

THE CHINESE SPECIES DESCRIBED IN MEYEN'S
"OBSERVATIONES BOTANICAE" (BEITRÄGE
ZUR BOTANIK)

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PARTLY because certain Chinese species described in Meyen's "Observationes botanicae (Beiträge zur Botanik)" have been overlooked, partly because others have never been definitely placed, and partly because still others have been accepted as valid, although it is reasonably clear from their descriptions that they are but synonyms of other species, it has been thought expedient to make a somewhat critical study of them. The various Philippine species of flowering plants based on Meyen's collections have for the most part been disposed of in a satisfactory manner, either as valid species or as synonyms of previously described ones, as indicated in my "Enumeration of Philippine flowering plants." The status of these Philippine species was for the most part determined by an actual examination of their types in the Berlin Herbarium.

Meyen was primarily a plant physiologist. In 1830–32 he served as surgeon on the German ship "Prinzess Louise" on a trip around the world. Wherever stops were made he took advantage of the opportunity to collect botanical material. A detailed account of his journey was published in 1834–35.¹

In his published "Reise" Meyen included various observations on the vegetation of the countries visited, on individual species observed, and incidental to his narrative actually named and described a number of new plant species. Pages 292 to 400 of volume two of this work are devoted to his observations on China, as the result of his two stops in Kwangtung Province, August 15 to September 2, and November 11 to December 12, 1831. But a single new binomial appears in these pages, *Aralia trifoliata* Meyen, and this a *nomen nudum*; Walpers later placed it as a synonym of *Panax aculeatus* Ait. = *Acanthopanax trifoliatum* (Linn.) Merr.

The Chinese plants that Meyen collected and on which the descriptions discussed below were based, were secured mostly at Macao and on neighboring small islands, at Cape Syng-moon on Lantao Island, Hong-

¹Meyen, F. J. F. Reise um die Erde, ausgeführt auf dem Königlich Preussischen Seehandlungs-Schiffe Prinzess Louise, commandirt von Capitain W. Wendt, in den Jahren 1830, 1831 und 1832. 1: i-viii. 1-493. 1 t. 1 map, 1834; 2: i-vi. 1-411, 1 map, 1835.

kong New Territory, and Lintin Island, Canton River, near Hongkong. One of the new species was collected at Canton, and one on Lippas (Lappa) Island near Macao. From Meyen's own account of his journey it is safe to assume that the considerable number of his specimens that are cited merely as coming from "China" were collected at some one of the several localities listed above, and mostly at Macao, and on Lantao and Lintin Islands. These localities are all within a few miles of Hongkong. At the time of Meyen's visit, Hongkong Colony did not exist, Hongkong Island having been ceded to Great Britain in 1841, and the Colony chartered in 1843. The foreign commerce with southeastern China, up to the time of the establishment of Hongkong, was largely through the small Portuguese colony of Macao and with Canton.

The "Observationes botanicae"¹ is a composite work published after Meyen's death. The contributors were Ratzeburg, Grisebach, Klotzsch, Flotow, J. Meyen, Miquel, Nees von Esenbeck, Schauer, Vogel, and Walpers. In some cases Meyen is given as the joint author of certain species, notably in association with Nees von Esenbeck and with Walpers. In this work six new genera and about fifty new species of Chinese plants were characterized as new. It is with these new forms that I have concerned myself in the present paper. No attempt has been made to consider those records given in the form of previously described species, as usually no descriptive data are given. Apparently most of them were correctly named.

This study is based primarily on a critical examination of the descriptions in comparison with extensive collections of plants from Kwangtung Province. In some cases, as mentioned in the text, I am under obligations to Dr. J. Mattfeld of the Berlin Botanic Garden, who kindly searched for the types of certain species and made the necessary critical comparisons. In a very few cases the actual types could not be located, either because they have been lost or misplaced, or because the species represented has been transferred to some other genus without leaving a cross reference slip.

The references to Hemsley are to Forbes and Hemsley's "An enumeration of all the plants known from China proper . . ." *Jour. Linn. Soc. Bot.* **23**: 1-521. *t.* 1-14. 1886-1888; **26**: 1-592. *t.* 1-10. 1889-1902; **36**: i-xi. 1-686. 1903-1905; those to Dunn and Tutcher to their "Flora of Kwangtung and Hongkong (China)." *Kew Bull. Add. Ser.* **10**: 1-370, map. 1912.

¹Meyen, F. J. F. Beiträge zur Botanik gesammelt auf einer Reise um die Erde. Nach dessen Tode von den Mitgleidern der Akademie fortgeführt und bearbeitet. Observationes botanicae, in itinere circum terram institutae. Opus posthumum, sociorum academiae curis suppletum. *Nova Acta Acad. Leop.-Carol. Nat. Cur.* **19**: Suppl. 1: i-xxxii. 1-512. *t.* 1-13. 1843.

One of the results of this study is the reduction to synonymy of about twelve species that Hemsley accepted, usually without comment, in his enumeration of Chinese plants. *Vernonia Gomphrena* Walp. = *Blumea obliqua* (Linn.) Druce, has not been found by any collector in China since Meyen secured it on Lintin Island in 1831; it seems likely that this was a casual introduction from India or Ceylon that may not have persisted. *Scleria pratensis* Lindl. = *S. pterota* Presl is to be excluded as a Chinese species, the Chinese record apparently having been based on an erroneously localized plant. *Ferula marathrophylla* Walp., very inadequately characterized, remains of entirely doubtful status, while *Aster Walpersianus* Nees cannot at present be associated with any other known Chinese species of the genus.

