 376. Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore.

***B. javanica* Dozy & Molk.** — Fröhlich 1953: 79; Tixier 1971: 337 (as *Hydrogonium consanguineum*); Wee 1979: 59 (as *H. consanguineum*); Mohamed & Tan 1988: 30; Mohamed & Yong 2005a: 115; Mohamed et al. 2005: 251. Kedah, Pahang, Penang,

B. louisiadum Broth. = *B. consanguinea* (Thwaites & Mitt.) A. Jaeger (fide Eddy 1990: 178).

B. orientalis (F. Weber) Broth. = *B. indica* (Hook.) Spreng. (fide Saito 1975: 488).

***B. subcomosa* Broth.** — Tan & Ho 2008: 123. Singapore.

***Brachymenium* Schwägr. (Family Bryaceae)**

***B. acuminatum* Harv.** — Harvey 1840: 10; Mitten 1859: 68 (as *Bryum harveyanum*); Manuel 1981a: 62; Mohamed & Tan 1988: 30. Penang.

***B. exile* (Dozy & Molk.) Bosch & Sande Lac.** — Tixier 1971: 337; Noguchi 1973: 296; Manuel 1981a: 62; Ochi 1985: 80; Mohamed & Tan 1988: 31; Mohamed & Yong 2005a: 115; Mohamed et al. 2005: 252; Yong et al. 2006: 109. Kedah, Pahang.

***B. longicolle* Thér.** — Manuel 1981a: 62; Mohamed & Tan 1988: 31. Peninsular Malaysia.

B. nepalense Hook. — Tixier 1971: 337; Tixier 1980: 380; Damanhuri & Nizam 2001: 215. Pahang.

***Braunfelsia* Paris (Family Dicranaceae)**

B. dicranoides (Dozy & Molk.) Broth. — Dixon 1926: 3; Johnson 1980: 33; Manuel 1981a: 41; Mohamed & Tan 1988: 27. Pahang.

B. enervis (Dozy & Molk.) Paris. — Dixon 1926: 4; Johnson 1980: 33; Manuel 1981a: 41; Mohamed & Tan 1988: 27. Pahang.

B. longipes Dixon — Dixon 1924: 225; Dixon 1926: 4; Manuel 1981a: 41; Mohamed & Tan 1988: 27. Pahang. Eddy (1988: 172) stated that this is a synonym of *B. enervis*.

B. plicata (Sande Lac.) Broth. — Dixon 1924: 226 (as *Dicranoloma perintegrum*); Dixon 1926: 4, 5 (as *D. perintegrum*); Manuel 1981a: 40 (as *D. perintegrum*), 41; Mohamed & Tan 1988: 27; Yong et al. 2006: 112; Suleiman et al. 2010: 60. Johor, Kedah, Kelantan.

***Breutelia* (Bruch & Schimp.) Schimp. (Family Bartramiaceae)**

B. arundinifolia (Duby) M. Fleisch. — Manuel 1981a: 67; Manuel 1981b: 250; Manuel 1981d: 220; Mohamed & Tan 1988: 31; Damanhuri & Nizam 2001: 216. Pahang.

***Bryohumbertia* P. de la Varde & Thér. (Family Dicranaceae)**

B. subcomosa (Dixon) J.-P. Frahm — Frahm & Mohamed 1987: 487, 488 (as *B. walkeri*); Mohamed & Tan 1988: 27 (as *B. walkeri*); Yong & Damanhuri 2005: 83 (as *B. walkeri*); Suleiman et al. 2010: 60 (as *B. walkeri*). Kelantan, Pahang, Perak, Selangor.

B. walkeri (Mitt.) J.-P. Frahm = *B. subcomosa* (Dixon) J.-P. Frahm (fide Frahm 1989: 9).

***Bryum* Hedw. (Family Bryaceae)**

[The genus has been split into several genera in recent years, a conclusion we do not follow, except for the new genus, *Rosulabryum*, published by Spence (1996)]

B. ambiguum Duby. = *B. apiculatum* Schwägr. (fide Eddy 1996: 124).

B. apiculatum Schwägr. — Möller 1919: 318 (as *B. nitens*); Dixon 1926: 20 (as *B. ambiguum*, *B. nitens*, *B. porphyroneuron*); Manuel 1981a: 62 (as *B. nitens*, *B. plumosum*, *B. porphyroneuron*); Tixier 1982: 85 (as *B. ambiguum*); Ochi 1985: 82; Mohamed & Tan 1988: 31 (as *B. ambiguum*, *B. nitens*, *B. plumosum*, *B. porphyroneuron*); Mohamad & Gidiman 1990: 149 (as *B. nitens*); Tan & Mohamed 1999: 75; Damanhuri & Nizam 2001: 216; Ho & Tan 2002: 71; Damanhuri et al. 2004: 258; Mohamed & Yong 2005b: 83; Mohamed et al. 2005: 252; Yong & Damanhuri 2005: 90; Yong et al. 2006: 109 (as *B. ambiguum*, *B. porphyroneuron*); Damanhuri et al. 2007: 91; Lee & Damanhuri 2008: 173; Suleiman et al. 2010: 62. Johor, Kedah, Kelantan, Pahang, Penang, Selangor, Singapore.

B. argenteum* Hedw. var. *argenteum — Manuel 1981a: 62; Mohamed & Tan 1988: 31; Yong et al. 2006: 109. Kedah.

***B. argenteum* Hedw. var. *australe* Rehmman ex Dixon** — Dixon 1926: 19; Mohamed & Tan 1988: 31. Penang.

B. aubertii (Schwägr.) Brid. ≡ *Rhodobryum aubertii* (Schwägr.) Thér. (see Mohamed & Tan 1988: 38).

***B. bicolor* Dicks.** — Wee 1979: 59 (as *B. junghuhnianum*); Mohamed & Tan 1988: 31 (as *B. junghuhnianum*); Tan & Ho 2008: 123. Singapore? (see Tan & Ho 2008).

B. billarderi Schwägr. ≡ *Rosulabryum billarderi* (Schwägr.) J.R. Spence (fide Spence 1996: 223).

B. capillare Hedw. ≡ *Rosulabryum capillare* (Hedw.) J.R. Spence (fide Spence 1996: 223).

***B. clavatum* (Schimp.) Müll. Hal.** — Dixon 1926: 19 (as *B. gedeanum*); Manuel 1981a: 62 (as *B. gedeanum*); Ochi 1985: 83 (as *B. gedeanum*); Mohamed & Tan 1988: 31 (as *B. gedeanum*); Mohamed & Yong 2005a: 115; Mohamed et al. 2005: 252; Damanhuri et al. 2006: 159; Mohamed et al. 2009: 371. Federal State, Kedah, Kelantan, Melaka, Negeri Sembilan, Penang, Selangor, Terengganu.

***B. cognatum* Mitt.** — Ochi 1985: 84; Mohamed & Tan 1988: 31. Selangor.

***B. coronatum* Schwägr.** — Möller 1919: 318; Dixon 1926: 19; Holttum 1927: 91; Noguchi 1973: 296; Wee 1979: 59; Johnson 1980: 77; Tixier 1980: 381; Manuel 1981a: 62; Ochi 1985: 82; Mohamed 1987a: 55; Mohamed 1987b: 657; Mohamed & Tan 1988: 31; Mohamad & Gidiman 1990: 149; Tan & Mohamed 1999: 75; Maideen & Damanhuri 2000: 109; Damanhuri & Maideen 2001b: 211; Yong et al. 2002: 245; Damanhuri et al. 2005d: 274; Damanhuri et al. 2005e: 239; Mohamed & Yong 2005a: 115; Mohamed et al. 2005: 252; Yong et al. 2006: 109; Mohamed et al. 2009: 371. Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

B. gedeanum Bosch & Sande Lac. = *B. clavatum* (Schimp.) Müll. Hal. (fide Eddy 1996: 126).

B. graeffeanum Müll. Hal. = *Rhodobryum aubertii* (Schwägr.) Thér. (fide Mohamed 1984: 285).

B. harveyanum Müll. Hal. = *Brachymenium acuminatum* Harv. (fide Ochi 1985: 43).

B. junghuhnianum Hampe ex Dozy & Molk. = *B. bicolor* Dicks. (fide Ochi 1970: 25).

***B. madurese* (Dixon & P. de la Varde) Ochi** — Noguchi 1973: 296; Manuel 1981a: 62; Mohamed & Tan 1988: 31. Pahang. This species has been made a synonym of *Rhodobryum commersonii* (Schwägr.) Paris.

***B. neelgheriense* Mont. in Müll. Hal.** — Mohamed 1979: 418; Manuel 1981a: 62; Mohamed & Tan 1988: 31; Yong et al. 2006: 109. Kedah, Pahang, Perak. Ochi (1985) synonymized this with *Bryum billarderi* Schwägr., which is today placed in the genus *Rosulabryum* J.R. Spence.

B. nitens Harv. = *B. apiculatum* Schwägr. (fide Ochi 1985: 54).

B. plumosum Dozy & Molk. = *B. apiculatum* Schwägr. (fide Eddy 1996: 124).

B. porphyroneuron Müll. Hal. = *B. apiculatum* Schwägr. (fide Eddy 1996: 126).

B. tuberosum Mohamed & Damanhuri ≡ *Rosulabryum tuberosum* (Mohamed & Damanhuri) J.R. Spence (fide Spence 1996: 223).

B. wightii Mitt. ≡ *Rosulabryum wightii* (Mitt.) J.R. Spence (fide Spence 1996: 223).

***Caduciella* Enroth (Family Neckeraceae)**

***C. mariei* (Besch.) Enroth** — Dixon 1926: 25 (as *Pinnatella microptera*); Tixier 1971: 339 (as *P. microptera*); Wee 1979: 60 (as *P. microptera*); Manuel 1980b: 39 (as *P. microptera*); Manuel 1981a: 87 (as *P. microptera*); Mohamed 1987b: 657 (as *P. microptera*); Mohamed & Abdullah 1988: 142 (as *P. microptera*); Mohamed & Tan 1988: 33 (as *P. microptera*); Tan & Mohamed 1999: 75; Damanhuri 2000: 219; Damanhuri & Maideen 2001b: 213; Yong et al. 2002: 246; Damanhuri et al. 2005e: 246; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 84; Mohamed et al. 2005: 253; Yong et al. 2006: 117; Damanhuri et al. 2007: 94; Lee & Damanhuri 2008: 179; Mohamed et al. 2009: 374. Johor, Kedah, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Singapore.

***Callicostella* (Müll. Hal.) Mitt. (Family Pilotrichaceae)**

C. papillata* (Mont.) Mitt. var. *papillata — Herzog 1919: 297; Dixon 1926: 27; Johnson 1972: 19; Noguchi 1973: 300; Wee 1979: 61; Manuel 1981a: 93 (as *Schizomitrium papillatum*); Mohamed & Tan 1988: 33; Mohamed & Robinson 1991: 6; Damanhuri 1999: 219; Tan & Mohamed 1999: 75; Damanhuri 2000: 219; Maideen & Damanhuri 2000: 110; Damanhuri & Maideen 2001a: 27; Damanhuri & Nizam 2001: 220; Ho & Tan 2002: 71; Damanhuri et al. 2004: 260; Damanhuri et al. 2005a: 72; Damanhuri et al. 2005d: 275; Damanhuri et al. 2005e: 240; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 84; Mohamed et al. 2005: 253; Yong & Damanhuri 2005: 96; Damanhuri et al. 2006: 168; Yong et al. 2006: 114; Damanhuri et al. 2007: 91; Lee & Damanhuri 2008: 174; Mohamed et al. 2009: 373. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu, Singapore.

***C. papillata* (Mont.) Mitt. var. *prabaktiana* (Müll. Hal.) Streimann** — Dixon 1926: 27 (as *C. beccariana*, see Note 1 and as *C. prabaktiana*); Holttum 1927: 91 (as *C. prabaktiana*); Wee 1979: 61 (as *C. beccariana*, see Note 1 and as *C. prabaktiana*); Johnson 1980: 94 (as *C. prabaktiana*); Manuel 1980b: 39; Manuel 1981a: 93 (as *Schizomitrium beccariana* and *S. prabaktianum*); Mohamed 1987a: 56 (as *S. prabaktiana*, see Note 2); Mohamed & Tan 1988: 33 (as *C. beccariana*, see Note 1 and as *C. prabaktiana*); Mohamed & Robinson 1991: 6 (as *C. prabaktiana*); Damanhuri 1999: 219; Damanhuri & Ajamain 1999: 410 (as *C. prabaktiana*); Tan & Mohamed 1999: 75; Damanhuri 2000: 219 (as *C. prabaktiana*); Maideen & Damanhuri 2000: 110 (as *C. prabaktiana*); Damanhuri et al. 2005a: 72 (as *C. prabaktiana*); Damanhuri et al. 2005d: 275 (as *C. prabaktiana*); Damanhuri et al. 2005e: 240 (as *C. prabaktiana*); Mohamed & Yong 2005a: 115 (as *C. prabaktiana*); Mohamed & Yong 2005b: 84 (as *C. prabaktiana*); Mohamed et al. 2005: 253 (as *C. prabaktiana*); Yong & Damanhuri 2005: 96 (as *C. prabaktiana*); Damanhuri et al. 2006: 168 (as *C. prabaktiana*); Yong et al. 2006: 115 (as *C. prabaktiana*); Damanhuri et al. 2007: 91 (as *C. prabaktiana*); Lee & Damanhuri 2008: 174 (as *C. prabaktiana*). Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu, Singapore. See Note 2.

C. prabaktiana (Müll. Hal.) Bosch & Sande Lac. ≡ *C. papillata* (Mont.) Mitt. var. *prabaktiana* (Müll. Hal.) Streimann (fide Streimann 1997: 294).

***Calymperes* Sw. ex F. Weber (Family Calymperaceae)**

***C. aeruginosum* Hampe ex Sande Lac.** — Reese & Mohamed 1985: 100; Mohamed & Tan 1988: 29; Damanhuri & Maideen 2001b: 208; Yong et al. 2002: 244; Damanhuri et al. 2005d: 270; Mohamed & Yong 2005a: 115; Mohamed et al. 2005: 250; Yong et al. 2006: 110; Damanhuri et al. 2007: 89; Lee & Damanhuri 2008: 168. Kedah, Kelantan, Pahang, Perlis.

***C. afzelii* Sw.** — Müller 1864: 348 (as *C. inaequifolium*); Wee 1979: 58 (as *C. thwaitesii*); Manuel 1980b: 39 (as *C. vriesei*); Manuel 1981a: 50 (as *C. thwaitesii*); Tixier 1982: 84 (as *C. donnellii*); Reese & Mohamed 1985: 100; Mohamed & Tan 1988: 29; Dürhammer & Schäfer-Verwimp 1995: 157; Damanhuri 1999: 215; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 75; Damanhuri 2000: 215; Maideen & Damanhuri 2000: 108; Damanhuri & Maideen 2001b: 208; Ho & Tan 2002: 71; Yong et al. 2002: 244; Damanhuri et al. 2005a: 65; Damanhuri et al. 2005d: 270; Damanhuri et al. 2005e: 235; Mohamed & Yong 2005a: 115; Mohamed et al. 2005: 250; Yong & Damanhuri 2005: 86; Damanhuri et al. 2006: 159; Yong et al. 2006: 110; Damanhuri et al. 2007: 89; Lee & Damanhuri 2008: 168; Mohamed et al. 2009: 371; Suleiman et al. 2010: 61. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perlis, Selangor, Terengganu.

C. angustatum Hampe ex Besch., *nom. nud.* = *Syrrhopodon loreus* (Sande Lac.) W.D. Reese (fide Reese et al. 1986a: 185).

C. anisodictyon Besch., *nom. nud.* = *C. bescherellei* M. Fleisch. (fide Fleischer 1900–02: 276).

C. beccarii Hampe ≡ *C. lonchophyllum* Schwägr. var. *beccarii* (Hampe) M. Menzel in M. Menzel & W. Schultze-Motel (fide Menzel & Schultze-Motel 1990: 488).

C. bescherellei M. Fleisch. = *C. crassinerve* (Mitt.) A. Jaeger (see Reese & Mohamed 1985: 105).

***C. boulayi* Besch.** — Bescherelle 1896: 265 (as *C. eutrichostomum*); Bescherelle 1896: 282 (as *C. delessertii*); Fleischer 1900–02: 268 (as *C. dozymanum*); Dixon 1926: 14 (as *C. delessertii*); Mohamed 1987b: 656; Damanhuri & Ajamain 1999: 409; Maideen & Damanhuri 2000: 108; Damanhuri & Maideen 2001b: 208; Damanhuri & Nizam 2001: 213; Yong et al. 2002: 244; Damanhuri et al. 2005a: 65; Damanhuri et al. 2005e: 235; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 81; Mohamed et al. 2005: 250; Yong & Damanhuri 2005: 86; Yong et al. 2006: 110; Lee & Damanhuri 2008: 168; Mohamed et al. 2008: 43. Johor, Kedah, Pahang, Penang, Perak, Perlis, Selangor, Singapore.

C. constrictum Dixon, *hom. illeg.* ≡ *C. dixoconstrictum* B.C. Tan & Mohamed (fide Mohamed & Tan 1988: 38) = *Syrrhopodon croceus* Mitt. (see Ellis 2001: 1).

***C. crassinerve* (Mitt.) A. Jaeger** — Fleischer 1900–02: 278 (as *C. bescherellei*); Dixon 1926: 15 (as *C. bescherellei*); Wee 1979: 57 (as *C. bescherellei*); Manuel 1981a: 50 (as *C. bescherellei*); Reese & Mohamed 1985: 100; Mohamed & Tan 1988: 29; Damanhuri & Ajamain 1999: 409; Damanhuri 2000: 215; Maideen & Damanhuri 2000: 108; Damanhuri et al. 2005a: 65; Damanhuri et al. 2005c: 251; Damanhuri et al. 2005e: 235; Mohamed & Yong 2005b: 81; Yong & Damanhuri 2005: 86; Damanhuri et al. 2006: 159; Lee & Damanhuri 2008: 168. Johor, Kedah, Pahang, Perak, Selangor, Terengganu, Singapore.

C. cristatum Hampe = *C. longifolium* Mitt. (see Dixon 1926: 16).

C. delessertii Besch. = *C. boulayi* Besch. (see Ellis 1988: 128).

C. dixoconstrictum B.C. Tan & Mohamed = *Syrrhopodon croceus* Mitt. (fide Ellis 2001: 1).

C. donnellii Austin = *C. afzelii* Sw. (fide Reese & Mohamed 1985: 103).

C. dozymanum Mitt. = *C. moluccense* Schwägr. (fide Ellis 1988: 130).

C. dozymanum Mitt. *sensu* M. Fleisch. = *C. boulayi* Besch. (fide Ellis 1988: 130).

***C. erosum* Müll. Hal.** — Möller 1919: 316 (as *C. hampei*); Dixon 1926: 15 (as *C. fordii*), 16 (as *C. heterophyllum*); Holttum 1927: 90 (as *C. hampei*); Johnson 1972: 19 (as *C. hampei*); Wee 1979: 57 (as *C. hampei*); Johnson 1980: 52 (as *C. hampei*); Manuel 1980b: 38 (as *C. hampei*); Manuel 1981a: 50 (as *C. hampei*); Reese & Mohamed 1985:

100; Mohamed 1987a: 55; Mohamed & Tan 1988: 29; Mohamad & Gidiman 1990: 148; Damanhuri 1999: 215; Damanhuri & Ajamain 1999: 409; Damanhuri 2000: 215; Maideen & Damanhuri 2000: 108; Damanhuri & Maideen 2001a: 26; Damanhuri & Maideen 2001b: 209; Ho & Tan 2002: 71; Yong et al. 2002: 244; Damanhuri et al. 2004: 254; Damanhuri et al. 2005a: 65; Damanhuri et al. 2005d: 270; Damanhuri et al. 2005e: 235; Mohamed & Yong 2005a: 115; Mohamed et al. 2005: 250; Yong & Damanhuri 2005: 86; Damanhuri et al. 2006: 159; Yong et al. 2006: 110; Damanhuri et al. 2007: 89; Lee & Damanhuri 2008: 168; Mohamed et al. 2008: 44; Mohamed et al. 2009: 371; Lim et al. 2010: 52. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

C. eutrichostomum Müll. Hal. = *C. dozyanum* Mitt. *sensu* M. Fleischer (fide Reese & Mohamed 1985: 107) = *C. boulayi* Besch. (fide Ellis 1988: 130).

***C. fasciculatum* Dozy & Molk.** — Dixon 1924: 231 (as *Syrrhopodon perakensis*); Dixon 1926: 12 (as *S. perakensis*), 16; Manuel 1981a: 50; Reese & Mohamed 1985: 100; Mohamed & Tan 1988: 29; Damanhuri 1999: 215; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 75; Damanhuri & Nizam 2001: 213; Ho & Tan 2002: 72; Damanhuri et al. 2004: 254; Damanhuri et al. 2005a: 65; Damanhuri et al. 2005d: 270; Mohamed & Yong 2005b: 81; Mohamed et al. 2005: 250; Yong & Damanhuri 2005: 86; Lee & Damanhuri 2008: 168. Johor, Kedah, Kelantan, Pahang, Perak, Selangor.

C. fordii Besch. = *C. erosum* Müll. Hal. (see Menzel & Schultze-Motel 1990: 483).

***C. graeffeanum* Müll. Hal.** — Fleischer 1900–02: 273; Dixon 1926: 15 (as *C. nicobarensis*, *C. punctulatum*); Holttum 1927: 9 (as *C. nicobarensis*); Fröhlich 1953: 76 (as *C. hyophilaceum*); Noguchi 1973: 295 (as *C. hyophilaceum*); Wee 1979: 58 (as *C. punctulatum*); Johnson 1980: 55 (as *C. nicobarensis*); Manuel 1980b: 39 (as *C. hyophilaceum*); Manuel 1981a: 50 (as *C. nicobarensis*, *C. punctulatum*); Tixier 1982: 84 (as *C. hyophilaceum*), 85 (as *C. punctulatum*); Mohamed 1987a: 55 (as *C. hyophilaceum*); Mohamed & Tan 1988: 29 (as *C. punctulatum*); Wolseley et al. 1996: 80; Damanhuri 1999: 215; Damanhuri & Ajamain 1999: 409; Damanhuri 2000: 215; Damanhuri & Maideen 2001b: 209; Ho & Tan 2002: 72; Yong et al. 2002: 244; Damanhuri et al. 2005a: 65; Damanhuri et al. 2005e: 235; Mohamed & Yong 2005a: 115; Yong & Damanhuri 2005: 86; Damanhuri et al. 2007: 89; Lee & Damanhuri 2008: 168; Mohamed et al. 2008: 45. Johor, Kedah, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Singapore.

C. hampei Dozy & Molk. = *C. erosum* Müll. Hal. (fide Reese & Mohamed 1985: 102).

C. heterophyllum (Mitt.) Besch. = *C. erosum* Müll. Hal. (fide Reese 1987: 206).

C. hyophilaceum Müll. Hal. ex Besch. = *C. graeffeanum* Müll. Hal. (fide Ellis & Tan 1999: 10).

C. inaequifolium Müll. Hal. = *C. afzelii* Sw. (fide Reese et al. 1986a: 161).

C. kurzianum Hampe ex Müll. Hal. = *C. moluccense* Schwägr. (fide Ellis 1987: 681).

***C. lonchophyllum* Schwägr. subsp. *beccarii* (Hampe) M. Menzel** — Mohamed & Tan 1988: 29 (as *C. beccarii*); Damanhuri et al. 2004: 254; Damanhuri et al. 2005d: 270; Damanhuri et al. 2006: 160; Damanhuri et al. 2007: 89; Lee & Damanhuri 2008: 169; Mohamed et al. 2008: 45; Mohamed et al. 2009: 371. Johor, Kelantan, Negeri Sembilan, Pahang, Terengganu, Singapore.

C. lonchophyllum* Schwägr. subsp. *lonchophyllum — Tixier 1971: 337 (as *C. nietneri*); Reese & Mohamed 1985: 100; Mohamed 1987a: 55 (as *C. nietneri*); Mohamed & Mohamad 1987: 187; Wolseley et al. 1996: 80; Damanhuri 1999: 215; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 75; Damanhuri 2000: 215; Maideen & Damanhuri 2000: 109; Damanhuri & Maideen 2001a: 26; Damanhuri & Maideen 2001b: 209; Ho & Tan 2002: 72; Yong et al. 2002: 244; Damanhuri et al. 2004: 254; Damanhuri et al. 2005a: 66; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 270; Damanhuri et al. 2005e: 235; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 81; Mohamed et al. 2005: 250; Yong & Damanhuri 2005: 86; Damanhuri et al. 2006: 159; Yong et al. 2006: 110; Damanhuri et al. 2007: 89; Lee & Damanhuri 2008: 169; Mohamed et al. 2009: 371; Lim et al. 2010: 52. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore.

C. longifolium Mitt. = *Syrrhodon loreus* (Sande Lac.) W.D. Reese (fide Mohamed & Reese 1985: 249).

C. malayanum Besch. = *C. moluccense* Schwägr. (fide Ellis 1987: 681).

***C. moluccense* Schwägr.** — Mitten 1859: 41; Bescherville 1896: 291 (as *C. malayanum*); Dixon 1926: 14 (as *C. dozyanum*), 17; Holttum 1927: 90 (as *C. dozyanum*); Wee 1979: 57 (as *C. dozyanum*); Johnson 1980:50 (as *C. dozyanum*); Manuel 1981a: 50 (as *C. dozyanum*); Tixier 1982: 85 (as *C. kurzianum*); Reese & Mohamed 1985: 100; Mohamed 1987b: 656 (as *C. dozyanum*); Mohamed & Mohamad 1987: 187 (as *C. dozyanum*); Mohamed & Tan 1988: 29 (as *C. dozyanum*); Wolseley et al. 1996: 80; Damanhuri 1999: 215; Damanhuri & Ajamain 1999: 409; Damanhuri 2000: 216; Damanhuri & Maideen 2001a: 26; Damanhuri & Maideen 2001b: 209; Yong et al. 2002: 244; Damanhuri et al. 2004: 254; Damanhuri et al. 2005a: 66; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005c: 251; Damanhuri et al. 2005d: 270; Mohamed & Yong 2005a: 115; Mohamed et al. 2005: 250; Damanhuri et al. 2006: 160; Yong et al. 2006: 110; Damanhuri et al. 2007: 89; Lee & Damanhuri 2008: 169; Mohamed et al. 2008: 45; Mohamed et al. 2009: 371; Lim et al. 2010: 52. Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

***C. motleyi* Mitt. in Dozy & Molk.** — Reese & Mohamed 1985: 100; Mohamed 1987a: 55; Mohamed & Tan 1988: 29; Maideen & Damanhuri 2000: 109; Yong et al. 2002: 244; Mohamed & Yong 2005a: 115; Damanhuri et al. 2005c: 251; Mohamed et al. 2005: 251. Kedah, Pahang, Perak, Perlis, Singapore.

C. nicobarense Hampe ex Besch. = *C. graeffeanum* Müll. Hal. (fide Menzel & Schultze-Motel 1990: 486).

C. nietneri Müll. Hal. = *C. lonchophyllum* Schwägr. (fide Reese & Mohamed 1985: 100).

C. nitidiusculum Broth. in Roth., *nom. nud.* (see Dixon 1926: 14).

C. nymanii (M. Fleisch.) W.D. Reese = *C. subintegrum* Broth. (fide Ellis 1991: 591).

C. orientale Mitt. var. *orientale* = *C. taitense* (Sull.) Mitt. (fide Reese & Mohamed 1985: 103).

C. orientale Mitt. var. *polytrichoides* M. Fleisch. = *C. taitense* (Sull.) Mitt. (fide Reese & Mohamed 1985: 103).

***C. palisotii* Schwägr.** — Reese & Mohamed 1985: 100; Mohamed 1987a: 55; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 29; Mohamad & Gidiman 1990: 148; Wolseley et al. 1996: 80; Tan & Mohamed 1999: 75; Maideen & Damanhuri 2000: 109; Damanhuri et al. 2005d: 270; Damanhuri et al. 2005e: 236; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 81; Yong et al. 2006: 110. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor, Singapore.

***C. porrectum* Mitt. var. *elatissimum* (M. Fleisch.) A. Eddy** — Damanhuri et al. 2007: 89. Pahang.

C. porrectum* Mitt. var. *porrectum — Bescherelle 1896: 301 (as *C. recurvifolium*); Fleischer 1900–02: 252 (as *C. salakense*); Möller 1919: 316; Dixon 1926: 16 (as *C. recurvifolium*), 17 (as *C. salakense*); Holttum 1927: 91 (as *C. salakense*); Wee 1979: 58; Johnson 1980: 51; Manuel 1981a: 50; Reese & Mohamed 1985: 100; Mohamed & Tan 1988: 29; Damanhuri 1999: 216; Damanhuri & Ajamain 1999: 409; Maideen & Damanhuri 2000: 109; Damanhuri 2005c: 66; Damanhuri et al. 2005d: 270; Mohamed & Yong 2005b: 81; Damanhuri et al. 2006: 160; Yong et al. 2006: 110; Damanhuri et al. 2007: 89; Lee & Damanhuri 2008: 169; Mohamed et al. 2008: 45; Mohamed et al. 2009: 371; Lim et al. 2010: 52. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu, Singapore.

C. punctulatum Hampe in Besch. = *C. graeffeanum* Müll. Hal. (fide Ellis 1988: 132).

C. recurvifolium Besch. = *C. porrectum* Mitt. (fide Reese & Mohamed 1985: 105).

C. repens (Harv.) Müll. Hal. ≡ *Mitthyridium repens* (Harv.) H. Rob. (fide Reese & Stone 1995: 23).

***C. robinsonii* B.C. Tan & W.D. Reese in W.D. Reese & B.C. Tan** — Tan & Mohamed 1990: 353; Damanhuri et al. 2007: 89. Kelantan, Pahang.

C. salakense Besch. = *C. porrectum* Mitt. (fide Menzel & Schultze-Motel 1990: 491).

***C. schmidtii* Broth. in J. Schmidt** — Reese & Mohamed 1985: 102; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 29; Damanhuri & Ajamain 1999: 409; Damanhuri 2000: 216; Maideen & Damanhuri 2000: 109; Damanhuri & Maideen 2001b: 209; Damanhuri & Nizam 2001: 213; Damanhuri et al. 2004: 255; Damanhuri 2005c: 66; Damanhuri et al. 2005e: 236; Mohamed et al. 2005: 251; Lee & Damanhuri 2008: 169; Mohamed et al. 2008: 45. Johor, Kedah, Pahang, Perak, Perlis, Selangor.

***C. serratum* A. Braun ex Müll. Hal.** — Möller 1919: 316; Dixon 1926: 16; Holttum 1927: 91; Tixier 1971: 337; Wee 1979: 58; Johnson 1980: 51; Manuel 1980b: 39; Tixier 1980: 380; Manuel 1981a: 50; Reese & Mohamed 1985: 100; Mohamed & Tan 1988: 29; Damanhuri 1999: 216; Damanhuri & Ajamain 1999: 409; Damanhuri 2000: 216; Damanhuri & Maideen 2001b: 209; Damanhuri & Nizam 2001: 213; Ho & Tan 2002: 72; Damanhuri et al. 2004: 255; Damanhuri et al. 2005a: 66; Damanhuri et al. 2005d: 270; Mohamed & Yong 2005a: 115; Damanhuri et al. 2006: 160; Yong et al. 2006: 110; Damanhuri et al. 2007: 89. Johor, Kedah, Kelantan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

C. setifolium Hampe = *Syrrhopodon loreus* (Sande Lac.) W.D. Reese (fide Reese et al. 1986a: 185).

C. stenophyllum Dixon = *C. subintegrum* Broth. (fide Ellis 1991: 591).

***C. strictifolium* (Mitt.) G. Roth** — Reese & Mohamed 1985: 100; Mohamed & Tan 1988: 29; Wolseley et al. 1996: 80; Damanhuri 1999: 216; Damanhuri 2000: 216; Damanhuri & Nizam 2001: 213; Damanhuri et al. 2005e: 236; Mohamed & Yong 2005b: 81; Yong & Damanhuri 2005: 87; Damanhuri et al. 2007: 89; Lee & Damanhuri 2008: 169; Mohamed et al. 2008: 45. Johor, Kedah, Negeri Sembilan, Pahang, Perak, Selangor.

C. subfasciculatum Broth., *nom. nud.* = *C. orientale* Mitt. (fide Fleischer 1900–02: 248) = *C. taitense* (Sull.) Mitt. (fide Reese & Mohamed 1985: 103).

***C. subintegrum* Broth. in J. Schmidt** — Dixon 1924: 233 (as *C. stenophyllum*); Dixon 1926: 15 (as *C. stenophyllum*); Manuel 1981a: 50 (as *C. stenophyllum*); Reese 1984: 17 (as *C. nymanii*); Mohamed & Tan 1988: 29 (as *C. stenophyllum*). Perak.

C. tahitense (Sull.) Mitt., *orthogr. err.* ≡ *C. taitense* (Sull.) Mitt. See Note 3.

***C. taitense* (Sull.) Mitt.** — Dixon 1926: 15 (as *C. vriesei* var. *robustum*), 16 (as *C. orientale* var. *polytrichoides*); Wee 1979: 58; Johnson 1980: 52; Manuel 1981a: 50 (as *C. tahitense*); Reese & Mohamed 1985: 103; Mohamed 1987a: 55; Mohamed 1987b: 656; Mohamed & Tan 1988: 29; Damanhuri 1999: 216; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 75; Damanhuri 2000: 216; Maideen & Damanhuri 2000: 109;

Damanhuri & Maideen 2001b: 209; Yong et al. 2002: 244; Damanhuri et al. 2004: 255; Damanhuri et al. 2005a: 66; Damanhuri et al. 2005d: 271; Damanhuri et al. 2005e: 236; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 81; Yong & Damanhuri 2005: 87; Damanhuri et al. 2006: 160; Yong et al. 2006: 110 (as *C. tahitense*); Damanhuri et al. 2007: 89; Lee & Damanhuri 2008: 169; Mohamed et al. 2009: 371 (as *C. tahitense*); Lim et al. 2010: 52 (as *C. tahitense*). Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

***C. tenerum* Müll. Hal.** — Fleischer 1900–02: 275; Dixon 1926: 15; Fröhlich 1953: 76; Wee 1979: 58; Johnson 1980: 55; Manuel 1981a: 50; Tixier 1982: 85; Reese & Mohamed 1985: 100; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 29; Mohamad & Gidiman 1990: 148; Damanhuri & Ajamain 1999: 409; Maideen & Damanhuri 2000: 109; Damanhuri & Maideen 2001b: 209; Damanhuri et al. 2005a: 66; Damanhuri et al. 2005c: 251; Mohamed & Yong 2005a: 115; Mohamed et al. 2005: 251; Yong et al. 2006: 110; Mohamed et al. 2008: 45; Mohamed et al. 2009: 371. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

C. thwaitesii Besch. = *C. afzelii* Sw. (fide Menzel & Schultze-Motel 1990: 479).

C. vriesei Besch. var. *vriesei* = *C. afzelii* Sw. (fide Ellis & Tan 1999: 5).

C. vriesei Besch. var. *robustum* Dixon, *nom. nud.* = *C. taitense* (Sull.) Mitt. (fide Reese & Mohamed 1985: 103).

***C. woodii* L.T. Ellis** — Wolseley et al. 1996: 80; Ellis 1997: 7. Negeri Sembilan. Endemic.

Calymperidium Dozy & Molk. (Family Calymperaceae)

C. croceum (Mitt.) M. Fleisch. ≡ *Syrrhopodon croceus* Mitt. (see Mohamed & Tan 1988: 38).

C. muelleri Dozy & Molk. ≡ *Syrrhopodon muelleri* (Dozy & Molk.) Sande Lac. (fide Ellis & Tan 1999: 39).

Calymperopsis (Müll. Hal.) M. Fleisch. (Family Calymperaceae)

C. langbianensis Tixier ≡ *Syrrhopodon langbianensis* (Tixier) W.D. Reese (fide Reese 1993: 252).

C. semiliber (Mitt.) M. Fleisch. ≡ *Syrrhopodon semiliber* (Mitt.) Besch. ex Paris (see O'Shea 2001: 24).

C. tjibodensis (M. Fleisch.) M. Fleisch. ≡ *Syrrhopodon tjibodensis* M. Fleisch. (see Ellis & Tan 1999: 42).

***Calypothecium* Mitt. (Family Pterobryaceae)**

***C. recurvulum* (Broth.) Broth.** — Damanhuri et al. 2005e: 246; Suleiman et al. 2010: 65. Kedah, Kelantan.

Campylocladus Dozy & Molk. (Family Entodontaceae)

C. flavescens (Hook.) Bosch & Sande Lac. ≡ *Mesonodon flavescens* (Hook.) W.R. Buck (fide Buck 1980: 117).

***Calypstrochaeta* Desv. (Family Daltoniaceae)**

***C. remotifolia* (Müll. Hal.) Z. Iwats., B.C. Tan & A. Touw** — Dixon 1926: 27 (as *Eriopus remotifolius*); Manuel 1981a: 92; Mohamed & Robinson 1991: 9; Damanhuri & Nizam 2001: 220; Yong & Damanhuri 2005: 97; Damanhuri et al. 2006: 164; Suleiman et al. 2010: 63. Kelantan, Pahang, Perak, Selangor, Terengganu.

***Campylopodium* (Müll. Hal.) Besch. (Family Dicranaceae)**

C. euphorocladum (Müll. Hal.) Besch. = *C. medium* (Duby) Giese & J.-P. Frahm (fide Giese & Frahm 1986a: 126).

C. griffithii (Mitt.) Broth. = *C. medium* (Duby) Giese & J.-P. Frahm (fide Giese & Frahm 1986a: 128).

***C. medium* (Duby) Giese & J.-P. Frahm** — Dixon 1926: 3 (as *C. euphorocladum*); Johnson 1980: 30 (as *C. euphorocladum*); Manuel 1981a: 42 (as *C. euphorocladum*); Giese & Frahm 1986a: 128; Mohamed & Tan 1988: 27. Kedah.

***Campylopus* Brid. (Family Dicranaceae)**

C. abbreviatus (Dixon) Manuel = *C. exasperatus* (Nees & Blume) Brid. (fide Frahm & Mohamed 1987: 474).

C. calodictyon Broth. = *C. laxitextus* Sande Lac. (fide Frahm & Mohamed 1987: 482).

C. caudatus (Müll. Hal.) Mont. = *C. comosus* (Schwägr.) Bosch & Sande Lac. (fide Frahm & Mohamed 1987: 474).

***C. comosus* (Schwägr.) Bosch & Sande Lac.** — Dixon 1926: 5; Tixier 1971: 336 (as *C. caudatus*); Johnson 1980: 37; Tixier 1980: 379 (as *C. caudatus*); Manuel 1981a: 39 (as *C. caudatus*); Frahm & Mohamed 1987: 472, 474; Mohamed & Tan 1988: 27; Mohamed & Yong 2005b: 80; Yong et al. 2006: 113; Mohamed et al. 2009: 372; Suleiman et al. 2010: 60. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang.

C. crispifolius E.B. Bartram = *C. fragilis* (Brid.) Bruch & Schimp. subsp. *zollingerianus* (Müll. Hal.) J.-P. Frahm (fide Frahm 1999: 34).

C. eberhardtii Paris = *C. sinensis* (Müll. Hal.) J.-P. Frahm (fide Frahm 1999: 49).

***C. ericoides* (Griff.) A. Jaeger** — Tixier 1980: 379; Frahm & Mohamed 1987: 479, 482 (as *C. involutus*); Mohamed & Tan 1988: 27 (as *C. involutus*); Suleiman et al. 2010: 60. Kelantan, Pahang, Singapore.

C. exasperatus* (Nees & Blume) Brid. var. *exasperatus — Dixon 1924: 227 (as *Thysanomitrium abbreviatum*); Dixon 1926: 6 (as *T. abbreviatum*, *T. exasperatum*); Manuel 1981a: 39 (as *C. abbreviates*); Frahm & Mohamed 1987: 474, 475, 477; Mohamed & Tan 1988: 27. Johor, Kedah, Pahang.

***C. exasperatus* (Nees & Blume) Brid. var. *lorentzii* (M. Fleisch.) J.-P. Frahm** — Dixon 1924: 228 (as *Thysanomitrium ridleyi*); Dixon 1926: 6 (as *T. ridleyi*); Manuel 1981a: 39 (as *C. ridleyi*); Frahm & Mohamed 1987: 477; Mohamed & Tan 1988: 27. Pahang.

***C. fragilis* (Brid.) Bruch & Schimp. subsp. *zollingerianus* (Müll. Hal.) J.-P. Frahm** — Frahm & Mohamed 1987: 473, 474 (as *C. crispifolius*); Mohamed & Tan 1988: 27 (as *C. crispifolius*); Damanhuri & Nizam 2001: 212 (as *C. crispifolius*). Pahang.

C. hemitrichius (Müll. Hal.) A. Jaeger ≡ *C. schmidii* (Müll. Hal.) A. Jaeger subsp. *hemitrichius* (Müll. Hal.) J.-P. Frahm (fide Frahm 1999: 46).

C. involutus (Müll. Hal.) A. Jaeger = *C. ericoides* (Griff.) A. Jaeger (fide Frahm 1999: 49).

***C. laxitextus* Sande Lac.** — Dixon 1926: 6 (as *C. calodictyon*); Manuel 1981a: 39 (as *C. calodictyon*); Frahm & Mohamed 1987: 480, 482; Mohamed & Tan 1988: 28; Yong et al. 2006: 113; Suleiman et al. 2010: 60. Kedah, Kelantan, Pahang.

***C. macgregorii* Broth. & Geh.** — Johnson 1980: 38 (as *C. thwaitesii*, see Note 5); Frahm & Mohamed 1987: 481, 482; Mohamed & Tan 1988: 28. Terengganu.

C. ridleyi (Dixon) Manuel = *C. exasperatus* (Nees & Blume) Brid. var. *lorentzii* (M. Fleisch.) J.-P. Frahm (fide Frahm & Mohamed 1987: 477).

***C. schmidii* (Müll. Hal.) A. Jaeger subsp. *hemitrichius* (Müll. Hal.) J.-P. Frahm** — Tixier 1971: 336 (as *C. hemitrichius*); Manuel 1981a: 39 (as *C. hemitrichius*); Mohamed & Tan 1988: 27 (as *C. hemitrichius*); Damanhuri et al. 2004: 253 (as *C. hemitrichius*). Pahang.

***C. serratus* Sande Lac.** — Paris 1906: 25 (as *C. singaporensis*); Dixon 1926: 5, 6; Holttum 1927: 89; Wee 1979: 57; Johnson 1980: 37; Manuel 1981a: 39; Frahm & Mohamed 1987: 485, 488; Mohamed & Mohamad 1987: 186; Mohamed & Tan 1988: 28; Mohamad & Gidiman 1990: 148; Damanhuri 1999: 214; Tan & Mohamed 1999: 75; Damanhuri et al. 2005d: 268; Yong et al. 2006: 113; Lee & Damanhuri 2008: 167; Mohamed et al. 2009: 372. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Selangor, Singapore.

***C. sinensis* (Müll. Hal.) J.-P. Frahm** — Yong et al. 2006: 113 (as *C. eberhardtii*). Kedah.

C. singaporensis M. Fleisch. ex Paris = *C. serratus* Sande Lac. (fide Dixon 1926: 5).

***C. umbellatus* (Schwägr. & Gaudich. ex Arn.) Paris** — Dixon 1926: 6 (as *Thysanomitrium umbellatum*); Tixier 1974: 17 (as *C. richardii* see Note 4); Johnson 1980: 38 (as *C. richardii* see Note 4); Tixier 1980: 379; Manuel 1981a: 39; Frahm & Mohamed 1987: 486, 488; Mohamed & Tan 1988: 28; Mohamed & Yong 2005a: 115; Mohamed et al. 2005: 250; Yong et al. 2006: 113; Suleiman et al. 2010: 60. Johor, Kedah, Kelantan, Pahang, Selangor.

***Chaetomitriopsis* M. Fleisch. (Family Symphyodontaceae)**

***C. glaucocarpa* (Reinw. ex Schwägr.) M. Fleisch.** — Manuel 1981a: 93; Manuel 1981d: 220; Mohamed & Tan 1988: 33; Mohamed & Robinson 1991: 9. Pahang.

***Chaetomitrium* Dozy & Molk. (Family Symphyodontaceae)**

***C. beccarii* Dixon** — Mohamed & Mohamad 1987: 188. Johor.

***C. borneense* Mitt.** — Dixon 1916: 314 (as *Pilotrichella perakensis*); Dixon 1926: 28; Manuel 1980b: 39; Manuel 1981a: 94; Mohamed & Tan 1988: 33; Mohamed & Robinson 1991: 10; Wolseley et al. 1996: 80; Damanhuri 1999: 219; Damanhuri et al. 2004: 260; Damanhuri et al. 2006: 171; Damanhuri et al. 2007: 93; Lee & Damanhuri 2008: 176. Negeri Sembilan, Pahang, Perak, Selangor, Terengganu.

***C. leptopoma* (Schwägr.) Bosch & Sande Lac.** — Dixon 1926: 27 (as *C. muricatum*, see Note 8); Johnson 1980: 93; Manuel 1981a: 94; Mohamed & Tan 1988: 34 (as *C. leptopoma* and *C. muricatum*); Mohamed & Robinson 1991: 10; Damanhuri 2000: 219; Damanhuri et al. 2005e: 243; Mohamed & Yong 2005b: 84; Damanhuri et al. 2006: 171. Johor, Kedah, Perak, Selangor, Terengganu.

***C. orthorrhynchum* (Dozy & Molk.) Bosch & Sande Lac.** — Dixon 1924: 238 (as *C. perakense*); Dixon 1926: 28 (as *C. nematosum*, see Note 9, and as *C. perakense*); Johnson 1980: 93; Manuel 1980b: 39 (as *C. lanceolatum*); Tixier 1980: 383 (as *C. ciliatum*, *C. lanceolatum*, see Note 6); Manuel 1981a: 94 (as *C. lanceolatum*, *C. perakense*); Mohamed 1987b: 658; Mohamed & Mohamad 1987: 188 (as *C. perakense*); Mohamed & Tan 1988: 33 (as *C. lanceolatum*), 34 (as *C. nematosum*, *C. perakense*); Mohamed & Robinson 1991: 11; Wolseley et al. 1996: 80; Damanhuri 1999: 219; Tan & Mohamed 1999: 75; Damanhuri et al. 2004: 260; Damanhuri et al. 2005b: 64; Damanhuri et al. 2005e: 243; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 84; Yong & Damanhuri 2005: 97; Damanhuri et al. 2006: 171; Damanhuri et al. 2007: 93; Lee & Damanhuri 2008: 176. Johor, Kedah, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu.