LICHENES

Ramalina digitata Meyen & Flotow, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 212. t. 3. f. 1. 1843." Ad ramos Theae chinensis, tum in horto botanico Rio Janeiro urbis Brasiliae, tum in imperio Chinesi prope Canton."

Ramalina geniculata Hook. f. & Taylor, Lond. Jour. Bot. 3: 655. 1844; Zahlbr. Cat. Lich. Univ. 6: 490. 1930.

Zahlbruckner placed *Ramalina digitata* Meyen & Flotow as a doubtful synonym of *R. geniculata* Hook. f. & Tayl. J. Mueller, however, (Revisio Lichenum Meyenorum. Jahrb. Bot. Gart. Berlin 2: 310. 1883) on the basis of an examination of the Brazilian specimen (he did not see the Canton one) cites Nylander's recognition of it as related to *R. pumila* Mont. and states: "sed planta nihil nisi var. gracilis et tenuis divisa videtur **Ramalinae geniculatae** Hook. et Tayl." In view of Mueller's eminence as a lichenologist it is believed that this disposition of the species should be accepted. Most lichenologists accept *Ramalina geniculata* Hook. f. & Tayl., but *R. digitata* Meyen & Flotow is a valid name, and is one year older than that of Hooker f. & Taylor.

FUNGI

Fusarium Caries Nees, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 478. 1843 "In spicis Meoschii lodicularis [*Ischaemum aristatum*] Chinae: Cap-Lintin."

Saccardo, Syll. Fung. 4: 725. 1886, merely lists this as a species of doubtful status unknown to him, erroneously crediting it to Chile. Wollenweber & Reinking, Die Fusarien 320. 1935, merely state: "non *Fusarium*." The problem of its identity is one for some mycologist to solve.

POLYPODIACEAE

Pteris ensiformis Burm. f. Fl. Ind. 230. 1768.

Pteris ensiformis Goldm. Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 457. 1843. "China" (syn. nov.).

Goldmann described this as a new species overlooking Burman's use of the same specific name for the same species. Christensen enumerated *Pteris ensiformis* Goldm. but suggested no reduction. An excellent photograph of Goldmann's type in the Berlin Herbarium, courteously supplied by Dr. Mattfeld, enables me to make this reduction with confidence as to its correctness. The type is a single fertile frond, a very few of the lower pinnules sterile. The rachis is not winged as in *P. multifida* Poir. and in *P. dimorpha* Copel. Philip. Jour. Sci. 3: Bot. 282. 1908; Ching, Ic. Fil. Sin. 1: 69. t. 34. 1930, the type of Copeland's species being from Kwangtung. Ching observes that *P. dimorpha* Copel. is more or less intermediate between *P. multifida* Poir. and *P. ensiformis* Burm. f.

LYCOPODIACEAE

Lycopodium cernuum Linn. Sp. Pl. 1103. 1763.

Lycopodium amentigerum Goldm. Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 468. 1843. "China" (syn. nov.).

From the short description this seems clearly to be a form of the widely distributed Linnaean species which is very common in Kwangtung Province. Goldmann's species was not accounted for by Spring in his "Monographie de la famille des Lycopodiacees" (1842-49), nor by Baker in his "Handbook of the fern-allies" (1877).

GRAMINEAE

Andropogon intermedius R. Br. var. **Haenkei** (Presl) Hackel in DC. Monog. Phan. 6: 486. 1889.

Andropogon Vachellii Nees in Hook. & Arn. Bot. Beechey Voy. 243. 1838; Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 188. 1843 "In vicinia urbis Macao imperii Chinensis et in insulis adiacentibus."

The description of 1838 is an ample one, but much of it is repeated in that of 1843. Hackel made the reduction of *A. Vachellii* Nees to *A. intermedius* R. Br. var. *Haenkei* (Presl) Hackel, but Rendle, Jour. Linn. Soc. Bot. 36: 373. 1904, recognized only R. Brown's species as occurring in China, not the variety.

Arundinella setosa Trin. Gram. Pan. 63. 1826; Keng, Nat. Centr. Univ. Sci. Rep. B 2: 56. 1936.

Miquelia barbulata Nees, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 178. 1843 "In promontorio Syng-moon."

Berghausia barbulata Endl. in Miq. Analecta Bot. Ind. 2: 20. 1851.

Garnotia barbulata Merr. Philip. Jour. Sci. 13: Bot. 130. 1918; Hitchc. Lingnan Sci. Jour. 7: 200. 1931, quoad syn. Nees, excl. spec. cit.

In 1929, on the assumption that the current reduction of *Miquelia barbulata* Nees as a synonym of *Garnotia patula* Munro was correct, I transferred the former to *Garnotia*. In 1931 Hitchcock maintained *G. patula* Munro and *G. barbulata* Merr. as distinct species. Keng, in 1936, placed *Miquelia barbulata* Nees as a doubtful synonym of *Arundinella setosa* Trin., with *Berghausia barbulata* Endl. and *Garnotia barbulata* Nees as doubtful synonyms. Dr. Mattfeld reports that Meyen's type is not in the Berlin herbarium under *Garnotia*, and Dr. Pilger failed to locate it under *Arundinella*. Mrs. Chase states that *Levine 767*, which Hitchcock placed under *Garnotia barbulata* (Nees) Merr., is apparently a *Garnotia*, although Keng thought that it might be a young specimen of *Arundinella*. It agrees with Nees' description particularly in the prominent circles of hairs below the spikelets "pedicelli . . . pilis . . . infra spiculam in speciem involucelli congeruntur," yet Trinius gives this character of *A. setosa* Trin. thus: "pedicello sub spicula pilifero," and many specimens representing his species, particularly those with young spikelets, show this character. Nees also states that the inflorescences are dense and a foot long, its branches eight inches long. These characters scarcely apply to any Chinese *Garnotia*, but do apply to specimens of *Arundinella setosa* Trin. with immature inflorescences. It is suspected that Nees had an immature specimen of *Arundinella setosa* Trin., a very common species in the region whence Meyen's plant came, with strict erect inflorescence branches.