***C. papillifolium* Bosch & Sande Lac.** — Dixon 1926: 27, 28 (as *C. elongatum*, see Note 7); Tixier 1971: 339 (as *C. torquescens*, see Note 10); Johnson 1980: 94 (as *C. elongatum*); Tixier 1980: 383; Manuel 1981a: 94 (as *C. elongatum*, *C. torquescens*); Mohamed & Tan 1988: 33 (as *C. elongatum*), 34 (as *C. torquescens*); Mohamed &

Robinson 1991: 11 & 12; Wolseley et al. 1996: 80; Damanhuri 1999: 220; Damanhuri & Maideen 2001b: 213; Damanhuri et al. 2004: 260; Damanhuri et al. 2005e: 243; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 84; Mohamed et al. 2005: 253; Damanhuri et al. 2007: 93; Lee & Damanhuri 2008: 176; Suleiman et al. 2010: 64. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu.

C. perakense Broth. ex Dixon = *C. orthorrhynchum* (Dozy & Molk.) Bosch & Sande Lac. (fide Mohamed & Robinson 1991: 11).

C. serratum Broth., *nom. nud.* = *C. orthorrhynchum* (Dozy & Molk.) Bosch & Sande Lac. (see Mohamed & Robinson 1991: 11).

***C. setosum* Broth. ex Dixon** — Dixon 1924: 237; Dixon 1926: 28; Johnson 1980: 71; Manuel 1981a: 55; Mohamed & Tan 1988: 30; Mohamed & Robinson 1991: 11; Damanhuri 1999: 219; Damanhuri et al. 2005d: 278; Damanhuri et al. 2006: 171. Kedah, Kelantan, Pahang, Perak, Terengganu.

Chionoloma Dixon (Family Pottiaceae)

C. bombayense (Müll. Hal.) P. Sollman ≡ *Pseudosymblepharis bombayensis* (Müll. Hal.) P. Sollman (fide Sollman 2000: 133).

C. latifolium Dixon = *Pseudosymblepharis bombayensis* (Müll. Hal.) P. Sollman (fide Sollman 2000: 136).

***Circulifolium* S. Olsson, Enroth & D. Quandt (Family Neckeraceae)**

***C. exiguum* (Bosch & Sande Lac.) S. Olsson, Enroth & D. Quandt** — Herzog 1919: 296; Dixon 1926: 25; Noguchi 1973: 300; Manuel 1980b: 39; Mohamed 1987b: 658; Mohamed & Mohamad 1987: 188; Dürhammer & Schäfer-Verwimp 1995: 157, 158; Wolseley et al. 1996: 80; Damanhuri 1999: 218; Damanhuri & Ajamain 1999: 410; Tan & Mohamed 1999: 75; Damanhuri 2000: 218; Maideen & Damanhuri 2000: 110; Damanhuri & Maideen 2001b: 212; Damanhuri & Nizam 2001: 219; Ho & Tan 2002: 72; Yong et al. 2002: 246; Damanhuri et al. 2004: 259; Damanhuri et al. 2005a: 71; Damanhuri et al. 2005d: 281; Damanhuri et al. 2005e: 246; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 84; Mohamed et al. 2005: 253; Yong & Damanhuri 2005: 94; Damanhuri et al. 2006: 167; Yong et al. 2006: 117; Damanhuri et al. 2007: 94; Lee & Damanhuri 2008: 179; Mohamed et al. 2009: 375. All records published as *Homaliodendron exiguum*. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore.

***C. microdendron* (Mont.) S. Olsson, Enroth & D. Quandt** — Dixon 1926: 24; Dixon 1926: 25 (as *Homaliodendron glossophyllum*); Noguchi 1973: 300; Manuel 1981a: 88; Mohamed 1987a: 55; Mohamed 1987b: 658; Mohamed & Tan 1988: 33; Damanhuri & Ajamain 1999: 410; Tan & Mohamed 1999: 75; Maideen & Damanhuri 2000: 110; Damanhuri & Maideen 2001b: 212; Yong et al. 2002: 246; Damanhuri et al. 2005a: 72;

Damanhuri et al. 2005d: 282; Yong & Damanhuri 2005: 95; Damanhuri et al. 2006: 167; Damanhuri et al. 2007: 94; Lee & Damanhuri 2008: 179. All records, except otherwise stated, published as *Homaliiodendron microdendron*. Kedah, Kelantan, Melaka, Pahang, Perak, Perlis, Selangor, Terengganu.

***Cladopodanthus* Dozy & Molk. (Family Leucobryaceae)**

***C. heterophyllus* (M. Fleisch.) E.B. Bartram** — Damanhuri 1999: 215 (as *C. muticus*); Ho & Tan 2002: 72; Damanhuri et al. 2004: 253 (as *C. muticus*); Lee & Damanhuri 2008: 167. Johor, Pahang, Singapore.

C. muticus Broth. = *C. heterophyllus* (M. Fleisch.) E.B. Bartram (fide Magill 1993: 237).

C. pilifer Dozy & Molk. = *C. speciosus* (Dozy & Molk.) M. Fleisch. (fide Magill 1993: 235).

***C. speciosus* (Dozy & Molk.) M. Fleisch.** — Dixon 1926: 7 (as *Leucobryum stellatum*); Johnson 1964: 325 (as *C. pilifer*); Johnson 1980: 46 (as *C. pilifer*); Manuel 1981a: 48; Mohamed & Tan 1988: 28 (as *C. pilifer*); Magill 1993: 237; Damanhuri & Nizam 2001: 212. Melaka, Pahang.

***Cladopodium* (Lesq. & James) Renaud & Cardot (Family Leskeaceae)**

C. nervosum M. Fleisch. = *C. prionophyllum* (Müll. Hal.) Broth. (fide Watanabe 1972: 215).

***C. prionophyllum* (Müll. Hal.) Broth.** — Noguchi 1973: 301 (as *C. nervosum*); Manuel 1981a: 55 (as *C. nervosum*); Mohamed 1987b: 658; Mohamed & Tan 1988: 34; Tan & Mohamed 1999: 75; Damanhuri et al. 2005d: 276; Damanhuri et al. 2005e: 240; Mohamed & Yong 2005b: 84; Yong & Damanhuri 2005: 98; Lee & Damanhuri 2008: 174 (as *C. nervosum*). Johor, Kedah, Kelantan, Pahang, Selangor, Singapore.

***Clastobryella* M. Fleisch. (Family Pylaisiadelphaceae)**

C. asperrima Dixon = *Clastobryum scalare* (Müll. Hal.) Tixier (fide Tixier 1977: 457).

C. cuculligera (Sande Lac.) M. Fleisch. ≡ *Clastobryum cuculligerum* (Sande Lac.) Tixier (fide Tixier 1977: 447).

C. epiphylla (Renaud & Cardot) M. Fleisch. ≡ *Clastobryum epiphyllum* (Renaud & Cardot) B.C. Tan & A. Touw (fide Tan 1991: 93).

C. merrillii (Broth.) M. Fleisch. ≡ *Gammiella merrillii* (Broth.) Tixier (see Mohamed & Tan 1988: 38) = *G. ceylonensis* (Broth.) B.C. Tan & W.R. Buck (see Tan & Jia 1999: 16).

C. ruficaulis (Thwaites & Mitt.) M. Fleisch. \equiv *Clastobryum ruficaule* (Thwaites & Mitt.) Tixier (see Mohamed & Tan 1988: 38) \equiv *Trichosteleum ruficaule* (Thwaites & Mitt.) B.C. Tan (fide Tan 1991: 101).

***Clastobryophilum* M. Fleisch. (Family Pylaisiadelphaceae)**

***C. asperifolium* (Thwaites & Mitt.) B.C. Tan** — Tan & Ho 2008: 125. Singapore. O'Shea (2000) reduced this to a synonym of *C. bogoricum*.

C. bogoricum* (Bosch & Sande Lac.) M. Fleisch. var. *bogoricum — Herzog 1919: 298 (as *Sematophyllum bogoricum*); Dixon 1926: 41 (as *Acropodium bogoricum*); Johnson 1972: 19; Noguchi 1973: 302; Manuel 1981a: 110; Mohamed & Tan 1988: 35; Tan & Mohamed 1999: 75; O'Shea 2000: 101; Damanhuri & Maideen 2001a: 27; Damanhuri et al. 2004: 261; Damanhuri et al. 2005d: 279; Mohamed & Yong 2005b: 85; Mohamed et al. 2005: 254; Yong et al. 2006: 120; Lee & Damanhuri 2008: 177. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor.

C. bogoricum (Bosch & Sande Lac.) M. Fleisch. var. *laevibogoricum* (Dixon) Seki = *C. rufoviride* (Besch.) M. Fleisch. (fide Tixier 1977: 406).

***C. rufoviride* (Besch.) M. Fleisch.** — Noguchi 1973: 302 (as *C. bogoricum* var. *laevibogoricum*); Mohamed & Tan 1988: 35. Pahang. O'Shea (2000) reduced this to a synonym of *C. bogoricum*, which we disagree.

***Clastobryopsis* M. Fleisch. (Family Pylaisiadelphaceae)**

***C. brevinervis* M. Fleisch.** — Suleiman et al. 2010: 65. Kelantan.

***Clastobryum* Dozy & Molk. (Family Pylaisiadelphaceae)**

***C. caudatum* M. Fleisch.** — Tixier 1974: 18; Tixier 1977: 451; Manuel 1981a: 105; Mohamed & Tan 1988: 35; Yong et al. 2006: 120. Kedah.

***C. cuculligerum* (Sande Lac.) Tixier** — Tixier 1974: 18 (as *Clastobryella cuculligera*); Manuel 1981a: 105 (as *C. cuculligera*); Mohamed & Tan 1988: 35; Damanhuri & Nizam 2001: 221; Ho & Tan 2002: 72; Damanhuri et al. 2004: 261; Tan & Chang 2004: 306; Damanhuri et al. 2006: 169; Yong et al. 2006: 120. Johor, Kedah, Pahang, Perak, Terengganu.

***C. epiphyllum* (Renauld & Cardot) B.C. Tan & A. Touw** — Tixier 1974: 18 (as *Clastobryella epiphylla*); Tixier 1977: 410 (as *Hageniella nematosa*); Tixier 1980: 384 (as *H. nematosa*); Manuel 1981a: 104 (as *H. nematosa*); Mohamed & Tan 1988: 35 (as *H. nematosa*); Damanhuri & Nizam 2001: 221 (as *H. nematosa*); Mohamed & Yong 2005b: 85; Mohamed et al. 2005: 254; Damanhuri et al. 2006: 170; Lee & Damanhuri 2008: 177. Johor, Kedah, Pahang, Penang, Terengganu.

***C. leucophyllum* (Dixon) B.C. Tan** — Dixon 1924: 250 (as *Acroporium leucophyllum*); Dixon 1926: 41 (as *A. leucophyllum*); Tixier 1974: 20 (as *A. leucophyllum*); Manuel 1981a: 110 (as *A. leucophyllum*). Kedah, Pahang.

C. ruficaule (Thwaites & Mitt.) Tixier ≡ *Trichosteium ruficaule* (Thwaites & Mitt.) B.C. Tan (fide Tan 1991: 101).

***C. scalare* (Müll. Hal.) Tixier** — Tixier 1974: 18 (as *Clastobryella asperrima*); Tixier 1977: 457, 459; Tixier 1980: 384; Manuel 1981a: 105; Mohamed & Tan 1988: 35. Kedah, Pahang.

***C. spiculiferum* (Dixon) B.C. Tan, Z. Iwats. & D.H. Norris** — Mohamed & Mohamad 1986: 337 (as *Tristichella spiculifera*); Mohamed & Tan 1988: 36 (as *T. spiculifera*). Pahang.

Cribrodontium Herz. (Family Entodontaceae)

C. wernerii Herzog ≡ *Entodon wernerii* (Herz.) W.R. Buck (fide Buck 1980: 112).

***Cryptogonium* (Müll. Hal.) Hampe (Family Pterobryaceae)**

***C. phyllogonioides* (Sull.) Isov.** — Dixon 1926: 23 (as *Orthorrhynchium philippinense*); Noguchi 1973: 298 (as *Horikawaea phyllogonioides*); Manuel 1981a: 85 (as *H. phyllogonioides*); Lin 1984a: 33 (as *Pursellia phyllogonioides*); Mohamed 1987b: 658 (as *P. phyllogonioides*); Mohamed & Tan 1988: 33; Damanhuri & Maideen 2001b: 212 (as *P. phyllogonioides*). Kedah, Pahang, Perlis.

***Cryptopapillaria* M. Menzel (Family Meteoriaceae)**

***C. fuscescens* (Hook.) M. Menzel** — Noguchi 1973: 299 (as *Papillaria fuscescens*); Damanhuri et al. 2006: 167; Yong et al. 2006: 117 (as *P. fuscescens*); Suleiman et al. 2010: 63. Kedah, Kelantan, Pahang, Terengganu.

***Ctenidiadelphus* M. Flesich. (Family Hypnaceae)**

***C. plumularia* (Müll. Hal.) M. Fleisch.** — Dixon 1926: 35 (as *Taxithelium plumularia*); Wee 1979: 63; Manuel 1981a: 116; Mohamed & Tan 1988: 36; Mohamed & Yong 2005b: 86; Mohamed et al. 2009: 373. Johor, Negeri Sembilan, Singapore.

***Ctenidium* (Schimp.) Mitt. (Family Hypnaceae)**

C. falcifolium Dixon ≡ *Ectropothecium falcifolium* (Dixon) N. Nishim. (fide Nishimura 1985: 75).

***C. lychnites* (Mitt.) Broth.** — Tixier 1974: 21; Manuel 1981a: 116; Mohamed & Tan 1988: 36. Kedah.

Cupressina Müll. Hal. (Family Hypnaceae)

C. malaccana Müll. Hal., *nom. nud.* = *Ectropothecium buitenzorgii* (Bél.) Mitt. (fide Dixon 1926: 30).

Cyathophorella M. Flesich. (Family Hypopterygiaceae)

C. burkillii (Dixon) Broth. = *Cyathophorum hookerianum* (Griff.) Mitt. (fide Kruijer 2002: 337).

C. hookeriana (Griff.) M. Fleisch. ≡ *Cyathophorum hookerianum* (Griff.) Mitt. (fide Kruijer 2002: 337).

C. spinosa (Müll. Hal.) M. Fleisch. ≡ *Cyathophorum spinosum* (Müll. Hal.) H. Akiyama (fide Kruijer 2002: 311).

C. tenera (Bosch & Sande Lac.) M. Fleisch. = *Cyathophorum parvifolium* Bosch & Sande Lac. (fide Kruijer 2002: 349; see also Note 11).

***Cyathophorum* P. Beauv. (Family Hypopterygiaceae)**

***C. hookerianum* (Griff.) Mitt.** — Tixier 1971: 339 (as *Cyathophorella tenera*, see Note 11); Noguchi 1973: 300 (as *Cyathophorella burkillii*); Manuel 1981a: 89 (as *Cyathophorella burkillii*); Mohamed & Tan 1988: 33 (as *Cyathophorella burkillii*); Mohamed & Robinson 1991: 32 (as *Cyathophorella burkillii*), 35 (as *Cyathophorella hookeriana*); Damanhuri & Nizam 2001: 219 (as *Cyathophorella burkillii*); Kruijer 2002: 349. Pahang, Perak.

***C. parvifolium* Bosch & Sande Lac.** — Wee 1979: 61 (as *Cyathophorella tenera*); Manuel 1981a: 89 (as *Cyathophorella tenera*); Mohamed & Tan 1988: 33 (as *Cyathophorella tenera*). Pahang?, Singapore? (cf. Tan & Ho 2008: 138). See also Note 11.

***C. spinosum* (Müll. Hal.) M. Fleisch.** — Mohamed & Robinson 1991: 35 (as *Cyathophorella spinosa*); Damanhuri & Nizam 2001: 219 (as *Cyathophorella spinosa*); Damanhuri et al. 2006: 164 (as *Cyathophorella spinosa*); Suleiman et al. 2010: 63. Kelantan, Pahang, Terengganu.

***Cyclodictyon* Mitt. (Family Pilotrichaceae)**

***C. blumeanum* (Müll. Hal.) Kuntze** — Mohamed & Mohamad 1986: 335; Mohamed & Tan 1988: 34; Mohamed & Robinson 1991: 12; Yong & Damanhuri 2005: 97. Pahang, Selangor.

***Daltonia* Hook. & Taylor (Family Daltoniaceae)**

D. angustifolia Dozy & Molk. = *D. splachnoides* (Sm) Hook & Taylor (fide Majestyk 2011: 570).

***D. armata* E.B. Bartram** — Mohamed & Robinson 1991: 13; Ho et al. 2010: 107. Pahang.

D. contorta Müll. Hal. = *D. marginata* Griff. (fide Majestyk 2011: 562).

***D. marginata* Griff.** — Mohamed & Robinson 1991: 13 (as *D. contorta* Müll. Hal.). Pahang.

***D. splachnoides* (Sm.) Hook. & Taylor** — Mohamed & Robinson 1991: 13 (as *D. angustifolia* Dozy & Molk.). Pahang.

***Dendrohypnum* Hampe (Family Hypnodendraceae)**

***D. reinwardtii* (Schwägr.) N.E. Bell, A.E. Newton & D. Quandt** — Touw 1971: 244; Tixier 1980: 381; Manuel 1981a: 66; Mohamed & Tan 1988: 31; Damanhuri et al. 2005d: 274; Yong & Damanhuri 2005: 91. All records published as *Hypnodendron reinwardtii*. Kelantan, Pahang, Selangor.

***D. subspininervium* (Müll. Hal.) N.E. Bell, A.E. Newton & D. Quandt subsp. *arborescens* (Mitt.) N.E. Bell, A.E. Newton & D. Quandt** — Dixon 1926: 45 (as *H. arborescens*); Holttum 1927: 92 (as *H. arborescens*); Touw 1971: 238; Mohamed & Tan 1988: 31; Damanhuri 1999: 218; Damanhuri et al. 2005d: 274. All records, except otherwise stated, published as *Hypnodendron subspininervium* subsp. *arborescens*. Kelantan, Pahang, Penang, Perak, Singapore.

D. subspininervium* (Müll. Hal.) N.E. Bell, A.E. Newton & D. Quandt subsp. *subspininervium — Manuel 1981a: 66; Damanhuri & Ajamain 1999: 410; Damanhuri & Nizam 2001: 216; Damanhuri et al. 2004: 259; Damanhuri et al. 2005a: 70; Mohamed & Yong 2005b: 83; Damanhuri et al. 2006: 165; Yong et al. 2006: 116; Mohamed et al. 2009: 374. All records published as *Hypnodendron subspininervium* subsp. *subspininervium*. Johor, Kedah, Negeri Sembilan, Pahang, Selangor, Terengganu.

***Desmotheca* Lindb. (Family Orthotrichaceae)**

***D. apiculata* (Dozy & Molk.) Lindb.** — Dixon 1926: 18; Tixier 1971: 338; Tixier 1974: 18; Wee 1979: 60; Johnson 1980: 83; Tixier 1980: 381; Manuel 1981a: 70; Mohamed & Tan 1988: 31; Damanhuri & Ajamain 1999: 410; Damanhuri 2000: 218; Damanhuri et al. 2005a: 70; Damanhuri et al. 2005c: 251; Damanhuri et al. 2006: 167; Damanhuri et al. 2007: 91; Lee & Damanhuri 2008: 172; Mohamed et al. 2009: 375. Kedah, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu, Singapore.

***Dicranella* Schimp. (Family Dicranaceae)**

***D. brasiliensis* (Hampe) E.B. Bartram** ≡ *Microdus brasiliensis* (Duby) Thér. (fide Tan & Iwatsuki 1993: 343) ≡ *Leptotrichella brasiliensis* (Duby) Ochyra (fide Ochyra 1997: 561).

***D. coarctata* (Müll. Hal.) Bosch & Sande Lac.** — Dixon 1926: 3; Johnson 1980: 29; Tixier 1980: 379; Manuel 1981a: 43; Mohamed 1987b: 656; Mohamed & Tan 1988: 28; Damanhuri et al. 2005d: 268; Damanhuri et al. 2005e: 234; Yong et al. 2006: 113; Mohamed et al. 2009: 372. Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Selangor.

***D. heteromalla* (Hedw.) Schimp.** — Noguchi 1973: 294; Manuel 1981a: 43; Mohamed & Tan 1988: 28. Pahang.

***Dicranodontium* Bruch & Schimp. (Family Dicranaceae)**

***D. fleischerianum* W. Schultze-Motel** = *D. uncinatum* (Harv.) A. Jaeger (fide Frahm 1997: 198).

D. nitidum (Dozy & Molk.) M. Fleisch., *hom illeg.* ≡ *D. fleischerianum* W. Schultze-Motel (fide Schultze-Motel 1963: 127).

***D. uncinatum* (Harv.) A. Jaeger** — Dixon 1926: 6 (as *D. nitidum*); Johnson 1980: 39 (as *D. nitidum*); Tixier 1980: 379; Manuel 1981a: 39 (as *D. nitidum*); Mohamed & Tan 1988: 28 (as *D. fleischerianum*); Yong et al. 2006: 113. Kedah, Kelantan, Pahang.

***Dicranoloma* (Renauld) Renauld (Family Dicranaceae)**

***D. assimile* (Hampe) Paris** — Dixon 1926: 5 (as *D. sumatranum*); Johnson 1980: 34; Manuel 1981a: 40; Tan & Koponen 1983: 323; Mohamed & Tan 1988: 28; Klazenga 1999: 53; Yong & Damanhuri 2005: 83. Kedah, Pahang, Perak, Selangor.

***D. billardierei* (Brid.) Paris** — Dixon 1924: 226 (as *D. brevicapsulare*); Dixon 1926: 5 (as *D. brevicapsulare*); Manuel 1981a: 40; Tan & Koponen 1983: 329, 331; Mohamed & Tan 1988: 28; Klazenga 1999: 62 (as *D. brevicapsulare*), 63; Yong et al. 2006: 113. Johor, Kedah, Pahang.

***D. blumii* (Nees) Paris** — Dixon 1926: 4; Johnson 1972: 18; Noguchi 1973: 294; Tixier 1974: 17; Tixier 1980: 379; Manuel 1981a: 40; Tan & Koponen 1983: 328; Mohamed & Tan 1988: 28; Klazenga 1999: 68; Tan & Mohamed 1999: 75; Damanhuri et al. 2006: 163; Suleiman et al. 2010: 60. Johor, Kedah, Kelantan, Pahang, Perak, Selangor, Terengganu.

***D. braunii* (Müll. Hal.) Paris** — Dixon 1926: 4; Tixier 1971: 336; Noguchi 1973: 294; Tixier 1974: 17; Wee 1979: 57; Tixier 1980: 379; Manuel 1981a: 40; Mohamed & Tan 1988: 28 (as *D. brevisetum* var. *samoanum*); Klazenga 1999: 75; Tan & Mohamed 1999: 75 (as *D. brevisetum* var. *samoanum*); Damanhuri & Nizam 2001: 212 (as *D. brevisetum* var. *samoanum*); Damanhuri et al. 2006: 163; Suleiman et al. 2010: 60. Kedah, Kelantan, Pahang, Selangor, Terengganu, Singapore.

D. brevicapsulare Dixon = *D. billardierei* (Brid.) Paris (fide Tan & Koponen 1983: 329).

D. brevisetum* (Dozy & Molk.) Paris var. *brevisetum — Dixon 1926: 5 (as *D. leucophyllum*); Tan & Koponen 1983: 326; Mohamed & Tan 1988: 28; Tan & Mohamed 1990: 359 (as *D. damanhurii*); Klazenga 1999: 82; Damanhuri & Nizam 2001: 212; Damanhuri et al. 2005d: 268; Yong & Damanhuri 2005: 83; Damanhuri et al. 2006: 163; Suleiman et al. 2010: 60. Johor, Kelantan, Pahang, Perak, Selangor, Terengganu, Singapore.

D. brevisetum (Dozy & Molk.) Paris var. *samoanum* (Broth.) B.C. Tan & T.J. Kop. = *D. braunii* (Müll. Hal.) Paris (fide Klazenga 1999: 73).

D. damanhurii B.C. Tan & Mohamed = *D. brevisetum* (Dozy & Molk.) Paris (fide Klazenga 1999: 79).

***D. daymannianum* E.B. Bartram** — Klazenga 1999: 87. Pahang.

D. dives (Müll. Hal. ex Bosch & Sande Lac.) Paris = *D. reflexum* (Müll. Hal.) Renauld (see Klazenga 1999: 102).

D. leucophyllum (Hampe ex Sande Lac.) Paris = *D. brevisetum* (Dozy & Molck.) Paris (fide Tan & Koponen 1983: 326).

D. perintegrum Dixon = *Braunfelsia plicata* (Sande Lac.) Broth. (fide Eddy 1988: 170).

D. reflexifolium (Müll. Hal.) Broth. = *D. reflexum* (Müll. Hal.) Renauld (fide Tan & Koponen 1983: 318).

***D. reflexum* (Müll. Hal.) Renauld** — Dixon 1926: 4 (as *D. reflexifolium*); Manuel 1981a: 40 (as *D. reflexifolium*); Tan & Koponen 1983: 320 (as *D. dives*); Mohamed & Tan 1988: 28 (as *D. dives*); Klazenga 1999: 105; Suleiman et al. 2010: 60. Johor, Kedah, Kelantan, Pahang, Selangor.

D. sumatranum (Broth.) Renauld = *D. assimile* (Hampe) Paris (fide Tan & Koponen 1983: 320).

Dicranum Hedw. (Family Dicranaceae)

D. megalophyllum Brid. = *Leucobryum javense* (Brid.) Mitt. (fide Enroth 1990: 76).

Didymodon Hedw. (Family Pottiaceae)

D. sphagnoides Harv., *nom. illeg.* = *Leucophanes candidum* (Schwägr.) Lindb. (see Enroth 1990: 102).

***Dimorphocladon* Dixon (Family Symphyodontaceae)**

***D. borneense* Dixon** — Damanhuri et al. 2005e: 243; Damanhuri et al. 2006: 171; Damanhuri et al. 2007: 93; Lee & Damanhuri 2008: 176; Mohamed et al. 2009: 373. Kedah, Negeri Sembilan, Pahang, Terengganu.

***Diphyscium* D. Mohr (Family Diphysciaceae)**

D. involutum Mitt. = *D. mucronifolium* Mitt. (fide Magombo 2003: 59).

***D. longifolium* Griff.** — Wee 1979: 63 (as *D. rupestre*); Mohamed & Tan 1988: 27 (as *D. rupestre*); Magombo 2003: 54; Damanhuri et al. 2005d: 267; Yong & Damanhuri 2005: 90. Kelantan, Pahang, Selangor, Singapore.

D. malayense Manuel. = *D. mucronifolium* Mitt. (fide Magombo 2003: 59).

***D. mucronifolium* Mitt.** — Noguchi 1973: 293 (as *D. involutum*); Johnson 1980: 79; Manuel 1980a: 245, 246 (as *D. involutum*, *D. malayense*); Manuel 1981a: 32 (as *D. involutum*, *D. malayense*); Mohamed & Mohamad 1987: 189 (as *D. involutum*);

Mohamed & Tan 1988: 27 (as *D. involutum*, *D. malayense*); Damanhuri 1999: 214; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 75 (as *D. involutum*); Damanhuri 2000: 214; Damanhuri & Maideen 2001b: 207; Ho & Tan 2002: 72 (as *D. involutum*); Magombo 2003: 59, 63; Damanhuri et al. 2004: 252; Damanhuri et al. 2005a: 75; Damanhuri et al. 2005d: 267; Damanhuri et al. 2005e: 232; Mohamed & Yong 2005b: 83; Mohamed et al. 2005: 252; Damanhuri et al. 2006: 164; Yong et al. 2006: 110 (as *D. involutum*); Damanhuri et al. 2007: 88; Tan & Ho 2008: 125; Suleiman et al. 2010: 59. Johor, Kedah, Kelantan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

D. rupestre Dozy & Molk. = *D. longifolium* Griff. (fide Magombo 2003: 50).

***Distichophyllidium* M. Fleisch. (Family Daltoniaceae)**

***D. nymanianum* M. Fleisch.** — Tan & Mohamed 1990: 354; Mohamed & Robinson 1991: 17; Damanhuri & Nizam 2001: 220; Damanhuri et al. 2006: 162; Ho et al. 2010: 107. Pahang, Terengganu.

***Distichophyllum* Dozy & Molk. (Family Daltoniaceae)**

***D. angustifolium* Dixon** — Ho et al. 2010: 109. Pahang.

***D. brevicuspis* M. Fleisch.** — Mohamed & Robinson 1991: 19; Damanhuri et al. 2006: 162; Ho et al. 2010: 109. Pahang, Terengganu.

D. cirratum Renaud & Cardot ≡ *D. nigricaula* Mitt. ex Bosch & Sande Lac. var. *cirratum* (Renaud & Cardot) M. Fleisch. (fide Fleischer 1906–08: 982).

***D. cuspidatum* (Dozy & Molk.) Dozy & Molk.** — Dixon 1926: 26; Johnson 1980: 90; Tixier 1980: 383 (as *Daltonia aristifolia*, see Note 12); Manuel 1981a: 92; Mohamed & Tan 1988: 34; Mohamed & Robinson 1991: 22; Damanhuri et al. 2005d: 275; Mohamed & Yong 2005b: 84; Yong & Damanhuri 2005: 97; Damanhuri et al. 2006: 163; Mohamed et al. 2009: 373. Johor, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu.

D. gracilicaule M. Fleisch. = *D. nigricaula* Mitt. ex Bosch & Sande Lac. var. *nigricaula* (fide Mohamed & Robinson 1991: 25).

***D. jungermannioides* (Müll. Hal.) Bosch & Sande Lac.** — Damanhuri & Mohamed 1986: 329 (as *D. ulukaliense*); Mohamed & Tan 1988: 34; Mohamed & Robinson 1991: 22; Tan & Mohamed 1999: 75; Damanhuri & Nizam 2001: 220; Damanhuri et al. 2005d: 275; Mohamed & Yong 2005b: 84. Johor, Kelantan, Pahang.

***D. maibarae* Besch.** — Mohamed & Robinson 1991: 22; Ho et al. 2010: 114. Pahang.

***D. malayense* Damanhuri & Mohamed** — Damanhuri & Mohamed 1986: 327; Mohamed & Tan 1988: 34; Ho et al. 2010: 114. Pahang.

***D. mittenii* Bosch & Sande Lac.** — Dixon 1926: 26 (as *D. undulatum*, see Note 14); Tixier 1971: 339; Johnson 1972: 19; Noguchi 1973: 300 (as *D. undulatum*, see Note 14); Manuel 1981a: 92 (as *D. undulatum*); Mohamed & Tan 1988: 34 (as *D. undulatum*); Mohamed & Robinson 1991: 25; Damanhuri & Nizam 2001: 220; Yong & Damanhuri 2005: 97; Damanhuri et al. 2006: 163. Johor, Kelantan, Pahang, Perak, Selangor, Terengganu. See Notes 13 & 14.

***D. nigricaula* Mitt. ex Bosch & Sande Lac. var. *cirratum* (Renauld & Cardot) M. Fleisch.** — Dixon 1926: 26 (as *D. sinuosulum*); Dixon 1935: 15 (as *D. sinuosulum*); Manuel 1981a: 92 (as *D. cirratum*); Mohamed & Tan 1988: 34 (as *D. sinuosulum*); Mohamed & Robinson 1991: 19 (as *D. cirratum*); Damanhuri & Nizam 2001: 220 (as *D. cirratum*); Ho & Tan 2002: 72; Damanhuri et al. 2005d: 275 (as *D. cirratum*); Damanhuri et al. 2006: 163 (as *D. cirratum*); Ho et al. 2010: 118; Suleiman et al. 2010: 63 (as *D. cirratum*). Johor, Kelantan, Pahang, Perak, Terengganu.

D. nigricaula* Mitt. ex Bosch & Sande Lac. var. *nigricaula — Dixon 1926: 26; Noguchi 1973: 300; Johnson 1980: 90 (as *D. gracilicaule*); Manuel 1981a: 92; Mohamed & Mohamad 1987: 188; Mohamed & Tan 1988: 34 (as *D. gracilicaule*); Mohamed & Robinson 1991: 26; Tan & Mohamed 1999: 75; Damanhuri et al. 2005d: 275; Mohamed & Yong 2005b: 84; Yong & Damanhuri 2005: 97; Ho et al. 2010: 118. Johor, Kelantan, Pahang, Selangor, Singapore? According to Ho et al. (2010), the record of *D. gracilicaule* M.Fleisch. from Singapore reported by Johnson (1980) is likely based on misidentification. The other Singapore collection (*Holttum 18313B*, SING!) identified as *D. gracilicaule* collected from Bukit Timah has only few small stems and represents a juvenile or underdeveloped specimens of *D. schmidtii*.

***D. obtusifolium* Thér** — Damanhuri et al. 2005d: 275. Kelantan.

***D. osterwaldii* M. Fleisch.** — Mohamed & Robinson 1991: 26; Damanhuri et al. 2005d: 275; Damanhuri et al. 2006: 163; Ho et al. 2010: 118. Kelantan, Pahang, Terengganu.

D. pterygophylloides Dixon, *nom. nud.* (see Dixon 1926: 26).

***D. schmidtii* Broth.** — Dixon 1926: 27; Johnson 1980: 93; Manuel 1981a: 92; Mohamed & Tan 1988: 34; Mohamed & Robinson 1991: 26; Damanhuri & Ajamain 1999: 410; Tan & Mohamed 1999: 75; Maideen & Damanhuri 2000: 110; Damanhuri et al. 2005a: 73; Damanhuri et al. 2005e: 240; Damanhuri et al. 2006: 163; Yong et al. 2006: 115; Ho et al. 2010: 118. Kedah, Pahang, Perak, Selangor, Terengganu, Singapore.

D. sinuosulum Dixon = *D. cirratum* Renauld & Cardot (fide Mohamed & Robinson 1991: 19).

***D. spathulatum* (Dozy & Molk.) Dozy & Molk.** — Dixon 1926: 26; Johnson 1980: 90; Manuel 1981a: 92; Mohamed & Tan 1988: 34; Mohamed & Robinson 1991: 25 (as *D. mittenii*, see Note 13); Mohamed & Robinson 1991: 29; Damanhuri & Nizam 2001: 220; Damanhuri et al. 2005d: 275; Damanhuri et al. 2006: 163; Ho et al. 2010: 119; Suleiman et al. 2010: 63. Kelantan, Pahang, Perak, Terengganu.

***D. tortile* Dozy & Molk. ex Bosch & Sande Lac.** — Manuel 1980b: 39; Manuel 1981a: 92; Mohamed 1987a: 56; Mohamed & Tan 1988: 34; Mohamed & Robinson 1991: 29. Kedah, Pahang, Perak.

D. ulukaliense Damanhuri & Mohamed. = *D. jungermannioides* (Müll. Hal.) Bosch & Sande Lac. (fide Mohamed & Robinson 1991: 22).

***Ditrichum* Hampe (Family Ditrichaceae)**

***D. difficile* (Duby) M. Fleisch.** — Dixon 1926: 3 (as *D. flexifolium*); Johnson 1980: 28; Manuel 1981a: 36; Mohamed & Tan 1988: 27. Perak.

D. flexifolium Hampe = *D. difficile* (Duby) M. Fleisch. (fide Seppelt 1982: 115).

***Duthiella* Müll. Hal. ex Broth. (Family Meteoriaceae)**

***D. wallichii* (Mitt.) Müll. Hal.** — Mohamed 1987b: 657; Mohamed & Tan 1988: 32. Kelantan, Pahang, Terengganu.

***Ectropotheciella* M. Fleisch. (Family Hypnaceae)**

***E. decrescens* (Sande Lac.) M. Fleisch.** — Dixon 1926: 35 (as *Taxithelium decrescens*); Manuel 1981a: 119; Mohamed 1987b: 658; Mohamed & Tan 1988: 36. Kelantan, Pahang, Terengganu.

***E. distichophylla* (Hampe ex Dozy & Molk.) M. Fleisch.** — Damanhuri et al. 2005e: 242; Mohamed & Yong 2005b: 86; Damanhuri et al. 2007: 92. Johor, Kedah, Pahang.

***Ectropothecium* Mitt. (Family Hypnaceae)**

***E. buitenzorgii* (Bél.) Mitt.** — Dixon 1924: 239 (as *Hypnum malaccanum*); Dixon 1926: 30; Holttum 1927: 91; Tixier 1971: 341; Noguchi 1973: 303; Wee 1979: 63; Johnson 1980: 97; Manuel 1981a: 117; Tixier 1982: 86; Mohamed & Tan 1988: 36; Damanhuri & Maideen 2001a: 28; Damanhuri & Maideen 2001b: 214; Damanhuri & Nizam 2001: 222; Yong et al. 2002: 248; Damanhuri et al. 2004: 263; Damanhuri et al. 2005d: 277; Mohamed & Yong 2005b: 87; Yong et al. 2006: 115; Damanhuri et al. 2007: 92; Lee & Damanhuri 2008: 175. Johor, Kedah, Kelantan, Melaka, Pahang, Penang, Perak, Perlis, Selangor, Singapore.

E. callichroides (Müll. Hal.) A. Jaeger var. *elongatum* Dixon = *E. eleganti-pinnatum* (Müll. Hal.) A. Jaeger (fide Dixon 1926: 31).

***E. chamissonis* (Hornsch.) A. Jaeger** — Dixon 1926: 32; Tixier 1974: 21; Manuel 1981a: 117; Mohamed & Tan 1988: 36. Kedah, Pahang.

***E. cyperoides* (Hook. ex Harv.) A. Jaeger** — Yong et al. 2006: 115. Kedah.

***E. dealbatum* (Reinw. & Hornsch.) A. Jaeger** — Dixon 1926: 31; Manuel 1980b: 39; Tixier 1980: 387; Manuel 1981a: 117; Mohamed 1987b: 658; Mohamed & Tan 1988:

36; Damanhuri 1999: 220; Maideen & Damanhuri 2000: 110; Ho & Tan 2002: 72; Yong et al. 2002: 248. Johor, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Terengganu.

E. dentatum Dixon = *E. buitenzorgii* (Bél.) Mitt. (fide Noguchi 1973: 303).

***E. eleganti-pinnatum* (Müll. Hal.) A. Jaeger** — Dixon 1924: 239 (as *E. callichroides* var. *elongatum*); Dixon 1926: 31; Noguchi 1973: 303; Manuel 1981a: 117; Mohamed 1987a: 56; Mohamed & Mohamad 1987: 189; Mohamed & Tan 1988: 36; Damanhuri & Nizam 2001: 222; Ho & Tan 2002: 72; Damanhuri et al. 2005d: 277; Damanhuri et al. 2005e: 242; Damanhuri et al. 2006: 165; Yong et al. 2006: 115; Damanhuri et al. 2007: 92. Johor, Kedah, Kelantan, Pahang, Perak, Selangor, Terengganu.

E. falcatum Broth., *nom. nud.* = *E. buitenzorgii* (Bél.) Mitt. (fide Dixon 1926: 30).

***E. falcifolium* (Dixon) N. Nishim.** — Dixon 1924: 238 (as *Ctenidium falcifolium*); Dixon 1926: 30 (as *C. falcifolium*); Manuel 1981a: 116 (as *C. falcifolium*); Nishimura 1985: 75; Mohamed & Tan 1988: 36. Perak.

***E. ichnotocladum* (Müll. Hal.) A. Jaeger** — Dixon 1926: 31; Tixier 1971: 341; Noguchi 1973: 303; Tixier 1974: 21; Manuel 1981a: 117; Mohamed 1987a: 56; Mohamed & Tan 1988: 36; Tan & Mohamed 1999: 75; Damanhuri & Nizam 2001: 222; Damanhuri et al. 2004: 263; Damanhuri et al. 2005d: 277; Yong et al. 2006: 115; Damanhuri et al. 2007: 93; Lee & Damanhuri 2008: 175; Tan & Ho 2008: 126; Suleiman et al. 2010: 64. Johor, Kedah, Kelantan, Pahang, Singapore.

***E. incubans* (Reinw. & Hornsch.) A. Jaeger** — Dixon 1926: 31, 32; Wee 1979: 63; Johnson 1980: 101; Manuel 1981a: 117; Mohamed 1987b: 658; Mohamed & Tan 1988: 36; Yong et al. 2002: 248; Mohamed & Yong 2005b: 87. Johor, Kelantan, Negeri Sembilan, Perak, Perlis, Selangor, Terengganu, Singapore.

***E. incubans* (Reinw. & Hornsch.) A. Jaeger fo. *scaberula* M. Fleisch.** — Dixon 1926: 32; Mohamed & Tan 1988: 36. Selangor.

***E. intorquatum* (Dozy & Molk.) A. Jaeger** — Johnson 1972: 19; Tixier 1974: 21; Wee 1979: 63; Manuel 1981a: 117; Mohamed & Tan 1988: 36. Kedah, Pahang, Singapore? (see Tan & Ho 2008: 126).

***E. kerstani* Dixon & Herzog** — Yong et al. 2006: 115. Kedah.

E. malaccense Broth., *nom. nud.* = *E. incubans* (Reinw. & Hornsch.) A. Jaeger (fide Dixon 1926: 31).

***E. manii* Broth.** — Yong et al. 2006: 115. Kedah.

***E. monumentorum* (Duby) A. Jaeger** — Dixon 1926: 32; Holttum 1927: 91; Wee 1979: 63; Johnson 1980: 101; Manuel 1981a: 117; Mohamed & Mohamad 1987: 189; Yong et al. 2002: 248; Yong et al. 2006: 115; Damanhuri et al. 2007: 93; Mohamed et al. 2008: 45. Johor, Kedah, Pahang, Perlis, Singapore.

E. moritzii* A. Jaeger var. *moritzii — Dixon 1926: 31; Holttum 1927: 91; Noguchi 1973: 303; Wee 1979: 63; Johnson 1980: 98; Manuel 1981a: 117; Mohamed & Tan 1988: 37; Wolseley et al. 1996: 80; Damanhuri et al. 2004: 263; Suleiman et al. 2010: 64. Kelantan, Negeri Sembilan, Pahang, Singapore.

***E. moritzii* A. Jaeger var. *stereodontoides* Dixon** — Dixon 1924: 241; Dixon 1926: 31; Mohamed & Tan 1988: 37. Pahang.

***E. penangense* M. Fleisch.** — Fleischer 1915–22: 1410; Brotherus 1925: 458; Dixon 1926: 32; Manuel 1981a: 117; Mohamed & Tan 1988: 37. Penang.

***E. perminutum* Broth. ex E.B. Bartram** — Mohamed 1987b: 658; Mohamed & Tan 1988: 37; Damanhuri & Maideen 2001b: 214; Yong et al. 2002: 248; Damanhuri et al. 2005e: 242; Yong et al. 2006: 115; Damanhuri et al. 2007: 93. Kedah, Pahang, Perlis.

E. scaberulum Broth. ≡ *E. incubans* (Reinw. & Hornsch.) A. Jaeger fo. *scaberula* (Broth.) M. Fleisch. (fide Fleischer 1915–22: 1410).

***E. serratum* Herzog** — Herzog 1919: 297; Brotherus 1925: 457; Dixon 1926: 31; Manuel 1981a: 117; Mohamed & Tan 1988: 37. Perak.

***E. siamense* Dixon** — Noguchi 1973: 303; Manuel 1981a: 117; Mohamed & Tan 1988: 37. Selangor.

***E. singaporense* Dixon** — Dixon 1924: 239; Brotherus 1925: 457; Dixon 1926: 30; Holttum 1927: 91; Wee 1979: 63; Johnson 1980: 98; Manuel 1981a: 117; Mohamed 1987b: 658; Mohamed & Tan 1988: 37. Kelantan, Selangor, Terengganu, Singapore.

E. singapurianum Broth. = *Vesicularia reticulata* (Dozy & Molk.) Broth. (fide Dixon 1926: 32).

***E. sparsipilum* (Bosch & Sande Lac.) A. Jaeger** — Dixon 1926: 30; Noguchi 1973: 303; Manuel 1981a: 117; Mohamed & Tan 1988: 37. Pahang.

***E. striatulum* Dixon ex E.B. Bartram** — Manuel 1980b: 39; Manuel 1981a: 117; Mohamed & Tan 1988: 37; Damanhuri & Nizam 2001: 222. Pahang.

E. verrucosum (Hampe) A. Jaeger ≡ *Trachythecium verrucosum* (A. Jaeger) M. Fleisch. (fide Fleischer 1923: 1415).

***E. zollingeri* (Müll. Hal.) A. Jaeger** — Dixon 1926: 32; Holttum 1927: 91; Tixier 1971: 341 (as *Glossadelphus zollingeri*); Wee 1979: 61 (as *G. zollingeri*); Manuel 1981a: 112 (as *G. zollingeri*); Mohamed 1987b: 658; Mohamed & Tan 1988: 37; Tan & Mohamed 1999: 75; Damanhuri et al. 2005e: 242; Lim et al. 2010: 52. Kedah, Kelantan, Pahang, Singapore.

Endotrichella Müll. Hal. (Family Pterobryaceae)

E. elegans (Dozy & Molk.) M. Fleisch. ≡ *Garovaglia elegans* (Dozy & Molk.) Hampe ex Bosch & Sande Lac. (fide Hyvönen 1989a: 31).

E. formosa Dixon., *nom. nud.* ≡ *Garovaglia elegans* (Dozy & Molk.) Bosch & Sande Lac. var. *elegans* fo. *formosa* During (fide During 1977).

E. plano-marginata Dixon ≡ *Garovaglia powelli* Mitt. subsp. *muelleri* (Hamper) During var. *plano-marginata* (Dixon) During (fide During 1977: 129).

E. polytrix Dixon, *nom. nud.* = *Garovaglia angustifolia* Mitt. var. *bogoriensis* (M. Fleisch.) During fo. *bogoriensis* (M. Fleisch.) During (fide During 1977: 211).

***Entodon* Müll. Hal. (Family Entodontaceae)**

***E. bandongiae* (Müll. Hal.) A. Jaeger** — Dixon 1926: 25; Manuel 1981a: 101; Mohamed & Tan 1988: 34. Pahang, Perak, Selangor.

***E. wernerii* (Herzog) W.R. Buck.** — Dixon 1926: 25 (as *Cribrodontium wernerii*); Manuel 1981a: 101; Mohamed & Tan 1988: 34. Melaka.

***Ephemeropsis* K.I. Goebel (Family Daltoniaceae)**

***E. tjibodensis* K.I. Goebel** — Dixon 1926: 26; Tixier 1971: 339; Tixier 1980: 383; Manuel 1981a: 90; Mohamed & Mohamad 1987: 188; Mohamed & Tan 1988: 33; Damanhuri 1999: 219; Damanhuri & Ajamain 1999: 409; Damanhuri 2000: 219; Damanhuri et al. 2005a: 72; Damanhuri et al. 2005e: 240; Damanhuri et al. 2007: 91; Lee & Damanhuri 2008: 173. Johor, Kedah, Pahang, Penang, Perak, Selangor.

Eriopus Brid. (Family Daltoniaceae)

E. remotifolius Müll. Hal. ≡ *Calypstrochaeta remotifolia* (Müll. Hal.) Z. Iwats., B.C. Tan & A. Touw (fide Tan & Iwatsuki 1991: 23).

***Erpodium* (Brid.) Brid. (Family Erpodiaceae)**

***E. biseriatum* (Austin) Austin** — Manuel 1981a: 69; Mohamed & Tan 1988: 31. Peninsular Malaysia.

***Erythrodontium* Hampe (Family Entodontaceae)**

***E. julaceum* (Hook. ex Schwägr.) Paris** — Damanhuri et al. 2007: 92. Pahang.

Eucamptodon Mont. (Family Dicnemonaceae)

E. wrayi Broth., *nom. nud.* = *Acroporium rigens* (Broth. ex Dixon) Dixon var. *dicranolomoides* Dixon (fide Dixon 1924: 252).

***Eurhynchium* Bruch & Schimp. (Family Brachytheciaceae)**

E. celebicum (Sande Lac.) E.B. Bartram ≡ *Rhynchostegium celebicum* (Sande Lac.) A. Jaeger (see Tan & Iwatsuki 1991: 23).

E. muelleri (A. Jaeger) E.B. Bartram ≡ *Platyhypnidium muelleri* (A. Jaeger) M. Fleisch. (see Ignatov et al. 1999: 60).

***E. vagans* (A. Jaeger) E.B. Bartram** — Hedenäs 1994: 372. Pahang.

Exodictyon Cardot (Family Calymperaceae)

E. blumii (Nees ex Hampe) M. Fleisch. ≡ *Exostratum blumii* (Nees ex Hampe) L.T. Ellis (fide Ellis 1985: 25).

E. sullivantii (Dozy & Molk.) M. Fleisch. ≡ *Exostratum sullivantii* (Dozy & Molk.) L.T. Ellis (fide Ellis 1985: 29).

***Exostratum* L.T. Ellis (Family Calymperaceae)**

***E. asperum* (Mitt.) L.T. Ellis** — Damanhuri et al. 2007: 90. Pahang.

***E. blumii* (Nees ex Hampe) L.T. Ellis** — Dixon 1926: 9 (as *Exodictyon blumii*); Johnson 1964: 340 (as *Exodictyon blumii*); Tixier 1971: 336 (as *Exodictyon blumii*); Wee 1979: 57 (as *Exodictyon blumii*); Johnson 1980: 46 (as *Exodictyon blumii*); Manuel 1981a: 46 (as *Exodictyon blumii*); Ellis 1985: 29; Mohamed & Tan 1988: 28 (as *Exodictyon blumii*); Wolseley et al. 1996: 80; Damanhuri 1999: 216; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 75; Damanhuri 2000: 216; Maideen & Damanhuri 2000: 109; Damanhuri & Maideen 2001b: 209; Damanhuri & Nizam 2001: 213; Ho & Tan 2002: 72; Damanhuri et al. 2004: 255; Damanhuri et al. 2005a: 67; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 271; Damanhuri et al. 2005e: 236; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 81; Mohamed et al. 2005: 251; Yong & Damanhuri 2005: 87; Damanhuri et al. 2006: 160; Yong et al. 2006: 111; Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 169; Mohamed et al. 2009: 372; Suleiman et al. 2010: 61. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore.

***E. sullivantii* (Dozy & Molk.) L.T. Ellis** — Johnson 1964: 340 (as *Exodictyon sullivantii*); Johnson 1980: 46 (as *Exodictyon sullivantii*); Ellis 1985: 31; Mohamed & Tan 1988: 28 (as *Exodictyon sullivantii*). Perak.

***Fissidens* Hedw. (Family Fissidentaceae)**

F. amblyotis Dixon = *F. laxus* Sull. & Lesq. (fide Iwatsuki & Mohamed 1987: 350).

F. areolatus Griff. = *F. polypodioides* Hedw. (see Tan & Choy 2002: 48).

F. autoicous Thér. & Dixon — Tan & Choy 2002: 46. Singapore.

F. benitotanii Z. Iwats., K.T. Yong & Tad. Suzuki — Iwatsuki et al. 2009: 49. Perak. Endemic.

F. bogoriensis M. Fleisch. — Iwatsuki & Mohamed 1987: 342; Mohamed & Tan 1988: 27; Damanhuri & Maideen 2001b: 207; Yong et al. 2002: 242; Tan & Ho 2008: 126. Pahang, Perlis, Singapore.

F. brevilingulatus E.B. Bartram = *F. punctulatus* Sande Lac. (fide Iwatsuki & Suzuki 1996: 155).

F. bryoides Hedw. var. *ramosissimus* Thér. — Iwatsuki & Mohamed 1987: 342; Mohamed & Tan 1988: 27. Pahang.

F. ceylonensis Dozy & Molk. — Dixon 1926: 9 (as *F. siamensis*, see Note 17); Fröhlich 1953: 67; Noguchi 1973: 294; Tixier 1974: 16; Wee 1979: 56; Johnson 1980: 67; Manuel 1980b: 38 (as *F. elegans*, see Note 16); Manuel 1981a: 54; Tixier 1982: 83; Iwatsuki & Mohamed 1987: 346, 347; Mohamed 1987a: 54, 55 (as *F. intromarginatulus*); Mohamed & Mohamad 1987: 186; Mohamed & Tan 1988: 27; Mohamad & Gidiman 1990: 148; Damanhuri 1999: 214; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 75; Damanhuri 2000: 214; Maideen & Damanhuri 2000: 108; Damanhuri & Maideen 2001a: 26; Damanhuri & Maideen 2001b: 207; Damanhuri & Nizam 2001: 211; Tan & Choy 2002: 47; Yong et al. 2002: 242; Damanhuri et al. 2004: 252; Damanhuri et al. 2005a: 63; Damanhuri et al. 2005d: 267; Damanhuri et al. 2005e: 232; Mohamed & Yong 2005a: 115; Mohamed et al. 2005: 249; Yong & Damanhuri 2005: 82; Yong et al. 2006: 114; Damanhuri et al. 2007: 88; Lee & Damanhuri 2008: 166; Mohamed et al. 2009: 373. Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Singapore.

F. crassinervis Sande Lac. var. *crassinervis* — Dixon 1926: 9; Holttum 1927: 89; Wee 1979: 56; Johnson 1980: 68; Manuel 1980b: 38; Manuel 1981a: 34; Iwatsuki & Mohamed 1987: 351; Mohamed 1987a: 55; Mohamed 1987b: 656; Mohamed & Mohamad 1987: 186; Mohamed & Tan 1988: 27; Mohamad & Gidiman 1990: 148; Wolseley et al. 1996: 80; Damanhuri 1999: 214; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 75; Maideen & Damanhuri 2000: 108; Damanhuri & Maideen 2001a: 26; Ho & Tan 2002: 72; Tan & Choy 2002: 47; Yong et al. 2002: 243; Damanhuri et al. 2004: 252; Damanhuri et al. 2005a: 63; Damanhuri et al. 2005d: 267; Damanhuri et al. 2005e: 232; Mohamed & Yong 2005b: 80; Mohamed et al. 2005: 249; Damanhuri et al. 2006: 164; Yong et al. 2006: 114; Damanhuri et al. 2007: 88; Lee & Damanhuri 2008: 166; Mohamed et al. 2009: 373. Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

F. crassinervis Sande Lac. var. *laxus* (Sull. & Lesq.) A. Eddy = *F. pellucidus* Hornsch. (fide Bruggeman-Nannenga & Pursell 1995: 52).

***F. crenulatus* Mitt. var. *elmeri* (Broth.) Z. Iwats. & Tad. Suzuki** — Manuel 1980b: 38 (as *F. elmeri*); Manuel 1981a: 34 (as *F. elmeri*); Iwatsuki & Mohamed 1987: 343; Mohamed & Tan 1988: 27; Tan & Mohamed 1999: 75; Damanhuri 2000: 214; Maideen & Damanhuri 2000: 108; Tan & Choy 2002: 47; Damanhuri et al. 2005a: 63; Damanhuri et al. 2005d: 267; Damanhuri et al. 2005e: 233; Damanhuri et al. 2007: 88; Mohamed et al. 2009: 373. Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor, Singapore.

F. crispulus* Brid. var. *crispulus — Möller 1919: 316 (as *F. zippelianus*); Dixon 1926: 10 (as *F. asplenoides*, see Note 15, and as *F. zippelianus*); Holttum 1927: 90 (as *F. zippelianus*); Fröhlich 1953: 68 (as *F. sylvaticus*); Noguchi 1973: 294 (as *F. sylvaticus*); Wee 1979: 56 (as *F. sylvaticus*); Johnson 1980: 67 (as *F. sylvaticus*); Manuel 1980b: 38 (as *F. zippelianus*); Manuel 1981a: 34 (as *F. zippelianus*); Tixier 1982: 83 (as *F. sylvaticus*); Iwatsuki & Mohamed 1987: 353 (as *F. zippelianus*); Mohamed 1987a: 55 (as *F. zippelianus*); Mohamed & Mohamad 1987: 186 (as *F. zippelianus*); Mohamed & Tan 1988: 27 (as *F. zippelianus*); Damanhuri 1999: 214 (as *F. zippelianus*); Damanhuri & Ajamain 1999: 410 (as *F. zippelianus*); Tan & Mohamed 1999: 75 (as *F. zippelianus*); Damanhuri 2000: 214 (as *F. zippelianus*); Maideen & Damanhuri 2000: 108 (as *F. zippelianus*); Damanhuri & Maideen 2001b: 207 (as *F. zippelianus*); Ho & Tan 2002: 72; Tan & Choy 2002: 47; Yong et al. 2002: 243 (as *F. zippelianus*); Damanhuri et al. 2005a: 64 (as *F. zippelianus*); Damanhuri et al. 2005d: 267; Damanhuri et al. 2005e: 233; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 80; Mohamed et al. 2005: 249; Yong & Damanhuri 2005: 82; Damanhuri et al. 2006: 164; Yong et al. 2006: 114 (as *F. zippelianus*); Damanhuri et al. 2007: 88; Lee & Damanhuri 2008: 166; Mohamed et al. 2009: 373; Lim et al. 2010: 52; Suleiman et al. 2010: 59. Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

***F. crispulus* Brid. var. *robinsonii* (Broth.) Z. Iwats. & Z.H. Li** — Iwatsuki & Mohamed 1987: 354 (as *F. robinsonii*); Mohamed & Tan 1988: 27 (as *F. robinsonii*); Tan & Mohamed 1999: 75 (as *F. zippelianus* var. *robinsonii*); Damanhuri & Maideen 2001b: 208 (as *F. zippelianus* var. *robinsonii*); Tan & Choy 2002: 47; Yong et al. 2002: 243 (as *F. zippelianus* var. *robinsonii*); Damanhuri et al. 2005e: 233; Mohamed & Yong 2005b: 115; Mohamed et al. 2005: 249; Damanhuri et al. 2007: 88; Mohamed et al. 2009: 373. Kedah, Negeri Sembilan, Pahang, Perlis, Singapore.

F. elmeri Broth. ≡ *F. crenulatus* Mitt. var. *elmeri* (Broth.) Z. Iwats. & Tad. Suzuki (fide Iwatsuki & Suzuki 1982: 386; Li & Iwatsuki 2001: 24).

***F. firmus* Mitt.** — Iwatsuki & Mohamed 1987: 350; Mohamed & Tan 1988: 27; Yong et al. 2006: 114. Kedah, Pahang.

***F. flaccidus* Mitt.** — Iwatsuki & Mohamed 1987: 342 (as *F. splachnobryoides*); Mohamed & Tan 1988: 27 (as *F. splachnobryoides*); Damanhuri & Maideen 2001b: 207 (as *F. splachnobryoides*); Tan & Choy 2002: 47; Yong et al. 2002: 243 (as *F. splachnobryoides*). Kedah, Perlis, Singapore.

F. geminiflorus* Dozy & Molk. var. *geminiflorus — Iwatsuki & Mohamed 1987: 359; Mohamed & Tan 1988: 27. Selangor.

F. geminiflorus Dozy & Molk. var. *nagasakius* (Besch.) Z. Iwats. = *F. geminiflorus* Dozy & Molk. var. *geminiflorus* (see Norris & Koponen 1987: 188).

***F. guangdongensis* Z. Iwats. & Z. H. Li** — Damanhuri & Maideen 2001a: 26; Ho & Tan 2002: 72; Tan & Choy 2002: 47; Damanhuri et al. 2004: 252; Damanhuri et al. 2005a: 63; Damanhuri et al. 2005d: 267; Damanhuri et al. 2005e: 233; Mohamed & Yong 2005b: 80; Damanhuri et al. 2007: 88; Lee & Damanhuri 2008: 167. Johor, Kedah, Kelantan, Pahang, Selangor, Singapore.

***F. gymnogynus* Besch.** — Tan & Choy 2002: 48. Singapore.

***F. hollianus* Dozy & Molk.** — Möller 1919: 315; Dixon 1926: 9; Manuel 1980b: 38 (as *F. elegans*, see Note 16); Manuel 1981a: 34 (as *F. elegans* & *F. hollianus*); Iwatsuki & Mohamed 1987: 345; Mohamed 1987a: 55; Mohamed 1987b: 656; Mohamed & Mohamad 1987: 186; Mohamed & Tan 1988: 27; Wolseley et al. 1996: 80; Damanhuri 1999: 214; Damanhuri & Ajamain 1999: 409; Damanhuri 2000: 214; Maideen & Damanhuri 2000: 108; Damanhuri & Maideen 2001b: 207; Damanhuri & Nizam 2001: 211; Yong et al. 2002: 243; Damanhuri et al. 2004: 252; Damanhuri et al. 2005a: 63; Damanhuri et al. 2005d: 267; Damanhuri et al. 2005e: 233; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 80; Mohamed et al. 2005: 249; Yong & Damanhuri 2005: 83; Damanhuri et al. 2006: 164; Yong et al. 2006: 114; Damanhuri et al. 2007: 88; Lee & Damanhuri 2008: 167; Mohamed et al. 2008: 45; Mohamed et al. 2009: 373. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu.

***F. hyalinus* Hook. & Wilson** — Iwatsuki & Mohamed 1987: 341; Mohamed & Tan 1988: 27; Mohamed et al. 2005: 249. Kedah, Selangor.

F. intromarginatulus E.B. Bartram = *F. ceylonensis* Dozy & Molk. (fide Iwatsuki & Mohamed 1987: 345).

***F. javanicus* Dozy & Molk.** — Dixon 1926: 9 (as *F. javanicus* var. *integrifolius*); Manuel 1980b: 38; Manuel 1981a: 34; Iwatsuki & Mohamed 1987: 356; Mohamed & Tan 1988: 27; Damanhuri 1999: 214; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 75; Damanhuri 2000: 214; Maideen & Damanhuri 2000: 108; Damanhuri & Maideen 2001b: 207; Damanhuri & Nizam 2001: 211; Yong et al. 2002: 243; Damanhuri et al. 2005a: 63; Damanhuri et al. 2005d: 267; Damanhuri et al. 2005e: 233; Mohamed &

Yong 2005a: 115; Mohamed & Yong 2005b: 80; Mohamed et al. 2005: 249; Damanhuri et al. 2006: 164; Yong et al. 2006: 114; Damanhuri et al. 2007: 88; Lee & Damanhuri 2008: 167; Mohamed et al. 2009: 373; Suleiman et al. 2010: 59. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu.

F. javanicus Dozy & Molk. var. *integrifolius* Dixon, *nom. nud.* = *F. javanicus* Dozy & Molk. (fide Iwatsuki & Mohamed 1987: 356).

F. laxus Sull. & Lesq. var. *laxus* = *F. pellucidus* Hornsch. (see Tan & Choy 2002: 48).

F. laxus Sull. & Lesq. var. *javensis* (M. Fleisch.) B.C. Tan & Mohamed = *F. pellucidus* Hornsch. (see Tan & Choy 2002: 48).

F. leptopelma Dixon = *F. subangustus* M. Fleisch. (fide Li & Iwatsuki 2001: 59).

F. mangarevensis Mont. = *F. oblongifolius* Hook. f. & Wilson (see Tan & Choy 2002: 48).

F. mittenii Paris var. *javensis* M. Fleisch. = *F. laxus* Sull. & Lesq. var. *javensis* (M. Fleisch.) B.C. Tan & Mohamed (fide Mohamed & Tan 1988: 27) = *F. pellucidus* Hornsch. (see Tan & Choy 2002: 48).

F. mittenii Paris var. *mittenii* = *F. pellucidus* Hornsch. (see Tan & Choy 2002: 48).

***F. nobilis* Griff.** — Dixon 1926: 10; Manuel 1981a: 34, Iwatsuki & Mohamed 1987: 357; Mohamed & Tan 1988: 27; Tan & Mohamed 1999: 75; Damanhuri et al. 2005d: 268; Damanhuri et al. 2005e: 233; Mohamed & Yong 2005b: 80; Suleiman et al. 2010: 59. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak.

***F. oblongifolius* Hook.f. & Wilson** — Iwatsuki & Mohamed 1987: 356 (as *F. mangarevensis*); Mohamed 1987b: 656 (as *F. mangarevensis*); Mohamed & Tan 1988: 27 (as *F. mangarevensis*); Damanhuri & Ajamain 1999: 409 (as *F. mangarevensis*); Damanhuri & Maideen 2001b: 207 (as *F. mangarevensis*); Tan & Choy 2002: 48; Damanhuri et al. 2005a: 63 (as *F. mangarevensis*); Mohamed & Yong 2005a: 115; Mohamed et al. 2005: 249; Damanhuri et al. 2007: 88 (as *F. mangarevensis*). Johor, Kedah, Pahang, Penang, Perlis, Selangor, Singapore.

***F. pallidinervis* Mitt.** — Tan & Choy 2002: 47. Singapore.

***F. pallidus* Hook. f. & Wilson** — Ho & Tan 2002: 72; Tan & Choy 2002: 47. Johor, Singapore.

F. papillosus Sande Lac. = *F. serratus* Müll. Hal.? The synonymy of these two species was questioned in Tan & Choy (2002: 50).

***F. pellucidus* Hornsch.** — Fleischer 1900–02: 40 (as *F. mittenii* var. *javensis*); Dixon 1924: 229 (as *F. amblyotis*); Dixon 1926: 10 (as *F. amblyotis*, *F. mittenii* var. *mittenii*); Holttum 1927: 89 (as *F. mittenii* var. *mittenii*); Wee 1979: 56 (as *F. mittenii* var. *mittenii*); Johnson 1980: 68 (as *F. mittenii* var. *mittenii*); Manuel 1980b: 38 (as *F. laxus*); Manuel 1981a: 34 (as *F. laxus*, *F. mittenii* var. *mittenii*); Tixier 1982: 83 (as *F. mittenii* var. *mittenii*); Iwatsuki & Mohamed 1987: 350 (as *F. laxus*); Mohamed 1987a: 55 (as *F. laxus*); Mohamed & Mohamad 1987: 186 (as *F. laxus*); Mohamed & Tan 1988: 27 (as *F. laxus* var. *javensis*); Mohamad & Gidiman 1990: 148 (as *F. laxus*); Wolseley et al. 1996: 80 (as *F. crassinervis* var. *laxus*); Damanhuri 1999: 214 (as *F. laxus*); Damanhuri & Ajamain 1999: 409 (as *F. crassinervis* var. *laxus*); Damanhuri 2000: 214 (as *F. crassinervis* var. *laxus*); Maideen & Damanhuri 2000: 108 (as *F. crassinervis* var. *laxus*); Damanhuri & Maideen 2001a: 26 (as *F. crassinervis* var. *laxus*); Damanhuri & Maideen 2001b: 207 (as *F. crassinervis* var. *laxus*); Ho & Tan 2002: 72; Tan & Choy 2002: 48; Yong et al. 2002: 243 (as *F. crassinervis* var. *laxus*); Damanhuri et al. 2004: 252 (as *F. crassinervis* var. *laxus*); Damanhuri et al. 2005a: 64; Damanhuri et al. 2005e: 234; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 80; Mohamed et al. 2005: 249; Yong & Damanhuri 2005: 83; Damanhuri et al. 2006: 164; Yong et al. 2006: 114 (as *F. laxus*); Damanhuri et al. 2007: 88; Lee & Damanhuri 2008: 167; Mohamed et al. 2008: 45; Mohamed et al. 2009: 373. Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore.

***F. polyodioides* Hedw.** — Dixon 1926: 10 (as *F. areolatus*); Manuel 1981a: 34 (as *F. areolatus*); Iwatsuki & Mohamed 1987: 357 (as *F. areolatus*); Mohamed & Tan 1988: 27 (as *F. areolatus*); Tan & Choy 2002: 47; Damanhuri et al. 2005d: 268; Yong & Damanhuri 2005: 82 (as *F. areolatus*); Suleiman et al. 2010: 60. Kelantan, Pahang, Perak, Selangor, Singapore.

***F. pseudoceylonensis* B.C. Tan & M.S. Choy** — Tan & Choy 2002: 48. Pahang, Singapore.

***F. punctulatus* Sande Lac.** — Iwatsuki & Mohamed 1987: 345 (as *F. brevilingulatus*); Mohamed & Tan 1988: 27 (as *F. brevilingulatus*); Yong & Damanhuri 2005: 82 (as *F. brevilingulatus*). Pahang, Selangor.

F. robinsonii Broth. ≡ *F. crispulus* Brid. var. *robinsonii* (Broth.) Z. Iwats. & Z.H. Li (see Tan & Choy 2002: 47).

***F. serratus* Müll. Hal.** — Manuel 1981a: 34 (as *F. papillosus*); Iwatsuki & Mohamed 1987: 351 (as *F. papillosus*); Mohamed & Mohamad 1987: 186 (as *F. papillosus*); Mohamed & Tan 1988: 27 (as *F. papillosus*); Damanhuri & Maideen 2001a: 26 (as *F. papillosus*); Tan & Choy 2002: 50; Damanhuri et al. 2004: 252 (as *F. papillosus*); Mohamed & Yong 2005b: 80 (as *F. papillosus*); Yong et al. 2006: 114 (as *F. papillosus*); Mohamed et al. 2008: 45. Johor, Kedah, Pahang, Selangor, Singapore.

F. splachnobryoides Broth. = *F. flaccidus* Mitt. (see Tan & Choy 2002: 47).

***F. subangustus* M. Fleisch.** — Manuel 1981a: 34; Manuel 1981d: 220; Iwatsuki & Mohamed 1987: 354 (as *F. leptopelma*); Mohamed 1987b: 656; Mohamed & Tan 1988: 27 (as *F. leptopelma*). Kelantan, Pahang, Terengganu.

***F. subdiscolor* Dixon** — Dixon 1924: 228; Dixon 1926: 10; Manuel 1981a: 34; Iwatsuki & Mohamed 1987: 353; Mohamed & Tan 1988: 27. Negeri Sembilan. Endemic.

F. sylvaticus Griff. = *F. zippelianus* Dozy & Molk. (fide Eddy 1988: 73) = *F. crispulus* Brid. var. *crispulus* (see Tan & Choy 2002: 47).

***F. teysmannianus* Dozy & Molk.** — Iwatsuki & Mohamed 1987: 357; Mohamed & Tan 1988: 27. Pahang.

***F. wichurae* Broth. & M. Fleisch.** — Iwatsuki & Mohamed 1987: 347; Mohamed & Tan 1988: 27. Pahang.

F. zippelianus Dozy & Molk. var. *robinsonii* (Broth.) Z. Iwats. & Tad. Suzuki ≡ *F. crispulus* Brid. var. *robinsonii* (Broth.) Z. Iwats. & Z.H. Li (see Suleiman et al. 2006: 137).

F. zippelianus Dozy & Molk. var. *zippelianus* = *F. crispulus* Brid. var. *crispulus* (see Tan & Choy 2002: 47).

***F. zollingeri* Mont.** — Dixon 1926: 9; Manuel 1980b: 38; Manuel 1981a: 34; Iwatsuki & Mohamed 1987: 342; Mohamed & Tan 1988: 27; Mohamad & Gidiman 1990: 148; Tan & Mohamed 1999: 75; Damanhuri 2000: 214; Maideen & Damanhuri 2000: 108; Damanhuri & Maideen 2001a: 208; Tan & Choy 2002: 48; Yong et al. 2002: 243; Damanhuri et al. 2005d: 268; Damanhuri et al. 2005e: 234; Mohamed & Yong 2005a: 115; Mohamed et al. 2005: 249; Yong & Damanhuri 2005: 83; Yong et al. 2006: 114; Lee & Damanhuri 2008: 167; Mohamed et al. 2009: 373. Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

***Floribundaria* M. Fleisch. (Family Meteoriaceae)**

***F. floribunda* (Dozy & Molk.) M. Fleisch.** — Dixon 1926: 23; Tixier 1971: 338; Noguchi 1973: 299; Tixier 1976: 273; Johnson 1980: 88; Tixier 1980: 383; Manuel 1981a: 82; Mohamed 1987b: 657; Mohamed & Tan 1988: 32; Damanhuri & Nizam 2001: 218; Ho & Tan 2002: 72; Damanhuri et al. 2005d: 277; Damanhuri et al. 2005e: 241; Mohamed & Yong 2005b: 83; Yong & Damanhuri 2005: 94; Damanhuri et al. 2006: 167; Damanhuri et al. 2007: 92; Lee & Damanhuri 2008: 175; Mohamed et al. 2009: 375; Suleiman et al. 2010: 63. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu.

F. intermedia Thér = *F. thuidioides* M. Fleisch. (fide Noguchi 1976: 277).

***F. pseudofloribunda* M. Fleisch.** — Tixier 1971: 338; Noguchi 1973: 299; Noguchi 1976: 275; Manuel 1981a: 82; Mohamed & Tan 1988: 32; Yong & Damanhuri 2005: 94; Yong et al. 2006: 117. Kedah, Pahang, Selangor.

***F. thuidioides* M. Fleisch.** — Noguchi 1973: 299; Noguchi 1976: 277; Manuel 1981a: 82; Mohamed & Tan 1988: 32; Menzel 1992: 186 (as *F. intermedia*). Pahang.

***F. walkeri* (Renauld & Cardot) Broth.** — Hedenäs 1994: 374; Yong & Damanhuri 2005: 94. Pahang, Selangor.

***Funaria* Hedw. (Family Funariaceae)**

***F. hygrometrica* Hedw.** — Dixon 1926: 19; Manuel 1981a: 59; Mohamed & Tan 1988: 30. Pahang.

***Gammiella* Broth. (Family Pylaisiadelphaceae)**

***G. ceylonensis* (Broth.) B.C. Tan & W.R. Buck** — Tixier 1974: 18 (as *Clastobryella merrillii*); Manuel 1981a: 105 (as *C. merrillii*); Mohamed & Tan 1988: 35 (as *G. merrillii*). Kedah.

G. merrillii (Broth.) Tixier = *G. ceylonensis* (Broth.) B.C. Tan & W.R. Buck (see Tan & Jia 1999: 16).

***G. tonkinensis* (Broth. & Paris) B.C. Tan** — Mohamed et al. 2004: 47; Tan & Chang 2004: 306. Pahang.

***Garckea* Müll. Hal. (Family Ditrichaceae)**

***G. comosa* (Dozy & Molk.) Wijk & Margad.** = *G. phascoides* (Hook.) Dozy & Molk. (see Eddy 1988: 101).

G. flexuosa (Griff.) Wijk & Nork. = *G. phascoides* (Hook.) Dozy & Molk. (see Eddy 1988: 101).

***G. phascoides* (Hook.) Dozy & Molk.** — Dixon 1926: 3; Wee 1979: 56; Johnson 1980: 28; Manuel 1981a: 37; Tixier 1982: 83; Mohamed 1987a: 55; Mohamed & Tan 1988: 35; Mohamed & Yong 2005a: 115; Mohamed et al. 2005: 249; Mohamed et al. 2009: 373. Kedah, Negeri Sembilan, Singapore.

***Garovaglia* Endl. (Family Pterobryaceae)**

G. angustifolia* Mitt. var. *angustifolia — Manuel 1981a: 79; Mohamed & Tan 1988: 32. Peninsular Malaysia.

***G. angustifolia* Mitt. var. *bogoriensis* (M. Fleisch.) During fo. *bogorensis* (M. Fleisch.) During** — Dixon 1926: 23 (as *G. polythrix*); During 1977: 213; Mohamed & Tan 1988: 32. Penang, Perak.

G. aristata Bosch & Sande Lac. = *G. elegans* (Dozy & Molk.) Bosch & Sande Lac. var. *elegans* fo. *formosa* During (fide During 1977: 163).

***G. compressa* Mitt.** — Tan & Mohamed 1990: 355; Damanhuri 1999: 218; Damanhuri & Ajamain 1999: 410; Damanhuri et al. 2004: 259; Damanhuri et al. 2005a: 71; Mohamed

& Yong 2005b: 83; Lee & Damanhuri 2008: 174; Mohamed et al. 2009: 376. Johor, Negeri Sembilan, Pahang, Selangor.

G. densifolia Thwaites & Mitt. = *G. powelli* Mitt. (fide Hyvönen 1989a: 28).

G. elegans* (Dozy & Molk.) Bosch & Sande Lac. var. *elegans* fo. *elegans — Herzog 1919: 296 (as *Endotrichella elegans*); Dixon 1926: 23 (as *E. elegans*); Tixier 1971: 338 (as *E. elegans*); Noguchi 1973: 298 (as *E. elegans*); Johnson 1980: 84; Tixier 1980: 382; Manuel 1981a: 79; Mohamed 1987b: 657; Mohamed & Tan 1988: 35; Damanhuri 1999: 218; Damanhuri & Nizam 2001: 217; Damanhuri et al. 2005d: 276; Yong & Damanhuri 2005: 92; Damanhuri et al. 2006: 164; Suleiman et al. 2010: 63. Kelantan, Pahang, Perak, Selangor, Terengganu.

***G. elegans* (Dozy & Molk.) Bosch & Sande Lac. var. *elegans* fo. *formosa* During** — Dixon 1926: 23 (as *G. aristata*); During 1977: 165; Mohamed & Tan 1988: 32 (as *G. aristata*). Pahang, Selangor.

G. plicata* (Brid.) Bosch & Sande Lac. subsp. *plicata* var. *plicata — Tixier 1971: 338; Noguchi 1973: 298; During 1977: 105; Tixier 1980: 382; Manuel 1981a: 79; Mohamed 1987b: 657; Mohamed & Tan 1988: 32; Damanhuri & Nizam 2001: 217; Yong & Damanhuri 2005: 92. Pahang, Perak, Selangor.

***G. plicata* (Brid.) Bosch & Sande Lac. subsp. *plicata* var. *splendida* (M. Fleisch.) During** — During 1977: 107; Tixier 1980: 382; Mohamed & Tan 1988: 32; Suleiman et al. 2010: 63. Kelantan, Pahang.

***G. plicata* (Brid.) Bosch & Sande Lac. subsp. *undulata* (Renauld & Cardot) During** — During 1977: 111; Mohamed & Tan 1988: 32. Pahang.

G. polytrix Dixon = *G. angustifolia* Mitt. var. *bogoriensis* (M. Fleisch.) During fo. *bogoriensis* M. Fleisch. (fide During 1977: 211).

***G. powelli* Mitt. subsp. *muelleri* (Hampe) During var. *plano-marginata* (Dixon) During** — Dixon 1924: 235 (as *Endotrichella plano-marginata*); Dixon 1926: 23 (as *E. plano-marginata*); During 1977: 129, 131; Mohamed & Tan 1988: 32. Pahang, Selangor.

G. powelli* Mitt. subsp. *powelli — Noguchi 1973: 298 (as *G. densifolia*); Manuel 1981a: 79; Mohamed 1987b: 657; Mohamed & Tan 1988: 32; Yong & Damanhuri 2005: 93; Damanhuri et al. 2006: 164. Pahang, Selangor, Terengganu.

Glossadelphus M. Fleisch. (Family Symphyodontaceae)
[The genus *Glossadelphus* was synonymised with *Phyllodon* by Buck (1987)].

G. bilobatus (Dixon) Broth. ≡ *Phyllodon bilobatus* (Dixon) P. Câmara (fide Câmara 2010: 140).

G. glossoides (Bosch & Sande Lac.) M. Fleisch. ≡ *Phyllodon glossoides* (Bosch & Sande Lac.) P. Câmara (fide Câmara 2010: 140).

G. similans (Bosch & Sande Lac.) M. Fleisch. ≡ *Taxithelium similans* (Bosch & Sande Lac.) Broth. (see Brotherus 1893–1909: 1093) ≡ *Phyllodon similans* (Bosch & Sande Lac.) S. He (see He & Nguyen 2012).

G. zollingeri (Müll. Hal.) M. Fleisch. ≡ *Ectropothecium zollingeri* (Müll. Hal.) A. Jaeger (fide Tan & Iwatsuki 1993: 354).

***Glyphothecium* Hampe (Family Ptychomniaceae)**

***G. sciuroides* (Hook.) Hampe** — Hedenäs 1994: 374; Mohamed et al. 2004: 49. Pahang.

***Groutiella* Steere (Family Orthotrichaceae)**

G. goniorrhyncha (Dozy & Molk.) E.B. Bartram = *G. tomentosa* (Hornsch.) Wijk & Margad. (see Eddy 1996: 82).

***G. tomentosa* (Hornsch.) Wijk & Margad.** — Möller 1919: 318 (as *Macromitrium goniorrhynchum*); Dixon 1926: 18 (as *M. goniorrhynchum*); Holttum 1927: 91 (as *G. goniorrhyncha*); Tixier 1971: 337 (as *G. goniorrhyncha*); Johnson 1972: 19 (as *G. goniorrhyncha*); Tixier 1974: 18 (as *G. goniorrhyncha*); Wee 1979: 60 (as *G. goniorrhyncha*); Manuel 1981a: 70 (as *G. goniorrhyncha*); Mohamed & Tan 1988: 31 (as *G. goniorrhyncha*); Damanhuri & Maideen 2001b: 211; Damanhuri & Nizam 2001: 216; Mohamed & Yong 2005a: 115; Mohamed et al. 2005: 252; Yong & Damanhuri 2005: 92; Yong et al. 2006: 117; Lee & Damanhuri 2008: 172. Kedah, Pahang, Perlis, Selangor, Singapore.

***Gymnostomiella* M. Flesich. (Family Pottiaceae)**

***G. vernicosa* (Hook. ex Harv.) M. Fleisch.** — Möller 1919: 317; Dixon 1926: 18; Wee 1979: 59; Manuel 1981a: 55; Mohamed 1987b: 656; Mohamed & Tan 1988: 30; Arts 1998: 424. Perak, Selangor, Singapore.

***Gymnostomum* Hedw. (Family Pottiaceae)**

***G. recurvirostrum* Hedw.** — Mohamed 1987b: 656 (see also Note 18); Mohamed & Tan 1988: 30 (see also Note 18). Kelantan, Perak, Selangor, Terengganu, Singapore.

***Hageniella* Broth. (Family Pylaisiadelphaceae)**

H. nematosa (Broth. & Paris) Tixier = *Clastobryum epiphyllum* (Renauld & Cardot) B.C. Tan & A. Touw (fide Tan 1991: 93).

***Henicodium* (Müll. Hal.) Kindb. (Family Pterobryaceae)**

***H. geniculatum* (Mitt.) W.R. Buck** — Tan & Mohamed 1990: 357. Pahang.

***Himantocladium* (Mitt.) M. Fleisch. (Family Neckeraceae)**

H. arbuscula Hampe = *H. plumula* (Nees) M. Fleisch. (fide Dixon 1926: 24).

***H. cyclophyllum* (Müll. Hal.) M. Fleisch.** — Möller 1919: 321 (as *H. loriforme*); Dixon 1926: 24 (as *H. loriforme*, *H. rugulosum*); Manuel 1981a: 86 (as *H. loriforme*, *H. rugulosum*); Mohamed & Tan 1988: 33 (as *H. loriforme*, *H. rugulosum*); Enroth 1992: 86; Damanhuri & Ajamain 1999: 410 (as *H. loriforme*); Tan & Mohamed 1999: 75; Ho & Tan 2002: 72; Damanhuri et al. 2004: 259 (as *H. loriforme*); Damanhuri et al. 2005a: 71 (as *H. loriforme*); Damanhuri et al. 2005e: 246; Yong et al. 2006: 117; Damanhuri et al. 2007: 94 (as *H. loriforme*). Johor, Kedah, Pahang, Penang, Selangor, Terengganu.

H. exsertum (Hook. ex Schwägr.) M. Fleisch. ≡ *Neckeropsis exserta* (Hook. Schwägr.) Broth. (see Touw 1962: 399).

H. loriforme (Bosch & Sande Lac.) M. Fleisch. = *H. cyclophyllum* (Müll. Hal.) M. Fleisch. (fide Enroth 1992: 85).

***H. plumula* (Nees) M. Fleisch.** — Fleischer 1906–08: 892 (as *H. arbuscula*); Dixon 1924: 236 (as *Pinnatella lingulata*); Dixon 1926: 24, 25 (as *P. lingulata*); Noguchi 1973: 299; Johnson 1980: 87; Manual 1980b: 39; Manuel 1981a: 86, 87 (as *P. lingulata*); Mohamed 1987b: 658; Mohamed & Mohamad 1987: 188; Mohamed & Tan 1988: 33 (as *P. lingulata*); Enroth 1989a: 48; Damanhuri 1999: 218; Tan & Mohamed 1999: 75; Damanhuri 2000: 218; Maideen & Damanhuri 2000: 110; Damanhuri & Maideen 2001b: 212; Damanhuri & Nizam 2001: 219; Yong et al. 2002: 246; Damanhuri et al. 2005d: 281; Damanhuri et al. 2005e: 246; Mohamed & Yong 2005a: 115; Mohamed & Yong 2005b: 83; Mohamed et al. 2005: 253; Yong & Damanhuri 2005: 94; Lee & Damanhuri 2008: 179; Mohamed et al. 2009: 375; Suleiman et al. 2010: 65. Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu.

H. rugulosum (Mitt.) M. Fleisch. = *H. cyclophyllum* (Müll. Hal.) M. Fleisch. (fide Enroth 1992: 85).

***Homaliodendron* M. Fleisch. (Family Neckeraceae)**

H. exiguum (Bosch & Sande Lac.) M. Fleisch. ≡ *Circulifolium exiguum* (Bosch & Sande Lac.) S. Olsson, Enroth & D. Quandt (fide Olsson et al. 2010: 120).

***H. flabellatum* (Sm.) M. Fleisch.** — Dixon 1926: 24 (as *H. javanicum*, *H. scalpellifolium*); Tixier 1971: 339; Noguchi 1973: 300 (as *H. javanicum*, *H. squarrulosum*); Tixier 1980: 383; Manuel 1981a: 88 (as *H. javanicum*, *H. scalpellifolium*); Mohamed 1987a: 55; Mohamed & Tan 1988: 33 (as *H. javanicum*, *H. scalpellifolium*, *H. squarrulosum*); Tan & Mohamed 1999: 75; Damanhuri & Nizam 2001: 219 (as *H. squarrulosum*); Ho & Tan 2002: 72; Damanhuri et al. 2005d: 281; Mohamed & Yong 2005b: 84; Yong & Damanhuri 2005: 95; Damanhuri et al. 2006: 167; Mohamed et al. 2009: 375; Suleiman et al. 2010: 65. Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu.

H. glossophyllum (Mitt.) M. Fleisch. = *H. microdendron* (Mont.) M. Fleisch. (see Ninh 1984: 14) ≡ *Circulifolium microdendron* (Mont.) S. Olsson, Enroth & D. Quandt

***H. intermedium* Herzog** — Herzog 1919: 297; Dixon 1926: 24; Manuel 1981a: 88; Mohamed & Tan 1988: 33. Perak.

H. javanicum (Müll. Hal.) M. Fleisch. = *H. flabellatum* (Sm.) M. Fleisch. (fide Enroth 1989a: 61).

H. microdendron (Mont.) M. Fleisch. ≡ *Circulifolium microdendron* (Mont.) S. Olsson, Enroth & D. Quandt (fide Olsson et al. 2010: 120).

***H. pinnatelloides* Herzog** — Herzog 1919: 296; Dixon 1926: 24; Manuel 1981a: 88; Mohamed & Tan 1988: 33. Perak.

H. scalpellifolium (Mitt.) M. Fleisch. = *H. flabellatum* (Sm.) M. Fleisch. (fide Enroth 1989a: 61).

H. squarulosum M. Fleisch. = *H. flabellatum* (Sm.) M. Fleisch. (fide Enroth 1989a: 61).

***Hookeria* Sm. (Family Hookeriaceae)**

***H. acutifolia* Hook. & Grev.** — Suleiman et al. 2010: 62. Kelantan.

Horikawaea Nog. (Family Pterobryaceae)

H. phyllogonioides (Sull.) Nog. ≡ *Cryptogonium phyllogonioides* (Sull.) Isov. (fide Isoviita 1986: 452).

Hydrogonium (Müll. Hal.) A. Jaeger (Family Pottiaceae)

H. arcuatum (Griff.) Wijk & Margad. ≡ *Barbula arcuata* Griff. (fide Tan & Iwatsuki 1993: 357).

H. consanguineum (Thwaites & Mitt.) Hilp. = *Barbula javanica* Dozy & Molk. (fide Saito 1975: 495).

Hymenostomum R. Br. (Family Pottiaceae)

H. edentulum (Mitt.) Besch. ≡ *Weissia edentula* Mitt. (see Tan & Iwatsuki 1993: 357).

H. malayense M. Fleisch. ≡ *Weissia malayensis* (M. Fleisch.) Manuel (see Mohamed & Tan 1988: 39) = *Barbula indica* (Hook.) Spreng. (see Eddy 1990: 177).

***Hymenostylium* Brid. (Family Pottiaceae)**

***H. recurvirostrum* (Hedw.) Dixon** — Damanhuri et al. 2007: 88. Pahang.

***Hyophila* Brid. (Family Pottiaceae)**

***H. beruensis* Dixon** — Yong et al. 2002: 245; Tan & Ho 2008: 128. Perlis, Singapore.

H. commutata Broth. = *H. involuta* (Hook.) A. Jaeger (see Wee 1979: 59).

H. dozy-molkenboeri M. Fleisch. = *H. involuta* (Hook.) A. Jaeger (see Wee 1979: 59).

***H. involuta* (Hook.) A. Jaeger** — Möller 1919: 317; Dixon 1926: 17 (as *H. commutata*); Tixier 1971: 337; Wee 1979: 59; Johnson 1980: 73; Manuel 1980b: 39; Tixier 1980: 380; Manuel 1981a: 55; Tixier 1982: 85; Mohamed 1987a: 55; Mohamed 1987b: 656; Mohamed & Tan 1988: 30; Mohamad & Gidiman 1990: 149; Damanhuri 1999: 217; Damanhuri & Ajamain 1999: 410; Damanhuri 2000: 217; Damanhuri & Maideen 2001b: 210; Damanhuri & Nizam 2001: 215; Yong et al. 2002: 245; Damanhuri 2005b: 235; Damanhuri et al. 2005a: 70; Damanhuri et al. 2005d: 269; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 83; Mohamed et al. 2005: 252; Yong & Damanhuri 2005: 90; Yong et al. 2006: 118; Damanhuri et al. 2007: 88; Lee & Damanhuri 2008: 172; Mohamed et al. 2008: 45; Mohamed et al. 2009: 376; Suleiman et al. 2010: 61. Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore.

***H. javanica* (Nees & Blume) Brid.** — Möller 1919: 317; Wee 1979: 59; Johnson 1980: 72; Manuel 1981a: 55; Mohamed 1987a: 55; Mohamed & Tan 1988: 30; Damanhuri & Maideen 2001b: 210; Yong et al. 2002: 245; Damanhuri et al. 2005d: 269. Kedah, Kelantan, Penang, Perlis, Singapore.

***H. rosea* R.S. Williams** — Damanhuri & Maideen 2001b: 210; Yong et al. 2002: 245. Perlis.

***Hypnodendron* (Müll. Hal.) S.O. Lindberg ex Mitt. (Family Hypnodendraceae)**

H. arborescens (Mitt.) Lindb. ≡ *H. subspininervium* (Müll. Hal.) A. Jaeger subsp. *arborescens* (Mitt.) A. Touw. (fide Touw 1971: 237) ≡ *Dendrohypnum subspininervium* (Müll. Hal.) N.E. Bell, A.E. Newton & D Quandt subsp. *arborescens* (Mitt.) N.E. Bell, A.E. Newton & D. Quandt (fide Bell et al. 2007: 556).

H. dendroides (Brid.) A. Touw. ≡ *Mniodendron dendroides* (Brid.) Wijk & Margad. (fide Bell et al. 2007: 555).

H. diversifolium Broth. & Geh. ≡ *Touwiodendron diversifolium* (Broth. & Geh.) N.E. Bell, A.E. Newton & D. Quandt (fide Bell et al. 2007: 557).

***H. junghuhnii* (Müll. Hal.) A. Jaeger & Sauerb.** — Dixon 1926: 46; Touw 1971: 288; Tixier 1980: 381; Manuel 1981a: 66; Mohamed & Tan 1988: 31; Yong & Damanhuri 2005: 91. Pahang, Perak, Selangor.

H. reinwardtii (Schwägr.) Lindb. ex A. Jaeger & Sauerb. ≡ *Dendrohypnum reinwardtii* (Schwägr.) N.E. Bell, A.E. Newton & D. Quandt (fide Bell et al. 2007: 556).