***Digitaria dispar* Henrard, Blumea 1: 97. 1934.**

Panicum (Digitaria) heteranthum Nees & Meyen, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 174. 1843, non Link 1827 [China].

Digitaria heterantha Merr. Enum. Philip. Fl. Pl. 1: 53. 1923, Lingnan Agr. Rev. 1(2): 48. 1923.

Paspalum heteranthum Hook. f. Fl. Brit. Ind. 7: 16. 1927, quoad syn. Nees & Meyen.

Panicum commutatum Nees in Hook. & Arn. Bot. Beechey Voy. 251. 1836, non Schult. 1824, non *Digitaria commutata* Schult. 1824.

No definite locality was given, the species being enumerated under the heading "Chinenses." Rendle placed it as a synonym of *Digitaria barbata* Willd., he being followed by Miss Camus in her treatment of the grasses of Indochina; Hitchcock, Lingnan Sci. Jour. 7: 210. 1931,

placed it as a synonym of *Digitaria sanguinalis* (Linn.) Heist. Dr. Mattfeld kindly supplied me with a fragment of the Nees & Meyen type which I transmitted to Dr. Henrard, the synonymy, as given above, following the latter's manuscript treatment. He informs me that the species extends from southeastern China to Indochina and Pahang. The Philippine *D. heterantha* var. *pachyrachis* (Hack.) Merr. is *D. longissima* Mez.

Eragrostis pilosissima Link, Hort. Berol. 1: 189. 1827.

Eragrostis Millettii Hook. & Arn. Bot. Beechey Voy. 252. 1838; Nees, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 206. 1843 "Ad Macao atque in insulis vicinis . . . ibidem in Promontorio Syng-moon."

The original description of Hooker & Arnott was based on specimens from Macao collected by Millett and by Vachell. Nees adds several synonyms in his consideration of the species in 1843. Link's species is a well-defined one not uncommon in southeastern China.

Eragrostis cylindrica (Roxb.) Nees in Hook. & Arn. Bot. Beechey Voy. 251. 1838.

Poa cylindrica Roxb. Fl. Ind. 1: 335. 1820, ed. 2, 1: 334. 1832.

Eragrostis geniculata Nees, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 203. 1843 "In Promontorio Syng-moon."

Roxburgh's description of *Poa cylindrica* was based on specimens grown in the Calcutta Botanic Garden from Canton seeds. The species is common and widely distributed in southeastern China. *Eragrostis geniculata* Nees is safely the same as *E. cylindrica* (Roxb.) Nees.

Ischaemum aristatum Linn. subsp. **barbatum** (Retz.) Hackel var. **Meyenianum** (Nees) Hack. et var. **lodiculare** (Nees) Hack. in DC. Monog. Phan. 6: 205. 1889.

Meoschium Meyenianum Nees, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 197. 1843 "Ad Promontorium Syng-moon."

Meoschium lodiculare Nees in Hook. & Arn. Bot. Beechey Voy. 246. 1838, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 195. 1843. "In vicinia Macao urbis inque insulis adiectis . . . ad Promontorium Syng-moon."

The original description of 1838 is a particularly ample one, based on specimens collected by Meyen, Millett, and Vachell. While *Ischaemum aristatum* Linn. as currently interpreted is a somewhat variable, or perhaps a collective species, it may or may not be desirable to attempt to segregate subspecies and varieties. Rendle does not recognize the two varieties, reducing both of Nees' species to the subsp. *barbatum* Hack.

Pogonatherum paniceum (Lam.) Hackel, Allg. Bot. Zeitschr. **12**: 178. 1906.

Saccharum paniceum Lam. Encycl. **1**: 595. 1785.

Pogonatherum saccharoideum Beauv. Agrost. 176. t. 11. f. 7. 1812.

Pogonatherum refractum Nees, Nova Acta Acad. Leop.-Carol. Nat. Cur. **19**: Suppl. **1**: 182. 1843 "In imperio Chinensi ad Macao et in vicinis insulis . . . in diversis Indiae orientalis partibus."

This grass is common in Kwangtung Province and is of very wide geographic distribution in the Indo-Malaysian region. Hackel (DC. Monog. Phan. **6**: 193. 1889) referred *Pogonatherum refractum* Nees to *P. saccharoideum* Beauv. var. *monandrum* (Roxb.) Hack.

Thysanolaena maxima (Roxb.) O. Ktze. Rev. Gen. Pl. 794. 1891.

Melica latifolia Roxb. Fl. Ind. **1**: 330. 1820.

Panicum acariferum Trin. Ic. Gram. **1**: t. 87. 1828. Mém. Acad. Sci. St. Pétersb. VI. Sci. Phys. Nat. **3**: 293. 1834 (Panic. Gen. 205).

Thysanolaena Agrostis Nees, Edinb. New Philos. Jour. **18**: 180. 1835.

Thysanolaena acarifera Arn. & Nees, Nova Acta Acad. Leop.-Carol. Nat. Cur. **19**: Suppl. **1**: 181. 1843 "In Promontorio Syng-moon."

Thysanolaena procera Mez, Bot. Arch. **1**: 27. 1921, non *Agrostis procera* Retz.

The description by Arnott and Nees is an amplified one of this widely distributed, strongly characterized, Indo-Malaysian species. Nees enumerates the Indian *T. Agrostis* Nees as representing a distinct species but there seems to be no justification for this. *Agrostis procera* Retz. on which *Thysanolaena procera* Mez was based, is *Eriochloa procera* (Retz) Hubbard (*E. ramosa* O. Ktz.).

CYPERACEAE

Cladium chinense Nees, Linnaea **9**: 301. 1834, *nomen nudum*, Hook. & Arn. Bot. Beechey Voy. 228. 1836, Nova Acta Acad. Leop.-Carol. Nat. Cur. **19**: Suppl. **1**: 116. 1843. "In China, circa Macao et in insulis adiacentibus."

Mariscus chinensis Fernald, Rhodora **25**: 52. 1923.

Cladium jamaicense sensu C. B. Clarke, Jour. Linn. Soc. Bot. **36**: 262. 1903, non Crantz.

Cladium japonicum Steud. Syn. Pl. Cyp. 152. 1855.

In 1923 Fernald adopted the generic name *Mariscus* (Haller) Zinn for this group and transferred a number of species from *Cladium* to *Mariscus*. In 1930 action by the Cambridge International Botanical Congress covered the points raised and settled the claims of *Cladium* B. Browne versus *Mariscus* (Haller) Zinn in favor of the former; see Sprague, Kew Bull. 217-219. 1934. *Cladium jamaicense* Crantz and

C. Mariscus Pohl have been interpreted in a collective sense as the names for a species of very wide geographic distribution. Fernald called attention to the fact that the European form, *Cladium Mariscus* (Linn.) Pohl (*Mariscus serratus* Gilib.) is distinct from the tropical one. He retained the tropical American species as *Mariscus jamaicensis* Britton = *Cladium jamaicense* Crantz, and separated the Chinese form as a third species. As Nees originally noted the achenes of *Cladium chinense* Nees are much smaller than in the European form, and Fernald states further that its pale achenes are but about one-third as large as are those of *Mariscus serratus* Gilib. = *Cladium Mariscus* Pohl, and that they are ellipsoid-ovoid and very short tipped rather than lance-ovoid and acuminate.

***Cyperus compressus* Linn. Sp. Pl. 46. 1753.**

Cyperus Meyenii Nees & Walp. Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 57. 1843. "In Manila insula . . . in China, etc."

This is the common pantropic *Cyperus compressus* Linn. Kükenthal (Pflanzenr. 101 (IV.20): 158. 1935) places *C. Meyenii* Nees & Walp. as a synonym of *C. compressus* Linn. var. *pectiniformis* (Roem. & Schultes) C. B. Clarke, giving its range as India, Indochina, Java, Philippines and Mexico.

***Cyperus radians* Nees & Meyen, Linnaea 9: 285. 1834, *nomen nudum*, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 63. 1843. "Ad Promontorium Syng-moon imperii Chinensis."**

Cyperus radicans Nees & Meyen ex Kunth, Enum. 2: 95. 1837, err. typ.

Cyperus Griffithii Steud. Syn. 2: 316. 1855.

Cyperus sinensis Debeaux, Act. Soc. Linn. Bordeaux 31: t. 2. 1877, 32: 28. 1878.

This is a strongly marked, well-known species. Technically the first published description is as *Cyperus radicans*, but in 1837, when Kunth published this binomial, he credited it to "Nees ab Esenb. et Meyen in Linnaea 9. 285 (v. s.)", and Nees & Meyen's printed *nomen nudum* in Linnaea is *C. radians*. I do not think that this can be interpreted as other than a typographical error; otherwise Kunth's non-descriptive name will replace the distinctly descriptive one of Nees & Meyen.

***Fimbristylis subbispicata* Nees & Meyen, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 75. 1843. "Habitat ad Macao urbem, in vicinis insulis et in Promontorio Syng-moon imperii Chinensis."**

As noted by Clarke, Jour. Linn. Soc. Bot. 36: 246. 1903, the limits

and relationships of this species are not entirely clear. In Wight's Contributions (1834), and in the Botany of Captain Beechey's Voyage (1836) Nees confused this with *F. bispicata* Nees & Meyen. It is believed that the status of the binomial *F. subbispicata* Nees & Meyen should be settled on the basis of the Macao and Syng-moon plants cited in the description of 1843.

Fimbristylis sericea R. Br. Prodr. 228. 1810.

Fimbristylis decora Nees & Meyen in Wight, Contrib. Bot. Ind. 101. 1834, Hook. & Arn. Bot. Beechey Voy. 225. 1836, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 83. 1843. "In China, Julio a. 1831, Ibidem, in Herb. Lindl."

The original description of 1834 was based on Meyen's specimen and one collected by Potts, probably at Macao. The species as interpreted by Clarke is one of wide geographic distribution occurring along the seashore from India to Japan southward to Australia. Other synonyms are *Fimbristylis velutina* Franch. and *Scirpus sericeus* Poir.

Fimbristylis podocarpa Nees & Meyen in Wight, Contrib. Bot. Ind. 98. 1834, Hook. & Arn. Bot. Beechey Voy. 225. 1836, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 77. 1843, pro parte, quoad var. α . "Crescit var. α in China, (Meyen)."