***H. spininervium* (Hook.) A. Jaeger & Sauerb.** — Mohamed & Mohamad 1987: 188. Johor.

H. subspininervium (Müll. Hal.) A. Jaeger subsp. *arborescens* (Mitt.) A. Touw ≡ *Dendrohypnum subspininervium* (Müll. Hal.) N.E. Bell, A.E. Newton & D Quandt subsp. *arborescens* (Mitt.) N.E. Bell, A.E. Newton & D. Quandt (fide Bell et al. 2007: 556).

H. subspininervium (Müll. Hal.) A. Jaeger subsp. *subspininervium* ≡ *Dendrohypnum subspininervium* (Müll. Hal.) N.E. Bell, A.E. Newton & D Quandt subsp. *subspininervium* (fide Bell et al. 2007: 556).

H. wrayi Broth. = *H. diversifolium* Broth. & Geh. (fide Touw 1971: 295) ≡ *Touwiodendron diversifolium* (Broth. & Geh.) N.E. Bell, A.E. Newton & D. Quandt (fide Bell et al. 2007: 557).

Hypnum Hedw. (Family Hypnaceae)

H. bogoricum Bosch. & Lac. ≡ *Clastobryophilum bogoricum* (Bosch. & Sande Lac.) M. Fleisch. (fide Mohamed & Tan 1988: 39).

H. malaccanum Müll. Hal., *nom. nud.* = *Ectropothecium buitenzorgii* (Bél.) Mitt. (fide Dixon 1924: 239).

H. rigidum Reinw. & Hornsch., *nom. illeg.* ≡ *Acanthodium rigidum* Mitt. ≡ *Trismegistia rigida* (Mitt.) Broth. = *T. calderensis* (Sull.) Broth. var. *convoluta* (Bosch & Sande Lac.) K.T. Yong, B.C. Tan & B.C. Ho (see Note 34).

H. similans Bosch & Sande Lac. ≡ *Taxithelium similans* (Bosch & Sande Lac.) Broth. (fide Brotherus 1893–1909: 1093) ≡ *Glossadelphus similans* (Bosch & Sande Lac.) M. Fleisch. (fide Fleischer 1915–22: 1362) ≡ *Phyllodon similans* (Bosch & Sande Lac.) S. He (see He & Nguyen 2012).

H. subulatum Hampe ≡ *Acroporium subulatum* (Hampe) Dixon (fide Mohamed & Tan 1988: 39).

H. tavoyense Hook. ≡ *Stereophyllum tavoyense* (Hook.) A. Jaeger (fide Tan & Iwatsuki 1993: 359).

***Hypopterygium* Brid. (Family Hypopterygiaceae)**

H. aristatum Bosch & Sande Lac. = *H. flavolimbatum* Müll. Hal. (fide Kruijer 2002: 170).

***H. flavolimbatum* Müll. Hal.** — Noguchi 1973: 300 (as *H. aristatum*); Manuel 1980b: 39 (as *H. aristatum*); Manuel 1981a: 94 (as *H. aristatum*); Mohamed 1987b: 658 (as *H. aristatum*); Mohamed & Tan 1988: 34 (as *H. aristatum*); Mohamed & Robinson 1991: 37 (as *H. aristatum*); Kruijer 2002: 170; Suleiman et al. 2010: 63. Kelantan, Pahang.

H. javanicum (Hampe) A. Jaeger = *Lopidium struthiopteris* (Brid.) M. Fleisch. (fide Horikawa 1934: 607).

***H. tamarisci* (Sw.) Brid. ex Müll. Hal.** — Noguchi 1973: 300 (as *H. tenellum*); Manuel 1981a: 94 (as *H. tenellum*); Mohamed & Tan 1988: 34 (as *H. tenellum*); Mohamed & Robinson 1991: 37 (as *H. tenellum*); Tan & Mohamed 1999: 75 (as *H. tenellum*); Damanhuri 2000: 220 (as *H. tenellum*); Kruijer 2002: 215; Mohamed & Yong 2005b: 84 (as *H. tenellum*); Yong & Damanhuri 2005: 98 (as *H. tenellum*); Tan & Ho 2008: 128. Johor, Pahang, Perak, Selangor, Singapore.

H. tenellum Müll. Hal. = *H. tamarisci* (Sw.) Brid. ex Müll. Hal. (fide Kruijer 2002: 199).

***Indothuidium* A. Touw (Family Thuidiaceae)**

***I. kiasense* (R.S. Williams) A. Touw** — Touw 2001: 124. Perlis.

***Isocladiella* Dixon (Family Pylaisiadelphaceae)**

***I. surcularis* (Dixon) B.C. Tan & Mohamed** — Dixon 1924: 258 (as *Acroporium surculare*); Tixier 1980: 384 (as *Wijkia surcularis*); Tan & Mohamed 1990: 357, 358; Damanhuri 1999: 219; Damanhuri & Ajamain 1999: 410; Tan & Mohamed 1999: 75 (as *I. surculare*, see also Note 19); Damanhuri 2000: 220; Damanhuri & Nizam 2001: 221; Ho & Tan 2002: 72; Damanhuri et al. 2004: 260; Tan & Chang 2004: 306; Damanhuri et al. 2005a: 73; Damanhuri et al. 2005b: 64; Damanhuri et al. 2005d: 279; Damanhuri et al. 2005e: 244; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 85; Mohamed et al. 2005: 254; Yong & Damanhuri 2005: 99; Damanhuri et al. 2006: 170; Mohamed et al. 2009: 377; Suleiman et al. 2010: 65. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu.

***Isopterygium* Mitt. (Family Hypnaceae)**

I. albescens* (Hook.) A. Jaeger var. *albescens — Holttum 1924: 251; Dixon 1926: 32 (as *I. minutirameum*); Dixon 1926: 33; Holttum 1927: 91; Holttum 1927: 92 (as *I. minutirameum*); Tixier 1971: 341; Wee 1979: 63 (as *I. albescens* & *I. minutirameum*); Johnson 1980: 101 (as *I. minutirameum*); Johnson 1980: 102; Tixier 1980: 387; Manuel 1980b: 39 (as *I. minutirameum*); Manuel 1981a: 119 (as *I. albescens* & *I. minutirameum*); Tixier 1982: 86; Mohamed 1987b: 659 (as *I. albescens* & *I. minutirameum*); Mohamed & Tan 1988: 37 (as *I. albescens* & *I. minutirameum*); Wolseley et al. 1996: 80 (as *I. minutirameum*); Damanhuri & Maideen 2001a: 28 (as *I. albescens* & *I. minutirameum*); Damanhuri & Maideen 2001b: 214 (as *I. minutirameum*); Ho & Tan 2002: 72; Yong et al. 2002: 248 (as *I. minutirameum*); Damanhuri et al. 2004: 263 (as *I. albescens* & *I. minutirameum*); Tan & Chang 2004: 306; Damanhuri et al. 2005a: 63 (as *I. minutirameum*); Damanhuri et al. 2005c: 251 (as *I. minutirameum*); Damanhuri et al. 2005e: 242 (as *I. minutirameum*); Mohamed & Yong 2005a: 116 (as *I. minutirameum*); Mohamed et al. 2005: 254 (as *I. minutirameum*); Damanhuri et al. 2006: 165 (as *I. albescens* & *I. minutirameum*); Yong et al. 2006: 115; Damanhuri et al. 2007: 93 (as *I. minutirameum*); Lee & Damanhuri 2008: 175 (as *I. minutirameum*); Mohamed et al. 2009: 374 (as *I. albescens* & *I. minutirameum*). Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore.

***I. albescens* (Hook.) A. Jaeger var. *smallii* (Sull. & Lesq.) Z. Iwats.** — Dixon 1926: 33 (as *I. subalbescens*); Wee 1979: 63 (as *I. subalbescens*); Manuel 1981a: 119 (as *I. subalbescens*); Mohamed & Tan 1988: 37 (as *I. subalbescens*); Suleiman et al. 2010: 64. Kelantan, Peninsular Malaysia, Singapore. See also Note 20.

I. arquifolium (Bosch & Sande Lac.) A. Jaeger ≡ *Pseudotaxiphyllum arquifolium* (Bosch & Sande Lac.) Z. Iwats. (fide Iwatsuki 1987: 449).

***I. bancanum* (Sande Lac.) A. Jaeger** — Dixon 1926: 33; Tixier 1971: 341; Johnson 1980: 102; Manuel 1980b: 39; Manuel 1981a: 119; Mohamed 1987b: 659; Mohamed & Tan 1988: 37; Ho & Tan 2002: 73; Yong et al. 2002: 248; Damanhuri et al. 2005d: 277; Tan & Ho 2008: 128. Johor, Kelantan, Pahang, Penang, Perlis, Selangor, Singapore.

I. constrictum Broth. in Dixon, *nom. nud.* (see Mohamed & Tan 1988: 39).

***I. laxissimum* Cardot** — Dixon 1926: 33; Manuel 1981a: 119; Mohamed 1987b: 659; Mohamed & Tan 1988: 37. Selangor.

I. minutirameum (Müll. Hal.) A. Jaeger var. *minutirameum* = *I. albescens* (Hook.) A. Jaeger (fide Iwatsuki & Ramsay 2009: 374).

***I. minutirameum* (Müll. Hal.) A. Jaeger var. *tonkinense* Besch.** — Noguchi 1973: 303; Mohamed & Tan 1988: 37. Pahang, Selangor.

I. pohliaecarpum (Sull. & Lesq.) A. Jaeger ≡ *Pseudotaxiphyllum pohliaecarpum* (Sull. & Lesq.) Z. Iwats. (fide Iwatsuki 1987: 449).

I. subalbescens Broth. = *I. albescens* (Müll. Hal.) A. Jaeger var. *smallii* (Sull. & Lesq.) Z. Iwats. (fide Noguchi 1994: 1052).

***I. tenerum* (Sw.) Mitt.** — Yong et al. 2006: 115. Kedah.

I. textorii (Sande Lac.) Mitt. = *I. pohliaecarpum* (Sull. & Lesq.) A. Jaeger (fide Iwatsuki & Tan 1979: 202). ≡ *Pseudotaxiphyllum pohliaecarpum* (Sull. & Lesq.) Z. Iwats. (fide Iwatsuki 1987: 449).

***Leptotrichella* (Müll. Hal.) Lindb. (Family Dicranaceae)**

***L. brasiliensis* (Duby) Ochyra** — Noguchi 1973: 294 (as *Dicranella brasiliensis*); Manuel 1981a: 43; Mohamed & Tan 1988: 28; Ho & Tan 2002: 73; Mohamed & Yong 2005a: 116; Mohamed et al. 2005: 250; Mohamed et al. 2009: 373. All records, except otherwise stated, published as *Microdus brasiliensis*. Johor, Kedah, Negeri Sembilan, Pahang.

***L. macromorpha* (M. Fleisch.) Ochyra** — Dixon 1926: 3; Manuel 1981a: 43; Mohamed & Tan 1988: 28. All records published as *Microdus macromorphus*. Perak.

L. miqueliana* (Mont.) Lindb. ex Broth. var. *miqueliana — Dixon 1926: 3; Holttum 1927: 89; Fröhlich 1953: 69; Wee 1979: 57; Johnson 1980: 29; Manuel 1981a: 43; Mohamed 1987a: 55; Mohamed & Tan 1988: 28; Tan & Mohamed 1999: 75; Damanhuri et al. 2005e: 234; Damanhuri et al. 2006: 164; Yong et al. 2006: 113; Mohamed et al. 2009: 373; Suleiman et al. 2010: 60. All records published as *Microdus miquelianus* var. *miquelianus*. Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu, Singapore.

***L. miqueliana* (Mont.) Lindb. ex Broth. var. *longifolia* (Baumgartner & J. Froehl.) Ochyra** — Fröhlich 1953: 69; Mohamed & Tan 1988: 28. All records published as *Microdus miquelianus* var. *longifolius*. Singapore.

***Leucobryum* Hampe (Family Leucobryaceae)**

L. aduncum* Dozy & Molk. var. *aduncum — Dixon 1926: 7; Johnson 1964: 329; Tixier 1971: 336; Wee 1979: 57; Johnson 1980: 41; Manuel 1980b: 38; Manuel 1981a: 47; Mohamed & Tan 1988: 28; Yamaguchi 1993: 31; Wolseley et al. 1996: 80; Damanhuri 1999: 214; Damanhuri & Ajamain 1999: 410; Damanhuri 2000: 215; Damanhuri & Maideen 2001b: 208; Damanhuri & Nizam 2001: 212; Ho & Tan 2002: 73; Damanhuri et al. 2004: 253; Damanhuri et al. 2005a: 64; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 268; Damanhuri et al. 2005e: 234; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 81; Mohamed et al. 2005: 250; Yong & Damanhuri 2005: 84; Damanhuri et al. 2006: 165; Yong et al. 2006: 116; Damanhuri et al. 2007: 88; Lee & Damanhuri 2008: 167; Mohamed et al. 2009: 374. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore.

***L. aduncum* Dozy & Molk. var. *scalare* (Müll. Hal. ex M. Fleisch.) A. Eddy** — Dixon 1926: 7 (as *L. scalare*); Johnson 1964: 331 (as *L. scalare*), 333 (as *L. microleucophanoides*); Wee 1979: 57 (as *L. scalare*); Manuel 1981a: 47 (as *L. scalare*); Tixier 1982: 83 (as *L. scalare*); Mohamed 1987a: 55 (as *L. scalare*); Mohamed & Mohamad 1987: 186 (as *L. microleucophanoides*); Mohamed & Tan 1988: 28 (as *L. microleucophanoides*, *L. scalare*); Yamaguchi 1993: 33, 34; Damanhuri 1999: 214, 215 (as *L. microleucophanoides*); Tan & Mohamed 1999: 75; Damanhuri 2000: 215; Damanhuri & Nizam 2001: 212; Damanhuri et al. 2004: 253 (as *L. microleucophanoides*); Damanhuri et al. 2005d: 269 (as *L. microleucophanoides*); Mohamed & Yong 2005b: 81; Yong & Damanhuri 2005: 85 (as *L. microleucophanoides*); Damanhuri et al. 2006: 166 (as *L. microleucophanoides*); Yong et al. 2006: 116; Mohamed et al. 2009: 374 (as *L. microleucophanoides*); Suleiman et al. 2010: 60. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu, Singapore.

***L. aduncum* Dozy & Molk. var. *teysmannianum* (Dozy & Molk.) T. Yamag.** — Tan & Ho 2008: 129. Singapore.

L. arfakianum Müll. Hal. ex Geh. ≡ *L. sanctum* (Nees ex Schwägr.) Hampe var *arfakianum* (Müll. Hal. ex Geh.) A. Eddy (fide Eddy 1990: 15). Yamaguchi (1993) treated *L. arfakianum* and *L. sanctum* as distinct taxa, which is not followed in this checklist.

L. bowringii* Mitt. var. *bowringii — Holttum 1924: 251; Dixon 1926: 7; Johnson 1964: 330 (as *L. bowringii* var. *sericeum*), 340; Tixier 1971: 336; Noguchi 1973: 295; Tixier 1974: 17; Manuel 1980b: 38; Tixier 1980: 380; Manuel 1981a: 47; Tixier 1982: 83; Mohamed & Mohamad 1987: 186; Mohamed & Tan 1988: 28 (as *L. bowringii* var. *sericeum*); Yamaguchi 1993: 43; Damanhuri 1999: 215; Tan & Mohamed 1999: 75; Damanhuri & Nizam 2001: 212; Ho & Tan 2002: 73; Damanhuri et al. 2004: 253; Damanhuri et al. 2005d: 269; Damanhuri et al. 2005e: 234; Mohamed & Yong 2005b: 81; Mohamed et al. 2005: 250; Yong & Damanhuri 2005: 84; Damanhuri et al. 2006: 165; Yong et al. 2006: 116; Mohamed et al. 2009: 374; Suleiman et al. 2010: 60. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu, Singapore ? (see Tan & Ho 2008: 129).

L. bowringii Mitt. var. *sericeum* (Broth. ex Geh.) Dixon = *L. bowringii* Mitt. var. *bowringii* (fide Enroth 1989b: 532).

***L. candidum* (Brid. ex P. Beauv.) Wilson** — Johnson 1972: 18; Tixier 1974: 17; Manuel 1980b: 38; Manuel 1981a: 47; Mohamed & Tan 1988: 28; Damanhuri 1999: 215; Damanhuri et al. 2005d: 269; Damanhuri et al. 2006: 166; Damanhuri et al. 2007: 88; Lee & Damanhuri 2008: 168. Kedah, Kelantan, Pahang, Terengganu.

L. chlorophyllosum* Müll. Hal. var. *chlorophyllosum — Dixon 1926: 7; Johnson 1964: 332; Manuel 1981a: 47; Mohamed & Tan 1988: 28; Damanhuri 1999: 215; Ho & Tan 2002: 73; Damanhuri et al. 2004: 253; Damanhuri et al. 2005e: 234; Mohamed & Yong 2005a: 116; Mohamed et al. 2005: 250; Yong & Damanhuri 2005: 85; Damanhuri et al. 2006: 166; Yong et al. 2006: 116; Tan & Ho 2008: 129; Mohamed et al. 2009: 374; Suleiman et al. 2010: 61. Johor, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu, Singapore.

***L. chlorophyllosum* Müll. Hal. var. *minor* (M. Fleisch.) M. Fleisch.** — Dixon 1926: 7; Mohamed & Tan 1988: 28. Penang.

L. cyathifolium Dixon = *L. javense* (Brid.) Mitt. (fide Eddy 1990: 6).

***L. javense* (Brid.) Mitt.** — Harvey 1840: 6 (as *Dicranum megalophyllum*); Holttum 1924: 251; Dixon 1926: 7; Johnson 1964: 330 (as *L. cyathifolium*), 332; Tixier 1971: 336; Tixier 1974: 17; Wee 1979: 57; Johnson 1980: 40; Tixier 1980: 380; Manuel 1981a: 47; Tixier 1982: 83; Mohamed 1987a: 55; Mohamed & Tan 1988: 28 (as *L. cyathifolium*); Yamaguchi 1993: 27; Damanhuri 1999: 215; Tan & Mohamed 1999: 75; Damanhuri 2000: 215; Damanhuri & Nizam 2001: 212; Ho & Tan 2002: 73; Damanhuri et al. 2004: 253; Damanhuri et al. 2005d: 269; Mohamed & Yong 2005b: 81; Mohamed et al. 2005: 250; Yong & Damanhuri 2005: 85; Damanhuri et al. 2006: 166; Yong et al. 2006: 116; Damanhuri et al. 2007: 88; Mohamed et al. 2009: 374; Suleiman et al. 2010: 61. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu, Singapore.

***L. juniperoideum* (Brid.) Müll. Hal.** — Johnson 1964: 328 (as *L. neilgherrense*); Mohamed & Tan 1988: 28 (as *L. neilgherrense*); Damanhuri et al. 2006: 166. Kedah, Terengganu.

L. microleucophanoides Dixon ex A. Johnson. = *L. aduncum* Dozy & Molk. var. *scalare* (Müll. Hal. ex M. Fleisch.) A. Eddy (fide Yamaguchi 1993: 33).

L. neilgherrense Müll. Hal. = *L. juniperoideum* (Brid.) Müll. Hal. (fide Yamaguchi 1993: 37).

L. pulchrum Broth. = *L. sumatranum* Broth. ex M. Fleisch. (fide Yamaguchi 1993: 43).

***L. sanctum* (Nees ex Schwägr.) Hampe var. *arfakianum* (Müll. Hal. ex Geh.) A. Eddy** — Johnson 1964: 328 (as *L. subsanctum*); Mohamed & Tan 1988: 28 (as *L. arfakianum*, *L. subsanctum*); Tan & Mohamed 1999: 75 (as *L. arfakianum*); Ho & Tan 2002: 73 (as *L. arfakianum*); Mohamed & Yong 2005b: 81; Damanhuri et al. 2006: 165 (as *L. arfakianum*); Yong et al. 2006: 116 (as *L. arfakianum*); Mohamed et al. 2009: 374; Suleiman et al. 2010: 60 (as *L. arfakianum*). Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Terengganu.

L. sanctum* (Nees ex Schwägr.) Hampe var. *sanctum — Dixon 1926: 7; Holttum 1927: 89; Johnson 1964: 328; Wee 1979: 57; Johnson 1980: 40; Manuel 1981a: 47; Mohamed 1987a: 55; Mohamed & Mohamad 1987: 186; Mohamed & Tan 1988: 28; Yamaguchi 1993: 45; Wolseley et al. 1996: 80; Damanhuri 1999: 215; Damanhuri & Ajamain 1999: 410; Tan & Mohamed 1999: 75; Damanhuri & Maideen 2001a: 26; Ho & Tan 2002: 73; Damanhuri et al. 2004: 253; Damanhuri et al. 2005a: 64; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 269; Mohamed et al. 2005: 250; Yong & Damanhuri 2005: 85; Damanhuri et al. 2006: 166; Yong et al. 2006: 116; Damanhuri et al. 2007: 88; Lee & Damanhuri 2008: 168; Mohamed et al. 2009: 374; Lim et al. 2010: 52. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Selangor, Terengganu, Singapore.

***L. scabrum* Sande Lac.** — Johnson 1964: 329; Noguchi 1973: 295; Manuel 1981a: 47; Mohamed & Tan 1988: 28; Damanhuri 1999: 215; Damanhuri et al. 2005d: 269; Yong et al. 2006: 116. Kedah, Kelantan, Pahang, Perak.

L. scalare Müll. Hal. ex M. Fleisch. ≡ *L. aduncum* Dozy & Molk. var. *scalare* (Müll. Hal. ex M. Fleisch.) A. Eddy (fide Yamaguchi 1993: 33).

L. sericeum Broth. ex Geh. = *L. bowringii* Mitt. (fide Enroth 1989b: 532).

L. stellatum Dixon, *nom. nud.* = *Cladopodanthus speciosus* (Dozy & Molk.) M. Fleisch. (fide Dixon 1926: 7).

L. subsanctum Broth. = *L. arfakianum* Müll. Hal. ex Geh. (fide Yamaguchi 1993: 33) ≡ *L. sanctum* (Nees ex Schwägr.) Hampe var. *arfakianum* (Müll. Hal. ex Geh.) A. Eddy (fide Eddy 1990: 15).

***L. sumatranum* Broth. ex M. Fleisch.** — Dixon 1926: 7; Johnson 1964: 332 (as *L. pulchrum*); Noguchi 1973: 295 (as *L. pulchrum*); Manuel 1981a: 47 (as *L. pulchrum*); Mohamed & Mohamad 1987: 186 (as *L. pulchrum*); Mohamed & Tan 1988: 28; Enroth 1989b: 536 (as *L. pulchrum*); Yamaguchi 1993: 43 (as *L. pulchrum*); Damanhuri et al. 2005d: 269; Yong & Damanhuri 2005: 85; Damanhuri et al. 2006: 166; Suleiman et al. 2010: 61. Johor, Kelantan, Pahang, Selangor, Terengganu.

***Leucoloma* Brid. (Family Dicranaceae)**

***L. amoene-virens* Mitt.** — Tan & Mohamed 1990: 358; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 75; Ho & Tan 2002: 73; Damanhuri et al. 2005a: 64; Damanhuri et al. 2005e: 234; Mohamed & Yong 2005b: 80; Mohamed et al. 2005: 250 (see also Note 21); Yong & Damanhuri 2005: 84; Damanhuri et al. 2006: 163; Yong et al. 2006: 113. Johor, Kedah, Kelantan, Pahang, Selangor, Terengganu, Singapore? (see Tan & Ho 2008: 138).

L. malayanum Dixon, *nom. nud.* (in Dixon 1926: 5).

L. molle (Müll. Hal.) Mitt. var. *longipilum* M. Fleisch. = *L. molle* (Müll. Hal.) Mitt. var. *molle* (fide Norris & Koponen 1990: 48).

L. molle* (Müll. Hal.) Mitt. var. *molle — Herzog 1919: 295 (as *L. molle* var. *longipilum*); Dixon 1926: 5 (as *L. molle* var. *longipilum*); Tixier 1971: 336; Noguchi 1973: 294; Tixier 1974: 17; Johnson 1980: 34; Manuel 1981a: 41; Mohamed 1987a: 55; Mohamed & Mohamad 1987: 186; Mohamed & Tan 1988: 28 (as *L. molle* var. *longipilum*); Damanhuri 1999: 214; Tan & Mohamed 1999: 75; Damanhuri & Nizam 2001: 212; Damanhuri et al. 2005d: 268; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 81; Mohamed et al. 2005: 250, see Note 21; Yong & Damanhuri 2005: 84; Damanhuri et al. 2006: 163; Yong et al. 2006: 113; Mohamed et al. 2009: 372; Suleiman et al. 2010: 60. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu.

L. pallidum Dixon, *nom. nud.* (in Dixon 1926: 5).

***L. walkeri* Broth.** — Dixon 1926: 5; Manuel 1981a: 41; Mohamed 1987a: 55; Mohamed & Tan 1988: 28; Damanhuri & Maideen 2001b: 208; Yong et al. 2002: 243; Damanhuri et al. 2005d: 268; Mohamed & Yong 2005b: 81; Mohamed et al. 2005: 250, see note 21; Damanhuri et al. 2006: 163; Mohamed et al. 2008: 45; Mohamed et al. 2009: 372. Johor, Kedah, Kelantan, Negeri Sembilan, Perlis, Terengganu.

***Leucomium* Mitt. (Family Leucomiaceae)**

L. aneurodictyon (Müll. Hal.) A. Jaeger = *L. strumosum* (Hornsch.) Mitt. (see Allen 1987: 670).

***L. strumosum* (Hornsch.) Mitt.** — Dixon 1926: 36 (as *L. aneurodictyon*); Tixier 1980: 383 (as *L. aneurodictyon*); Manuel 1981a: 119 (as *L. aneurodictyon*); Allen 1987: 673;

Mohamed & Tan 1988: 37; Tan & Mohamed 1999: 75; Damanhuri et al. 2005e: 240; Mohamed & Yong 2005b: 87 (as *L. aneurodictyon*). Johor, Kedah, Pahang.

***Leucophanes* Brid. (Family Calymperaceae)**

L. aciculare Müll. Hal., *nom. nud.* = *L. candidum* (Schwägr.) Lindb. (see Wee 1979: 57).

L. albescens Müll. Hal. = *L. glaucum* (Schwägr.) Mitt. (fide Salazar-Allen 1993: 101).

***L. angustifolium* Renault & Cardot** — Salazar-Allen 1993: 112; Damanhuri 1999: 216 (as *L. massartii*); Damanhuri & Ajamain 1999: 409 (as *L. massartii*); Tan & Mohamed 1999: 75; Damanhuri 2000: 216 (as *L. massartii*); Damanhuri & Maideen 2001b: 210 (as *L. massartii*); Damanhuri & Nizam 2001: 213 (as *L. massartii*); Damanhuri et al. 2005a: 67; Damanhuri et al. 2005d: 271; Damanhuri et al. 2005e: 236; Mohamed & Yong 2005b: 82; Yong & Damanhuri 2005: 87; Damanhuri et al. 2006: 160; Yong et al. 2006: 111; Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 169; Mohamed et al. 2009: 372; Suleiman et al. 2010: 61. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu.

L. candidum* (Schwägr.) Lindb. var. *candidum — Harvey 1840: 4 (as *Didymodon sphagnoides*); Dixon 1926: 8 (as *L. aciculare*, *L. densifolium*, *L. pugioniforme*); Johnson 1964: 335 (as *L. candidum* var. *densifolium*); Wee 1979: 57 (as *L. candidum* var. *densifolium*); Johnson 1980: 42; Manuel 1981a: 45; Tixier 1982: 83; Mohamed 1987a: 55; Mohamed 1987b: 656; Mohamed & Tan 1988: 28 & 29 (as *L. candidum* var. *densifolium*); Mohamad & Gidiman 1990: 148; Salazar-Allen 1993: 114; Damanhuri 1999: 216; Maideen & Damanhuri 2000: 109; Damanhuri et al. 2005d: 271; Yong et al. 2006: 111; Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 170. Johor, Kedah, Kelantan, Melaka, Pahang, Penang, Perak, Selangor, Terengganu, Singapore.

L. candidum (Schwägr.) Lindb. var. *densifolium* (Mitt.) Dixon = *L. candidum* (Schwägr.) Lindb. var. *candidum* (fide Salazar-Allen 1993: 96).

L. densifolium Mitt. = *L. candidum* (Schwägr.) Lindb. (fide Salazar-Allen 1993: 96).

***L. glaucum* (Schwägr.) Mitt.** — Fleischer 1900–02: 181; Möller 1919: 315 (as *L. albescens*); Dixon 1926: 8 (as *L. albescens*); Holttum 1927: 89 (as *L. albescens*); Johnson 1964: 336 (as *L. albescens*); Wee 1979: 57 (as *L. albescens*); Johnson 1980: 42 (as *L. albescens*); Manuel 1981a: 45 (as *L. albescens*); Mohamed & Mohamad 1987: 186 (as *L. albescens*); Mohamed & Tan 1988: 28 (as *L. albescens*); Enroth 1989b: 547; Salazar-Allen 1993: 117; Damanhuri 1999: 216; Tan & Mohamed 1999: 75; Damanhuri 2000: 216; Damanhuri & Maideen 2001b: 209; Ho & Tan 2002: 73 (as *L. albescens*); Yong et al. 2002: 245; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005c: 251; Damanhuri et al. 2005d: 271; Mohamed et al. 2005: 251; Yong et al. 2006: 111; Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 170. Johor, Kedah, Kelantan, Pahang, Penang, Perak, Perlis, Terengganu, Singapore.

L. massartii Renault & Cardot = *L. angustifolium* Renault & Cardot (fide Salazar-Allen 1993: 70).

***L. octoblepharioides* Brid.** — Möller 1919: 315; Dixon 1926: 8; Holttum 1927: 89; Johnson 1964: 336; Johnson 1972: 18; Noguchi 1973: 295; Wee 1979: 57; Johnson 1980: 41; Manuel 1980b: 38; Manuel 1981a: 45; Mohamed & Mohamad 1987: 186; Mohamed & Tan 1988: 29; Mohamad & Gidiman 1990: 148; Salazar-Allen 1993: 122; Wolseley et al. 1996: 80; Damanhuri 1999: 216; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 75; Damanhuri 2000: 216; Maideen & Damanhuri 2000: 109; Damanhuri & Maideen 2001a: 26; Damanhuri & Maideen 2001b: 210; Damanhuri & Nizam 2001: 213; Ho & Tan 2002: 73; Damanhuri et al. 2004: 255; Damanhuri et al. 2005a: 67; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005c: 251; Damanhuri et al. 2005d: 271; Damanhuri et al. 2005e: 236; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 82; Yong & Damanhuri 2005: 87; Damanhuri et al. 2006: 160; Yong et al. 2006: 111; Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 170; Mohamed et al. 2009: 372; Suleiman et al. 2010: 61. Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

L. pugioniforme M. Fleisch., *nom. nud.* = *L. candidum* (Schwägr.) Lindb. var. *densifolium* (Mitt.) Dixon (fide Salazar-Allen, pers. comm., 1987).

***Lopidium* Hook. f. & Wilson (Family Hypopterygiaceae)**

***L. struthiopteris* (Brid.) M. Fleisch.** — Dixon 1926: 28 (as *Hypopterygium javanicum*); Tixier 1971: 339 (as *L. trichocladon*); Noguchi 1973: 300 (as *L. trichocladon*); Wee 1979: 61; Manuel 1981a: 95 (as *L. trichocladon*); Mohamed & Tan 1988: 34 (as *L. trichocladon*); Mohamed & Robinson 1991: 40 (as *L. trichocladon*); Tan & Mohamed 1999: 75 (as *L. trichocladon*); Damanhuri & Nizam 2001: 220 (as *L. trichocladon*); Damanhuri et al. 2005d: 276 (as *L. trichocladon*); Yong & Damanhuri 2005: 98 (as *L. trichocladon*); Damanhuri et al. 2006: 165 (as *L. trichocladon*); Suleiman et al. 2010: 63. Kelantan, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu, Singapore.

L. trichocladon (Bosch & Sande Lac.) M. Fleisch. = *L. struthiopteris* (Brid.) M. Fleisch. (fide Kruijer 2002: 266).

Lorentzia Hampe (Family Thuidiaceae)

L. bifaria (Bosch & Sande Lac.) W.R. Buck & H.A. Crum ≡ *Aequatoriella bifaria* (Bosch & Sande Lac.) A. Touw (fide Touw 2001: 62).

L. velata (Mitt.) W.R. Buck & H.A. Crum ≡ *Pelekium velatum* Mitt. (fide Touw 2001: 118).

***Macrohymenium* Müll. Hal. (Family Sematophyllaceae)**

***M. muelleri* Dozy & Molk.** — Dixon 1926: 45; Johnson 1980: 113; Tixier 1980: 387; Manuel 1981a: 107; Mohamed & Tan 1988: 35; Tan & Chang 2004: 306. Pahang.

M. strictum Bosch & Sande Lac. — Tixier 1980: 387; Mohamed & Tan 1988: 35. Pahang.

***Macromitrium* Brid. (Family Orthotrichaceae)**

M. angustifolium Dozy & Molk. — Damanhuri & Maideen 2001b: 211; Damanhuri et al. 2007: 91. Pahang, Perlis.

M. blumei Nees ex Schwägr. var. *blumei*— Dixon 1926: 18; Noguchi 1973: 297; Manuel 1981a: 71; Mohamed & Tan 1988: 31; Damanhuri & Nizam 2001: 217; Yong et al. 2002: 245; Damanhuri et al. 2005d: 273; Mohamed & Yong 2005b: 83; Damanhuri et al. 2006: 167; Yong et al. 2006: 117 (as *M. blumii*); Suleiman et al. 2010: 62. Johor, Kedah, Kelantan, Pahang, Perlis, Terengganu.

M. blumei Nees ex Schwägr. var. *zollingeri* (Mitt. ex Bosch & Sande Lac.) S.L. Guo, B.C. Tan & Virtanen — Dixon 1924: 234 (as *M. magnirete*); Dixon 1926: 18 (as *M. zollingeri*), 19 (as *M. magnirete*); Manuel 1981a: 71 (as *M. magnirete* and *M. zollingeri*); Mohamed & Tan 1988: 32 (as *M. magnirete*); Tan & Mohamed 1999: 75 (as *M. zollingeri*); Yong et al. 2006: 118 (as *M. zollingeri*); Damanhuri et al. 2007: 91 (as *M. zollingeri*). Kedah, Pahang.

M. brevirete Dixon, *nom. nud.* (see Dixon 1926: 18).

M. cumingii Müll. Hal. — Tixier 1971: 337; Manuel 1981a: 71; Mohamed & Tan 1988: 32. Pahang.

M. cuspidatum Hampe — Mohamed 1987b: 657; Mohamed & Tan 1988: 32; Damanhuri & Nizam 2001: 217; Damanhuri et al. 2005d: 273; Yong et al. 2006: 117; Suleiman et al. 2010: 62. Kedah, Kelantan, Pahang, Terengganu.

M. falcatum Müll. Hal. — Vitt et al. 1995: 33; Damanhuri 1999: 218; Damanhuri & Maideen 2001b: 211; Damanhuri et al. 2005e: 239; Yong & Damanhuri 2005: 92; Damanhuri et al. 2007: 91. Kedah, Pahang, Perlis, Selangor.

M. fuscescens Schwägr. — Dixon 1926: 19 (as *M. semipellucidum*); Tixier 1980: 381 (as *M. semipellucidum*); Manuel 1981a: 71 (as *M. semipellucidum*); Mohamed 1987b: 657 (as *M. semipellucidum*); Mohamed & Tan 1988: 32 (as *M. semipellucidum*); Damanhuri 1999: 218 (as *M. semipellucidum*); Damanhuri & Ajamain 1999: 410 (as *M. semipellucidum*); Damanhuri 2000: 218 (as *M. semipellucidum*); Damanhuri & Nizam 2001: 217 (as *M. semipellucidum*); Damanhuri et al. 2005a: 71 (as *M. semipellucidum*); Damanhuri et al. 2006: 167; Yong et al. 2006: 118; Damanhuri et al. 2007: 91 (as *M. semipellucidum*); Lee & Damanhuri 2008: 172 (as *M. semipellucidum*); Mohamed et al. 2009: 375. Kedah, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu.

M. goniorrhynchum (Dozy & Molk.) Mitt. ≡ *Groutiella goniorrhyncha* (Dozy & Molk.) E.B. Bartram (fide Vitt et al. 1995: 85) = *G. tomentosa* (Hornsch.) Wijk & Margad. (see Eddy 1996: 82).

M. incurvifolium (Hook. & Grev.) Schwägr. — Dixon 1926: 19; Wee 1979: 60; Johnson 1980: 83; Manuel 1981a: 71; Mohamed 1987b: 657 (as *M. subtile*); Mohamed & Tan 1988: 32 (as *M. subtile*); Damanhuri 1999: 218; Damanhuri et al. 2005d: 273; Mohamed et al. 2005: 252; Yong & Damanhuri 2005: 92. Kedah, Kelantan, Pahang, Selangor, Singapore.

M. longicaule Müll. Hal. — Tixier 1980: 381; Mohamed & Tan 1988: 32; Yong et al. 2006: 118; Suleiman et al. 2010: 62. Kedah, Kelantan, Pahang.

M. magnirete Dixon = *M. zollingeri* Mitt. ex Bosch & Sande Lac. (fide Eddy 1996: 78).

M. micropoma M. Fleisch. — Noguchi 1973: 297; Mohamed & Tan 1988: 32. Pahang.

M. microstomum (Hook. & Grev.) Schwägr. — Tixier 1971: 337 (as *M. reinwardtii*); Manuel 1981a: 71 (as *M. reinwardtii*); Mohamed & Tan 1988: 32 (as *M. reinwardtii*). Pahang.

M. minutum Mitt. — Dixon 1926: 18; Noguchi 1973: 297; Manuel 1981a: 71; Mohamed & Tan 1988: 32; Damanhuri & Nizam 2001: 217. Pahang, Perak, Singapore.

M. nepalense (Hook. & Grev.) Schwägr. — Damanhuri 2000: 218; Damanhuri et al. 2005d: 273. Kelantan, Perak.

M. ochraceum (Dozy & Molk.) Müll. Hal. — Dixon 1926: 18; Tixier 1980: 381; Manuel 1981a: 71; Mohamed & Tan 1988: 32; Yong et al. 2006: 118. Kedah, Pahang.

M. orthostichum Nees ex Schwägr. — Brotherus 1925: 31; Manuel 1981a: 71; Mohamed 1987b: 657; Mohamed & Tan 1988: 32; Damanhuri & Nizam 2001: 217; Mohamed & Yong 2005b: 83; Suleiman et al. 2010: 62. Johor, Kelantan, Pahang.

M. reinwardtii Schwägr. = *M. microstomum* (Hook. & Grev.) Schwägr. (fide Vitt 1983: 24).

M. salakanum Müll. Hal. — Noguchi 1973: 297; Manuel 1981a: 71; Mohamed & Tan 1988: 32; Damanhuri et al. 2005d: 273; Yong & Damanhuri 2005: 92; Damanhuri et al. 2006: 167; Lee & Damanhuri 2008: 172; Suleiman et al. 2010: 62. Kelantan, Pahang, Selangor, Terengganu.

M. semipellucidum Dozy & Molk. = *M. fuscescens* Schwägr. (fide Vitt et al. 1995: 33).

M. subtile Schwägr. = *M. incurvifolium* (Hook. & Grev.) Schwägr. (fide Vitt et al. 1995: 36).

M. zollingeri Mitt. ex Bosch & Sande Lac. ≡ *M. blumei* Nees ex Schwägr. var. *zollingeri* (Mitt. ex Bosch & Sande Lac.) S.L. Guo, B.C. Tan & Virtanen (fide Guo et al. 2006: 476).

***Macrothamnium* M. Fleisch. (Family Hylocomiaceae)**

***M. macrocarpum* (Reinw. & Hornsch.) M. Fleisch.** — Manuel 1981a: 116; Manuel 1981d: 220; Mohamed & Tan 1988: 37; Suleiman et al. 2010: 63. Kelantan, Pahang.

***Mastopoma* Cardot (Family Pylaisiadelphaceae)**

***M. armitii* (Broth. & Geh.) Broth.** — Mohamed & Mohamad 1987: 188 (as *Mastopoma* sp., see Note 22); Mohamed & Yong (2005b: 88). Johor.

***M. brauniana* (Bosch & Sande Lac.) H. Akiyama** — Dixon 1926: 37 (as *Trismegistia brauniana*); Tixier 1974: 18 (as *T. brauniana*); Manuel 1981a: 106 (as *T. brauniana*); Mohamed & Tan 1988: 36 (as *T. brauniana*); Damanhuri et al. 2005d: 281 (as *T. brauniana*); Akiyama 2006: 10; Damanhuri et al. 2006: 171 (as *T. brauniana*). Kedah, Kelantan, Terengganu.

M. impolitum Dixon, *nom. nud.* (see Dixon 1926: 36).

M. papillatum Dixon, *nom. nud.* (see Dixon 1926: 36).

***M. papillosum* Broth.** — Mohamed & Tan 1988: 35; Tan & Mohamed 1990: 358; Suleiman et al. 2010: 65. Kelantan, Pahang.

***M. pulchellum* (Herzog) H. Akiyama** — Akiyama 2006: 5. Pahang.

M. scabrifolium (Broth.) B.C. Tan & Tran Ninh = *Acanthorrhynchium scabrifolium* (Broth.) B.C. Tan & Y. Chang (fide Tan & Chang 2004: 307; see also Akiyama 2006: 9).

***M. uncinifolium* (Broth.) Broth.** — Yong et al. 2006: 118; Mohamed et al. 2008: 46. Johor, Kedah.

***Meiothecium* Mitt. (Family Sematophyllaceae)**

***M. attenuatum* Broth.** — Mohamed et al. 2004: 49. Pahang.

M. bogoriense M. Fleisch. = *M. microcarpum* (Harv.) Mitt. var. *minus* (Paris) Wijk & Margad. (fide Tan & Iwatsuki 1991: 35).

***M. hamatum* (Müll. Hal.) Broth.** — Tixier 1971: 340; Manuel 1981a: 107; Mohamed & Tan 1988: 35. Pahang.

M. jagorii* (Müll. Hal.) Broth. var. *jagorii — Dixon 1926: 37; Wee 1979: 62; Manuel 1981a: 107; Mohamed & Tan 1988: 35. Melaka, Singapore.

***M. jagorii* (Müll. Hal.) Broth. var. *tenuis* M. Fleisch.** — Fleischer 1915–22: 1236. Melaka, Singapore.

***M. microcarpum* (Harv.) Mitt. var. *lineolatum* (Duby) M. Fleisch.** — Dixon 1926: 37; Wee 1979: 62; Mohamed & Tan 1988: 35. Melaka, Singapore.

M. microcarpum* (Harv.) Mitt. var. *microcarpum — Dixon 1926: 37; Holttum 1927: 92; Fröhlich 1953: 107; Wee 1979: 62; Johnson 1980: 108; Manuel 1981a: 107; Tixier 1982: 85; Mohamed & Tan 1988: 35; Mohamad & Gidiman 1990: 149; Damanhuri & Ajamain 1999: 410; Tan & Mohamed 1999: 75; Maideen & Damanhuri 2000: 110; Ho & Tan 2002: 73; Damanhuri et al. 2005a: 74; Damanhuri et al. 2005d: 279; Mohamed & Yong 2005a: 116; Mohamed et al. 2005: 254; Yong & Damanhuri 2005: 100; Yong et al. 2006: 120; Lee & Damanhuri 2008: 177; Mohamed et al. 2009: 377. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Singapore.

***M. microcarpum* (Harv.) Mitt. var. *minus* (Paris) Wijk & Margad.** — Damanhuri et al. 2005c: 252 (as *M. bogoriense*); Tan & Ho 2008: 130 (as *M. bogoriense*). Perak, Singapore.

M. scaberulum Dixon, *nom. nud.* (see Dixon 1926: 37).

***Mesonodon* Hampe (Family Entodontaceae)**

***M. flavescens* (Hook.) W.R. Buck** — Dixon 1926: 25 (as *Campylodontium flavescens*); Tixier 1971: 339 (as *C. flavescens*); Noguchi 1973: 301 (as *C. flavescens*); Johnson 1980: 89 (as *C. flavescens*); Tixier 1980: 384 (as *C. flavescens*); Manuel 1981a: 100; Mohamed & Tan 1988: 34. Pahang, Penang.

***Meteoriella* S. Okamura (Family Pterobryaceae)**

***M. soluta* (Mitt.) S. Okamura** — Manuel 1981a: 76; Mohamed & Tan 1988: 32. Peninsular Malaysia.

***Meteoriopsis* M. Fleisch. ex Broth. (Family Meteoriaceae)**

M. ancistrodes (Renauld & Cardot) Broth. ≡ *Pseudobarbella ancistrodes* (Renauld & Cardot) Manuel (fide Manuel 1977: 596).

M. reclinata (Müll. Hal.) M. Fleisch. var. *ancistrodes* (Renauld & Cardot) Noguchi ≡ *Pseudobarbella ancistrodes* (Renauld & Cardot) Manuel (fide Manuel 1977: 597).

M. reclinata* (Müll. Hal.) M. Fleisch. var. *reclinata — Noguchi 1973: 299; Manuel 1977: 592; Manuel 1981a: 83; Mohamed & Tan 1988: 32 (as *M. reclinata* var. *subreclinata*); Damanhuri & Nizam 2001: 218; Yong & Damanhuri 2005: 94. Pahang, Selangor.

M. reclinata (Müll. Hal.) M. Fleisch. var. *subreclinata* M. Fleisch. = *M. reclinata* (Müll. Hal.) M. Fleisch. var. *reclinata* (fide Manuel 1977: 588).

***Meteorium* (Brid.) Dozy & Molk. (Family Meteoriaceae)**

M. miquelianum (Müll. Hal.) M. Fleisch. = *M. polytrichum* Dozy & Molk. (fide Menzel 1992: 189).

***M. polytrichum* Dozy & Molk.** — Dixon 1926: 23 (as *M. miquelianum*); Noguchi 1973: 299 (as *M. miquelianum*); Noguchi 1976: 260 (as *M. miquelianum*); Johnson 1980: 87 (as *M. miquelianum*); Manuel 1981a: 81 (as *M. miquelianum*); Mohamed 1987b: 657 (as *M. miquelianum*); Mohamed & Tan 1988: 33 (as *M. miquelianum*); Damanhuri & Maideen 2001b: 211 (as *M. miquelianum*); Yong & Damanhuri 2005: 94 (as *M. miquelianum*); Damanhuri et al. 2006: 167; Damanhuri et al. 2007: 92 (as *M. miquelianum*); Suleiman et al. 2010: 64. Kelantan, Pahang, Perlis, Selangor, Terengganu.