In the original description in Wight's Contributions, and in the Nova Acta description, the localities cited are China, Manila, India and Himalaya, three varieties being characterized. As species are now segregated in this critical group more than one is represented in Nees & Meyen's concept, including *F. diphylla* Vahl, fide C. B. Clarke, and *F. podocarpa* Nees & Meyen. I believe under the circumstances that the species should be interpreted by the first specimen cited, and this is the Meyen specimen under variety α . Clarke's procedure in maintaining Hooker f. as the authority of the binomial *Fimbristylis podocarpa* is inadmissible under any rules; it should be *F. podocarpa* Nees & Meyen or Nees & Meyen in part.

Lepidosperma chinense Nees & Meyen, Linnaea 9: 302. 1834, *nomen nudum*. Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 117. 1843. "China, ad promontorium Syng-moon . . . in vicinia Macao urbis insulisque adiacentibus . . . in Lippas insula."

A well-known species common in Kwangtung Province. The Macao and Lappa Island specimens were collected by Vachell.

Rhynchospora chinensis Nees & Meyen, Linnaea 9: 297. 1834, *nomen nudum*, Wight, Contrib. Bot. Ind. 115. 1834, Hook. & Arn. Bot.

Beechey Voy. 226. 1836, Nova Acta Acad. Leop.-Carol. Nat. Cur. **19**: Suppl. **1**: 108. 1843. "In China, ad Promontorium Syng-moon . . . Meyen; in Nepalia Wallich" and in the previous line "Wall. Cat. n. 3421, Vachell in Herb. Lindl. n. 60."

Clarke's note on this species, Jour. Linn. Soc. Bot. **36**: 259. 1903, sub *Rhynchospora glauca* Vahl var. *chinensis* Clarke, should be consulted. I agree with Dr. Mattfeld that Nees & Meyen, not Boeckeler is the authority, Clarke accepting the latter. I can do no better than quote Dr. Mattfeld's statement: "*Rhynchospora chinensis* Nees et Meyen. — Das Original wurde in unserm Herbar von C. B. Clarke als *Rh. glauca* Vahl var. *chinensis* spec. Boeck. bestimmt. — Wallich no. 3421 bestimmte Clarke als typische *Rh. glauca*. — Wallich's Pflanze wird von Nees nur als Synonym zitiert. Die nomenklatorische und systematische Grundlage für *Rh. chinensis* ist also immer Meyen's Pflanze, an die der Name geknüpft bleiben muss, auch wenn die nicht ganz einheitliche *Rh. chinensis* Nees aufgeteilt wird. Nimmt man diese Sippe als Art so wäre zu zitieren: *Rh. chinensis* Nees et Meyen emend. Boeckeler; als Varietät: *Rh. glauca* Vahl var. *chinensis* (N. et M. ex parte) C. B. Cl. — Auch Kükenthal fasst die *chinensis* als Varietät von *glauca* auf. — Wallich's Pflanze wurde von Boeckeler zuerst als *Rh. Brownii* bezeichnet; diesen Namen zog er später aber, wie aus einer handschriftlichen Eintragung in dem Handexemplar seiner Monographie hervorgeht, als Synonym zu *Rh. glauca*. — Kunth zog Wallich's und Meyen's Pflanzen zu *Rh. laxa* R. Br., die er aber schon für "nil nisi forma indica *R. glaucae*" hielt. — Nees und Kunth hielten also die asiatische Sippe für einheitlich. Boeckeler erkannte zuerst die Unterschiede; die eine Komponente erkannte er als identisch mit der amerikanischen *glauca*; die zweite hielt er für eine besondere Art *chinensis* (Typus Meyen), die Clarke dann zur Varietät von *glauca* reduzierte." Whether we are dealing with a distinct species or with a variety is a matter of some difference of opinion. The type of *Rh. glauca* Vahl is an American plant.

Scleria pterota Presl, Oken Isis **21**: 268. 1826; Core, Brittonia **2**: 91. t. 2. f. 18. 1936.

Scleria pratensis Lindl. ex Nees, Nova Acta Acad. Leop.-Carol. Nat. Cur. **19**: Suppl. **1**: 121. 1843. "var. α , in China, ad prom. Syng-moon, Julio 1831, Meyen; Bahiae . . . Guiana . . ."

Lindley's species is a synonym of *S. pterota* Presl. The Chinese record was apparently based on an erroneously localized specimen. Core cites about fifteen synonyms for the species which is widely distributed in tropical America.

COMMELINACEAE

***Commelina diffusa* Burm. f. Fl. Ind. 18. t. 7. f. 2. 1768.**

Commelina nudiflora sensu Burm. f. op. cit. 17 et auct plur., non Linn.

Commelina longicaulis Jacq. Coll. 3: 234. 1789, Ic. Pl. Rar. 2: t. 294. 1786-93; Pennell, Bull. Torr. Bot. Club 43: 100. 1916.

Commelina pacifica Vahl, Enum. 2: 168. 1806.

Commelina cespitosa Roxb. Fl. Ind. 1: 178. 1820, ed. 2, 1: 174. 1833.

Commelina ochreata Schauer, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 447. 1843. "China: Lintin, Octobri; Macao, Augusto."