***M. subpolytrichum* (Besch.) Broth.** — Damanhuri & Nizam 2001: 218. Pahang.

Microdus Schimp. ex Besch. (Family Dicranaceae)

M. brasiliensis (Duby) Thér. ≡ *Leptotrichella brasiliensis* (Duby) Ochyra (fide Ochyra 1997: 561).

M. macromorphus M. Fleisch. ≡ *Leptotrichella macromorpha* (M. Fleisch.) Ochyra (fide Ochyra 1997: 563).

M. miquelianus (Mont.) Besch. var. *miquelianus* ≡ *Leptotrichella miqueliana* (Mont.) Lindb. ex Broth.

M. miquelianus (Mont.) Besch. var. *longifolius* Baumgartner & J. Froehl. ≡ *Leptotrichella miqueliana* (Mont.) Lindb. ex Broth. var. *longifolius* (Baumgartner & J. Froehl.) Ochyra (fide Ochyra 1997: 563).

***Mitthyridium* H. Rob. (Family Calymperaceae)**

M. cardotii (M. Fleisch.) H. Rob. ≡ *M. fasciculatum* (Hook. & Grev.) H. Rob. subsp. *cardotii* (M. Fleisch.) B.C. Tan & L.T. Ellis (fide Ellis & Tan 1999: 25).

***M. constrictum* (Sull.) H. Rob.** — Reese et al. 1986a: 194; Reese et al. 1986b: 55; Mohamed & Tan 1988: 29; Damanhuri 1999: 216; Damanhuri & Ajamain 1999: 409; Damanhuri & Maideen 2001a: 26; Ho & Tan 2002: 73; Damanhuri et al. 2004: 255; Damanhuri et al. 2005a: 67; Damanhuri et al. 2006: 160; Damanhuri et al. 2007: 90. Johor, Pahang, Selangor, Terengganu.

M. crassum (Broth.) H. Rob. = *M. wallisii* (Müll. Hal.) H. Rob. var. *crassum* (Broth.) M. Menzel in Menzel & W. Schultze-Motel (fide Menzel & Schultze-Motel 1990: 508).

***M. fasciculatum* (Hook. & Grev.) H. Rob. subsp. *cardotii* (M. Fleisch.) B.C. Tan & L.T. Ellis** — Johnson 1980: 63 (as *Thyridium cardotii*); Reese et al. 1986b: 53 (as *M. cardotii*), 55; Mohamed & Tan 1988: 29 (as *M. cardotii*); Tan & Mohamed 1999: 75 (as *M. fasciculatum* var. *cardotii*); Damanhuri 2000: 217 (as *M. fasciculatum* var. *cardotii*); Damanhuri & Nizam 2001: 214 (as *M. fasciculatum* var. *cardotii*); Damanhuri et al. 2004: 256 (as *M. fasciculatum* var. *cardotii*); Damanhuri et al. 2005d: 271 (as *M. fasciculatum* var. *cardotii*); Damanhuri et al. 2005e: 237 (as *M. fasciculatum* var. *cardotii*); Mohamed et al. 2005: 251 (as *M. fasciculatum* var. *cardotii*); Damanhuri et al. 2006: 160 (as *M.*

fasciculatum var. *cardotii*); Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 170; Mohamed et al. 2009: 372 (as *M. fasciculatum* var. *cardotii*); Suleiman et al. 2010: 61. Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Terengganu, Singapore? (see Tan & Ho 2008: 131).

M. fasciculatum* (Hook. & Grev.) H. Rob. subsp. *fasciculatum — Harvey 1840: 7 (as *Syrrhopodon fasciculatus*); Möller 1919: 316 (as *S. fasciculatus*); Dixon 1926: 13 (as *S. fasciculatus*); Holttum 1927: 90 (as *S. fasciculatus*); Tixier 1971: 336 (as *Thyridium fasciculatum*); Wee 1979: 58 (as *T. fasciculatum*); Johnson 1980: 63 (as *T. fasciculatum*); Nowak 1980: 111; Tixier 1980: 380 (as *T. fasciculatum*); Manuel 1981a: 51; Reese et al. 1986b: 52; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 29; Damanhuri 1999: 216; Damanhuri & Ajamain 1999: 409; Damanhuri 2000: 216; Damanhuri & Maideen 2001a: 26; Damanhuri & Nizam 2001: 214; Ho & Tan 2002: 73; Damanhuri et al. 2004: 255; Damanhuri et al. 2005a: 67; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 271; Damanhuri et al. 2005e: 237; Mohamed & Yong 2005b: 82; Mohamed et al. 2005: 251; Yong & Damanhuri 2005: 88; Damanhuri et al. 2006: 160; Yong et al. 2006: 111; Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 170. Johor, Kedah, Kelantan, Melaka, Pahang, Perak, Selangor, Terengganu, Singapore.

***M. fasciculatum* (Hook. & Grev.) H. Rob. subsp. *obtusifolium* (Lindb.) M. Menzel in Menzel & W. Schultze-Motel** — Reese et al. 1986b: 54 (as *M. obtusifolium*); Damanhuri & Ajamain 1999: 409 (as *M. obtusifolium*); Damanhuri et al. 2005a: 68 (as *M. obtusifolium*); Mohamed et al. 2005: 251 (as *M. obtusifolium*); Damanhuri et al. 2006: 161 (as *M. obtusifolium*); Yong et al. 2006: 111 (as *M. obtusifolium*); Mohamed et al. 2009: 372 (as *M. obtusifolium*); Lim et al. 2010: 52 (as *M. obtusifolium*). Kedah, Negeri Sembilan, Selangor, Terengganu.

M. fasciculatum (Hook. & Grev.) H. Rob. var. *cardotii* (M. Fleisch.) A. Eddy ≡ *M. fasciculatum* subsp. *cardotii* (M. Fleisch.) B.C. Tan & L.T. Ellis (fide Ellis & Tan 1999: 25).

***M. flavum* (Müll. Hal.) H. Rob.** — Dixon 1926: 13 (as *Syrrhopodon flavus*); Holttum 1927: 90 (as *S. flavus*); Johnson 1980: 62 (as *Thyridium flavum*); Manuel 1980b: 39; Manuel 1981a: 51; Tixier 1982: 84; Reese et al. 1986b: 50; Mohamed 1987a: 55; Mohamed & Tan 1988: 29; Mohamad & Gidiman 1990: 148; Wolseley et al. 1996: 80; Damanhuri 1999: 216; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 75; Damanhuri 2000: 217; Maideen & Damanhuri 2000: 109; Damanhuri & Maideen 2001a: 26; Damanhuri & Maideen 2001b: 210; Damanhuri & Nizam 2001: 214; Ho & Tan 2002: 73; Damanhuri et al. 2005a: 67; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 271; Damanhuri et al. 2005e: 237; Mohamed & Yong 2005b: 82; Mohamed et al. 2005: 251; Yong & Damanhuri 2005: 88; Damanhuri et al. 2006: 161; Yong et al. 2006: 111; Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 170; Mohamed et al. 2009: 372; Lim et al. 2010: 52. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore.

***M. jungquilianum* (Mitt.) H. Rob.** — Reese et al. 1986b: 51; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 29; Mohamad & Gidiman 1990: 148; Damanhuri 1999: 216; Damanhuri & Ajamain 1999: 409; Damanhuri 2000: 217; Maideen & Damanhuri 2000: 109; Damanhuri & Maideen 2001a: 26; Damanhuri & Nizam 2001: 214; Ho & Tan 2002: 73; Damanhuri et al. 2004: 256; Damanhuri et al. 2005a: 68; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 271; Damanhuri et al. 2005e: 237; Mohamed et al. 2005: 251; Damanhuri et al. 2006: 161; Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 170; Mohamed et al. 2008: 46; Mohamed et al. 2009: 372. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu, Singapore.

M. louisiadum (Broth.) H.K. Nowak \equiv *M. repens* (Harv.) H. Rob. (fide Reese et al. 1986a: 189).

***M. luteum* (Mitt.) H. Rob.** — Reese et al. 1986b: 55; Mohamed & Tan 1988: 29; Damanhuri 1999: 216; Damanhuri & Nizam 2001: 216; Ho & Tan 2002: 74; Mohamed & Yong 2005b: 82; Damanhuri et al. 2006: 161; Yong et al. 2006: 111; Mohamed et al. 2008: 46. Johor, Kedah, Pahang, Terengganu.

M. manii (M. Fleisch.) H. Rob. = *M. repens* (Harv.) H. Rob. (fide Eddy 1990: 145).

M. obtusifolium (Lindb.) H. Rob. \equiv *M. fasciculatum* (Hook. & Grev.) H. Rob. subsp. *obtusifolium* (Lindb.) M. Menzel in Menzel & W. Schultze-Motel (fide Ellis & Tan 1999: 25).

***M. papuanum* (Broth.) H. Rob.** — Mohamed & Reese 1992: 91; Damanhuri et al. 2005e: 237; Mohamed & Yong 2005b: 82; Damanhuri et al. 2006: 161; Lee & Damanhuri 2008: 170. Johor, Kedah, Pahang, Terengganu.

***M. repens* (Harv.) H. Rob.** — Harvey 1840: 8 (as *Syrrhopodon repens*); Mitten 1859: 41 (as *Calymperes repens*); Fleischer 1900–02: 236 (as *Thyridium manii* var. *minor*, *T. undulatulum*); Paris 1906: 26 (as *S. repens*); Dixon 1926: 12 (as *S. repens*), 13 (as *S. manii*, *S. undulatulus*); Holttum 1927: 90 (as *S. manii*, *S. repens*); Wee 1979: 59 (as *T. repens*); Manuel 1980b: 39 (as *M. manii*); Nowak 1980: 99 (as *M. louisiadum*); Manuel 1981a: 51 (as *M. undulatulum*); Reese et al. 1986b: 51, 52; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 29 (as *M. repens* var. *minor*, see Note 25); Mohamad & Gidiman 1990: 148; Wolseley et al. 1996: 80; Damanhuri 1999: 216; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 75; Damanhuri 2000: 217; Maideen & Damanhuri 2000: 109; Damanhuri & Maideen 2001a: 26; Ho & Tan 2002: 74; Yong et al. 2002: 245; Damanhuri et al. 2004: 256; Damanhuri et al. 2005a: 68; Damanhuri et al. 2005d: 272; Damanhuri et al. 2005e: 237; Mohamed & Yong 2005b: 82; Mohamed et al. 2005: 251; Yong & Damanhuri 2005: 88; Damanhuri et al. 2006: 161; Yong et al. 2006: 111; Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 170; Lim et al. 2010: 52. Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

M. repens (Harv.) H. Rob. var. *minor* (M. Fleisch.) B.C. Tan & Mohamed = *M. repens* (Harv.) H. Rob. (fide Nowak 1980: 93; see also Note 25).

***M. retusum* (Besch.) W.D. Reese** — Damanhuri et al. 2004: 256. Pahang.

***M. subluteum* (Müll. Hal.) H.K. Nowak** — Nowak 1980: 147; Reese et al. 1986b: 54; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 29; Mohamed & Reese 1992: 91; Damanhuri & Nizam 2001: 214; Mohamed et al. 2005: 251; Yong et al. 2006: 111. Johor, Kedah, Pahang, Terengganu.

M. undulatulum (Broth. & Geh.) H. Rob. ≡ *M. repens* (Harv.) H. Rob. (see Reese et al. 1986a: 189).

***M. undulatum* (Dozy & Molk.) H. Rob.** — Dixon 1924: 232 (as *Syrrhopodon pungens*); Dixon 1926: 13 (as *S. pungens*, *S. undulatus*); Tixier 1971: 336 (as *Thyridium undulatum*); Johnson 1972: 18 (as *T. undulatum*); Wee 1979: 59 (as *T. undulatum*); Johnson 1980: 64 (as *T. undulatum*); Nowak 1980: 125; Manuel 1981a: 51; Reese et al. 1986b: 52; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 29 (as *M. pungens* and *M. undulatum*); Mohamad & Gidiman 1990: 148; Damanhuri 1999: 216; Damanhuri & Ajamain 1999: 409; Damanhuri 2000: 217; Maideen & Damanhuri 2000: 109; Damanhuri & Maideen 2001a: 26; Damanhuri & Maideen 2001b: 210; Damanhuri & Nizam 2001: 214; Ho & Tan 2002: 74; Damanhuri et al. 2004: 256; Damanhuri et al. 2005a: 68; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 272; Damanhuri et al. 2005e: 238; Mohamed & Yong 2005b: 82; Damanhuri et al. 2006: 161; Yong et al. 2006: 111; Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 171; Mohamed et al. 2009: 372; Suleiman et al. 2010: 61. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore.

***M. wallisii* (Müll. Hal.) H. Rob. var. *crassum* (Broth.) M. Menzel in M. Menzel & W. Schultze-Motel** — Reese et al. 1986b: 56 (as *M. crassum*); Mohamed & Mohamad 1987: 187 (as *M. crassum*); Damanhuri 1999: 216 (as *M. crassum*); Ho & Tan 2002: 73 (as *M. crassum*); Damanhuri et al. 2004: 255 (as *M. crassum*); Damanhuri et al. 2006: 160 (as *M. crassum*). Johor, Pahang, Terengganu.

M. wallisii* (Müll. Hal.) H. Rob. var. *wallisii — Dixon 1926: 12 (as *Syrrhopodon wallisii*); Wee 1979: 59 (as *Thyridium wallisii*); Manuel 1981a: 51; Reese et al. 1986b: 55; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 30; Wolseley et al. 1996: 80; Damanhuri 1999: 216; Damanhuri & Ajamain 1999: 409; Damanhuri et al. 2004: 256; Damanhuri et al. 2005a: 68; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 272; Damanhuri et al. 2006: 161; Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 171. Johor, Kelantan, Negeri Sembilan, Pahang, Selangor, Terengganu, Singapore.

***Mniodendron* Lindb. ex Dozy & Molk. (Family Hypnodendraceae)**

M. curtisii Müll. Hal., *nom. nud.* = *M. mittenii* E.S. Salmon (fide Dixon 1926: 46) = *Hypnodendron dendroides* (Brid.) A. Touw (fide Touw 1971: 321) ≡ *Mniodendron dendroides* (Brid.) Wijk & Margad. (fide Bell et al. 2007: 555).

***M. dendroides* (Brid.) Wijk & Margad.** — Dixon 1926: 46 (as *M. mittenii*); Tixier 1971: 337 (as *M. divaricatum*); Touw 1971: 325; Noguchi 1973: 296; Tixier 1974: 18; Manuel 1981a: 66; Mohamed & Tan 1988: 31; Tan & Mohamed 1999: 75; Damanhuri & Nizam 2001: 216; Damanhuri et al. 2005d: 274; Yong et al. 2006: 116. Johor, Kedah, Kelantan, Pahang, Penang, Perak, Selangor, Terengganu. All records, except otherwise stated, published as *Hypnodendron dendroides*.

M. divaricatum (Reinw. & Hornsch.) Lindb. = *Hypnodendron dendroides* (Brid.) A. Touw (fide Touw 1971: 320) ≡ *Mniodendron dendroides* (Brid.) Wijk & Margad. (fide Bell et al. 2007: 555).

M. mittenii E.S. Salmon = *Hypnodendron dendroides* (Brid.) A. Touw (fide Touw 1971: 321) ≡ *Mniodendron dendroides* (Brid.) Wijk & Margad. (fide Bell et al. 2007: 555).

***Mniomalia* Müll. Hal. (Family Phyllo Drepaniaceae)**

***M. semilimbata* (Mitt.) Müll. Hal.** — Dixon 1926: 19; Manuel 1981a: 64; Mohamed & Tan 1988: 31; Damanhuri & Ajamain 1999: 410; Tan & Mohamed 1999: 75; Damanhuri et al. 2005a: 70; Damanhuri et al. 2005d: 274; Mohamed & Yong 2005b: 83; Damanhuri et al. 2006: 168; Yong et al. 2006: 118; Lee & Damanhuri 2008: 173; Mohamed et al. 2009: 375; Lim et al. 2010: 52. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Selangor, Terengganu.

Mnium Hedw. (Family Mniaceae)

M. integrum Bosch & Sande Lac. ≡ *Plagiomnium integrum* (Bosch & Sande Lac.) T.J. Kop. (fide Koponen 1981: 23).

M. longirostre Brid = *Plagiomnium rostratum* (Schrad.) T.J. Kop. (fide Koponen 1981: 23).

M. rhynchophorum Harv. ≡ *Plagiomnium rhynchophorum* (Harv.) T.J. Kop. (fide Koponen 1981: 22).

M. succulentum Mitt. ≡ *Plagiomnium succulentum* (Mitt.) T.J. Kop. (fide Koponen 1981: 25).

Myurium Schimp. (Family Myuriaceae)

M. pseudorufescens (Hampe) Maschke ≡ *Oedycladium pseudorufescens* (Hampe) B.C. Tan & Mohamed (fide Mohamed & Tan 1988: 39).

M. rufescens (Reinw. & Hornsch.) M. Fleisch. ≡ *Oedycladium rufescens* (Reinw. & Hornsch.) Mitt. (see Mohamed & Tan 1988: 39).

M. subnitens (Dixon) Z. Iwats. ≡ *Oedycladium subnitens* (Dixon) Z. Iwats. (fide Iwatsuki 1979: 267).

***Neckeropsis* Reichardt (Family Neckeraceae)**

***N. andamana* (Müll. Hal.) M. Fleisch.** — Fleischer 1906–08: 878; Dixon 1926: 24; Manuel 1981a: 87; Mohamed 1987a: 55; Mohamed 1987b: 657; Mohamed & Tan 1988: 33; Damanhuri & Maideen 2001b: 212. Kedah, Perlis, Singapore.

***N. exserta* (Hook. Schwägr.) Broth.** — Fleischer 1906–08: 887 (as *Himantocladium exsertum*); Manuel 1981a: 87; Mohamed & Tan 1988: 33. Melaka.

***N. fimbriata* (Harv.) M. Fleisch.** — Touw 1962: 402; Manuel 1981a: 87; Mohamed 1987a: 55; Mohamed & Tan 1988: 33; Yong et al. 2002: 246; Mohamed & Yong 2005a: 116; Mohamed et al. 2005: 253. Kedah, Perlis.

***N. fleischeri* (Dixon) A. Touw** — Damanhuri et al. 2007: 94; Lee & Damanhuri 2008: 179. Pahang.

***N. gracilentata* (Bosch & Sande Lac.) M. Fleisch.** — Dixon 1926: 23, 24 (as *N. penicillata*); Touw 1962: 395; Wee 1979: 60; Manuel 1980b: 39; Manuel 1981a: 87; Mohamed 1987a: 55; Mohamed 1987b: 657; Mohamed & Tan 1988: 33; Dürhammer & Schäfer-Verwimp 1995: 158; Wolseley et al. 1996: 80; Damanhuri 1999: 218; Damanhuri & Ajamain 1999: 410; Damanhuri 2000: 218; Damanhuri et al. 2005a: 72; Damanhuri et al. 2005b: 64; Damanhuri et al. 2005e: 247; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 84; Mohamed et al. 2005: 253; Yong et al. 2006: 117; Damanhuri et al. 2007: 94; Lee & Damanhuri 2008: 179; Mohamed et al. 2009: 375. Johor, Kedah, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Singapore.

***N. lepineana* (Mont.) M. Fleisch.** — Dixon 1926: 24; Touw 1962: 385; Manuel 1981a: 87; Mohamed 1987b: 657; Mohamed & Tan 1988: 33; Dürhammer & Schäfer-Verwimp 1995: 158; Damanhuri & Maideen 2001b: 212; Yong & Damanhuri 2005: 95; Damanhuri et al. 2007: 94. Kelantan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu.

N. penicillata Herzog = *N. gracilentata* (Bosch & Sande Lac.) M. Fleisch. (fide Touw 1962: 394).

***N. submarginata* Cardot ex A. Touw** — Touw 1962: 418; Manuel 1981a: 87; Touw & Ochyra 1987: 103; Mohamed & Tan 1988: 33. Pahang.

***Neolindbergia* M. Fleisch. (Family Pterobryaceae)**

***N. rigida* (Bosch & Sande Lac.) M. Fleisch.** — Noguchi 1973: 297 (as *N. semitorta*); Manuel 1981a: 78 (as *N. semitorta*); Mohamed & Tan 1988: 32 (as *N. semitorta*); Akiyama et al. 1991: 86 (as *N. semitorta*); Yong & Damanhuri 2005: 93. Pahang, Selangor.

N. semitorta Nog. = *N. rigida* (Bosch & Sande Lac.) M. Fleisch. (fide Akiyama et al. 1991: 86).

***Ochrobryum* Mitt. (Family Leucobryaceae)**

O. herzogianum B.C. Tan & Mohamed = *O. subulatum* Hampe (fide Allen 1992: 126).

O. kurzianum Hampe — Tan & Ho 2008: 131. Singapore.

O. microphyllum Cardot = *O. subulatum* Hampe (fide Allen 1992: 126).

O. subulatum Hampe — Herzog 1919: 295 (as *O. microphyllum*); Mohamed & Tan 1988: 29 (as *O. herzogianum*); Allen 1992: 128. Perak.

***Octoblepharum* Hedw. (Family Leucobryaceae)**

O. albidum Hedw. — Harvey 1840: 7; Johnson 1964: 338; Tixier 1971: 336; Johnson 1980: 49; Tixier 1982: 84; Mohamed 1987a: 55; Mohamed 1987b: 656; Mohamed & Tan 1988: 29; Mohamad & Gidiman 1990: 148; Damanhuri 1999: 215; Damanhuri & Ajamain 1999: 410; Tan & Mohamed 1999: 76; Damanhuri 2000: 215; Maideen & Damanhuri 2000: 108; Damanhuri & Maideen 2001b: 208; Damanhuri & Nizam 2001: 213; Yong et al. 2002: 244; Damanhuri et al. 2005a: 64; Damanhuri et al. 2005d: 272; Damanhuri et al. 2005e: 238; Mohamed & Yong 2005a: 116; Mohamed et al. 2005: 250; Yong et al. 2006: 113; Lee & Damanhuri 2008: 171; Suleiman et al. 2010: 61. Kedah, Kelantan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

***Oedocladium* Mitt. (Family Myuriaceae)**

O. pseudorufescens (Hampe) B.C. Tan & Mohamed — Dixon 1926: 45 (as *Piloecium pseudorufescens*); Wee 1979: 60 (as *P. pseudorufescens*); Manuel 1980b: 39 (as *Myurium pseudorufescens*); Manuel 1981a: 78 (as *P. pseudorufescens*); Mohamed & Mohamad 1987: 188 (as *M. pseudorufescens*); Mohamed & Tan 1988: 32; Wolseley et al. 1996: 80 (as *P. pseudorufescens*); Damanhuri 1999: 218; Damanhuri & Ajamain 1999: 410; Damanhuri & Maideen 2001a: 27; Damanhuri & Maideen 2001b: 211; Ho & Tan 2002: 74; Damanhuri et al. 2004: 259; Tan & Chang 2004: 306 (as *P. pseudorufescens*); Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 281; Mohamed & Yong 2005b: 83; Mohamed et al. 2005: 252; Yong & Damanhuri 2005: 71; Damanhuri et al. 2006: 167; Yong et al. 2006: 117; Damanhuri et al. 2007: 94; Lee & Damanhuri 2008: 179; Mohamed et al. 2009: 375; Lim et al. 2010: 52. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore.

O. rufescens (Reinw. & Hornsch.) Mitt. — Dixon 1926: 22 (as *Myurium rufescens*); Holttum 1927: 91 (as *M. rufescens*); Iwatsuki 1979: 269; Wee 1979: 60 (as *M. rufescens*); Manuel 1981a: 77; Mohamed & Tan 1988: 32. Peninsular Malaysia, Singapore.

O. subnitens (Dixon) Z. Iwats. — Dixon 1924: 235; Dixon 1926: 22 (as *Myurium subnitens*); Manuel 1981a: 77; Mohamed & Tan 1988: 32. Pahang.

***Orthodontium* Schwägr. (Family Bryaceae)**

O. infractum Dozy & Molke. — Noguchi 1973: 295; Manuel 1981a: 61; Mohamed & Tan 1988: 31; Mohamad & Gidiman 1990: 149; Maideen & Damanhuri 2000: 109;

Damanhuri & Maideen 2001a: 27; Damanhuri & Maideen 2001b: 211; Yong et al. 2002: 245; Damanhuri et al. 2004: 258; Damanhuri et al. 2005e: 239; Mohamed & Yong 2005a: 116; Mohamed et al. 2005: 252; Yong & Damanhuri 2005: 90; Lee & Damanhuri 2008: 173. Kedah, Pahang, Perak, Perlis, Selangor.

***Orthomnion* Wilson (Family Mniaceae)**

***O. dilatatum* (Mitt.) P.C. Chen** — Noguchi 1973: 296 (as *Orthomniopsis dilatata*); Koponen 1980: 45; Manuel 1981a: 64 (as *O. dilatata*); Mohamed & Tan 1988: 31 (as *O. dilatata*). Pahang.

Orthomniopsis Broth. (Family Mniaceae)

O. dilatata (Wilson ex Mitt.) Nog. ≡ *Orthomnion dilatatum* (Mitt.) P.C. Chen (fide Tan & Iwatsuki 1991: 38).

Orthorrhynchium Reichardt (Family Orthorrhynchiaceae)

O. philippinense Müll. Hal ≡ *Pursellia phyllogonioides* (Sull.) S.H. Lin (fide Lin 1984b: 300) ≡ *Cryptogonium phyllogonioides* (Sull.) Isov. (fide Isoviita: 1986: 452).

O. ridleyi Broth. in Dixon, *nom. nud.* = *Pursellia phyllogonioides* (Sull.) S.H. Lin (fide Lin 1984b: 300) ≡ *Cryptogonium phyllogonioides* (Sull.) Isov. (fide Isoviita: 1986: 452).

Oxyrrhynchium (Schimp.) Warnst. (Family Brachytheciaceae)

Oxyrrhynchium vagans (A. Jaeger) Ignatov & Huttunen ≡ *Eurhynchium vagans* (A. Jaeger) E.B. Bartram (fide Bartram 1933: 213).

O. muelleri (A. Jaeger) Broth. ≡ *Platyhypnidium muelleri* (A. Jaeger) M. Flesich. (fide Flesicher 1923: 1537).

Papillaria (Müll. Hal.) Lorentz (Family Meteoriaceae)

P. fuscescens (Hook.) A. Jaeger var. *fuscescens* ≡ *Cryptopapillaria fuscescens* (Hook.) M. Menzel var. *fuscescens* (fide Menzel 1992: 183).

P. fuscescens (Hook.) A. Jaeger var. *rigidicaulis* M. Fleisch. = *P. fuscescens* (Hook.) A. Jaeger var. *fuscescens* (fide Noguchi 1976: 247) ≡ *Cryptopapillaria fuscescens* (Hook.) M. Menzel (fide Menzel 1992: 183).

***Papillidiopsis* (Broth.) W.R. Buck & B.C. Tan (Family Sematophyllaceae)**

***P. aquatica* (Dixon) B.C. Ho & B.C. Tan** — Ho & Tan 2002: 74. Johor.

***P. bruchii* (Dozy & Molk.) W.R. Buck & B.C. Tan** — Brotherus 1925: 435 (as *Rhaphidostichum bruchii*); Dixon 1926: 40 (as *Trichosteleum bruchii*); Noguchi 1973: 302 (as *R. bruchii*); Wee 1979: 62 (as *R. bruchii*); Johnson 1980: 112 (as *R. bruchii*); Manuel 1981a: 111 (as *R. bruchii*); Mohamed & Mohamad 1987: 188 (as *R. bruchii*); Mohamed & Tan 1988: 35 (as *R. bruchii*); Wolseley et al. 1996: 80 (as *R. bruchii*); Ho & Tan 2002: 74; Tan & Chang 2004: 306; Damanhuri et al. 2004: 261; Damanhuri et al. 2005: 64. Johor, Pahang, Penang, Perak, Selangor, Singapore.

***P. complanata* (Dixon) W.R. Buck & B.C. Tan** — Dixon 1924: 256 (as *Acroporium complanatum*); Dixon 1926: 45 (as *A. complanatum*); Manuel 1981a: 107 (as *Warburgiella complanata*); Mohamed & Tan 1988: 36 (as *Warburgiella complanata*); Wolseley et al. 1996: 81 (as *W. complanata*); Ho & Tan 2002: 74; Damanhuri et al. 2004: 260; Damanhuri et al. 2005b: 64; Damanhuri et al. 2005e: 244; Mohamed & Yong 2005b: 86; Mohamed et al. 2005: 254; Damanhuri et al. 2006: 170; Damanhuri et al. 2007: 94; Lee & Damanhuri 2008: 177. Johor, Kedah, Negeri Sembilan, Pahang, Terengganu.

***P. luxurians* (Dozy & Molk.) W.R. Buck & B.C. Tan** — Dixon 1926: 40 (as *Trichosteleum luxurians*); Wee 1979: 62 (as *Rhaphidostichum luxurians*); Johnson 1980: 112 (as *R. luxurians*); Manuel 1981a: 111 (as *R. luxurians*); Mohamed & Tan 1988: 35 (as *R. luxurians*). Johor, Penang, Singapore.

***P. malayana* (Dixon) B.C. Tan** — Dixon 1924: 257 (as *Acroporium malayanum*); Dixon 1926: 45 (as *A. malayanum*); Noguchi 1973: 302 (as *Rhaphidostichum malayanum*); Manuel 1981a: 111 (as *R. malayanum*); Mohamed 1987a: 56 (as *R. malayanum*); Mohamed & Tan 1988: 35 (as *R. malayanum*); Buck & Tan 1989: 14; Tan 1994: 292; Tan & Mohamed 1999: 76; Damanhuri & Maideen 2001a: 27; Ho & Tan 2002: 74; Damanhuri et al. 2005e: 244; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 86; Mohamed et al. 2005: 254; Yong et al. 2006: 120. Johor, Kedah, Pahang, Penang, Selangor. O'Shea (1998) reduced this to a synonym of the African species, *Papillidiopsis mahensis* (Besch.) O'Shea, which we disagree.

***P. malesiana* W.R. Buck & B.C. Tan** — Damanhuri et al. 2004: 262; Damanhuri et al. 2005b: 64; Damanhuri et al. 2005d: 279; Damanhuri et al. 2005e: 244; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 86; Mohamed et al. 2005: 254; Damanhuri et al. 2006: 170; Damanhuri et al. 2007: 94; Lee & Damanhuri 2008: 177; Mohamed et al. 2009: 377. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Terengganu.

***P. ramulina* (Thwaites & Mitt.) W.R. Buck & B.C. Tan** — Damanhuri & Nizam 2001: 221; Ho & Tan 2002: 74; Damanhuri et al. 2005d: 280; Mohamed et al. 2005: 254; Damanhuri et al. 2006: 170; Yong et al. 2006: 120; Lee & Damanhuri 2008: 177; Tan & Ho 2008: 132. Mohamed et al. 2009: 377. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Terengganu, Singapore.

***Pelekium* Mitt. (Family Thuidiaceae)**

P. bifarium (Bosch & Sande Lac.) M. Fleisch. ≡ *Aequatoriella bifaria* (Bosch & Sande Lac.) A. Touw (fide Touw 2001: 62).

***P. contortulum* (Mitt.) A. Touw** — Touw 2001: 83. Pahang.

***P. gratum* (P. Beauv.) A. Touw** — Touw 2001: 110. Peninsular Malaysia.

***P. velatum* Mitt.** — Fleischer 1915–22: 1511; Dixon 1926: 29; Holttum 1927: 91; Watanabe 1972: 206; Wee 1979: 61; Johnson 1980: 96; Manuel 1980b: 39; Manuel 1981a: 98; Mohamed 1987a: 56; Mohamed 1987b: 658; Mohamed & Tan 1988: 34; Dürhammer & Schäfer-Verwimp 1995: 157 (as *Lorentzia velata*); Damanhuri 1999: 219; Damanhuri 2000: 220 (as *L. velata*); Maideen & Damanhuri 2000: 110; Damanhuri & Maideen 2001b: 213; Touw 2001: 120; Yong et al. 2002: 247; Damanhuri et al. 2005a: 73; Damanhuri et al. 2005e: 241; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 85; Mohamed et al. 2005: 253; Yong et al. 2006: 122; Damanhuri et al. 2007: 92; Lee & Damanhuri 2008: 174; Mohamed et al. 2008: 46; Mohamed et al. 2009: 378. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore.

***P. versicolor* (Müll. Hal.) A. Touw** — Touw 2001: 78. Peninsular Malaysia.

***Philonotis* Brid. (Family Bartramiaceae)**

***P. bartramioides* (Griff.) Griffin & W.R. Buck** — Eddy 1996: 229; Mohamed et al. 2008: 46. Johor, Kedah.

***P. hastata* (Duby) Wijk & Marg.** — Dixon 1926: 21 (as *P. laxissima*); Tixier 1971: 337; Manuel 1981a: 68; Manuel 1981b: 251; Mohamed 1987a: 55; Mohamed 1987b: 657; Mohamed & Tan 1988: 31; Damanhuri et al. 2005d: 273; Damanhuri et al. 2005e: 239; Mohamed & Yong 2005a: 116; Mohamed et al. 2005: 252; Yong & Damanhuri 2005: 91; Yong et al. 2006: 109; Lee & Damanhuri 2008: 173; Tan & Ho 2008: 132; Mohamed et al. 2009: 371. Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Singapore.

P. laxissima (Müll. Hal.) Bosch. & Sande Lac. = *P. hastata* (Duby) Wijk & Marg. (see Koponen 1998: 22).

***P. mollis* (Dozy & Molk.) Mitt.** — Dixon 1926: 21 (as *P. secunda*); Tixier 1980: 381 (as *P. secunda*); Manuel 1981a: 68 (as *P. secunda*); Manuel 1981b: 251 (as *P. secunda*); Tixier 1982: 85 (as *P. secunda*); Mohamed & Tan 1988: 31 (as *P. secunda*); Tan & Mohamed 1999: 76; Mohamed & Yong 2005a: 116 (as *P. secunda*); Mohamed et al. 2005: 252 (as *P. secunda*); Yong & Damanhuri 2005: 91 (as *P. secunda*); Yong et al. 2006: 109 (as *P. secunda*); Mohamed et al. 2009: 371 (as *P. secunda*). Kedah, Negeri Sembilan, Pahang, Perak, Selangor, Singapore.

P. secunda (Dozy & Molk.) Bosch & Sande Lac. = *P. mollis* (Dozy & Molk.) Mitt. (fide Koponen & Norris 1996: 10).

P. speciosa (Griff.) Mitt. = *P. turneriana* (Schwägr.) Mitt. (fide Koponen 1998: 24).

P. thwaitesii Mitt. — Mohamed & Yong 2005b: 83; Tan & Ho 2008: 132. Johor, Singapore.

P. turneriana (Schwägr.) Mitt. — Noguchi 1973: 296; Manuel 1981a: 68; Manuel 1981b: 250 (as *P. speciosa*), 252; Mohamed 1987a: 55; Mohamed & Tan 1988: 31 (as *P. speciosa*); Mohamad & Gidiman 1990: 149 (as *P. speciosa*); Yong et al. 2006: 109 (as *P. speciosa*). Kedah, Pahang, Penang, Perak, Selangor.

***Phyllodon* Bruch & Schimp. (Family Symphyodontaceae)**

P. bilobatus (Dixon) P. Câmara — Dixon 1924: 244 (as *Taxithelium bilobatum*); Dixon 1926: 35 (as *T. bilobatum*); Manuel 1981a: 112 (as *Glossadelphus bilobatus*); Tixier 1988: 334 (as *G. bilobatus*); Mohamed & Tan 1988: 35 (as *G. bilobatus*); Damanhuri et al. 2005a: 74 (as *G. bilobatus*); Damanhuri et al. 2005e: 244 (as *G. bilobatus*); Mohamed & Yong 2005b: 85 (as *G. bilobatus*); Câmara 2010: 140. Johor, Kedah, Perak, Selangor.

P. glossoides (Bosch & Sande Lac.) P. Câmara — Manuel 1981a: 112, Mohamed 1987a: 56 (as *Glossadelphus glossoides*); Mohamed & Tan 1988: 35 (as *G. glossoides*). Kedah.

P. similans (Bosch & Sande Lac.) S. He [Basionym: *Hypnum similans* Bosch & Sande Lac., Bryol. Jav. 2: 147. 1866]. — Tixier 1982: 86; Mohamed & Tan 1988: 35; Lee & Damanhuri 2008: 175. All as *Glossadelphus similans* (Bosch & Sande Lac.) M. Flesich. Johor, Pahang. (See He & Nguyen 2012).

***Physcomitrium* (Brid.) Brid. (Family Funariaceae)**

P. pyriforme (Hedw.) Hampe — Mohamed & Mohamad 1986: 334; Mohamed & Tan 1988: 30. Pahang.

P. sphaericum (C.F. Ludw.) Fűrnr. — Eddy 1996: 115. Peninsular Malaysia.

Piloecium (Müll. Hal.) Broth. (Family Myuriaceae)

P. pseudorufescens (Hampe) Müll. Hal. ≡ *Myurium pseudorufescens* (Hampe) Maschke (see Iwatsuki & Tan 1979: 204) ≡ *Oedicladium pseudorufescens* (Hampe) B.C. Tan & Mohamed (fide Mohamed & Tan 1988: 39).

Pilotrichella (Müll. Hal.) Besch. (Family Lembophyllaceae)

P. perakensis Broth. = *Chaetomitrium borneense* Mitt. (fide Mohamed 1985: 81).

***Pinnatella* M. Fleisch. (Family Neckeraceae)**

P. alopecuroides (Hook.) M. Fleisch. — Mohamed 1987b: 657; Mohamed & Abdullah 1988: 143 (as *P. intralimbata*); Mohamed & Tan 1988: 33; Damanhuri 2000: 219; Damanhuri & Maideen 2001b: 212; Mohamed & Yong 2005a: 116; Mohamed et al. 2005: 253; Yong & Damanhuri 2005: 95. Kedah, Kelantan, Pahang, Perak, Perlis, Selangor, Terengganu.

***P. ambigua* (Bosch & Sande Lac.) M. Fleisch.** — Manuel 1981a: 87; Mohamed 1987b: 657; Mohamed & Tan 1988: 33; Damanhuri & Maideen 2001b: 212; Yong et al. 2002: 246; Mohamed & Yong 2005a: 116; Mohamed et al. 2005: 253; Damanhuri et al. 2007: 94; Suleiman et al. 2010: 65. Kedah, Kelantan, Pahang, Perlis, Terengganu. See also Note 26.

P. anacamptolepis (Müll. Hal.) Broth. ≡ *Shevockia anacamptolepis* (Müll. Hal.) Enroth & M.C. Ji (fide Enroth & Ji 2006: 74). See also Note 27.

***P. calcutensis* M. Fleisch.** — Damanhuri & Maideen 2001b: 213. Perlis.

P. intralimbata (Bosch & Sande Lac.) M. Fleisch. = *P. alopecuroides* (Hook.) M. Fleisch. (fide Enroth 1994: 15).

***P. kuehliana* (Bosch & Sande Lac.) M. Fleisch.** — Dixon 1926: 25; Tixier 1971: 339; Wee 1979: 60; Manuel 1980b: 39 (as *P. ambigua*, see Note 26); Manuel 1981a: 87; Mohamed 1987b: 657; Mohamed & Abdullah 1988: 144; Mohamed & Tan 1988: 33; Damanhuri 1999: 218; Damanhuri et al. 2005d: 282; Yong & Damanhuri 2005: 96; Damanhuri et al. 2007: 95. Kelantan, Pahang, Selangor, Singapore.

P. lingulata Dixon = *Himantocladium plumula* (Nees) M. Fleisch. (fide Enroth 1992: 82).

P. microptera M. Fleisch. = *Caduciella mariei* (Besch.) Enroth (fide Enroth 1991: 612).

***P. mucronata* (Bosch & Sande Lac.) M. Fleisch.** — Dixon 1926: 25 (as *P. anacamptolepis*, see Note 27); Johnson 1980: 88; Manuel 1981a: 87; Mohamed & Abdullah 1988: 145; Mohamed & Tan 1988: 33; Wolseley et al. 1996: 80; Damanhuri 1999: 214; Damanhuri & Ajamain 1999: 410; Damanhuri 2000: 219; Damanhuri & Maideen 2001b: 213; Damanhuri & Nizam 2001: 219; Ho & Tan 2002: 74; Damanhuri et al. 2005a: 72; Damanhuri et al. 2005d: 282; Damanhuri et al. 2005e: 247; Mohamed & Yong 2005b: 84; Yong & Damanhuri 2005: 96; Damanhuri et al. 2006: 167; Yong et al. 2006: 117; Damanhuri et al. 2007: 95; Lee & Damanhuri 2008: 179; Mohamed et al. 2008: 46; Mohamed et al. 2009: 375; Lim et al. 2010: 52; Suleiman et al. 2010: 65. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore. Based on initially revealed DNA inferred relationship, Olsson et al. (2010) transferred this species to *Taiwanobryum* as *T. mucronatum* (Bosch & Sande Lac.) S. Olsson, Enroth & D. Quandt. In our opinion, morphological characters of *P. mucronata* fit better in the genus *Pinnatella* rather than *Taiwanobryum*.

***Plagiomnium* T.J. Kop. (Family Mniaceae)**

***P. elimbatum* (M. Fleisch.) T.J. Kop.** — Mohamed et al. 2004: 49. Pahang.

***P. integrum* (Bosch & Sande Lac.) T.J. Kop.** — Dixon 1926: 20 (as *Mnium integrum*); Koponen 1981: 23; Manuel 1981a: 63; Mohamed & Tan 1988: 31; Suleiman et al. 2010: 62. Kelantan, Pahang, Perak.

P. rhynchophorum (Hook.) T.J. Kop. — Harvey 1840: 11 (as *Mnium rhynchophorum*); Mohamed & Tan 1988: 31. Penang.

P. rostratum (Schrad.) T.J. Kop. — Noguchi 1973: 296 (as *Mnium longirostre*); Manuel 1981a: 63; Mohamed & Tan 1988: 31. Pahang.

P. succulentum (Mitt.) T.J. Kop. — Wee 1979: 60 (as *Mnium succulentum*); Koponen 1981: 26; Manuel 1981a: 63; Mohamed & Tan 1988: 31. Peninsular Malaysia, Singapore.

***Plagiothecium* Bruch & Schimp. (Family Plagiotheciaceae)**

P. miquelli (Sande Lac.) Broth. ≡ *Vesicularia miquelii* (Sande Lac.) M. Fleisch. (fide Tan & Iwatsuki 1991: 41).

P. neckeroideum Schimp. — Wee 1979: 61; Johnson 1980: 97; Mohamed & Tan 1988: 34. Peninsular Malaysia, Singapore ? (see Tan & Ho 2008: 138).

***Platyhypnidium* M. Fleisch. (Family Brachytheciaceae)**

Platyhypnidium muelleri (A. Jaeger) M. Fleisch. — Hedenäs 1994: 373 (as *Rhynchostegium muelleri* A. Jaeger). Pahang.

***Pogonatum* P. Beauv. (Family Polytrichaceae)**

P. camusii (Thér.) A. Touw — Mohamed & Yong 2005a: 116; Mohamed et al. 2005: 249. Kedah.

P. cirratum (Sw.) Brid. subsp. *cirratum* — Herzog 1919: 295; Dixon 1926: 21; Manuel 1981a: 31; Mohamed & Tan 1988: 26; Mohamed & Yong 2005b: 80; Mohamed et al. 2009: 375; Suleiman et al. 2010: 59. Johor, Kelantan, Negeri Sembilan, Pahang, Penang, Perak.

P. cirratum (Sw.) Brid. subsp. *fuscatum* (Mitt.) Hyvönen — Herzog 1919: 295 (as *P. flexicaule*); Noguchi 1973: 294 (as *P. spuriocirratum*); Iwatsuki & Noguchi 1975: 319 (as *P. spuriocirratum*); Manuel 1981a: 31 (as *P. spuriocirratum*); Mohamed & Tan 1988: 26 (as *P. flexicaule*, *P. spuriocirratum*); Hyvönen 1989b: 32; Damanhuri & Nizam 2001: 222; Damanhuri et al. 2005d: 266; Yong et al. 2006: 118; Suleiman et al. 2010: 59 (as *P. fuscatum*). Kedah, Kelantan, Pahang, Perak.

P. cirratum (Sw.) Brid. subsp. *macrophyllum* (Dozy & Molk.) Hyvönen — Burkill & Holttum 1923: 109 (as *P. macrophyllum*); Dixon 1926: 22 (as *P. macrophyllum*); Tixier 1971: 341 (as *P. macrophyllum*); Noguchi 1973: 294 (as *P. macrophyllum*); Johnson 1980: 79 (as *P. macrophyllum*); Tixier 1980: 388 (as *P. macrophyllum*); Manuel 1981a: 31 (as *P. macrophyllum*); Mohamed & Tan 1988: 26 (as *P. macrophyllum*); Hyvönen 1989b: 33; Damanhuri & Nizam 2001: 223; Damanhuri et al. 2005d: 266; Yong & Damanhuri 2005: 82; Mohamed et al. 2009: 375; Suleiman et al. 2010: 59 (as *P. macrophyllum*). Kelantan, Melaka, Negeri Sembilan, Pahang, Penang, Perak, Selangor.

P. convolutum (Hedw.) P. Beauv. var. *cirratum* (Sw.) Par. = *P. cirratum* (Sw.) Brid. subsp. *cirratum* (fide Hyvönen 1989b: 30).

P. flexicaule Mitt. = *P. cirratum* (Sw.) Brid. subsp. *fuscatum* (Mitt.) Hyvönen (fide Hyvönen 1989b: 32).

P. junghuhnianum (Dozy & Molk.) Dozy & Molk. var. *incurvum* (Dozy & Molk.) Dozy & Molk. = *P. neesii* Müll. Hal. (fide Hyvönen 1989b: 50).