N. E. Brown, following C. B. Clarke, placed Schauer's species as a synonym of *Commelina nudiflora* Linn.; it is that species as currently interpreted but not the species that Linnaeus described, except as *Commelina nudiflora* Linn., as originally published, included more than one species. It should be noted that *Commelina nudiflora* Linn., currently accepted as such, is also the name-bringing synonym of *Aneilema nudiflorum* (Linn.) "R. Br." An analysis of the original Linnaean description by Mr. J. E. Dandy of the British Museum, shows that the specimens in Linnaeus' herbarium, three sheets, at least one of which was there in 1753, all represent *Aneilema nudiflorum*; that the Flora Zeylanica reference is a *Commelina*, and the form currently known as *C. nudiflora* Linn.; and that the Plukenet reference may represent the same form as the Flora Zeylanica one. There is no actual *new description* in the Species Plantarum, except as the cited Flora Zeylanica reference is modified by the addition of the words "involucro nullo." Mr. Dandy considers this to be a very significant modification, since the phrase "involucro nullo" actually applies to the material in Linnaeus' herbarium and not to the Hermann and Plukenet plants, while the specific name *nudiflora* was clearly selected because it was descriptive of the actual specimens Linnaeus had before him. The actual specimen numbered by Linnaeus as "7 nudiflora" was one collected by Osbeck (either in Java or in the vicinity of Canton), and this should, we believe, be designated as the type; it is the *Aneilema*. If further confirmation of the correctness of this interpretation be needed, the greatly amplified description of *Commelina nudiflora* Linn. Mant. 2: 177. 1771 appertains entirely to the *Aneilema*, not to the *Commelina nudiflora* of modern authors. I believe that it is clear just what Linnaeus intended even although he referred certain pre-Linnaean items to the binomial in 1753 which represent a different species.

As I have already noted elsewhere¹ Osbeck did not return to Sweden

¹Merrill, E. D. On *Poa malabarica* Linnaeus. Bull. Torr. Bot. Club 60: 633-638. 1933.

until June 26, 1752. Manifestly at that time the copy for the Species Plantarum must have been well advanced. It is possible that Linnaeus' original concept of *Commelina nudiflora* may have been based on the Flora Zeylanica and the Plukenet references. When he received Osbeck's specimens he selected the descriptive name *nudiflora* and modified the Flora Zeylanica descriptive sentence accordingly. Osbeck cites but two species of *Commelina*, *C. communis* and *C. chinensis*, both collected by him on Dane's Island, near Whampoa, China, October 20, 1751. See Merrill, E. D. "Osbeck's Dagbok öfwer en Ostindsk resa" Am. Jour. Bot. 3: 571-588. 1916.

The oldest valid name for this form seems to be *Commelina diffusa* Burm. f. Pennell, Bull. Torr. Bot. Club 43: 100. 1916, adopted *Commelina longicaulis* Jacq. (1788) as the proper binomial for this widely distributed pantropic species, considering that *Commelina diffusa* Burm. f. was unidentifiable. Burman's description is short, and his illustration is distinctly poor. Dr. Hochreutiner informs me that the only specimen of *Commelina diffusa* Burm. f. in Burman's herbarium was examined by Clarke, and was indicated by the latter as Burman's type; it is "*C. nudiflora*" as named by Clarke. He notes, however, that there is a question mark after the name *C. diffusa*, and that this was apparently added by Burman. He states that it is difficult to explain why Burman should apply the name *diffusa* to this specimen when at the same time he applied the name *C. nudiflora* Linn. to another specimen that manifestly represents the same species. Burman's rather crude figure represents a *Commelina* very similar to what is currently known as *C. nudiflora* Linn., and there seems to be no valid reason why his binomial should not be accepted.

I had noted, some years ago, this anomalous disposition of the binomial *Commelina nudiflora* Linn., first as a valid species of *Commelina*, and second as the name-bringing synonym of *Aneilema nudiflorum* "R. Br." Assuming that Clarke was correct in his interpretation of the Linnaean species as a true *Commelina*, I further assumed that *Commelina nudiflora* Linn. as redescribed in 1771 was different from the *C. nudiflora* Linn. of 1753. For this reason I adopted the binomial *Aneilema malabaricum* (Linn.) Merr. for the *Aneilema*. With the above interpretation of the type of *Commelina nudiflora* Linn. the partial synonymy of this, as an *Aneilema*, is as follows:

Aneilema nudiflorum (Linn.) Wall. List. 182. no. 5224. 1830; Kunth, Enum. 4: 66. 1843; Clarke in DC. Monog. Phan. 3: 210. 1881; Pennell, Bull. Torr. Bot. Club 43: 96. 407. 1916.

Commelina nudiflora Linn. Sp. Pl. 41. 1753, pro parte, excl. syn. et ref. Fl. Zeyl. et Plukenet; Mant. 1: 177. 1767.

Tradescantia malabarica Linn. Sp. Pl. ed. 2, 412. 1762.

Commelina nudicaulis Burm. f. Fl. Ind. 17. t. 8. f. 1. 1768.

Aneilema nudicaule Kunth, Enum. 4: 67. 1843.

Commelina trichocolea Schauer, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 448. 1843.

Aneilema malabaricum Merr. Philip. Jour. Sci. 7: Bot. 232. 1912, Fl. Manila 138. 1912, Enum. Philip. Fl. Pl. 1: 196. 1923.