P. junghuhnianum (Dozy & Molk.) Dozy & Molk. var. *junghuhnianum* = *P. neesii* Müll. Hal. (fide Hyvönen 1989b: 50).

P. macrophyllum Dozy & Molk. = *P. cirratum* (Sw.) Brid. subsp. *macrophyllum* (Dozy & Molk.) Hyvönen (fide Hyvönen 1989b: 33).

***P. neesii* Müll. Hal.** — Burkill & Holttum 1923: 109; Dixon 1926: 21 (as *P. junghuhnianum* var. *incurvum*); Tixier 1971: 341 (as *P. junghuhnianum* var. *junghuhnianum*); Noguchi 1973: 294 (as *P. junghuhnianum* var. *junghuhnianum*); Johnson 1980: 80 (as *P. junghuhnianum* var. *junghuhnianum*); Tixier 1980: 387 (as *P. junghuhnianum* var. *junghuhnianum*); Manuel 1981a: 31 (as *P. junghuhnianum* var. *junghuhnianum*); Mohamed 1987b: 659 (as *P. junghuhnianum* var. *junghuhnianum*); Mohamed & Tan 1988: 26 (as *P. junghuhnianum* var. *incurvum*, *P. junghuhnianum* var. *junghuhnianum*); Hyvönen 1989b: 52; Damanhuri et al. 2005d: 267; Mohamed et al. 2009: 375; Suleiman et al. 2010: 59. Kelantan, Negeri Sembilan, Pahang, Selangor.

***P. piliferum* (Dozy & Molk.) Lindb.** — Burkill & Holttum 1923: 109 (as *Racelopus pilifer*); Dixon 1926: 21 (as *R. pilifer*); Johnson 1962: 111 (as *R. pilifer*); Johnson 1980: 82 (as *R. pilifer*); Manuel 1980b: 40 (as *R. pilifer*); Manuel 1981a: 30 (as *R. pilifer*); Touw 1986: 30; Mohamed & Mohamad 1987: 189 (as *R. pilifer*); Mohamed & Tan 1988: 26, 27 (as *R. pilifer*); Damanhuri & Ajamain 1999: 410; Tan & Mohamed 1999: 76; Damanhuri et al. 2005a: 75; Damanhuri et al. 2005d: 267; Mohamed & Yong 2005b: 80; Yong & Damanhuri 2005: 82; Damanhuri et al. 2006: 168; Damanhuri et al. 2007: 87. Johor, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu.

P. spuriocirratum Broth. = *P. cirratum* (Sw.) Brid. subsp. *fuscatum* (Mitt.) Hyvönen (see Tan & Iwatsuki 1991: 42).

P. subtortile* (Müll. Hal.) A. Jaeger var. *subtortile — Dixon 1926: 22 (as *P. teysmannianum*); Iwatsuki & Noguchi 1975: 319 (as *P. teysmannianum*); Manuel 1981a: 31; Mohamed & Tan 1988: 26 (as *P. subtortile* var. *teysmannianum*); Hyvönen 1989b: 39; Ho & Tan 2002: 74; Mohamed & Yong 2005b: 80; Yong et al. 2006: 118; Mohamed et al. 2009: 375; Suleiman et al. 2010: 59. Johor, Kedah, Kelantan, Negeri Sembilan, Penang.

P. subtortile (Müll. Hal.) A. Jaeger var. *teysmannianum* (Dozy & Molk.) Dozy & Molk. = *P. subtortile* (Müll. Hal.) A. Jaeger var. *subtortile* (fide Hyvönen 1989b: 39).

P. teysmannianum (Dozy & Molk.) Dozy & Molk. = *P. subtortile* (Müll. Hal.) A. Jaeger var. *subtortile* (fide Hyvönen 1989b: 39).

***Pohlia* Hedw. (Family Bryaceae)**

P. flexuosa Hook. — Mohamed et al. 2004: 49. Pahang.

***Powellioopsis* Zanten (Family Racopilaceae)**

Powellioopsis integra (Dixon) Zanten — Zanten 2008: 63 (specimen identified as *Racopilum cuspidigerum*). Pahang.

***Pseudobarbella* Nog. (Family Meteoriaceae)**

P. ancistrodes (Renauld & Cardot) Manuel — Noguchi 1973: 299 (as *Meteoriopsis ancistrodes*); Noguchi 1976: 340 (as *M. reclinata* var. *ancistrodes*); Mohamed & Tan 1988: 33 (as *M. reclinata* var. *ancistrodes*). Pahang.

P. assimilis (Cardot) Nog = *P. attenuata* (Thwaites & Mitt.) Nog. (fide Noguchi 1976: 342).

P. attenuata (Thwaites & Mitt.) Nog. — Noguchi 1971: 409 (as *P. assimilis*); Noguchi 1973: 299 (as *P. assimilis*); Noguchi 1976: 345; Manuel 1981a: 84; Mohamed & Tan 1988: 33. Pahang.

***Pseudoleskeopsis* Broth. (Family Leskeaceae)**

P. zippelii (Dozy & Molk.) Broth. — Mohamed & Bakar 1989: 69; Damanhuri et al. 2005d: 276; Damanhuri et al. 2005e: 240. Kedah, Kelantan, Perak.

***Pseudosymblepharis* Broth. (Pottiaceae)**

P. angustata (Mitt.) Hilp. = *P. bombayensis* (Müll. Hal.) P. Sollman (fide Sollman 2000: 134).

P. bombayensis (Müll. Hal.) P. Sollman — Dixon 1926: 17 (as *Chionoloma bombayense*, *Trichostomum sarawakense*); Dixon 1932: 17 (as *C. bombayense*); Johnson 1980: 71 (as *C. latifolium*), 74 (as *T. sarawakense*); Manuel 1981a: 55 (as *C. latifolium*), 57 (as *T. sarawakense*); Mohamed 1987a: 55 (as *C. latifolium*); Mohamed 1987b: 656 (as *C. latifolium*), 657 (as *T. sarawakense*); Mohamed & Tan 1988: 30 (as *C. latifolium*, *T. sarawakense*); Damanhuri & Maideen 2001b: 211 (as *P. subduriuscula*, *T. sarawakense*); Yong et al. 2002: 245 (as *P. subduriuscula*); Mohamed & Yong 2005a: 116 (as *P. angustata*); Yong et al. 2006: 118; Damanhuri et al. 2007: 89; Suleiman et al. 2010: 61. Kedah, Kelantan, Perak, Perlis.

P. subduriuscula (Müll. Hal.) P.C. Chen = *P. bombayensis* (Müll. Hal.) P. Sollman (fide Sollman 2000: 134).

***Pseudotaxiphyllum* Z. Iwats. (Family Hypnaceae)**

P. arquifolium (Bosch & Sande Lac.) Z. Iwats. — Dixon 1926: 32 (as *Isopterygium arquifolium*); Mohamed & Tan 1988: 37 (as *I. arquifolium*). Kedah.

***P. pohliaecarpum* (Sull. & Lesq.) Z. Iwats.** — Dixon 1926: 32 (as *Isopterygium textorii*); Manuel 1980b: 40 (as *I. pohliaecarpum*); Tixier 1980: 387 (as *I. pohliaecarpum*); Manuel 1981a: 119 (as *I. pohliaecarpum*); Mohamed & Tan 1988: 37 (as *I. pohliaecarpum*); Ho & Tan 2002: 74; Damanhuri et al. 2005d: 277; Mohamed & Yong 2005b: 87; Yong et al. 2006: 115; Tan & Ho 2008: 133; Suleiman et al. 2010: 64. Johor, Kedah, Kelantan, Pahang, Perak, Singapore.

***Pterobryopsis* M. Fleisch. (Family Pterobryaceae)**

***P. crassicaulis* (Müll. Hal.) M. Fleisch.** — Tixier 1971: 338; Noguchi 1973: 298; Tixier 1980: 382; Manuel 1981a: 77; Mohamed & Tan 1988: 32; Damanhuri & Nizam 2001: 218; Yong & Damanhuri 2005: 93; Damanhuri et al. 2006: 168; Suleiman et al. 2010: 65. Kelantan, Pahang, Selangor, Terengganu.

***P. gedehensis* M. Fleisch.** — Tixier 1971: 338; Manuel 1981a: 77; Mohamed & Tan 1988: 32; Damanhuri et al. 2006: 168. Pahang, Terengganu.

***Pterogonidium* Müll. Hal. (Family Hypnaceae)**

***P. pulchellum* (Hook.) Müll. Hal. ex Broth.** — Tan & Buck 2002: 166; Tan & Chang 2004: 306. Singapore. This is a naturalized species introduced from the Neotropics.

Pursellia S.H. Lin (Family Pterobryaceae)

P. phyllogonioides (Sull.) S.H. Lin ≡ *Cryptogonium phyllogonioides* (Sull.) Isov. (fide Isoviita 1986: 452).

***Pyrrhobryum* Mitt. (Family Rhizogoniaceae)**

***P. latifolium* (Bosch & Sande Lac.) Mitt.** — Holttum 1924: 251 (as *Rhizogonium latifolium*); Dixon 1926: 20 (as *R. latifolium*); Wee 1979: 60; Johnson 1980: 78 (as *R. latifolium*); Manuel 1980b: 39; Tixier 1980: 381; Manuel 1981a: 66; Manuel 1981c: 454 (as *P. longiflorum*); Mohamed & Mohamad 1987: 187 (as *P. longiflorum*); Mohamed & Tan 1988: 31; Damanhuri 1999: 217; Damanhuri 2000: 218; Damanhuri & Maideen 2001a: 27; Damanhuri & Nizam 2001: 215; Frahm et al. 2003a: 117 (as *P. longiflorum*); Damanhuri et al. 2004: 258; Damanhuri et al. 2005a: 70; Damanhuri et al. 2005b: 64; Damanhuri et al. 2005d: 274; Damanhuri et al. 2006: 168; Yong et al. 2006: 118; Lee & Damanhuri 2008: 173; Mohamed et al. 2008: 46; Mohamed et al. 2009: 376. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu, Singapore.

P. longiflorum Mitt. = *P. latifolium* (Bosch & Sande Lac.) Mitt. (fide Koponen et al. 1986: 14).

***P. medium* (Besch.) Manuel** — Damanhuri 1999: 217; Damanhuri et al. 2004: 258; Damanhuri et al. 2005b: 64; Lee & Damanhuri 2008: 173. Pahang.

P. spiniforme (Hedw.) Mitt. var. *badakense* (Broth.) Manuel = *P. latifolium* (Bosch & Sande Lac.) Mitt. (fide Koponen et al. 1986: 14).

P. spiniforme* (Hedw.) Mitt. var. *spiniforme — Herzog 1919: 295 (as *Rhizogonium spiniforme*); Dixon 1926: 20; Tixier 1971: 337 (as *R. spiniforme*); Johnson 1972: 19 (as *R. spiniforme*); Noguchi 1973: 296 (as *R. badakense*, see Note 29); Tixier 1974: 17 (as *R. spiniforme*); Wee 1979: 60 (as *R. spiniforme*); Johnson 1980: 78 (as *R. spiniforme*); Manuel 1981a: 66; Manuel 1981c: 453; Mohamed 1987a: 55; Mohamed & Mohamad 1987: 188; Mohamed & Tan 1988: 31; Wolseley et al. 1996: 80; Damanhuri & Ajamain 1999: 410; Tan & Mohamed 1999: 76; Damanhuri 2000: 218; Damanhuri & Maideen 2001a: 27; Damanhuri & Nizam 2001: 216; Ho & Tan 2002: 74; Damanhuri et al. 2004: 259; Damanhuri et al. 2005a: 70; Damanhuri et al. 2005d: 274; Damanhuri et al. 2005e: 239; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 83; Mohamed et al. 2005: 252; Yong & Damanhuri 2005: 91; Damanhuri et al. 2006: 168; Yong et al. 2006: 118; Lee & Damanhuri 2008: 173; Mohamed et al. 2009: 376; Suleiman et al. 2010: 62. Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu, Singapore.

Racelopus Dozy & Molk. (Family Polytrichaceae)

R. pilifer Dozy & Molk. ≡ *Pogonatum piliferum* (Dozy & Molk.) A. Touw (fide Touw 1986: 29).

***Racopilum* P. Beauv. (Family Racopilaceae)**

***R. cuspidigerum* (Schwägr.) Åongström** — Dixon 1926: 29; Tixier 1971: 338 (as *R. schmidii*); Manuel 1981a: 73 (as *R. schmidii*); Mohamed & Tan 1988: 32 (as *R. schmidii*); Damanhuri 1999: 218 (as *R. schmidii*); Damanhuri & Nizam 2001: 217; Mohamed & Yong 2005a: 116; Mohamed et al. 2005: 252; Yong & Damanhuri 2005: 92; Zanten 2006: 542. Kedah, Pahang, Selangor.

***R. orthocarpum* Wilson ex Mitt.** — Noguchi 1973: 297; Manuel 1981a: 73; Mohamed & Tan 1988: 32. Pahang. According to Zanten (2006), this and *R. cuspidigerum* cannot be distinguished based on material without sporophytes. He has not seen a Peninsular Malaysian material with sporophyte.

R. schmidii (Müll. Hal.) Mitt. = *R. cuspidigerum* (Schwägr.) Åongström (fide Iwatsuki & Tan 1979: 205).

R. spectabile* Reinw. & Hornsch. var. *spectabile — Dixon 1926: 29; Noguchi 1973: 297; Manuel 1981a: 73; Mohamed & Tan 1988: 32; Tan & Mohamed 1999: 76; Yong & Damanhuri 2005: 92; Zanten 2006: 534; Suleiman et al. 2010: 62. Kelantan, Pahang, Perak, Selangor.

***R. spectabile* Reinw. & Hornsch. var. *subisophyllum* Herzog** — Herzog 1919: 298; Dixon 1926: 29 (as *R. spectabile*, see Note 28); Zanten 2006: 534. Perak.

***Radulina* W.R. Buck & B.C. Tan (Family Sematophyllaceae)**

***R. borbonica* (Bél.) W. R. Buck** — Herzog 1919: 295 (as *Trichosteleum hamatum*); Möller 1919: 324 (as *T. hamatum*); Dixon 1926: 38 (as *T. hamatum*); Tixier 1971:

340 (as *T. hamatum*); Noguchi 1973: 302 (as *T. hamatum*); Tixier 1980: 386 (as *T. hamatum*); Manuel 1981a: 109 (as *T. hamatum*); Mohamed & Mohamad 1987: 189 (as *T. elegantissimum*); Mohamed & Tan 1988: 36 (as *T. hamatum*); Damanhuri 1999: 220 (as *T. hamatum*); Tan & Mohamed 1999: 76 (as *R. hamata*); Damanhuri 2000: 221 (as *T. hamatum*); Damanhuri & Maideen 2001a: 27 (as *R. hamata*); Damanhuri & Nizam 2001: 222 (as *R. hamata*); Ho & Tan 2002: 74 (as *R. hamata*); Yong et al. 2002: 247 (as *R. hamata*); Damanhuri et al. 2005a: 74 (as *R. elegantissima*, *R. hamata*); Damanhuri et al. 2005d: 280 (as *R. elegantissima*, *R. hamata*); Damanhuri et al. 2005e: 245 (as *R. hamata*); Mohamed & Yong 2005a: 116 (as *R. hamata*); Mohamed & Yong 2005b: 86 (as *R. elegantissima*, *R. hamata*); Mohamed et al. 2005: 254; Yong & Damanhuri 2005: 101 (as *R. hamata*); Damanhuri et al. 2006: 170 (as *R. elegantissima*, *R. hamata*); O'Shea 2006: 42; Yong et al. 2006: 120 (as *R. elegantissima*, *R. hamata*); Lee & Damanhuri 2008: 178 (as *R. hamata*); Mohamed et al. 2009: 377. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu.

R. elegantissima (M. Fleisch.) W.R. Buck & B.C. Tan = *R. borbonica* (Bél.) W.R. Buck (fide O'Shea 2006: 32).

R. hamata (Dozy & Molk.) W.R. Buck & B.C. Tan = *R. borbonica* (Bél.) W. R. Buck (fide O'Shea 2006: 29).

***Regmatodon* Brid. (Family Regmatodontaceae)**

***R. declinatus* (Hook.) Brid.** — Tan & Mohamed 1999: 76. Pahang.

Rhaphidostegium (Schimp.) De Not. (Family Sematophyllaceae)

R. caespitosum (Hedw.) Besch. ≡ *Sematophyllum caespitosum* Mitt. (fide Mohamed & Tan 1988: 40).

R. complanatum Dixon, *nom. nud.* (see Dixon 1926: 37).

R. densirameum Dixon, *nom. nud.* (see Dixon 1926: 38).

R. microcladum (Dozy & Molk.) Broth., *nom. illeg.* ≡ *Sematophyllum microcladon* (Dozy & Molk.) Broth., *hom. illeg.* ≡ *S. microcladiellum* M. Fleisch. (fide Mohamed & Tan 1988: 40) ≡ *Acroporium microcladum* (Dozy & Molk.) B.C. Tan (fide Tan et al. 1997: 236).

R. saproxyphilum (Müll. Hal.) A. Jaeger ≡ *Sematophyllum saproxyphilum* (Müll. Hal.) M. Fleisch. (fide Fleischer 1915–22: 1266) ≡ *Trichosteleum saproxyphilum* (Müll. Hal.) B.C. Tan, W.B. Schofield & H.P. Ramsay (fide Tan et al. 1998: 220).

R. tristiculum (Mitt.) A. Jaeger = *R. caespitosum* (Hedw.) Besch. (fide Dixon 1926: 37) ≡ *Sematophyllum caespitosum* Mitt. (fide Mohamed & Tan 1988: 40) = *S. subpinnatum* (Brid.) Britt. (fide Buck 1983: 310).

***Rhaphidostichum* M. Fleisch. (Family Sematophyllaceae)**

R. boschii (Dozy & Molk.) Seki ≡ *Trichosteium boschii* (Dozy & Molk.) A. Jaeger (fide Tan & Jia 1999: 52).

R. bruchii (Dozy & Molk.) M. Fleisch. ≡ *Papillidiopsis bruchii* (Dozy & Molk.) W.R. Buck & B.C. Tan (fide Buck & Tan 1989: 12).

***R. bunodicarpum* (Müll. Hal.) M. Fleisch.** — Ho & Tan 2002: 74; Damanhuri et al. 2005d: 280; Damanhuri et al. 2005e: 245; Yong et al. 2006: 120; Mohamed et al. 2009: 377. Johor, Kedah, Kelantan, Negeri Sembilan.

***R. dubium* Dixon** — Yong et al. 2006: 120. Kedah.

R. luxurians (Dozy & Molk.) M. Fleisch. ≡ *Papillidiopsis luxurians* (Dozy & Molk.) W.R. Buck & B.C. Tan (fide Buck & Tan 1989: 12).

R. malayanum (Dixon) Dixon ≡ *Papillidiopsis malayana* (Dixon) B.C. Tan (fide Tan 1994: 292).

***R. piliferum* (Broth.) Broth.** — Lee & Damanhuri 2008: 178. Pahang.

R. surcularre (Dixon) Dixon ≡ *Isocradiella surcularis* (Dixon) B.C. Tan & Mohamed (fide Tan & Mohamed 1990: 357).

***Rhizogonium* Brid. (Family Rhizogoniaceae)**

R. badakense M. Flesich. = *Pyrrhobryum latifolium* (Bosch & Sande Lac.) Mitt. (fide Koponen et al. 1986: 14). See also Note 29.

***R. graeffeanum* (Müll. Hal.) A. Jaeger** — Mohamed & Tan 1988: 31; Touw 1989: 240. Peninsular Malaysia.

***R. lamii* Reimers** — Dixon 1926: 20 (as *R. novae-hollandiae*, see Note 30); Manuel 1981a: 65 (as *R. novae-hollandiae*); Manuel 1981c: 450 (as *R. novae-hollandiae*, see Note 30); Mohamed & Tan 1988: 31 (as *R. novae-hollandiae*); Frahm et al. 2003b: 132; Suleiman et al. 2010: 62. Kelantan, Pahang.

R. latifolium Bosch & Sande Lac. ≡ *Pyrrhobryum latifolium* (Bosch & Sande Lac.) Mitt. (fide Manuel 1981c: 454).

R. longiflorum (Mitt.) A. Jaeger = *Pyrrhobryum latifolium* (Bosch & Sande Lac.) Mitt. (fide Koponen et al. 1986: 14).

R. spiniforme (Hedw.) Bruch ≡ *Pyrrhobryum spiniforme* (Hedw.) Mitt. (fide Manuel 1981c: 450).

R. spiniforme (Hedw.) Bruch var. *badakense* (Broth.) Iwats. = *Pyrrhobryum latifolium* (Bosch & Sande Lac.) Mitt. (fide Koponen et al. 1986: 14).

***Rhodobryum* (Schimp.) Limpr. (Family Bryaceae)**

***R. aubertii* (Schwägr.) Thér.** — Manuel 1980b: 39 (as *Bryum graeffeanum*); Manuel 1981a: 61 (as *R. graeffeanum*); Mohamed 1981: 693; Mohamed 1984: 286; Ochi 1985: 87 (as *B. aubertii*); Mohamed 1987b: 657; Mohamed & Tan 1988: 31; Damanhuri & Ajamain 1999: 409; Damanhuri 2000: 217; Yong et al. 2002: 245; Damanhuri et al. 2004: 258; Damanhuri et al. 2005a: 70; Yong & Damanhuri 2005: 90; Mohamed et al. 2009: 371; Suleiman et al. 2010: 62. Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu.

***R. giganteum* (Schwägr.) Paris** — Dixon 1926: 20; Tixier 1971: 337; Tixier 1980: 381; Manuel 1981a: 61; Mohamed 1984: 283; Mohamed & Tan 1988: 31. Pahang.

R. graeffeanum (Müll. Hal.) Paris = *R. aubertii* (Schwägr.) Thér. (fide Mohamed 1984: 285).

***R. ontariense* (Kindb.) Paris** — Manuel 1981a: 61; Mohamed 1984: 291; Mohamed & Tan 1988: 31; Damanhuri & Nizam 2001: 216; Yong et al. 2006: 109. Pahang, Perak.

***Rhynchostegiella* (Schimp.) Limpr. (Family Brachytheciaceae)**

***R. menadensis* (Sande Lac.) E.B. Bartram** — Damanhuri et al. 2006: 159. Terengganu.

***Rhynchostegium* Bruch & Schimp. (Family Brachytheciaceae)**

***R. celebicum* (Sande Lac.) A. Jaeger** — Tixier 1971: 339; Tixier 1980: 384; Manuel 1981a: 99; Mohamed 1987b: 658; Mohamed & Tan 1988: 34; Tan & Mohamed 1999: 76; Damanhuri & Nizam 2001: 221; Yong et al. 2002: 247; Mohamed & Yong 2005b: 85; Yong & Damanhuri 2005: 99; Damanhuri et al. 2007: 92. Johor, Pahang, Perlis, Selangor, Terengganu.

***R. javanicum* (Bél.) Besch.** — Dixon 1926: 45; Manuel 1981a: 99; Mohamed 1987b: 658; Mohamed & Tan 1988: 34. Pahang, Perak.

R. menadense (Sande Lac.) A. Jaeger ≡ *Rhynchostegiella menadensis* (Sande Lac.) E.B. Bartram (see Ignatov et al. 1999: 60).

R. muelleri A. Jaeger ≡ *Platyhypnidium muelleri* (A. Jaeger) M. Fleisch. (see Ignatov et al. 1999: 60).

R. vagans A. Jaeger ≡ *Eurhynchium vagans* (A. Jaeger) E.B. Bartram (see Ignatov et al. 1999: 60).

***Rosulabryum* J.R. Spence (Family Bryaceae)**

***R. billarderi* (Schwägr.) J.R. Spence** — Damanhuri & Nizam 2001: 216; Suleiman

et al. 2010: 62. All as *Bryum billarderi* Schwägr. Kelantan, Pahang. Ochi (1985) considered this a synonym of *Bryum neelgheriense* Mont.

***R. capillare* (Hedw.) J.R. Spence** — Yong et al. 2006: 109 (as *Bryum capillare*). Kedah.

***R. tuberosum* (Mohamed & Damanhuri) J.R. Spence** — Mohamed & Damanhuri 1990: 288; Yong et al. 2006: 109. All as *Bryum tuberosum* Mohamed & Damanhuri. Kedah, Pahang.

***R. wightii* Mitt.** — Noguchi 1973: 296; Manuel 1981a: 62; Mohamed & Tan 1988: 31. All as *Bryum wightii* Mitt. Pahang.

Sauloma (Hook. f. & Wilson) Mitt. (Family Saulomataceae)

S. microcarpa (Harv.) Mitt. ≡ *Meiothecium microcarpum* (Harv.) Mitt. (fide Mohamed & Tan 1988: 40).

***Schistomitrium* Dozy & Molk. (Family Leucobryaceae)**

S. apiculatum* (Dozy & Molk.) Dozy & Molk. var. *apiculatum — Dixon 1926: 8; Johnson 1964: 322 (as *S. apiculatum* var. *apiculatum* and *S. apiculatum* var. *copelandii*); Johnson 1980: 46; Manuel 1981a: 48; Mohamed & Mohamad 1987: 186; Mohamed & Tan 1988: 29 (as *S. apiculatum* var. *apiculatum* and *S. apiculatum* var. *copelandii*); Damanhuri et al. 2004: 254; Damanhuri et al. 2005d: 269; Damanhuri et al. 2006: 166. Johor, Kelantan, Pahang, Perak, Selangor, Terengganu.

S. apiculatum (Dozy & Molk.) Dozy & Molk. var. *copelandii* (Broth.) E.B. Bartram = *S. apiculatum* var. *apiculatum* (Dozy & Molk.) Dozy & Molk. (fide Eddy 1990: 23).

***S. mucronifolium* (Müll. Hal.) M. Fleisch.** — Dixon 1926: 8; Johnson 1964: 321 (as *S. nieuwenhuisii*), 323; Manuel 1981a: 48; Mohamed & Tan 1988: 29 (as *S. nieuwenhuisii*); Damanhuri 1999: 214; Damanhuri et al. 2004: 254; Damanhuri et al. 2005d: 269; Yong et al. 2006: 113; Suleiman et al. 2010: 61. Kedah, Kelantan, Pahang, Terengganu.

S. nieuwenhuisii M. Fleisch. = *S. mucronifolium* (Müll. Hal.) M. Fleisch. (fide Enroth 1990: 86).

***S. sparei* Dixon ex A. Johnson** — Johnson 1964: 324; Mohamed & Tan 1988: 29. Kedah. Endemic.

Schizomitrium Schimp. (Family Pilotrichaceae)

S. papillatum (Mont.) Sull. ≡ *Callicostella papillata* (Mont.) Mitt. (fide Mitten 1859: 136; Koponen & Isoviita 1984: 112).

S. prabaktianum (Müll. Hal.) H.A. Mill., H. Whittier & B. Whittier ≡ *Callicostella prabaktiana* (Müll. Hal.) Bosch & Sande Lac. (fide Koponen & Isoviita 1984: 112). See also Note 2.

***Schoenobryum* Dozy & Molk. (Family Cryphaeaceae)**

S. concavifolium (Griff.) Gangulee — Mohamed et al. 2004: 52. Pahang.

***Sclerohypnum* Dixon (Family Hypnaceae)**

S. littorale (Hampe) B.C. Tan — Dixon 1931: 3 (as *S. riparium*); Harrington & Miller 1979: 277 (as *S. riparium*); Manuel 1981a: 93 (as *S. riparium*); Mohamed & Tan 1988: 34 (as *S. riparium*); Tan 1991: 100. Pahang.

S. riparium Dixon = *S. littorale* (Hampe) B.C. Tan (fide Tan 1991: 100).

***Sematophyllum* Mitt. (Family Sematophyllaceae)**

S. bogoricum (Bosch & Sande Lac.) A. Jaeger ≡ *Clastobryophilum bogoricum* (Bosch & Sande Lac.) M. Fleisch. (fide Tixier 1977: 403).

S. braunii (Müll. Hal.) A. Jaeger. = *Acroporium rufum* (Hornsch. & Reinw.) M. Fleisch. (fide Dixon 1926: 42).

S. caespitosum Mitt. = *Rhaphidostegium subpinnatum* (Brid.) E. Britton (fide Mohamed & Tan 1988: 40) ≡ *S. subpinnatum* (Brid.) Britt. (fide Buck 1983: 310).

S. decipiens Dixon ≡ *Acroporium decipiens* (Dixon) Dixon (fide Dixon 1926: 42).

S. dicranolomoides Broth., *nom. nud.* ≡ *Acroporium rigens* (Broth. ex Dixon) Dixon var. *dicranolomoides* Dixon (fide Dixon 1924: 252).

S. hyalinum (Reinw.) A. Jaeger = *Acroporium stramineum* (Reinw. & Hornsch.) M. Fleisch. (fide Dixon 1926: 44).

S. longicuspis Broth., *nom. nud.* ≡ *Acroporium longicuspis* Dixon (fide Dixon 1924: 254).

S. microcladiellum M. Fleisch. = *Acroporium microcladum* (Dozy & Molk.) B.C. Tan (fide Tan et al. 1997: 236).

***S. microcladioides* (Broth.) Broth.** — Mohamed & Mohamad 1987: 188. Johor.

S. microcladon (Dozy & Molk.) Broth., *hom. illeg.* ≡ *Sematophyllum microcladiellum* M. Fleisch. (fide Mohamed & Tan 1988: 40) ≡ *Acroporium microcladum* (Dozy & Molk.) B.C. Tan (fide Tan et al. 1997: 236).

S. obscurum Broth., *nom. nud.* ≡ *Acroporium obscurum* Dixon (fide Dixon 1924: 251).

S. perpapillosum Dixon, *nom. nud.* = *Acroporium longicuspis* Dixon (fide Dixon 1924: 255).

S. rigens Broth. ex Dixon = *Acroporium rigens* var. *rigens* (Broth. ex Dixon) Dixon (fide Tan 1994: 275).

S. rigidum (Mitt.) Mitt. ≡ *Trismegistia rigida* (Mitt.) Broth. = *T. calderensis* (Sull.) Broth. var. *convoluta* (Bosch & Sande Lac.) K.T. Yong, B.C. Tan & B.C. Ho (see Note 34).

S. ruficaule Thwait. & Mitt. ≡ *Trichosteleum ruficaule* (Thwaites & Mitt.) B.C. Tan (fide Tan 1991: 101).

S. secundum (Reinw. & Hornsch.) M. Fleisch. ≡ *Acroporium secundum* (Reinw. & Hornsch.) M. Fleisch. (fide Mohamed & Tan 1988: 40).

S. saproxylophilum (Müll. Hal.) M. Fleisch. ≡ *Trichosteleum saproxylophilum* (Müll. Hal.) B.C. Tan, W.E. Schofield & H.P. Ramsay (fide Tan & Jia 1999: 54).

***S. subpinnatum* (Brid.) E. Britton** — Dixon 1926: 37 (as *Rhaphidostegium caespitosum*); Holttum 1927: 92 (as *R. caespitosum*); Manuel 1981a: 111 (as *S. caespitosum*); Tixier 1982: 85 (as *S. tristiculum*); Mohamed & Tan 1988: 35; Damanhuri et al. 2005e: 245; Mohamed et al. 2009: 377. Kedah, Melaka, Negeri Sembilan, Penang, Perak, Terengganu, Singapore.

S. tristiculum (Mitt.) M. Fleisch. = *S. caespitosum* Mitt. (fide Mohamed & Tan 1988: 40) = *S. subpinnatum* (Brid.) Britt. (fide Buck 1983: 310).

Semibarbula Herzog ex Hilp. (Family Pottiaceae)

S. orientalis (F. Weber) Wijk & Margad. = *Barbula indica* (Hook.) Spreng. (fide Saito 1975: 488).

***Shevockia* Enroth & M.C. Ji (Family Neckeraceae)**

***S. anacamptolepis* (Müll. Hal.) Enroth & M.C. Ji** — Tixier 1980: 383 (as *Pinnatella anacamptolepis*); Manuel 1981a: 87 (as *P. anacamptolepis*); Mohamed 1987b: 657 (as *P. anacamptolepis*); Mohamed & Tan 1988: 33 (as *P. anacamptolepis*). Pahang, Selangor. Based on DNA inferred relationship, Olsson et al. (2010) transferred this species to *Taiwanobryum* as *T. anacamptolepis* (Müll. Hal.) S. Olsson, Enroth & D. Quandt. In our opinion, its morphological characters do not fit well in the genus *Taiwanobryum*. We prefer to keep the species in the genus *Shevockia* for now.

Sigmatella (Müll. Hal.) Müll. Hal. (Family Sematophyllaceae)

S. trichochaete Müll. Hal., *nom. nud.* = *Taxithelium instratum* (Brid.) Broth. (fide Dixon 1926: 34).

Solmsiella biseriata (Austin) Steere ≡ *Erpodium biseriatum* (Austin) Austin (fide Tan & Iwatsuki 1991: 47).

***Sphagnum* L. (Family Sphagnaceae)**

S. beccarii Hampe = *S. perichaetiale* Hampe (fide Eddy 1977: 380).

S. cuspidatum* Müll. Hal. var. *cuspidatum — Dixon 1926: 2 (as *S. cuspidatum* var. *malaccense*); Johnson 1958: 315 (as *S. cuspidatum* var. *malaccense*); Eddy 1977: 422; Manuel 1981a: 28; Mohamed & Tan 1988: 25; Damanhuri et al. 2005d: 266. Kedah, Kelantan, Pahang, Perak.

S. cuspidatum Müll. Hal. var. *malaccense* (Warnst.) Wijk & Margad. = *S. cuspidatum* Müll. Hal. (fide Eddy 1977: 419).

S. cuspidatum Müll. Hal. var. *trengganuense* Johnson = *S. cuspidatum* Ehrh. ex Hoffm. subsp. *subrecurvum* (Warnst.) A. Eddy var. *subrecurvum* (fide Eddy 1977: 413).

S. cuspidatum* Ehrh. ex Hoffm. subsp. *cuspidatum — Johnson 1958: 315; Eddy 1977: 412; Manuel 1981a: 28; Eddy 1988: 14; Mohamed & Tan 1988: 26; Suleiman et al. 2010: 59. Kelantan, Pahang, Selangor.

***S. cuspidatum* Ehrh. ex Hoffm. subsp. *subrecurvum* (Warnst.) A. Eddy var. *flaccidifolium* (A. Johnson) A. Eddy** — Johnson 1958: 317; Eddy 1977: 416; Johnson 1980: 24 (as *S. flaccidifolium*); Mohamed & Tan 1988: 26; Menzel & Schultze-Motel 1991: 188. Pahang, Selangor.

S. cuspidatum* Ehrh. ex Hoffm. subsp. *subrecurvum* (Warnst.) A. Eddy var. *subrecurvum — Johnson 1958: 316 (as *S. cuspidatum* var. *trengganuense*); Eddy 1977: 415; Eddy 1988: 14; Mohamed & Tan 1988: 26. Terengganu.

S. cuspidatum Ehrh. ex Hoffm. var. *malaccense* Warnst. = *S. cuspidatum* Müll. Hal. (fide Eddy 1977: 419).

S. flaccidifolium Dixon ex Johnson ≡ *S. cuspidatum* Ehrh. ex Hoffm. subsp. *subrecurvum* (Warnst.) A. Eddy var. *flaccidifolium* (Dixon ex A. Johnson) A. Eddy (fide Eddy 1977: 416; Menzel & Schultze-Motel 1991: 188).

S. holttumii A. Johnson = *S. perichaetiale* Hampe (fide Eddy 1977: 381).

***S. junghuhnianum* Dozy & Molk.** — Dixon 1926: 2; Johnson 1958: 319; Noguchi 1973: 293; Tixier 1974: 16; Eddy 1977: 429; Johnson 1980: 24; Tixier 1980: 379; Manuel 1981a: 28; Mohamed & Tan 1988: 26; Damanhuri et al. 2005d: 266; Yong et al. 2006: 121; Mohamed et al. 2009: 378; Suleiman et al. 2010: 59. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor.

S. kelantanense Dixon = *S. perichaetiale* Hampe (fide Eddy 1977: 380).

S. malaccense Warnst. = *S. cuspidatum* Müll. Hal. (fide Eddy 1977: 419).

S. pauciporosum Warnst. = *S. perichaetiale* Hampe (fide Eddy 1977: 380).

***S. perichaetiale* Hampe** — Dixon 1926: 2 (as *S. kelantanense*), 3 (as *S. magellanicum*, see Note 31); Johnson 1958: 320 (as *S. holttumii*, *S. roseotinctum*), 321 (as *S. beccarii*); Johnson 1959: 320; Eddy 1977: 384; Manuel 1981a: 28; Mohamed & Tan 1988: 26; Damanhuri et al. 2005d: 266; Yong et al. 2006: 122; Suleiman et al. 2010: 59. Johor, Kedah, Kelantan, Pahang.

S. roseotinctum A. Johnson = *S. perichaetiale* Hampe (fide Eddy 1977: 381).

***S. sericeum* Müll. Hal.** — Johnson 1958: 318; Eddy 1977: 438; Manuel 1981a: 28; Mohamed & Tan 1988: 26; Suleiman et al. 2010: 59. Kelantan, Pahang.

***Splachnobryum* Müll. Hal. (Family Splachnobryaceae)**

S. indicum Müll. Hal. = *S. obtusum* (Brid.) Müll. Hal. (fide Arts 2001: 91).

***S. obtusum* (Brid.) Müll. Hal.** — Maideen & Damanhuri 2000: 109 (as *S. indicum*); Arts 2001: 93. Perak.

***S. oorschotii* (Sande Lac.) Müll. Hal.** — Dixon 1926: 18; Wee 1979: 59; Manuel 1981a: 54; Mohamed & Tan 1988: 30; Arts 2001: 88; Ho & Tan 2002: 74; Yong et al. 2006: 122. Johor, Kedah, Singapore.

***S. temasekensis* B.C. Tan, B.-C. Ho & B. Seah K.-B.** — Tan et al. 2004: 228. Singapore. Endemic.

***S. wiemansii* M. Fleisch.** — Arts 2001: 87. Selangor.

Stereodon Mitt. (Family Hypnaceae)

S. malayanus Dixon, *nom. nud.* (see Dixon 1926: 32).

***Stereodontopsis* R.S. Williams (Family Hypnaceae)**

***S. excavata* (Broth.) Ando** — Ando 1971: 44; Damanhuri et al. 2007: 93 (as *S. flagellifera*). Pahang.

S. flagellifera R.S. Williams = *S. excavata* (Broth.) Ando (fide Ando 1971: 43).

***Stereophyllum* Mitt. (Family Stereophyllaceae)**

***S. tavoyense* (Hook.) A. Jaeger** — Harvey 1840: 19 (as *Hypnum tavoyense*); Manuel 1981a: 101; Mohamed & Tan 1988: 34; Damanhuri & Maideen 2001b: 213. Penang, Perlis.

***Symphysodon* Dozy & Molk. (Family Pterobryaceae)**

S. neckeroides* Dozy & Molk. var. *neckeroides — Dixon 1926: 23; Johnson 1980: 84; Manuel 1981a: 75; Mohamed 1987a: 56; Mohamed & Tan 1988: 32; Tan & Mohamed

1999: 76; Damanhuri & Nizam 2001: 218; Damanhuri et al. 2005d: 281; Yong & Damanhuri 2005: 93. Kedah, Kelantan, Pahang, Selangor.

***S. neckeroides* Dozy & Molk. var. *subneckeroides* (Broth.) B.C. Tan** — Tan & Mohamed 1999: 76. Pahang.

***Symphysodontella* M. Fleisch. (Family Pterobryaceae)**

***S. attenuatula* M. Fleisch.** — Mohamed & Yong 2005a: 116. Kedah.

***S. cylindracea* (Mont.) M. Fleisch.** — Tixier 1971: 338; Magill 1980: 47; Tixier 1980: 382; Manuel 1981a: 76; Mohamed & Tan 1988: 32; Damanhuri et al. 2005d: 281; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 83; Mohamed et al. 2005: 252; Yong & Damanhuri 2005: 93; Damanhuri et al. 2006: 162; Mohamed et al. 2008: 47. Johor, Kedah, Kelantan, Pahang, Selangor, Terengganu.

***Syrhropodon* Schwägr. (Family Calymperaceae)**

S. aberrans Broth. = *S. albidus* Thwaites & Mitt. (fide Mohamed & Reese 1985: 232).

S. aberrans Broth. var. *laevis* ≡ *S. laevis* (Dixon) Mohamed & W.D. Reese (fide Mohamed & Reese 1985: 233) ≡ *S. prolifer* Schwägr. var. *laevis* (Dixon) A. Eddy (fide Eddy 1990: 65).

S. albidus* Thwaites & Mitt. subsp. *albidus — Ho & Tan 2002: 75 (as *S. prolifer* var. *albidus*); Ellis 2003: 168 (as *S. prolifer* var. *albidus*); Ellis 2005: 165; Yong et al. 2006: 112 (as *S. prolifer* var. *albidus*); Tan & Ho 2008: 135 (as *S. prolifer* var. *albidus*). Johor, Kedah, Pahang, Penang, Perak, Singapore.

***S. albidus* Thwaites & Mitt. subsp. *integrifolius* (E.B. Bartram) L.T. Ellis** — Ellis 2005: 167. Pahang, Perak.

***S. albo-vaginatus* Schwägr.** — Möller 1919: 316; Dixon 1926: 11; Tixier 1978: 1002; Wee 1979: 58; Johnson 1980: 58; Manuel 1981a: 52; Mohamed & Reese 1985: 231; Mohamed 1987a: 55; Mohamed 1987b: 656; Mohamed & Tan 1988: 30; Mohamad & Gidiman 1990: 148; Wolseley et al. 1996: 80; Damanhuri 1999: 217; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 76; Damanhuri 2000: 217; Maideen & Damanhuri 2000: 109; Damanhuri & Maideen 2001a: 26; Damanhuri & Maideen 2001b: 210; Ho & Tan 2002: 74; Damanhuri et al. 2004: 256; Damanhuri et al. 2005a: 68; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005e: 238; Mohamed & Yong 2005b: 82; Mohamed et al. 2005: 251; Damanhuri et al. 2006: 161; Yong et al. 2006: 111; Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 171. Johor, Kedah, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

***S. aristifolius* Mitt.** — Dixon 1926: 13 (as *S. fallax*); Tixier 1978: 1007 (as *S. fallax*); Manuel 1980b: 39 (as *S. fallax*, *S. subulatus*); Manuel 1981a: 52 (as *S. fallax*); Mohamed & Reese 1985: 250; Mohamed & Tan 1988: 30; Mohamad & Gidiman 1990: 148;

Wolseley et al. 1996: 80; Damanhuri 1999: 217; Damanhuri & Ajamain 1999: 409; Damanhuri & Maideen 2001a: 27; Damanhuri & Nizam 2001: 214; Damanhuri et al. 2004: 256; Damanhuri et al. 2005a: 68; Damanhuri et al. 2005b: 63; Mohamed & Yong 2005b: 82; Mohamed et al. 2005: 251; Yong & Damanhuri 2005: 88; Damanhuri et al. 2006: 161; Yong et al. 2006: 112; Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 171; Mohamed et al. 2008: 46. Johor, Kedah, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu, Singapore.

***S. armatus* Mitt.** — Tixier 1978: 982 (as *S. larminatii*); Tixier 1982: 84 (as *S. larminatii*); Mohamed & Reese 1985: 245 (as *S. fimbriatulus*); Mohamed & Tan 1988: 30 (as *S. fimbriatulus*); Damanhuri & Maideen 2001a: 27; Damanhuri et al. 2005e: 238 (as *S. fimbriatulus*); Mohamed & Yong 2005b: 82 (as *S. fimbriatulus*). Johor, Kedah, Perak, Selangor, Singapore.

***S. borneensis* (Hampe) A. Jaeger & Sauerb.** — Holttum 1924: 252; Dixon 1926: 10; Tixier 1974: 17; Manuel 1981a: 52; Fisher 2006: 18. Johor, Kedah, Pahang, Penang, Singapore.

S. candidus Schwägr. ≡ *Leucophanes candidum* (Schwägr.) Lindb. (see Enroth 1990: 102).

***S. cavifolius* Sande Lac.** — Dixon 1926: 12; Ellis 2003: 164. Pahang, Terengganu.

***S. ciliatus* (Hook.) Schwägr.** — Dixon 1926: 12 (as *S. ciliatus* fo. *pseudopodanus*); Holttum 1927: 90; Fröhlich 1953: 75; Pócs & Tixier 1967: 133; Tixier 1978: 982; Wee 1979: 58; Johnson 1980: 58; Manuel 1981a: 52; Mohamed & Reese 1985: 239; Mohamed & Tan 1988: 30 (as *S. ciliatus* fo. *pseudopodanus*); Mohamad & Gidiman 1990: 148; Damanhuri & Ajamain 1999: 409; Damanhuri et al. 2004: 256; Damanhuri et al. 2005a: 69; Damanhuri et al. 2005b: 63; Yong et al. 2006: 112. Kedah, Pahang, Selangor, Singapore.

S. ciliatus fo. *pseudopodanus* M. Fleisch. = *S. ciliatus* (Hook.) Schwägr. (fide Menzel & Schultze-Motel 1990: 514).

***S. confertus* Sande Lac.** — Dixon 1926: 11; Tixier 1978: 969; Wee 1979: 58; Johnson 1980: 62; Manuel 1981a: 52; Mohamed & Reese 1985: 237; Mohamed 1987a: 55; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 30; Wolseley et al. 1996: 81; Damanhuri 1999: 217; Damanhuri & Ajamain 1999: 409; Damanhuri & Nizam 2001: 214; Ho & Tan 2002: 74; Damanhuri et al. 2004: 257; Damanhuri et al. 2005a: 69; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 272; Mohamed & Yong 2005b: 82; Mohamed et al. 2005: 251; Damanhuri et al. 2006: 161; Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 171; Mohamed et al. 2008: 46. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu, Singapore.

***S. croceus* Mitt.** — Mitten 1859: 41, Fleischer 1900–02: 220 (as *Calymperidium croceum*); Möller 1919: 316; Dixon 1924: 233 (as *Calymperes constrictum*); 1926: 14, 16 (as *C. constrictum*); Johnson 1972: 18; Tixier 1974: 17; Tixier 1978: 1017; Wee 1979: 58; Johnson 1980: 61; Manuel 1981a: 50 (as *C. constrictum*), 52; Tixier 1982: 84; Mohamed & Reese 1985: 247; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 29 (as *Calymperes dixoconstrictum*), 30; Mohamad & Gidiman 1990: 148; Wolseley et al. 1996: 81; Damanhuri 1999: 217; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 76; Damanhuri & Maideen 2001a: 27; Damanhuri & Nizam 2001: 214; Ellis 2001: 1; Ho & Tan 2002: 74; Damanhuri et al. 2004: 257; Damanhuri et al. 2005a: 69; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 272; Damanhuri et al. 2005e: 238; Mohamed & Yong 2005b: 82; Mohamed et al. 2005: 251; Damanhuri et al. 2006: 161; Yong et al. 2006: 112; Damanhuri et al. 2007: 90; Lee & Damanhuri 2008: 171. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Selangor, Terengganu, Singapore.

S. elimbatus Dixon = *S. spiculosus* Hook. & Grev. (fide Mohamed & Reese 1985: 241).

S. fallax Sande Lac. = *S. aristifolius* Mitt. (fide Mohamed & Reese 1985: 249).

S. fasciculatus Hook. & Grev. ≡ *Mitthyridium fasciculatum* (Hook. & Grev.) H. Rob. (see Reese & Stone 1995: 18).

S. fimbriatulus Müll. Hal. = *S. armatus* Mitt. (fide Ellis & Tan 1999: 31).

S. flavus Müll. Hal. ≡ *Mitthyridium flavum* (Müll. Hal.) H. Rob. (see Ellis & Tan 1999: 25).

S. fraserianus Tixier = *S. albidus* Thwait & Mitt. (fide Mohamed & Reese 1985: 232).

***S. gardneri* (Hook.) Schwägr.** — Wee 1979: 58; Johnson 1980: 57; Manuel 1981a: 52; Mohamed & Reese 1985: 226; Mohamed & Tan 1988: 30; Damanhuri & Nizam 2001: 214; Mohamed & Yong 2005a: 116; Mohamed et al. 2005: 251; Yong & Damanhuri 2005: 88; Yong et al. 2006: 112. Kedah, Pahang, Selangor, Singapore? (see Tan & Ho 2008: 134).

S. griffithii Mitt. = *S. trachyphyllus* Mont. (fide Mohamed & Reese 1985: 243).

***S. hispidissimus* Dixon** — Damanhuri et al. 2004: 257. Pahang.

S. horridulus M. Fleisch. = *S. spiculosus* Hook. & Grev. (fide Mohamed & Reese 1985: 239).

***S. involutus* Schwägr.** — Hooker & Greville 1826: 227 (as *S. rufescens*); Harvey 1840: 7 (as *S. rufescens*); Mitten 1859: 39 (as *S. rufescens*); Dixon 1924: 229 (as *S. ridleyi*); Dixon 1926: 10 (as *S. revolutus*), 11 (as *S. rufescens*, *S. ridleyi*); Holttum 1927: 90 (as

S. revolutus, *S. rufescens*); Tixier 1978: 973, 975 (as *S. rufescens*); Wee 1979: 58 (as *S. revolutus*, *S. ridleyi*, *S. rufescens*); Johnson 1980: 62 (as *S. ridleyi*); Manuel 1981a: 52 (as *S. revolutus*, *S. ridleyi*); Tixier 1982: 84; Mohamed & Reese 1985: 236, 238; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 30; Mohamad & Gidiman 1990: 148; Damanhuri 1999: 217; Damanhuri & Maideen 2001a: 27; Damanhuri & Nizam 2001: 215; Damanhuri et al. 2004: 257; Damanhuri et al. 2005d: 272; Mohamed et al. 2005: 251; Yong et al. 2006: 117; Damanhuri et al. 2007: 91; Suleiman et al. 2010: 61. Johor, Kedah, Kelantan, Pahang, Penang, Perak, Selangor, Singapore.

***S. japonicus* (Besch.) Broth.** — Johnson 1972: 18 (as *S. schiffnerianus*); Noguchi 1973: 295; Manuel 1981a: 52; Mohamed & Reese 1985: 228; Mohamed & Tan 1988: 30; Damanhuri et al. 2005d: 272; Yong & Damanhuri 2005: 89; Damanhuri et al. 2006: 162; Suleiman et al. 2010: 61. Kelantan, Pahang, Selangor, Terengganu.

S. laevis (Dixon) Mohamed & W.D. Reese ≡ *S. prolifer* Schwägr. var. *laevis* (Dixon) A. Eddy (fide Eddy 1990: 65).

***S. langbianensis* (Tixier) W.D. Reese** — Tixier 1971: 337 (as *Calymperopsis langbianensis*); Tixier 1980: 380 (as *C. langbianensis*); Manuel 1981a: 52 (as *C. langbianensis*); Mohamed & Tan 1988: 29 (as *C. langbianensis*). Pahang.

S. larminatii Paris & Broth. = *S. fimbriatulus* Müll. Hal. (fide Mohamed & Reese 1985: 244).

S. ligulifolius Dixon = *S. albidus* Thwait & Mitt. (fide Mohamed & Reese 1985: 232).

***S. loreus* (Sande Lac.) W.D. Reese** — Dixon 1924: 232 (as *Calymperes angustatum*); Dixon 1926: 16 (as *C. longifolium*, *C. setifolium*); Johnson 1972: 19 (as *C. longifolium*); Noguchi 1973: 295 (as *C. longifolium*); Wee 1979: 57 (as *C. longifolium*); Johnson 1980: 51 (as *C. longifolium*); Manuel 1981a: 50 (as *C. longifolium*); Mohamed & Reese 1985: 251; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 30; Wolseley et al. 1996: 81; Damanhuri 1999: 217; Damanhuri & Ajamain 1999: 409; Ho & Tan 2002: 75; Damanhuri et al. 2004: 257; Damanhuri et al. 2005a: 69; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 272; Damanhuri et al. 2005e: 238; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 82; Mohamed et al. 2005: 251; Damanhuri et al. 2006: 162; Yong et al. 2006: 112; Damanhuri et al. 2007: 91; Lee & Damanhuri 2008: 171; Mohamed et al. 2009: 372. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu, Singapore.

S. louisiadum Broth. = *Mitthyridium repens* (Harv.) H. Rob. (fide Reese et al. 1986b: 51).

***S. mammillosus* Müll. Hal.** — Reese 1996: 326; Yong et al. 2006: 112; Ellis 2007: 75. Kedah, Pahang.

S. manii Müll. Hal. , *nom. nud.* = *Mitthyridium repens* (Harv.) H. Rob. (fide Nowak 1980: 93).

***S. muelleri* (Dozy & Molk.) Sande Lac.** — Dixon 1926: 13; Noguchi 1973: 295 (as *Calymperidium muelleri*); Tixier 1978: 1011; Wee 1979: 58; Johnson 1980: 61; Manuel 1981a: 52; Mohamed & Reese 1985: 248; Mohamed 1987a: 55; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 30; Wolseley et al. 1996: 81; Damanhuri 1999: 217; Damanhuri & Ajamain 1999: 409; Tan & Mohamed 1999: 76; Maideen & Damanhuri 2000: 109; Damanhuri & Maideen 2001a: 27; Damanhuri & Maideen 2001b: 210; Damanhuri & Nizam 2001: 215; Ho & Tan 2002: 75; Damanhuri et al. 2004: 257; Damanhuri et al. 2005a: 69; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 272; Damanhuri et al. 2005e: 238; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 82; Mohamed et al. 2005: 251; Yong & Damanhuri 2005: 89; Damanhuri et al. 2006: 162; Yong et al. 2006: 112; Damanhuri et al. 2007: 91; Lee & Damanhuri 2008: 172; Mohamed et al. 2009: 372; Suleiman et al. 2010: 61. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

S. nymanii M. Fleisch. = *Calymperes schmidtii* Broth. (fide Reese & Mohamed 1985: 102).

S. orientalis W.D. Reese & P.J. Lin = *S. cavifolius* Sande Lac. (fide Ellis 2003: 164).

***S. parasiticus* (Sw. ex Brid.) Paris** — Damanhuri et al. 2004: 257; Damanhuri et al. 2005e: 238. Kedah, Pahang.

S. patens Dixon ≡ *Syrrhopodon spiculosus* var. *patens* (Dixon) A. Eddy (fide Eddy 1990: 71).

S. perakensis Dixon = *Calymperes fasciculatum* Dozy & Molk. (fide Mohamed & Reese 1985: 105).

S. prolifer Schwägr. var. *albidus* (Thwaites & Mitt.) Orbán & W.D. Reese ≡ *S. albidus* Thwaites & Mitt.

***S. prolifer* Schwägr. var. *laevis* (Dixon) A. Eddy** — Noguchi 1973: 295 (as *S. aberrans* var. *laevis*); Mohamed & Reese 1985: 234 (as *S. laevis*); Mohamed & Tan 1988: 30 (as *S. laevis*); Mohamed & Reese 1992: 88 (as *S. laevis*); Mohamed et al. 2009: 372. Negeri Sembilan, Pahang.

S. prolifer* Schwägr. var. *prolifer — Dixon 1924: 230 (as *S. ligulifolius*); Dixon 1926: 11 (as *S. albidus*), 12 (as *S. ligulifolius*); Tixier 1971: 336 (as *S. albidus*); Noguchi 1973: 295 (as *S. aberrans*); Tixier 1978: 986 (as *S. albidus*); Tixier 1980: 380 (as *S. albidus*); Manuel 1981a: 52 (as *S. aberrans*, *S. albidus*, *S. fraserianus*, *S. ligulifolius*); Tixier 1982: 84 (as *S. albidus*); Mohamed & Reese 1985: 232 (as *S. fraserianus*, *S. ligulifolius*), 233 (as *S. albidus*); Mohamed & Mohamad 1987: 187 (as *S. albidus*);

Mohamed & Tan 1988: 30 (as *S. albidus*); Damanhuri & Nizam 2001: 215; Damanhuri et al. 2004: 257; Damanhuri et al. 2005d: 272; Mohamed & Yong 2005b: 82; Mohamed et al. 2005: 251; Yong & Damanhuri 2005: 89; Damanhuri et al. 2006: 162; Damanhuri et al. 2007: 91; Mohamed et al. 2008: 46; Mohamed et al. 2009: 372. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu, Singapore.

S. pseudo-involutus Broth., *nom. nud.* (see Dixon 1926: 11).

S. pungens Dixon ≡ *Mitthyridium pungens* (Dixon) H. Rob. (see Mohamed & Tan 1988: 40) = *M. undulatum* (Dozy & Molk.) H. Rob. (fide Menzel & Schultze-Motel 1990: 507).

S. rectifolius Dixon, *nom. nud.* = *S. spiculosus* Hook. & Grev. (fide Mohamed & Reese 1985: 241).

S. repens Harv. ≡ *Mitthyridium repens* (Harv.) H. Rob. (see Ellis & Tan 1999: 27).

S. revolutus Dozy & Molk. = *S. involutus* Schwägr. (fide Mohamed & Reese 1985: 236).

S. ridleyi Broth. ex Dixon = *S. involutus* Schwägr. (fide Mohamed & Reese 1985: 236).

S. rufescens Hook. & Grev. = *S. involutus* Schwägr. (fide Mohamed & Reese 1985: 236).

***S. sarawakensis* (Dixon) W.D. Reese** — Lee & Damanhuri 2008: 172. Pahang.

S. schiffnerianus (M. Fleisch.) Paris = *S. japonicus* (Besch.) Broth. (fide Mohamed & Reese 1985: 227).

***S. semiliber* (Mitt.) Besch.** — Tixier 1980: 380 (as *Calymperopsis semiliber*); Mohamed & Tan 1988: 29 (as *C. semiliber*). Pahang.

***S. semperi* Müll. Hal.** — Ellis 2003: 169. Penang.

S. spiculosus Hook. & Grev. subsp. *herzogii* (Broth.) Tixier = *S. spiculosus* Hook. & Grev. var. *spiculosus* (fide Mohamed & Reese 1985: 242).

S. spiculosus Hook. & Grev. subsp. *horridulus* (M. Fleisch.) Tixier = *S. spiculosus* Hook. & Grev. var. *spiculosus* (fide Mohamed & Reese 1985: 242).

S. spiculosus Hook. & Grev. subsp. *elimbatus* (Dixon) Tixier = *S. spiculosus* Hook. & Grev. var. *spiculosus* (fide Mohamed & Reese 1985: 242).

***S. spiculosus* Hook. & Grev. var. *patens* (Dixon) A. Eddy** — Damanhuri 1999: 217. Pahang.

S. spiculosus* Hook. & Grev. var. *spiculosus — Harvey 1840: 7; Mitten 1859: 40; Fleischer 1900–02: 208; Dixon 1924: 230 (as *S. elimbatus*); Dixon 1926: 11 (as *S. elimbatus*), 12 (as *S. horridulus*), 14 (as *S. rectifolius*); Fröhlich 1953: 75; Pócs & Tixier 1967: 130, 131; Johnson 1972: 18; Noguchi 1973: 295; Tixier 1974: 17; Tixier 1978: 991; Wee 1979: 58; Johnson 1980: 58; Manuel 1980b: 39; Manuel 1981a: 52 (as *S. elimbatus*); Tixier 1982: 84; Mohamed & Reese 1985: 239; Mohamed 1987a: 55; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 30; Mohamad & Gidiman 1990: 148; Reese & Stone 1995: 4; Wolseley et al. 1996: 81; Damanhuri 1999: 217; Damanhuri & Ajamain 1999: 409; Damanhuri 2000: 217; Maideen & Damanhuri 2000: 109; Damanhuri & Maideen 2001a: 27; Damanhuri & Maideen 2001b: 210; Damanhuri & Nizam 2001: 215; Ho & Tan 2002: 75; Damanhuri et al. 2005a: 69; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 273; Damanhuri et al. 2005e: 239; Mohamed & Yong 2005b: 82; Mohamed et al. 2005: 251; Damanhuri et al. 2006: 162; Yong et al. 2006: 112; Damanhuri et al. 2007: 91; Ellis 2007: 68; Lee & Damanhuri 2008: 172; Mohamed et al. 2008: 46; Mohamed et al. 2009: 372; Lim et al. 2010: 52. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

***S. stoneae* W.D. Reese in Mohamed & W.D. Reese** — Mohamed & Reese 1992: 88. Pahang.

S. subulatus Sande Lac. = *S. aristifolius* Mitt. (fide Mohamed & Reese 1985: 249).

***S. tjibodensis* M. Fleisch.** — Wee 1979: 58 (as *Calymperopsis tjibodensis*); Johnson 1980: 55 (as *C. tjibodensis*); Mohamed & Tan 1988: 29 (as *C. tjibodensis*); Damanhuri & Nizam 2001: 215; Yong & Damanhuri 2005: 89; Damanhuri et al. 2006: 162; Yong et al. 2006: 112. Kedah, Pahang, Selangor, Terengganu, Singapore.

***S. trachyphyllus* Mont.** — Montagne 1856: 47; Mitten 1859: 40 (as *S. griffithii*); Brotherus 1924: 231; Dixon 1926: 12 (as *S. griffithii*); Tixier 1978: 987; Wee 1979: 58 (as *S. griffithii*); Manuel 1981a: 52 (as *S. griffithii*); Mohamed & Reese 1985: 244; Mohamed & Mohamad 1987: 187; Mohamed & Tan 1988: 30; Reese & Lin 1989: 187 (as *S. orientalis*); Damanhuri 1999: 217; Damanhuri 2000: 217; Maideen & Damanhuri 2000: 109; Damanhuri & Nizam 2001: 215; Damanhuri et al. 2004: 258; Damanhuri et al. 2005b: 63; Damanhuri et al. 2005d: 273; Damanhuri et al. 2005e: 239; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 82; Mohamed et al. 2005: 251; Damanhuri et al. 2006: 162; Yong et al. 2006: 112; Damanhuri et al. 2007: 91; Lee & Damanhuri 2008: 172; Mohamed et al. 2008: 46. Johor, Kedah, Kelantan, Melaka, Pahang, Perak, Selangor, Terengganu, Singapore.

S. treubii M. Fleisch. = *S. japonicus* (Besch.) Broth. (fide Mohamed & Reese 1985: 227).

***S. tristichus* Nees ex Schwägr.** — Dixon 1926: 11; Tixier 1971: 336; Tixier 1978: 1013; Manuel 1981a: 52; Mohamed & Reese 1985: 230; Mohamed & Mohamad 1987: 187;

Mohamed & Tan 1988: 30; Damanhuri 1999: 217; Damanhuri & Nizam 2001: 215; Ho & Tan 2002: 75; Damanhuri et al. 2004: 258; Damanhuri et al. 2005d: 273; Mohamed & Yong 2005b: 83; Yong & Damanhuri 2005: 89; Damanhuri et al. 2006: 162; Damanhuri et al. 2007: 91; Mohamed et al. 2008: 46; Mohamed et al. 2009: 372; Suleiman et al. 2010: 61. Johor, Kelantan, Negeri Sembilan, Pahang, Selangor, Terengganu.

S. undulatus Broth. & Geh. = *Mitthyridium repens* (Harv.) H. Rob. (see Menzel & Schultze-Motel 1990: 505).

S. undulatus (Doz. and Molk.) Lindb. ≡ *Mitthyridium undulatum* (Dozy & Molk.) H. Rob. (fide Nowak 1980: 121).

S. wallisii Müll. Hal. ≡ *Mitthyridium wallisii* (Müll. Hal.) H. Rob. (fide Ellis & Tan 1999: 27).

Taiwanobryum Nog. (Family Leptodontaceae)

T. anacamptolepis (Müll. Hal.) S. Olsson, Enroth & D. Quandt ≡ *Pinnatella anacamptolepis* (Müll. Hal.) Broth. ≡ *Shevockia anacamptolepis* (Müll. Hal.) Enroth & M.C. Ji (see Enroth & Ji 2006: 74).

T. mucronatum (Bosch & Sande Lac.) S. Olsson, Enroth & D. Quandt ≡ *Pinnatella mucronata* (Bosch & Sande Lac.) M. Fleisch.

***Taxiphyllum* M. Fleisch. (Family Hypnaceae)**

T. taxirameum (Mitt.) M. Fleisch. — Wee 1979: 63; Manuel 1981a: 118; Tixier 1982: 86; Mohamed & Tan 1988: 37; Damanhuri et al. 2004: 263; Damanhuri et al. 2007: 93; Lee & Damanhuri 2008: 175. Pahang, Singapore.

***Taxithelium* Spruce & Mitt. (Family Pylaisiadelphaceae)**

T. acanthocladoides Broth., *nom. nud.* = *T. papillatum* Broth. (fide Dixon 1926: 35).

T. alare Broth. = *T. lindbergii* (A. Jaeger) Renaud & Cardot (fide Câmara 2011a: 13).

T. albifolium Mitt., *nom. nud.* = *Plagiothecium miquelii* (Sande Lac.) Broth. (fide Dixon 1926: 33).

T. bilobatum Dixon ≡ *Glossadelphus bilobatus* (Dixon) Broth. (see Tan 1998: 55) ≡ *Phyllodon bilobatus* (Dixon) P. Câmara (fide Câmara 2010: 140).

T. capillipes (Sande Lac.) Broth. = *T. instratum* (Brid.) Broth. (fide Câmara 2011b: 827).

T. decrescens (Sande Lac.) Broth. ≡ *Ectropotheciella decrescens* (Sande Lac.) M. Fleisch. (fide Fleischer 1915–22: 1420).

T. deningeri Herzog = *T. isocladum* (Bosch & Sande Lac.) Renaud & Cardot (fide Câmara 2011a: 11).

T. gottscheanum (Hampe ex Müll. Hal.) Broth. = *T. nepalense* (Schwäger.) Broth. (fide Dixon 1926: 34).

***T. instratum* (Brid.) Broth.** — Möller 1919: 324; Dixon 1926: 33; Dixon 1926: 34 (as *T. capillipes*); Holttum 1927: 92; Wee 1979: 62; Wee 1979: 62 (as *T. capillipes*); Johnson 1980: 105; Johnson 1980: 107 (as *T. capillipes*); Manuel 1981a: 113; Manuel 1981a: 113 (as *T. capillipes*); Mohamed 1987a: 56; Mohamed & Tan 1988: 36; Mohamed & Tan 1988: 36 (as *T. capillipes*); Mohamad & Gidiman 1990: 149; Damanhuri 1999: 219; Damanhuri & Ajamain 1999: 410; Tan & Mohamed 1999: 76; Damanhuri 2000: 220; Maideen & Damanhuri 2000: 110; Damanhuri & Maideen 2001b: 214; Damanhuri & Nizam 2001: 222; Ho & Tan 2002: 75; Yong et al. 2002: 247; Damanhuri et al. 2004: 262; Damanhuri et al. 2005a: 74; Damanhuri et al. 2005d: 280; Damanhuri et al. 2005e: 245; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 86; Mohamed et al. 2005: 254; Yong & Damanhuri 2005: 101; Damanhuri et al. 2006: 170; Yong et al. 2006: 121; Damanhuri et al. 2007: 94; Lee & Damanhuri 2008: 178; Mohamed et al. 2009: 377; Câmara 2011b: 828. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Singapore.

T. isocladoides Dixon = *T. isocladum* (Bosch & Sande Lac.) Renaud & Cardot (fide Câmara 2011a: 11).

***T. isocladum* (Bosch & Sande Lac.) Renaud & Cardot** — Herzog 1919: 298 (as *T. deningeri*); Dixon 1924: 243 (as *T. isocladoides*); Dixon 1926: 34; Dixon 1926: 34 (as *T. deningeri*); Dixon 1926: 34 (as *T. isocladoides*); Holttum 1927: 92; Wee 1979: 62; Johnson 1980: 106; Manuel 1981a: 113; Manuel 1981a: 113 (as *T. deningeri*); Manuel 1981a: 113 (as *T. isocladoides*); Mohamed & Tan 1988: 36; Mohamed & Tan 1988: 36 (as *T. deningeri*); Mohamed & Tan 1988: 36 (as *T. isocladoides*); Damanhuri 1999: 219; Damanhuri & Ajamain 1999: 410; Damanhuri 2000: 220; Damanhuri & Maideen 2001a: 27; Ho & Tan 2002: 75; Damanhuri et al. 2004: 262; Damanhuri et al. 2005a: 74; Damanhuri et al. 2005b: 64; Damanhuri et al. 2005d: 280; Damanhuri et al. 2005e: 245; Mohamed & Yong 2005b: 86; Damanhuri et al. 2006: 170; Damanhuri et al. 2007: 94; Tan & Ho 2008: 136; Lee & Damanhuri 2008: 178; Mohamed et al. 2009: 377; Câmara 2011a: 12. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu, Singapore.

***T. kaernbachii* (Broth.) Broth.** — Câmara 2011a: 13. Selangor.

***T. kerianum* (Broth.) Broth.** — Dixon 1926: 35; Tixier 1971: 341; Johnson 1980: 106; Manuel 1981a: 113; Mohamed & Tan 1988: 36; Wolseley et al. 1996: 81; Ho & Tan 2002: 75; Damanhuri et al. 2004: 262; Damanhuri et al. 2005e: 245; Mohamed & Yong 2005a: 116; Tan & Ho 2008: 136; Mohamed et al. 2009: 377; Câmara 2011b: 829. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor, Singapore.

***T. leptosigmatum* (Müll. Hall. ex Geh.) Paris** — Dixon 1924: 243 (as *T. subtrachaelophyllum*); Damanhuri et al. 2005c: 252; Câmara 2011b: 830. Perak, Singapore.

***T. lindbergii* (A. Jaeger) Renaud & Cardot** — Dixon 1926: 35; Manuel 1980b: 40 (as *T. alare*); Manuel 1981a: 113 (as *T. alare*); Mohamed & Tan 1988: 36 (as *T. alare*); Damanhuri & Nizam 2001: 222 (as *T. alare*); Damanhuri et al. 2005d: 280 (as *T. alare*); Mohamed & Yong 2005a: 116 (as *T. alare*); Mohamed & Yong 2005b: 86 (as *T. alare*); Yong & Damanhuri 2005: 101 (as *T. alare*); Yong et al. 2006: 121 (as *T. alare*); Mohamed et al. 2008: 47 (as *T. alare*); Câmara 2011a: 14. Johor, Kedah, Kelantan, Melaka, Pahang, Penang, Selangor.

T. magnum M. Fleisch. var. *majus* M. Fleisch. ex Dixon, *nom. nud.* — Dixon 1926: 35; Mohamed & Tan 1988: 36. Pahang.

***T. nepalense* (Schwägr.) Broth.** — Dixon 1924: 243 (as *T. trachaelophyllum*); Dixon 1926: 34; Holttum 1927: 92; Fröhlich 1953: 110; Wee 1979: 62 (as *T. planum*, see Note 33); Johnson 1980: 106 (as *T. gottscheanum*); Manuel 1980b: 40; Manuel 1981a: 113; Tixier 1982: 86; Mohamed 1987a: 56; Mohamed & Tan 1988: 36 (as *T. planum*, see Note 33); Tan & Mohamed 1999: 76; Damanhuri 2000: 221; Maideen & Damanhuri 2000: 110; Damanhuri & Maideen 2001b: 214; Yong et al. 2002: 247; Tan & Chang 2004: 306; Damanhuri et al. 2005e: 245; Mohamed & Yong 2005a: 116; Mohamed et al. 2005: 254 (as *T. planum*, see Note 33); Damanhuri et al. 2006: 170 (as *T. planum*, see Note 33); Yong et al. 2006: 121; Lee & Damanhuri 2008: 178 (as *T. planum*, see Note 33); Lim et al. 2010: 52; Câmara 2011b: 831. Kedah, Kelantan, Pahang, Penang, Perak, Perlis, Terengganu, Singapore.

***T. planissimum* Broth.** — Câmara 2011a: 15. Melaka, Perak, Selangor.

T. papillatum (Harv.) Broth. ≡ *Acanthorrhynchium papillatum* (Harv.) M. Fleisch. (fide Fleischer 1915–22: 1332).

T. papillatum (Harv.) Broth. var. *angustum* Dixon, *nom. nud.* (see Dixon 1926: 35).

T. papillatum (Harv.) Broth. var. *brevifolium* Dixon, *nom. nud.* (see Dixon 1926: 35).

T. perakense Broth., *nom. nud.* = *T. kerianum* (Broth.) Broth. (fide Dixon 1926: 35).

T. plumularia (Müll. Hal.) Broth. ≡ *Ctenidiadelphus plumularia* (Müll. Hal.) M. Fleisch. (fide Fleischer 1915–22: 1467).

T. ridleyi Broth., *nom. nud.* = *Plagiothecium miquelli* (Sande Lac.) Broth. (fide Dixon 1926: 33).

T. similans (Bosch & Sande Lac.) Broth. ≡ *Phyllodon similans* (Bosch & Sande Lac.) S. He (see He & Nguyen 2012).

T. singaporense Broth., *nom. nud.* = *T. isocladum* (Bosch & Sande Lac.) Renaud & Cardot (fide Dixon 1926: 34).

T. stigmatosum (Mitt.) Broth. ≡ *Trichosteleum stigmatosum* Mitt. (fide Mitten 1868: 181).

T. subtrachaelophyllum Dixon = *T. leptosigmatum* (Müll. Hal.) Paris (fide Câmara 2011b: 829).

***T. sumatranum* (Bosch & Sande Lac.) Broth.** — Tan & Mohamed 1999: 76. Pahang.

T. trachaelophyllum Dixon = *T. nepalense* (Schwäger.) Broth. (fide Dixon 1926: 34).

T. turgidellum (Müll. Hal.) Paris = *T. nepalense* (Harv.) A. Jaeger (fide Fleischer 1915–22: 1340).

***T. vernieri* (Duby) Besch.** — Tixier 1971: 341; Wee 1979: 62; Tixier 1980: 387; Manuel 1981a: 113; Mohamed & Tan 1988: 36; Tan & Mohamed 1999: 76; Damanhuri et al. 2006: 170. Johor, Kedah, Pahang, Penang, Selangor, Terengganu, Singapore.

Thamnium Schimp. (Family Thamnobryaceae)

T. ellipticum (Bosch & Lac.) Kindb. ≡ *Thamnobryum ellipticum* (Bosch & Sande Lac.) Nieuwl. (see Noguchi & Iwatsuki 1972: 470).

***Thamnobryum* Nieuwl. (Family Thamnobryaceae)**

***T. ellipticum* (Bosch & Sande Lac.) Nieuwl.** — Damanhuri et al. 2005e: 247. Kedah. Olsson et al. (2010: 121) proposed a new combination, *Touwia elliptica* (Bosch & Sande Lac.) S. Olsson, Enroth & D. Quandt, based on molecular evidence. We prefer to keep this species in *Thamnobryum* based on its overall morphology.

***Thuidium* Bruch & Schimp. (Family Thuidiaceae)**

***T. assimile* (Mitt.) A. Jaeger** — Ho & Tan 2002: 75. Johor.

T. bifarium Bosch & Sande Lac. ≡ *Pelekium bifarium* (Bosch & Sande Lac.) M. Fleisch. (fide Fleischer 1915–22: 1513).

***T. cymbifolium* (Dozy & Molck.) Dozy & Molck.** — Dixon 1926: 30; Noguchi 1973: 301; Manuel 1981a: 98; Mohamed & Tan 1988: 34; Tan & Mohamed 1999: 76; Damanhuri & Nizam 2001: 220; Touw 2001: 23; Damanhuri et al. 2005d: 276; Damanhuri et al. 2005e: 241; Yong & Damanhuri 2005: 99; Damanhuri et al. 2006: 172; Suleiman et al. 2010: 63. Kedah, Kelantan, Pahang, Perak, Selangor, Terengganu.

T. glaucinoides Broth. = *T. pristocalyx* (Müll. Hal.) A. Jaeger var. *samoanum* (Mitt.) A. Touw (fide Touw 2001: 41).

T. glaucinum (Mitt.) Bosch & Sande Lac. = *T. pristocalyx* (Müll. Hal.) A. Jaeger var. *pristocalyx* (Müll. Hal.) A. Jaeger (fide Touw 2001: 34).

T. meyenianum (Hampe) Dozy & Molck. = *T. plumulosum* (Dozy & Molck.) Dozy & Molck. (fide Touw 2001: 8).

T. orientale Mitt. ex Dixon \equiv *T. pristocalyx* (Müll. Hal.) A. Jaeger var. *orientale* (Mitt. ex Dixon) A. Touw (fide Touw 2001: 47).

***T. plumulosum* (Dozy & Molk.) Dozy & Molk.** — Dixon 1926: 29 (as *T. meyenianum*), 30; Tixier 1971: 339 (as *T. meyenianum*); Johnson 1972: 19 (as *T. meyenianum*); Manuel 1980b: 39; Manuel 1981a: 98 (as *T. meyenianum*); Mohamed 1987a: 56 (as *T. meyenianum*); Mohamed 1987b: 658; Mohamed & Tan 1988: 34 (as *T. meyenianum*); Damanhuri 1999: 214 (as *T. meyenianum*); Damanhuri & Ajamain 1999: 410; Tan & Mohamed 1999: 76; Damanhuri 2000: 220; Maideen & Damanhuri 2000: 110; Damanhuri & Maideen 2001b: 213 (as *T. meyenianum*); Touw 2001: 10; Yong et al. 2002: 247 (as *T. meyenianum*); Damanhuri et al. 2005a: 73; Damanhuri et al. 2005d: 276; Damanhuri et al. 2005e: 241; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 85; Damanhuri et al. 2007: 92; Lee & Damanhuri 2008: 174. Johor, Kedah, Kelantan, Pahang, Perak, Perlis, Selangor.

***T. pristocalyx* (Müll. Hal.) A. Jaeger var. *orientale* (Mitt. ex Dixon) A. Touw** — Dixon 1913: 329 (as *T. orientale*); Dixon 1926: 30 (as *T. orientale*); Manuel 1981a: 98 (as *T. orientale*); Mohamed & Tan 1988: 34 (as *T. orientale*); Touw 2001: 49; Damanhuri et al. 2005d: 277. Kelantan, Penang.

T. pristocalyx* (Müll. Hal.) A. Jaeger var. *pristocalyx — Noguchi 1973: 301 (as *T. glaucinum*); Tixier 1980: 384 (as *T. glaucinum*); Manuel 1981a: 98 (as *T. glaucinum*); Mohamed & Tan 1988: 34 (as *T. glaucinum*); Damanhuri 1999: 214 (as *T. glaucinum*); Damanhuri & Nizam 2001: 221 (as *T. glaucinum*); Touw 2001: 35; Damanhuri et al. 2005d: 276; Damanhuri et al. 2005e: 241; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 85; Yong & Damanhuri 2005: 99 (as *T. glaucinum*); Damanhuri et al. 2006: 172; Yong et al. 2006: 122; Damanhuri et al. 2007: 92; Lee & Damanhuri 2008: 174; Mohamed et al. 2008: 47; Mohamed et al. 2009: 378; Lim et al. 2010: 52; Suleiman et al. 2010: 63. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Selangor, Terengganu.

***T. pristocalyx* (Müll. Hal.) A. Jaeger var. *samoanum* (Mitt.) A. Touw** — Dixon 1926: 30 (as *T. glaucinoides*); Noguchi 1973: 301 (as *T. glaucinoides*); Manuel 1981a: 98 (as *T. glaucinoides*); Mohamed & Mohamad 1987: 188 (as *T. glaucinoides*); Mohamed & Tan 1988: 34 (as *T. glaucinoides*); Tan & Mohamed 1999: 76 (as *T. glaucinoides*); Damanhuri & Nizam 2001: 221 (as *T. glaucinoides*); Touw 2001: 43; Damanhuri et al. 2004: 260 (as *T. glaucinoides*); Yong & Damanhuri 2005: 99 (as *T. glaucinoides*). Johor, Pahang, Penang, Selangor.

T. trachypodium Bosch & Lac. = *Pelekium velatum* Mitt. (fide Fleischer 1915–22: 1509).

Thyridium Mitt. (Family Calymperaceae)

T. cardotii M. Fleisch. \equiv *Mitthyridium fasciculatum* (Hook. & Grev.) H. Rob. subsp. *cardotii* (M. Fleisch.) B.C. Tan & L.T. Ellis (see Ellis & Tan 1999: 25).

T. fasciculatum (Hook. & Grev.) Mitt. \equiv *Mitthyridium fasciculatum* (Hook. & Grev.) H. Rob. (see Ellis & Tan 1999: 24).

T. flavum (Müll. Hal.) M. Fleisch. ≡ *Mitthyridium flavum* (Müll. Hal.) H. Rob. (see Ellis & Tan 1999: 25).

T. manii M. Fleisch. var. *manii* = *Mitthyridium repens* (Harv.) H. Rob. (fide Reese et al. 1986b: 52).

T. manii M. Fleisch. var. *minor* M. Fleisch. = *Mitthyridium repens* (Harv.) H. Rob. (fide Nowak 1980: 93; see also Note 25).

T. repens (Harv.) Mitt. ≡ *Mitthyridium repens* (Harv.) H. Rob. (see Ellis & Tan 1999: 27).

T. undulatulum (Broth. & Geh.) M. Fleisch. ≡ *Mitthyridium undulatulum* (Dozy & Molk.) H. Rob. (see Nowak 1980: 121) = *Mitthyridium repens* (Harv.) H. Rob. (see Menzel & Schultze-Motel 1990: 505).

T. undulatum (Dozy & Molk.) M. Fleisch. ≡ *Mitthyridium undulatum* (Dozy & Molk.) H. Rob. (see O'Shea 2001: 56).

T. wallisii (Müll. Hal.) A. Jaeger ≡ *Mitthyridium wallisii* (Müll. Hal.) H. Rob. (see O'Shea 2001: 56).

Thysanomitrium Schwägr. ex Reinw. & Hornsch. (Family Dicranaceae)

T. abbreviatum Dixon = *Campylopus exasperatus* (Nees & Blume) Brid. (see Frahm & Mohamed 1987: 474).

T. exasperatum (Nees & Blum.) Reinw. & Hornsch. ≡ *Campylopus exasperatus* (Nees & Blume) Brid. (see Eddy 1988: 131).

T. ridleyi Dixon ≡ *Campylopus exasperatus* (Nees & Blume) Brid. var. *lorentzii* (M. Fleisch.) J.-P. Frahm (fide Frahm & Mohamed 1987: 477).

T. umbellatum Schwägr. & Gaudich. ex Arn. ≡ *Campylopus umbellatus* (Schwägr. & Gaudich. ex Arn.) Paris (see Eddy 1988: 133).

Touwia Ochyra (Family Neckeraceae)

T. elliptica (Bosch & Sande Lac.) S. Olsson, Enroth & D. Quandt ≡ *Thamnobryum ellipticum* (Bosch & Sande Lac.) Nieuwl. (see annotation of *Thamnobryum ellipticum*).

***Touwiodendron* N.E. Bell, A.E. Newton & D. Quandt (Family Hypnodendraceae)**

T. diversifolium (Broth. & Geh.) N.E. Bell, A.E. Newton & D. Quandt — Dixon 1926: 46 (as *Hypnodendron wrayi*); Touw 1971: 295; Manuel 1981a: 66; Mohamed & Tan 1988: 31. All records, except otherwise stated, published as *Hypnodendron diversifolium*. Perak.

***Trachyloma* Brid. (Family Trachylomataceae)**

***T. indicum* Mitt.** — Tixier 1971: 338; Noguchi 1973: 299; Manuel 1981a: 76; Miller & Manuel 1982: 304; Mohamed & Tan 1988: 32; Damanhuri & Nizam 2001: 218; Damanhuri et al. 2005d: 276. Kelantan, Pahang, Terengganu.

***Trachypus* Reinw. & Hornsch. (Family Meteoriaceae)**

***T. humilis* Lindb.** — Manuel 1981a: 73; Manuel 1981d: 220; Mohamed & Tan 1988: 32; Mohamed & Yong 2005a: 116; Damanhuri et al. 2006: 172. Kedah, Perak, Terengganu.

***Trachythecium* M. Fleisch. (Family Symphyodontaceae)**

***T. calcicolum* M. Fleisch.** — Fleischer 1915–22: 1417; Dixon 1926: 32; Manuel 1981a: 117; Mohamed 1987b: 658; Mohamed & Tan 1988: 37. Pahang, Selangor.

***T. verrucosum* (A. Jaeger) M. Fleisch.** — Manuel 1981a: 117; Mohamed & Tan 1988: 37; Damanhuri 1999: 220. Pahang.

***Trematodon* Michx. (Family Bruchiaceae)**

***T. acutus* Müll. Hal. = *T. longicollis* Michx.** (fide Bartram 1939: 30).

***T. longicollis* Michx.** — Noguchi 1973: 294; Manuel 1981a: 41; Mohamed & Tan 1988: 28; Mohamed et al. 2005: 250. Kedah, Pahang.

***Trichosteleum* Mitt. (Family Sematophyllaceae)**

***T. albifolium* Dixon** — Dixon 1924: 246; Dixon 1926: 40; Manuel 1981a: 109; Mohamed & Tan 1988: 36; Tan & Mohamed 1999: 76. Johor, Pahang, Perak.

***T. boschii* (Dozy & Molk.) A. Jaeger** — Holttum 1924: 251; Brotherus 1925: 438; Dixon 1926: 39 (as *T. brachypelma* var. *brachypelma*); Holttum 1927: 92 (as *T. brachypelma* var. *brachypelma*); Seki 1968: 58 (as *Rhaphidostichum boschii*); Tixier 1971: 340; Tixier 1974: 20; Wee 1979: 62; Johnson 1980: 113; Manuel 1981a: 109; Mohamed & Mohamad 1987: 188; Mohamed & Tan 1988: 36 (as *T. brachypelma* var. *brachypelma*); Mohamad & Gidiman 1990: 149; Wolseley et al. 1996: 81; Damanhuri 1999: 220; Tan & Mohamed 1999: 76; Maideen & Damanhuri 2000: 110; Damanhuri & Maideen 2001a: 28; Damanhuri & Nizam 2001: 222; Yong et al. 2002: 248; Damanhuri et al. 2004: 262; Damanhuri et al. 2005d: 280; Damanhuri et al. 2005e: 245; Mohamed & Yong 2005a: 116; Mohamed & Yong 2005b: 86; Mohamed et al. 2005: 254; Damanhuri et al. 2006: 170; Yong et al. 2006: 121; Lee & Damanhuri 2008: 178; Mohamed et al. 2009: 377; Lim et al. 2010: 52. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Perlis, Selangor, Terengganu, Singapore.

***T. brachypelma* (Müll. Hal.) Paris var. *brachypelma* = *T. boschii* (Dozy & Molk.) A. Jaeger** (see Tan & Jia 1999: 52).

***T. brachypelma* (Müll. Hal.) Paris var. *compactum* Dixon** — Dixon 1924: 246; Mohamed & Tan 1988: 36. Singapore. Endemic.

T. bruchii (Dozy & Molk.) Broth. ≡ *Rhaphidostichum bruchii* (Dozy & Molk.) M. Fleisch. (fide Fleischer 1915–22: 1312) ≡ *Papillidiopsis bruchii* (Dozy & Molk.) W.R. Buck & B.C. Tan (fide Buck & Tan 1989:12).

***T. complanatum* E.B. Bartram** — Mohamed & Mohamad 1987: 188; Yong et al. 2006: 121. Johor, Kedah.

T. densirameum (Dozy & Molk.) A. Jaeger, *comb. inval.* (see Manuel 1981a: 109).

T. elegantissimum M. Fleisch. = *Radulina borbonica* (Bél.) W. R. Buck (fide O'Shea 2006: 32).

***T. fleischeri* B.C. Tan, B.C. Ho & B.K.-B. Seah** — Tan & Chang 2004: 306; Tan et al. 2004: 223. Johor, Singapore.

***T. fruticola* Tixier** — Tixier 1971: 340; Manuel 1981a: 109; Mohamed & Tan 1988: 36. Pahang. Endemic.

T. hamatum (Dozy & Molk.) A. Jaeger = *Radulina borbonica* (Bél.) W.R. Buck (fide O'Shea 2006: 29).

T. laxirete Broth., *nom. nud.* = *T. boschii* (Dozy & Molk.) A. Jaeger (fide Dixon 1926: 39).

T. leptocarpon (Schwägr.) M. Fleisch. ≡ *Warburgiella leptocarpa* (Schwägr.) M. Fleisch. (fide Fleischer 1915–22: 1253).

T. luxurians (Dozy & Molk.) Broth. ≡ *Rhaphidostichum luxurians* (Dozy & Molk.) M. Fleisch. (fide Fleischer 1915–22: 1310).

***T. mammosum* (Müll. Hal.) A. Jaeger** — Dixon 1926: 39; Johnson 1972: 19; Manuel 1981a: 109; Tixier 1982: 86; Mohamed & Tan 1988: 36; Damanhuri & Maideen 2001a: 28. Johor, Pahang, Penang, Selangor.

***T. monostictum* (Thwaites & Mitt.) Broth. var. *laevius* Dixon** — Dixon 1926: 39; Wee 1979: 62; Johnson 1980: 62; Manuel 1981a: 109; Mohamed & Tan 1988: 36. Perak, Singapore.

T. papillatum (Harv.) A. Jaeger ≡ *Acanthorrhynchium papillatum* (Harv.) M. Fleisch. (fide Fleischer 1915–22: 1332).

***T. pinnatum* Dixon** — Dixon 1932: 43; Mohamed & Tan 1988: 36. Penang.

***T. procerum* Dixon var. *laevifolium* Dixon** — Tixier 1974: 21; Manuel 1981a: 109; Mohamed & Tan 1988: 36. Kedah.

T. pseudo-instratum Broth. = *Taxithelium instratum* (Brid.) Broth. (fide Dixon 1926: 33).

***T. ruficaule* (Thwaites & Mitt.) B.C. Tan** — Dixon 1924: 249 (as *Acroporium serrulatum*); Dixon 1926: 41 (as *A. ruficaule*); Tixier 1977: 453 (as *Clastobryum ruficaule*); Manuel 1981a: 105 (as *C. ruficaule*); Mohamed & Tan 1988: 35 (as *C. ruficaule*); Tan & Mohamed 1999: 76; Damanhuri et al. 2005d: 280; Damanhuri et al. 2005e: 246; Mohamed & Yong 2005b: 86. Johor, Kedah, Kelantan, Melaka, Pahang, Penang.

***T. saproxyphilum* (Müll. Hal.) B.C. Tan, W.B. Schofield & H.P. Ramsay** — Dixon 1926: 38 (as *Rhaphidstegium saproxyphilum*), 42 (as *Acroporium decipiens*); Johnson 1972: 19 (as *Sematophyllum saproxyphilum*); Noguchi 1973: 302 (as *S. saproxyphilum*); Wee 1979: 62 (as *S. saproxyphilum*); Johnson 1980: 111 (as *S. saproxyphilum*); Manuel 1980b: 40 (as *S. saproxyphilum*); Manuel 1981a: 110 (as *Acroporium decipiens*), 111 (as *S. saproxyphilum*); Tixier 1982: 85 (as *S. saproxyphilum*); Mohamed 1987a: 56 (as *S. saproxyphilum*); Mohamed & Tan 1988: 35 (as *S. saproxyphilum*); Damanhuri et al. 2004: 262 (as *S. saproxyphilum*); Mohamed & Yong 2005b: 86; Yong et al. 2006: 121 (as *S. saproxyphilum*); Mohamed et al. 2009: 377. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Selangor, Terengganu, Singapore.

***T. singaporense* M. Fleisch.** — Brotherus 1925: 438; Dixon 1926: 39; Holttum 1927: 92; Wee 1979: 62; Tixier 1980: 387; Manuel 1981a: 109; Tixier 1982: 86; Mohamed 1987a: 56; Mohamed & Tan 1988: 36; Tan & Chang 2004: 306; Damanhuri et al. 2005d: 280; Damanhuri et al. 2005e: 246; Mohamed & Yong 2005b: 86; Mohamed et al. 2005: 254; Damanhuri et al. 2006: 171; Yong et al. 2006: 121; Lee & Damanhuri 2008: 178; Mohamed et al. 2008: 47; Mohamed et al. 2009: 377. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu, Singapore.

***T. stigmatum* Mitt.** — Ho & Tan 2002: 75; Damanhuri et al. 2005d: 280; Damanhuri et al. 2005e: 246; Mohamed & Yong 2005b: 86; Mohamed et al. 2005: 254; Yong et al. 2006: 121; Lee & Damanhuri 2008: 178; Mohamed et al. 2008: 47; Mohamed et al. 2009: 377; Lim et al. 2010: 52. Johor, Kedah, Kelantan, Negeri Sembilan.