The usual authority cited for *Aneilema nudiflorum* is R. Brown, but Brown, Prodr. 271. 1810, did not publish such a binomial, merely indicating that *Commelina nudiflora* Linn. was an *Aneilema*. Pennell accepted Kunth as the authority. Wallich published an *Aneilema nudiflorum* in 1830, based, however, on *Commelina nudiflora* herb. Roxb.; Roxburgh merely accepted the Linnaean binomial, and did not independently describe it as a "new species." His description of *Commelina nudiflora* Linn., Fl. Ind. 1: 177. 1820, is of the Linnaean species as it has been interpreted in this discussion, i.e. the *Aneilema*, and he cites *Tradescantia malabarica* Linn. as a synonym. Under the circumstances it is believed that Wallich should be accepted as the authority.

ORCHIDACEAE

Arundina chinensis Blume, Bijdr. 402. 1825; Schltr. Repert. Sp. Nov. Beih. 4: 204. 1919.

Cymbidium Meyenii Schauer, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 433. 1843. "China: Macao."

Arundina Meyenii Reichb. f. Linnaea 25: 227. 1852.

Rolfe's reduction seems safely to be the correct disposition of *Cymbidium Meyenii* Schauer. Blume's type was from a plant originating in China, cultivated at Buitenzorg, Java.

Cymbidium ensifolium (Linn.) Sw. Nova Acta Acad. Soc. Sci. Upsal. II 6: 77. 1799; Schltr. Repert. Sp. Nov. Beih. 4: 266. 1919.

Epidendrum ensifolium Linn. Sp. Pl. 954. 1753.

Cymbidium micans Schauer, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 433. 1843. "China: Macao."

This is Rolfe's reduction, it being apparently correct. The type of the Linnaean species was a specimen collected by Osbeck near Canton.

Habenaria linguella Lindl. Gen. Sp. Orch. Pl. 325. 1835; Merr. Sundryatsenia 1: 13. t. 4. f. 2. 1930.

Habenaria acutifera sensu Rolfe, Jour. Linn. Soc. Bot. 36: 57. 1903. non Wall.

Habenaria endothrix Miq. Jour. Bot. Néerl. 1: 92. 1861.

Centrochilus gracilis Schauer, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 435. t. 13, f. B. 1843. "China: Promontorium Syng-moon."

Schauer described this as the type of a new genus. It was not accounted for by Rolfe in his treatment of the Orchidaceae of China in Forbes and Hemsley's Enumeration, by Dunn and Tutcher, nor by Schlechter in his Orch. Sino-Jap. Prodr. (Repert. Sp. Nov. Beih. 4: 1-319. 1919). It seems clearly to be the same as *Habenaria linguella* Lindl., type from Kwangtung Province (probably from Macao), from which it seems to be manifest that *Habenaria endothrix* Miq., type from Hoan, a short distance north of Hongkong, is not to be distinguished.

***Habenaria Meyenii*, nom. nov.**

Choeradoplectron spiranthes Schauer, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 436. t. 13. f. C. 1843. "China: Promontorio Syng-moon," non *Habenaria spiranthes* Reichb. f., nec Reichb. f. & Warming.

Peristylus chloranthus Lindl. Hook. Jour. Bot. Kew Gard. Miscel. 7: 37. 1855, non *Habenaria chlorantha* Spreng., nec Bab.

Habenaria lacertifera Benth. Fl. Hongkong. 362. 1861, non *Coeloglossum lacertiferum* Lindl.

Rolfe, in placing Schauer's species (described by Schauer as the type of a new genus) as a synonym of *Peristylus chloranthus* Lindl. (type from Hongkong), interpreted the Chinese form as representing the same species as the Indian form described by Lindley as *Coeloglossum lacertiferum* Lindl. and as *C. acuminatum* Lindl. Schlechter, however, states that this is apparently not the case. The Chinese plant belongs in *Peristylus*, a group placed by some botanists under *Platyanthera*, by others under *Habenaria*. The type of *Coeloglossum acuminatum* Lindl. was from Nepal and the Indian material that I have seen is distinctly unlike this Chinese species. The type of *C. lacertiferum* Lindl. was from Tavoy, and this seems much closer to the Chinese form than *C. acuminatum* Lindl.

RANUNCULACEAE

Clematis Meyeniana Walp. Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 297. 1843. "China: Cap Syng-Moon"; Sprague, Kew Bull. 46. 1916.

A well-known species common in southeastern China, extending to Indochina, Formosa and northern Luzon.

MENISPERMACEAE

Cyclea hypoglauca (Schauer) Diels, Pflanzenr. 46 (IV. 94): 319. 1910.

Cissampelos hypoglauca Schauer, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 479. 1843. "China: Cap Syng-moon."

Cyclea deltoidea Miers, Jour. Bot. Kew Gard. Miscel. 3: 258. 1851.

Hemsley overlooked Schauer's species and thus failed to account for it. The type of *C. deltoidea* Miers was from Hongkong. The species is a fairly common one in Kwangtung Province.

LEGUMINOSAE

Bauhinia variegata Linn. Sp. Pl. 375. 1753.

Bauhinia chinensis Vogel, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 42. 1843. "Circa Canton Chinae culta."

From Vogel's description I see no reason for doubting the correctness of this reduction. The species is not native of China, but is not uncommon in cultivation in Kwangtung Province.

Clitoria ternatea Linn. Sp. Pl. 753. 1753.

Wisteria dubia Walp. Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 324. 1843. "China: absque loco" (syn. nov.).

Walpers had only fragmentary material with a single detached flower. Hemsley admitted the species without comment, but Dunn and Tutcher did not account for it, although its type must have been from the general vicinity of Hongkong. Doctor Mattfeld informs me that Walpers' type in the Berlin Herbarium represents *Clitoria ternatea* Linn., the determination by Dr. Harms.