***Trichostomum* Bruch (Family Pottiaceae)**

***T. brachydontium* Bruch** — Mohamed et al. 2005: 252. Kedah.

T. orientale Web. = *Barbula indica* (Hook.) Spreng. (fide Saito 1975: 488).

T. sarawakense Dixon = *Pseudosymblepharis bombayensis* (Müll. Hal.) P. Sollmon (fide Sollman 2000: 135).

***Trismegistia* (Müll. Hal.) Müll. Hal. (Family Pylaisiadelphaceae)**

***T. brachyphylla* M. Fleisch.** — Akiyama 2010: 7. Pahang, Perak, Selangor.

T. brauniana (Bosch & Sande Lac.) M. Fleisch. = *Mastopoma braunianum* (Bosch & Sande Lac.) H. Akiyama (fide Akiyama 2006: 10).

T. calderensis* (Sull.) Broth. var. *calderensis — Dixon 1926: 37; Tixier 1971: 340; Manuel 1980b: 40; Manuel 1981a: 106; Mohamed & Tan 1988: 36; Damanhuri 1999: 220; Damanhuri & Ajamain 1999: 410; Damanhuri & Maideen 2001a: 28; Damanhuri & Nizam 2001: 222; Ho & Tan 2002: 75; Damanhuri et al. 2005d: 281; Mohamed & Yong 2005b: 86; Damanhuri et al. 2006: 171; Yong et al. 2006: 121; Mohamed et al. 2008: 47; Mohamed et al. 2009: 377; Suleiman et al. 2010: 65; Akiyama 2010: 10. Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Perak, Selangor, Terengganu.

***T. calderensis* (Sull.) Broth. var. *convoluta* (Bosch & Sande Lac.) K.T. Yong, B.C. Tan & B.C. Ho, comb. nov.** (see Note 34) — Holttum 1924: 251; Dixon 1926: 37; Tixier 1971: 340; Noguchi 1973: 304; Tixier 1974: 19; Wee 1979: 62; Johnson 1980: 108; Tixier 1980: 384; Manuel 1981a: 106; Mohamed 1987a: 56; Mohamed & Tan 1988: 36; Tan & Mohamed 1999: 76; Damanhuri & Nizam 2001: 222; Ho & Tan 2002: 75; Tan & Chang 2004: 306; Yong et al. 2006: 121; Suleiman et al. 2010: 65; Akiyama 2010: 13. Except in Akiyama (2010), all the above citations published it as *Trismegistia rigida* (Mitt.) Broth. Johor, Kedah, Kelantan, Pahang, Perak, Selangor, Singapore.

T. calderensis (Sull.) Broth. var. *rigida* (Reinw. & Hornsch.) H. Akiyama = *T. calderensis* (Sull.) Broth. var. *convoluta* (Bosch & Sande Lac.) K.-T. Yong, B.C. Tan & B.-C. Ho

***T. calderensis* (Sull.) Broth. var. *subintegrifolia* (Broth.) H. Akiyama** — Yong & Damanhuri 2005: 101 (as *T. subintegrifolia*); Akiyama 2010: 15. Johor, Pahang.

T. korthalsii (Dozy & Molk.) Broth. ≡ *T. lancifolia* (Harv.) Broth. var. *korthalsii* (Dozy & Molk.) M. Fleisch. (fide Fleischer 1915–22: 1222) = *T. lancifolia* (Harv.) Broth. (fide Akiyama 2010: 20).

T. lancifolia (Harv.) Broth. var. *korthalsii* (Dozy & Molk.) M. Fleisch. = *T. lancifolia* (Harv.) Broth. (fide Akiyama 2010: 20).

T. lancifolia* (Harv.) Broth. var. *lancifolia — Herzog 1919: 298; Dixon 1926: 37 (also as var. *korthalsii*); Holttum 1927: 91; Johnson 1972: 19; Noguchi 1973: 302, 304 (also as var. *korthalsii*); Wee 1979: 62; Johnson 1980: 108; Manuel 1980b: 40; Manuel 1981a: 106; Mohamed & Mohamad 1987: 189; Mohamed & Tan 1988: 36 (also as var. *korthalsii*); Damanhuri 1999: 220; Damanhuri et al. 2004: 262 (as var. *korthalsii*); Damanhuri et al. 2005a: 74 (as *T. korthalsii*); Damanhuri et al. 2005d: 281 (as *T. korthalsii*); Mohamed & Yong 2005b: 86 (as *T. korthalsii*); Mohamed et al. 2005: 254 (as *T. korthalsii*); Yong & Damanhuri 2005: 101 (as *T. korthalsii*); Damanhuri et al. 2006: 171 (also as *T. korthalsii*); Yong et al. 2006: 121; Lee & Damanhuri 2008: 178; Damanhuri et al. 2007: 94 (as *T. korthalsii*); Mohamed et al. 2009: 377 (as var. *korthalsii*); Lim et al. 2010: 52; Akiyama 2010: 21. Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Penang, Perak, Selangor, Terengganu.

***T. lancifolia* (Harv.) Broth. var. *pseudoplicata* H. Akiyama** — Akiyama 2010: 26. Johor, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor, Singapore.

***T. malayana* H. Akiyama** — Akiyama 2010: 29. Kedah, Pahang, Perak, Selangor.

T. rigida (Mitt.) Broth. ≡ *T. calderensis* (Sull.) Broth. var. *rigida* (Mitt.) H. Akiyama (fide Akiyama 2010: 11) = *T. calderensis* (Sull.) Broth. var. *convoluta* (Bosch & Sande Lac.) K.T. Yong, B.C. Tan & B.C. Ho (see Note 34).

T. subintegrifolia Broth. = *T. calderensis* (Sull.) Broth. (fide Tan 1991: 103) ≡ *T. calderensis* (Sull.) Broth. var. *subintegrifolia* (Broth.) H. Akiyama (fide Akiyama 2010: 15).

Tristichella Dixon (Family Sematophyllaceae)

T. spiculifera Dixon ≡ *Clastobryum spiculiferum* (Dixon) B.C. Tan, Z. Iwats. & D.H. Norris (fide Tan & Iwatsuki 1992: 151)

***Vesicularia* (Müll. Hal.) Müll. Hal. (Family Hypnaceae)**

***V. dubyana* (Müll. Hal.) Broth.** — Möller 1919: 328; Dixon 1926: 36; Holttum 1927: 92; Wee 1979: 63; Johnson 1980: 103; Manuel 1981a: 118; Mohamed 1987b: 659; Mohamed & Mohamad 1987: 189; Mohamed & Tan 1988: 37; Mohamad & Gidiman 1990: 149; Maideen & Damanhuri 2000: 110; Ho & Tan 2002: 75; Yong et al. 2002: 248; Mohamed & Yong 2005b: 87; Yong & Damanhuri 2005: 101; Yong et al. 2006: 115; Lee & Damanhuri 2008: 176; Mohamed et al. 2008: 47; Mohamed et al. 2009: 374; Lim et al. 2010: 52; Suleiman et al. 2010: 64. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Singapore.

***V. kurzii* (A. Jaeger) Broth.** — Dixon 1926: 36; Fröhlich 1953: 114; Wee 1979: 63; Johnson 1980: 103; Manuel 1981a: 118; Mohamed & Tan 1988: 37. Perak, Singapore.

V. muellerianum (Schimp.) A. Jaeger, *comb. inval.* (see Manuel 1981a: 118).

***V. miquelii* (Sande Lac.) M. Fleisch.** — Brotherus 1925: 464; Dixon 1926: 33 (as *Plagiothecium miquelli*); Holttum 1927: 92 (as *P. miquelli*); Wee 1979: 63; Johnson 1980: 102; Manuel 1981a: 118; Mohamed 1987b: 658; Mohamed & Tan 1988: 37; Wolseley et al. 1996: 81; Damanhuri 1999: 220; Damanhuri & Ajamain 1999: 410; Damanhuri & Maideen 2001a: 28; Damanhuri et al. 2004: 263; Damanhuri et al. 2005a: 63, 74; Damanhuri et al. 2005e: 242; Mohamed & Yong 2005b: 87; Damanhuri et al. 2006: 165; Damanhuri et al. 2007: 93; Lee & Damanhuri 2008: 176; Mohamed et al. 2008: 47. Johor, Kedah, Negeri Sembilan, Pahang, Selangor, Terengganu, Singapore.

***V. montagnei* (Schimp.) Broth.** — Möller 1919: 328; Dixon 1926: 36; Holttum 1927: 92; Wee 1979: 63; Manuel 1981a: 118; Mohamed 1987b: 659; Mohamed & Tan 1988: 37; Tan & Mohamed 1999: 76; Maideen & Damanhuri 2000: 110; Yong et al. 2002: 248; Damanhuri et al. 2005d: 277; Damanhuri et al. 2005e: 242; Mohamed et al. 2005: 254; Yong & Damanhuri 2005: 102; Damanhuri et al. 2007: 93; Lee & Damanhuri 2008: 176. Kedah, Kelantan, Pahang, Perak, Perlis, Selangor, Singapore.

***V. reticulata* (Dozy & Molk.) Broth.** — Möller 1919: 328; Dixon 1926: 36; Holttum 1927: 92; Noguchi 1973: 304; Wee 1979: 63; Johnson 1980: 103; Manuel 1981a: 118; Tixier 1982: 86; Mohamed 1987b: 659; Mohamed & Tan 1988: 37; Damanhuri 1999: 220; Damanhuri & Ajamain 1999: 410; Damanhuri 2000: 221; Maideen & Damanhuri 2000: 110; Damanhuri & Maideen 2001a: 28; Yong et al. 2002: 248; Damanhuri et al. 2004: 263; Tan & Chang 2004: 306; Damanhuri et al. 2005a: 74; Damanhuri et al. 2005d: 277; Damanhuri et al. 2005e: 243; Mohamed & Yong 2005b: 87; Yong & Damanhuri 2005: 102; Damanhuri et al. 2007: 93; Lee & Damanhuri 2008: 176; Mohamed et al. 2009: 374. Johor, Kedah, Kelantan, Negeri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Singapore.

***Warburgiella* Müll. Hal. ex Broth. (Family Sematophyllaceae)**

W. complanata (Dixon) Broth. ≡ *Papillidiopsis complanata* (Dixon) W.R. Buck & B.C. Tan (fide Buck & Tan 1989: 12).

***W. leptocarpa* (Schwägr.) M. Fleisch.** — Dixon 1926: 40 (as *Trichosteleum leptocarpon*); Wee 1979: 62; Johnson 1980: 111; Tixier 1980: 384; Manuel 1981a: 107; Mohamed & Tan 1988: 36; Tan & Chang 2004: 306. Pahang, Singapore.

***W. pycnophylla* (Müll. Hal.) M. Fleisch.** — Dixon 1926: 45 (as *Acroporium pycnophyllum*); Manuel 1981a: 107; Mohamed & Tan 1988: 36. Perak.

***Weissia* Hedw. (Family Pottiaceae)**

***W. edentula* Mitt.** — Dixon 1926: 17 (as *Hymenostomum edentulum*); Johnson 1980: 72 (as *H. edentulum*); Manuel 1981a: 57; Mohamed 1987a: 55; Mohamed 1987b: 656; Mohamed & Tan 1988: 30; Mohamed & Yong 2005a: 116; Mohamed et al. 2005: 252. Kedah, Perlis.

W. malayensis (M. Fleisch.) Manuel. = *Barbula indica* (Hook.) Spreng. (fide Eddy 1990: 177).

***Wijkia* H.A. Crum (Family Pylaisiadelphaceae)**

***W. alboalaris* (Tixier) Manuel** — Tixier 1971: 339 (as *Acanthocladium alboalare*); Manuel 1981a: 112; Mohamed & Tan 1988: 36. Pahang.

***W. hornschurchii* (M. Fleisch.) H.A. Crum** — Tixier 1980: 384; Mohamed & Tan 1988: 36. Pahang.

***W. polymorpha* (Dixon) H.A. Crum** — Dixon 1924: 245 (as *Acanthocladium polymorphum*); Noguchi 1973: 304; Manuel 1981a: 112; Mohamed & Tan 1988: 36. Pahang.

W. surcularis (Dixon) H.A. Crum \equiv *Rhaphidostichum surculare* (Dixon) Dixon (fide Mohamed & Tan 1988: 41) \equiv *Isocradiella surcularis* (Dixon) B.C. Tan & Mohamed (fide Tan & Mohamed 1990: 357).

W. tanytricha (Mont.) H.A. Crum — Noguchi 1973: 304; Manuel 1981a: 112; Tixier 1982: 85; Mohamed & Tan 1988: 36; Tan & Chang 2004: 306. Pahang, Singapore? (see Tan & Ho 2008: 137).

W. tenuisetum (Dixon) H.A. Crum, *comb. inval.* (see Tixier 1980: 384).

***Wilsoniella* Müll. Hal. (Family Dicranaceae)**

W. acutifolia Broth., *nom. nud.* = *W. decipiens* (Mitt.) Alston var. *acutifolia* (Dixon) Wijk & Marg. (fide Mohamed & Tan 1988: 41) = *W. decipiens* (Mitt.) Alston var. *decipiens* (fide Norris & Koponen 1990: 8).

W. decipiens (Mitt.) Alston var. *acutifolia* (Dixon) Wijk & Marg. = *W. decipiens* (Mitt.) Alston var. *decipiens* (fide Norris & Koponen 1990: 8).

W. decipiens (Mitt.) Alston var. *decipiens* — Dixon 1926: 3 (as *W. acutifolia*, *W. pellucida*); Johnson 1980: 27 (as *W. pellucida*); Manuel 1981a: 42; Mohamed 1987b: 656; Mohamed & Tan 1988: 28 (as *W. decipiens* var. *acutifolia*). Selangor.

W. pellucida (Wils) Müll. Hal. = *W. decipiens* (Mitt.) Alston (fide Tan & Iwatsuki 1993: 395).

W. tonkinensis Besch. — Eddy 1988: 104. Peninsular Malaysia.

Excluded Taxa

- Callicostella beccariana* (Hampe) A. Jaeger — see Mohamed & Robinson (1991) and Note 1.
- Campylopus richardii* Brid — see Frahm (1976: 905) and Note 4.
- C. thwaitesii* (Mitt.) A. Jaeger — see Mohamed & Tan (1988: 41) and Note 5.
- Chaetomitrium ciliatum* Bosch & Sande Lac. — see Mohamed & Robinson (1991) and Note 6.
- C. elongatum* (Dozy & Molk.) Dozy & Molk. — see Mohamed & Robinson (1991) and Note 7.
- C. lanceolatum* Bosch & Sande Lac. — see Mohamed & Robinson (1991) and Note 6.
- C. muricatum* Bosch & Sande Lac. — see Mohamed & Robinson (1991) and Note 8.
- C. nematosum* Broth. — see Mohamed & Robinson (1991) and Note 9.
- C. torquescens* Bosch & Sande Lac. — see Mohamed & Robinson (1991) and Note 10.
- Daltonia aristifolia* Renauld & Cardot — see Mohamed & Robinson (1991) and Note 12.
- Distichophyllum undulatum* Dozy & Molk. ex Bosch & Sande Lac. — see Mohamed & Robinson (1991) and Note 14.
- Fissidens asplenioides* Hedw. — see Iwatsuki & Mohamed (1987) and Note 15.
- F. elegans* Brid. — see Iwatsuki & Mohamed (1987) and Note 16.
- F. siamensis* Dixon — see Iwatsuki & Mohamed (1987) and Note 17.
- Mastopoma perundulata* (Dixon) Horik. & Ando. — see Note 23.
- Microcampylopus khasianus* (Griff.) Giese & J.-P. Frahm — see Note 24.
- M. laevigatus* (Thér.) Giese & J.-P. Frahm — see Note 24.
- Pogonatum patulum* (Harv.) Mitt. — see Hyvönen (1989b). The Malaysian record of this species was shown by the author in a distribution map with no mention of a specific collection from Peninsular Malaysia.
- Rhizogonium novae-hollandiae* (Brid.) Brid. — see Touw (1989) and Note 30.
- Sphagnum magellanicum* Brid. — see Eddy (1977) and Note 31.
- Symphiodon perrottetii* Mont. — see He & Snider (2000) and Note 32.
- Taxithelium planum* (Brid.) Mitt. — see Câmara (2011b) and Note 33.

Annotation

- [1] Specimen *Burkill 6566* collected from Telok Reserve, Selangor (SING) was initially reported as *Callicostella beccariana* (Hampe) A. Jaeger by Dixon (1926). However, a later identification confirmed that it is a *Callicostella prabaktiana* (Müll. Hal.) Bosch Sande Lac. (see Mohamed & Robinson 1991: 6).
- [2] *Schizomitrium prabaktianum* (Müll. Hal.) H.A. Mill., H. Whittier & B. Whittier was printed as *Schizomitrium prabaktiana* in Mohamed (1987a). The name accepted here is *Calliscostella papillata* var. *prabaktiana* (Müll. Hal.) Streimann.
- [3] Reese & Mohamed (1985: 104) has argued that the original spelling of “*taitense*” by Sullivant (1859) and later by Mitten (1969) was without an “h”, although it was cited as “*Calymperes tahitense*” by Wijk et al. (1959) as an orthographical error. The present checklist follows the original spelling of the species epithet, “*taitense*”.
- [4] *Campylopus richardii* Brid. is a species of the Neotropics (Frahm 1991) with a doubtful occurrence in Asia. Although Tixier (1974) and Johnson (1980), has reported this species from Peninsular Malaysia, Frahm (1976: 905) has clarified that all SE Asian records of *C. richardii* are in fact a misapplication of *C. umbellatus* (Schwägr. & Gaudich. ex Arn.) Paris.
- [5] Frahm & Mohamed (1987) omitted the reported *Campylopus thwaitesii* (Mitt.) A. Jaeger by Johnson (1980) from Peninsular Malaysia. Meanwhile, Johnson’s (1980: 38) specimen from Terengganu has been re-identified as *C. macgregorii* Broth. & Geh. by Frahm & Mohamed (1987: 470 & 482), which is the name accepted in this list.
- [6] Tixier (1980: 383) reported *Chaetomitrium ciliatum* Bosch & Sande Lac. and *C. lanceolatum* Bosch & Sande Lac. based on the same collection, viz., *Tixier 5234* (PC) from Cameron Highland in Pahang State. However, a later identification by Mohamed & Robinson (1991: 12) showed that the specimen is *C. orthorrhynchum* (Dozy & Molk.) Bosch & Sande Lac.
- [7] *Chaetomitrium elongatum* (Dozy & Molk.) Dozy & Molk. was reported from Malaya by Dixon (1926: 28) based on *Ridley 373* (BM, SING) from Dindings, Perak and *Burkill 16569* (BM, SING) from Sungai Perting, Pahang. According to Mohamed & Robinson (1991: 11), both of these specimens were actually forms of *C. papillifolium* Bosch & Sande Lac.

- [8] *Chaetomitrium muricatum* Bosch & Sande Lac. was reported from Malaya by Dixon (1926: 27) based on *Ridley 405, 411* (BM, SING) collected in Ginting Bidai, Selangor. Both specimens were identified as *C. leptopoma* (Schwägr.) Bosch & Sande Lac. in Mohamed & Robinson (1991: 12).
- [9] Specimen of *Ridley 205* (BM, SING) collected from Kuala Kenering, Perak, was initially identified as *Chaetomitrium nematosum* Broth. due to the peculiar brood-filaments and colour of the plants (Dixon 1926: 28). However, despite of these two morphological trait variants, the plant best fit the description of *C. orthorrhynchum* (Dozy & Molk.) Bosch & Sande Lac., according to Mohamed & Robinson (1991: 12).
- [10] Tixier (1971: 339) reported *Chaetomitrium torquescens* Bosch & Sande Lac. based on *Tixier 4809* (PC) collected from Fraser's Hill, Pahang. The specimen was later identified as *C. papillifolium* Bosch & Sande Lac. by Mohamed and Robinson (1991: 12).
- [11] Tixier (1971: 339) identified *Tixier 4827* (PC) collected from Fraser's Hill, Pahang, as *Cyathophorella tenera* (Bosch & Sande Lac.) M. Fleisch. which was later corrected to *Cyathophorella hookeriana* (Griff.) M. Fleisch. in Mohamed & Robinson (1991: 35). The latter is a homotypic synonym of *Cyathophorum hookerianum* (Griff.) Mitt.
- [12] Tixier (1980: 383) identified *Tixier 5220* (PC) from Cameron Highlands as *Daltonia aristifolia* Renault & Cardot. However, later identification (Mohamed & Robinson, 1991: 13) confirmed it as a *Distichophyllum cuspidatum* (Dozy & Molk.) Dozy & Molk.
- [13] Ho et al. (2001: 116) pointed out that due to the close resemblance of their vegetative characters, some specimens of the *D. spathulatum* (Dozy & Molk.) Dozy & Molk. were identified as *D. mittenii* Bosch & Sande Lac. by Mohamed & Robinson (1991: 25).
- [14] All the specimens that initially identified as *Distichophyllum undulatum* Dozy & Molk. ex Bosch & Sande Lac., *Wray Jr. 945* (BM, SING) by Dixon (1926: 26), and *Inoue 10432, 16345, 16356* (TNS) by Noguchi (1973: 300) are actually *Distichophyllum mittenii* Bosch & Sande Lac., according to Mohamed & Robinson (1991). However, one of us (HBC) confirmed the collection of *Inoue 16364* (TNS) determined as *D. undulatum* is *D. spathulatum* (Dozy & Molk.) Dozy & Molk.
- [15] *Fissidens asplenoides* Hedw. was reported by Dixon (1926: 10) from Bukit Penara, Penang, based on *Ridley 572* (BM, SING). According to Iwatsuki & Mohamed (1987: 359), the specimen is actually *F. zippelianus* Dozy & Molk., or *F. crispulus* Brid., as the name accepted in the new moss checklist.

- [16] Manuel (1980b: 38) reported *Fissidens elegans* Brid. from Taman Negara, Pahang, based on two specimens, viz., *Manuel 2510, 2614* (KLU). However, *Manuel 2510* only contains poor material of *F. hollianus* Dozy & Molk. and the other specimen, *Manuel 2614*, is, in fact, a *F. ceylonensis* Dozy & Molk. according to Iwatzuki & Mohamed (1987: 359).
- [17] *Fissidens siamensis* Broth. was reported by Dixon (1926: 9) from Pulau Langkawi, Kedah, based on the specimen collected by *Holtum 17479* (BM, SING). However, according to Iwatzuki & Mohamed (1987: 359), the specimen is identical with *F. ceylonensis* Dozy & Molk.
- [18] *Gymnostomum recurvirostrum* Hedw. was printed as *Gymnostomum recurvirostre* in Mohamed (1987b) and Mohamed & Tan (1988).
- [19] *Isocradiella surcularis* (Dixon) B.C. Tan & Mohamed was published as *Isocradiella surculare* in Tan & Mohamed (1999: 75).
- [20] The presence of *Isopterygium albescens* (Hook.) A. Jaeger var. *smallii* (Sull. & Lesq.) Z. Iwats. in Peninsular Malaysia needs further verification. The variety was reported to be endemic to South Japan (Noguchi 1994: 1052).
- [21] *Leucoloma* was mistakenly printed as *Leucolama* in Mohamed et al. (2005: 250).
- [22] The identity of the specimen first reported as *Mastopoma* sp. by Mohamed & Mohamad (1987: 188) was later identified by Mohamed & Yong (2005b: 88) as *Mastopoma armitii* (Broth. & Geh.) Broth.
- [23] Noguchi (1973: 303) compared the specimen, *Inoue 16337* (TNS), collected from Cameron Highlands, Pahang, with authentic specimen of *Mastopoma perundulata* (Dixon) Horik. & Ando. He noted some differences and decided to retain it as an unnamed *Mastopoma* species. Hence, *Mastopoma perundulata* is excluded from present checklist until further examination of the specimen.
- [24] Both *Microcampylopus khasianus* (Griff.) Giese & J.-P. Frahm and *M. laevigatus* (Thér.) Giese & J.-P. Frahm have not been reported for Peninsular Malaysia in literature, although Giese & Frahm (1986b: 117) have provided a map that included Malaysia into the overall distributional range of the two species. Thus, these two species are excluded from the checklist at present time until evidence supporting their occurrence in Peninsular Malaysia comes into existence.
- [25] The basionym of *Mitthyridium repens* (Harv.) H. Rob. var. *minor* (M. Fleisch.) B.C. Tan & Mohamed is actually *Thyridium manii* M. Fleisch. var. *minor* M. Fleisch. (see Fleischer 1900–02: 236).

- [26] Manuel (1980b: 39) reported *Pinnatella ambigua* (Bosch & Sande Lac.) M. Fleisch. based on specimens *Manuel 2607b, 2609, 2610, 2620, 2622* (KLU). All were later identified as *Pinnatella kuehliana* (Bosch & Sande Lac.) M. Fleisch. by Mohamed & Abdullah (1988: 147).
- [27] Dixon (1926: 25) reported *Pinnatella anacamptolepis* (Müll. Hal.) Broth. based on *Ridley 638* from Gua Batu, Selangor, and *Ridley 166* from Tapah, Perak. However, these specimens were actually *Pinnatella mucronata* (Bosch & Sande Lac.) M. Fleisch. according to Mohamed & Abdullah (1988: 147).
- [28] Herzog (1919: 298) first identified *Stresemann 97* (JE, L) from Batang Padang, Perak, as *Racopilum spectabile* Reinw. & Hornsch. var. *subisophyllum* Herzog, but Dixon (1926: 29) listed the same collection under *Racopilum spectabile* Reinw. & Hornsch. without recognizing any varieties. Recently, Zanten (2006) found sufficient evidence to support the distinction and separation of the varieties.
- [29] *Rhizogonium badakense* M. Fleisch. was reported for the Malay Peninsula by Noguchi (1973: 296) based on *Inoue 10797, 10904, 16223, 16371* (all at KLU), where these specimens were actually referring to *Pyrrhobryum spiniforme* (Hedw.) Mitt. (Manuel 1981c: 450).
- [30] *Rhizogonium novae-hollandiae* (Brid.) Brid. reported from Borneo, Sumatra and Peninsular Malaysia by Dixon (1926, 1932, 1935) and Manuel (1981c) was actually referable to *R. lamii* Reimers (Touw 1989: 241).
- [31] Eddy (1977: 389) discussed that *Sphagnum magellanicum* Brid. is a species not found in Malesia, and suggested that Malesian specimens so-named would most possibly belong to *S. perichaetiale* Hampe.
- [32] He & Snider (2000: 73) reported *Symphiodon perrottetii* Mont. from Singapore, based on *Down 28* (H). This is regarded by Tan & Ho (2008: 139) as a probably erroneous record for Peninsular Malaysia. To date, no other specimen of *Symphiodon perrottetii* has been reported, nor seen in Peninsular Malaysia
- [33] Câmara (2011b) reported *Taxithelium planum* (Brid.) Mitt. with a distribution restricted to Tropical America and west Tropical Africa, whereas *T. nepalense* (Schwägr.) Broth. is the morphologically allied species that is common in Southeast Asia.
- [34] The new combination of *Trismegistia calderensis* (Sull.) Broth. var. *rigida* (Reinw. & Hornsch.) H. Akiyama (see Akiyama 2010: 11) is not validly published by citing as its basionym an illegitimate later homonym, *Hypnum rigidum* Reinw. & Hornsch. (1829). The oldest available legitimate basionym for use in this combination is *Acanthodium rigidum* Mitt. (1868). More so, among the

listed synonyms of *Trismegistia calderensis* (Sull.) Broth. var. *rigida* (Mitt.) H. Akiyama in Akiyama (2010), *Hypnum rigidum* var. *convolutum* Bosch & Sande Lac. (1866) has priority over the newly proposed var. *rigida* at the varietal level. We amend the situation with the following nomenclatural proposal —

***Trismegistia calderensis* (Sull.) Broth. var. *convoluta* (Bosch & Sande Lac.)
K.T. Yong, B.C. Tan & B.C. Ho, *comb. nov.***

Basionym: *Hypnum rigidum* var. *convolutum* Bosch & Sande Lac., Bryol. Jav. 2: 140, t. 238A. 1866.

Synonym: *Trismegistia calderensis* (Sull.) Broth. var. *rigida* (Mitt.) H. Akiyama, Humans & Nature 21: 11. 2010, *nom. invalid.*



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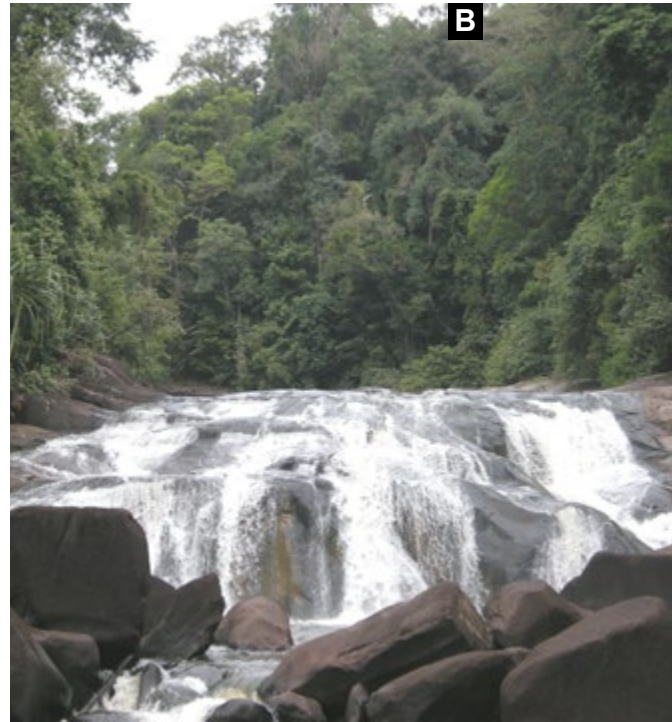


Plate 1. A, lowland dipterocarp forest, Belum Royal Park, Perak; B, lowland dipterocarp forest, Endau-Rompin State Park, Johor; C, lowland forest in Bukit Timah Nature Reserve, Singapore; D, Nee Soon fresh-water swamp forest, Singapore.

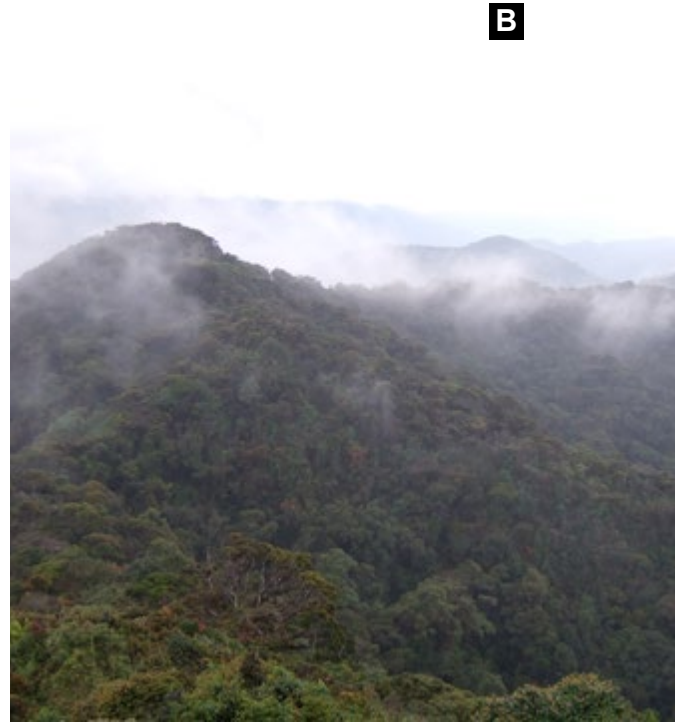
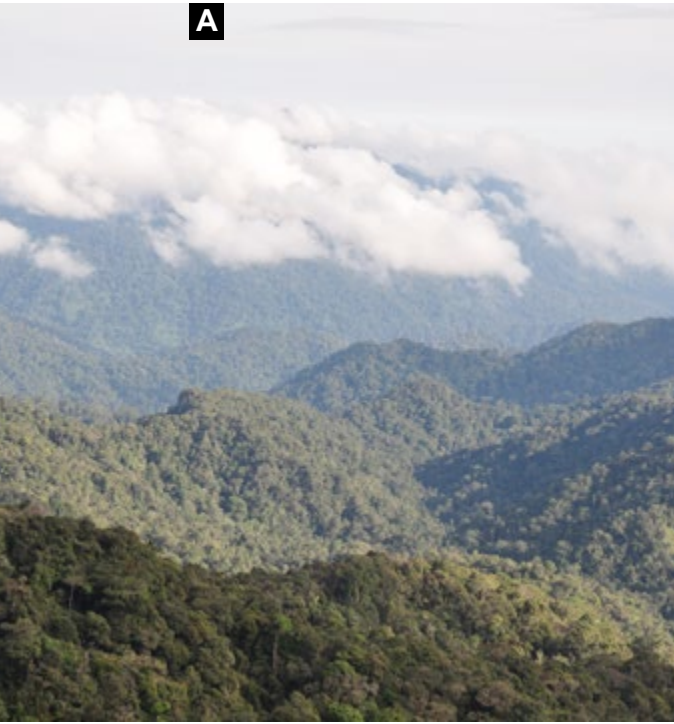


Plate 2. A, Main Range, Peninsular Malaysia; B, montane forests of Cameron Highlands, Pahang; C, mossy forest at the summit of Mount Ulu Kali, Genting Highland, Pahang; D, mossy ground in a mossy forest, Mount Tahan, Pahang.

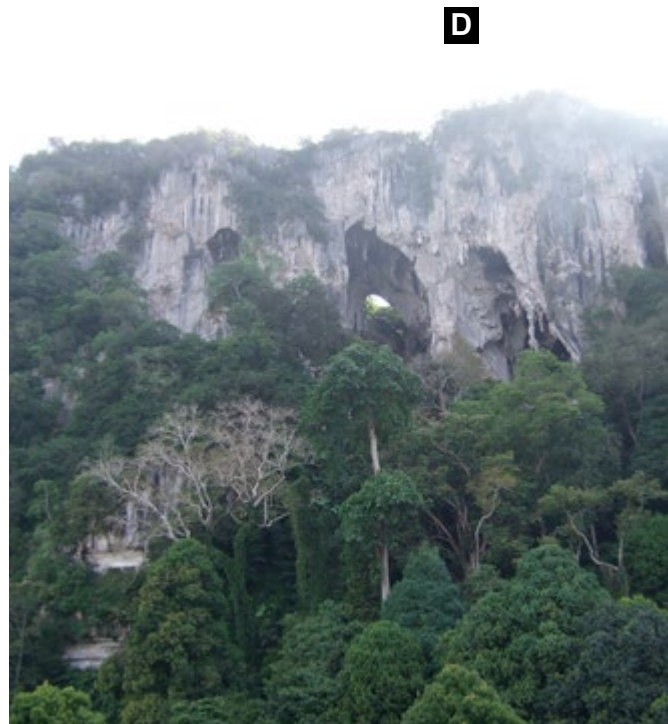
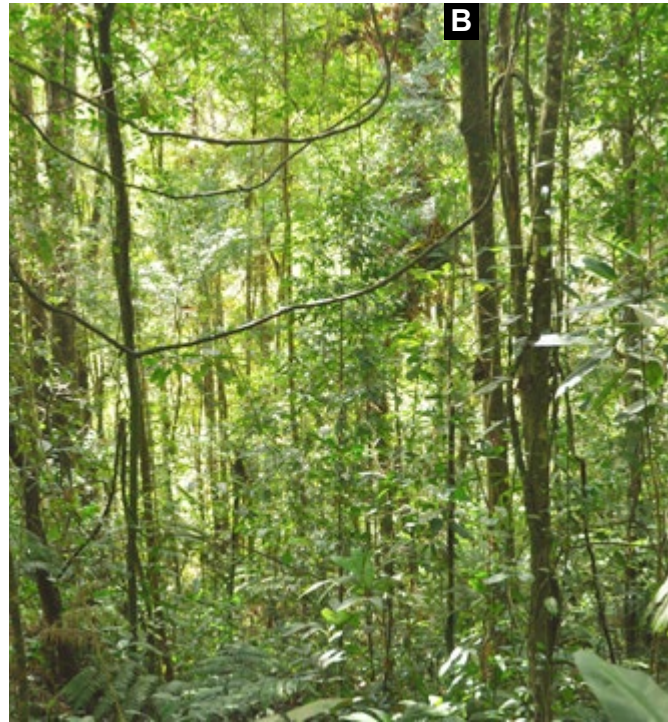


Plate 3. A, forest ground densely covered by *Sphagnum* species, Mount Stong, Kelantan; B, lower montane forest in Fraser's Hill, Pahang; C, highland heath forest, Mount Jerai, Kedah; D, Gunung Senyum limestone outcrop, Pahang.



Plate 4. A, *Acroporium procerum* (Müll. Hal.) M. Fleisch.; B, *Actinodontium adscendens* Schwägr.; C, *Aerobryopsis longissima* (Dozy & Molck.) M. Fleisch.; D, *Arthrocormus schimperi* (Dozy & Molck.) Dozy & Molck.

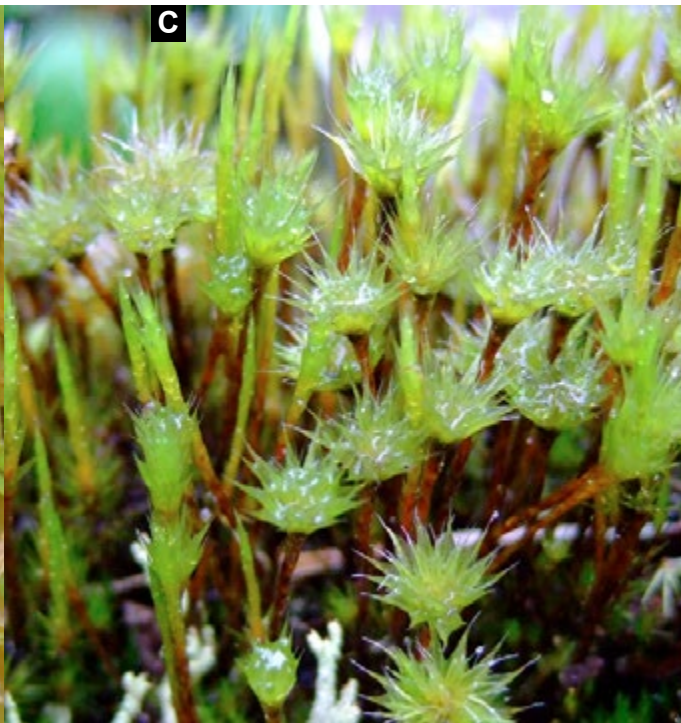


Plate 5. A, *Bryum neelgheriense* Mont.; B, *Calypstrochaeta remotifolia* (Müll. Hal.) Z. Iwats., B.C. Tan & A. Touw; C, *Campylopus umbellatus* (Schwägr. & Gaudich. ex Arn.) Paris; D, *Cladopodanthus heterophyllus* (M. Fleisch.) E.B. Bartram

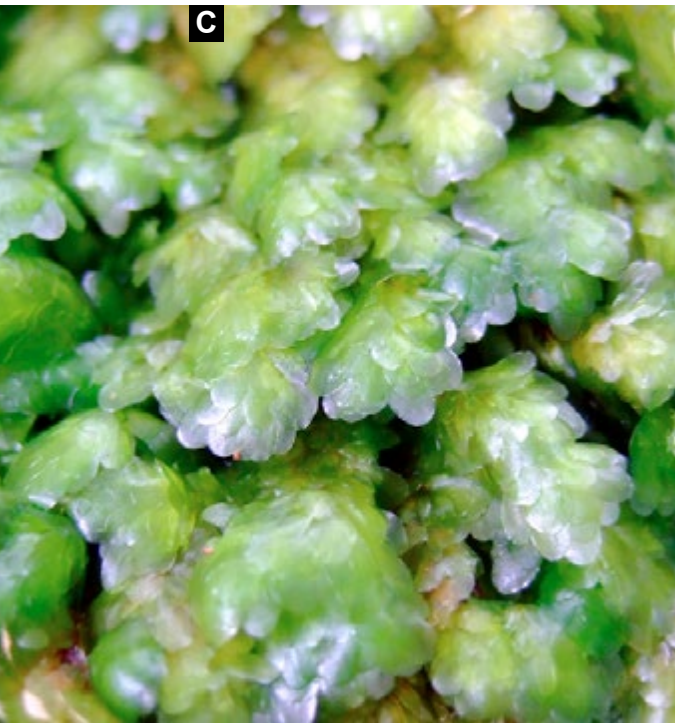


Plate 6. A, *Cyathophorum spinosum* (Müll. Hal.) M. Fleisch.; B, *Dicranoloma blumii* (Nees) Paris; C, *Distichophyllum spathulatum* (Dozy & Molk.) Dozy & Molk.; D, *Ectropothecium dealbatum* (Reinw. & Hornsch.) A. Jaeger.



Plate 7. A, *Fissidens oblongifolius* Hook.f. & Wilson; B, *Garovaglia plicata* (Brid.) Bosch & Sande Lac. subsp. *plicata* var. *plicata*.; C, *Himantocladium cyclophyllum* (Müll. Hal.) M. Fleisch.; D, *Hypnodendron junghuhnii* (Müll. Hal.) A. Jaeger & Sauerb.



Plate 8. A, *Hypopterygium tamarisci* (Sw.) Brid. ex Müll. Hal.; B, *Isocladiella surcularis* (Dixon) B.C. Tan & Mohamed; C, *Leucobryum javense* (Brid.) Mitt.; D, *Leucophanes glaucum* (Schwägr.) Mitt.

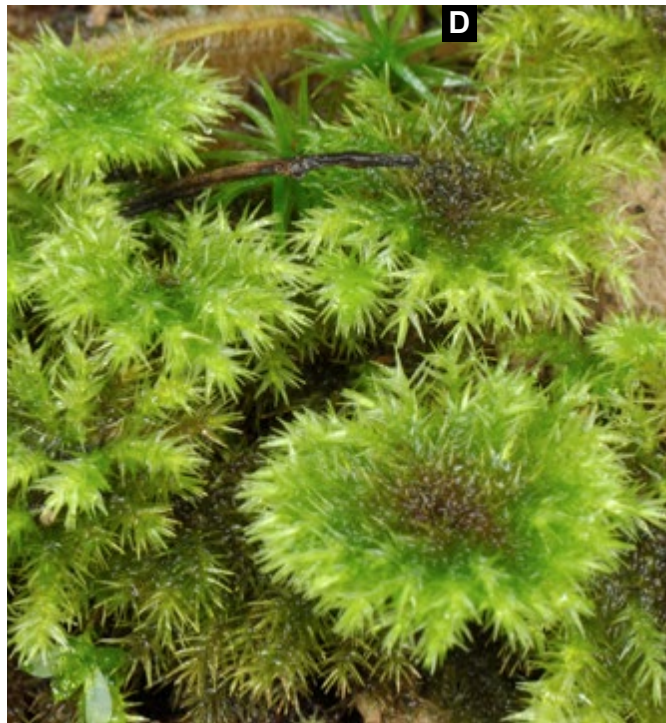


Plate 9. A, *Lopidium struthiopteris* (Brid.) M. Fleisch.; B, *Macromitrium salakanum* Müll. Hal.; C, *Meteorium polytrichum* Dozy & Molk.; D, *Mniodendron dendroides* (Brid.) Wijk & Margad.

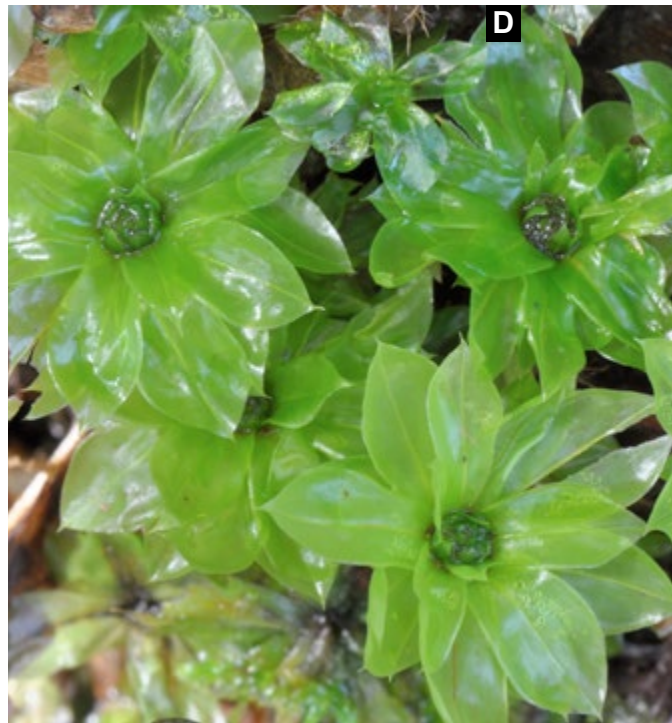


Plate 10. A, *Plagiomnium integrum* (Bosch & Sande Lac.) T.J. Kop.; B, *Pogonatum cirratum* (Sw.) Brid. subsp. *cirratum*; C, *Pyrrhobryum spiniforme* (Hedw.) Mitt.; D, *Rhodobryum ontariense* (Kindb.) Paris.



Plate 11. A, *Sphagnum junghuhnianum* Dozy & Molk.; B, *Thuidium cymbifolium* (Dozy & Molk.) Dozy & Molk.



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A Revised Moss Checklist of Peninsular Malaysia and Singapore

The book represents a summary and update of bryological research conducted in Peninsular Malaysia and Singapore in the past 25 years after the first modern moss checklist of Peninsular Malaysia and Singapore was published by Prof. Haji Mohamed (Malaysia) and Dr. B.C. Tan (Singapore) in 1988. It records the changes in family classification and generic concepts brought forth mainly by recent molecular phylogenetic studies. The updated checklist shows a total of 46 families, 159 genera and 522 species of mosses, of which 7 species are endemic to the geographical areas covered by the new checklist. To note, Singapore has 24 families, 58 genera and 153 species of mosses as compared to 46 families, 158 genera and 512 species in Peninsular Malaysia. Many of the moss taxa included in the new checklist are recent discoveries. The checklist also provides detailed bibliographical and distributional information of past records of moss taxa reported from the area. As many of the moss taxa listed in the checklist are widespread in the Malesian region, the checklist also serves as an important reference of updated nomenclature of mosses found in both countries and adjacent areas.



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