Crotalaria albida Heyne ex Roth, Nov. Pl. Sp. 333. 1821.

Crotalaria leiocarpus Vogel, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 8. 1843 (syn. nov.). "In Promontorio Syng-moon Chinae."

Vogel's species was admitted by Hemsley without comment, but it was not accounted for by Dunn and Tutcher. The species extends from India to southeastern China, Formosa, Indochina, Malay Peninsula and the Philippines. Vogel's description conforms with the characters of Heyne's species.

Crotalaria elliptica Roxb. Fl. Ind. ed. 2, 3: 279. 1832.

Crotalaria Vachellii Hook. & Arn. Bot. Beechey Voy. 180. 1833.

Crotalaria splendens Vogel, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 8. 1843. "China."

This reduction of Vogel's species is apparently correct. Roxburgh's type was a specimen cultivated at Calcutta from seeds originating in China, and probably from the vicinity of Macao or of Canton; the type of *C. Vachellii* Hook. & Arn. was from Canton. The species is a rather common one in Kwangtung Province.

Desmodium heterocarpum (Linn.) DC. Prodr. **2**: 337. 1825.

Hedysarum heterocarpon Linn. Sp. Pl. 747. 1753.

Hedysarum polycarpon Poir. in Lam. Encycl. **6**: 413. 1804.

Desmodium polycarpum DC. Prodr. **2**: 334. 1825.

Desmodium nervosum Vogel, Nova Acta Acad. Leop.-Carol. Nat. Cur. **19**: Suppl. **1**: 28. 1843. "China."

Schindler, Repert. Sp. Nov. Beih. **49**: 85, 285. 1928, placed Vogel's species as a synonym of *Desmodium siliquosum* Burm. f. In my discussion of Loureiro's species, Trans. Am. Philos. Soc. II **24**(2): 200. 1935, the problem of *Desmodium siliquosum* (Burm. f.) DC. versus *D. heterocarpum* (Linn.) DC. is extensively discussed. For the present, at least, it seems desirable to retain the Linnaean binomial for this Chinese form; Hemsley reduced Vogel's species to *D. polycarpum* DC.

Eriosema chinense Vogel, Nova Acta Acad. Leop.-Carol. Nat. Cur. **19**: Suppl. **1**: 31. 1843. "China."

A characteristic, well-known, widely distributed, Indo-Malaysian species, for which Vogel's name is the oldest valid one. It is *Dolichos biflorus* sensu Lour. (1790), non Linn. Other synonyms are *Crotalaria tuberosa* Ham. and *Pyrrhotrichia tuberosa* Wight & Arn.

Lespedeza formosa (Vogel) Koehne, Deutsch. Dendrol. 343. 1893; Schindler, Repert. Sp. Nov. Beih. **49**: 85. 164. 1928.

Desmodium formosum Vogel, Nova Acta Acad. Leop.-Carol. Nat. Cur. **19**: Suppl. **1**: 29. 1843. "In pratis circa Macao, Chinae."

Lespedeza viatorum Champ. Hook. Jour. Bot. Kew Gard. Miscel. **4**: 47. 1852.

This was admitted by Hemsley as *Desmodium formosum* Vogel with a statement that he had seen no Chinese material of *Desmodium* conforming to Vogel's description. It was not accounted for by Dunn and Tutcher. It is, however, clearly the same as *Lespedeza viatorum* Champ. as described in 1852, this species being correctly reduced to *Lespedeza formosa* (Vogel) Koehne, by Schindler. This is not *L. penduliflora* (Oudem.) Nakai, Bot. Mag. Tokyo **37**: 79. 1923, although Nakai cites *L. formosa* Koehne as a synonym; Koehne's binomial was based on Vogel's and thus *Lespedeza formosa* (Vogel) Koehne appertains to this species of southern China, in spite of the fact that Koehne applied the name to the more northern *L. penduliflora* (Oudem.) Nakai = *L. Thunbergii* Nakai, and erroneously cited as synonyms *L. racemosa* S. & Z. and *L. Sieboldii* Miq.

Lespedeza sericea (Thunb.) Miq. Ann. Mus. Bot. Lugd.-Bat. **3**: 49. 1867.

Hedysarum sericeum Thunb. Fl. Jap. 287 (err. typ. 289). 1784; Schindler, Sargent Pl. Wils. 2: 105. 1914.

Indigofera chinensis Vogel, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 14. 1843. "Circa Macao in imperio Chinensi."

Vogel's species was admitted by Hemsley as a valid one of *Indigofera*, without comment. It was not accounted for by Dunn and Tutcher. Schindler's reduction of it to *Lespedeza sericea* (Thunb.) Miq. is undoubtedly correct. Most of the material from southern China is erroneously referred to *Lespedeza juncea* Pers.

Millettia nitida Benth. Hook. Lond. Jour. Bot. 1: 484. 1842; Dunn, Jour. Linn. Soc. Bot. 41: 161. 1912.

Marquartia tomentosa Vogel, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 35. t. 1. 1843. "In fruticetis promontorii Syng-moon Chinae."

Callerya tomentosa Endl. ex Jackson, Ind. Kew. 1: 385. 1893.

Dunn states that *Millettia nitida* Benth. is unknown from outside of Hongkong Island. His distinction between this species and the closely allied *Millettia Dielsiana* Harms is by no means convincing. It is suspected that most of the Kwangtung material currently referred to *Millettia Dielsiana* Harms (1900) really represents *M. nitida* Benth. *Callerya* was proposed by Endlicher as a new generic name for *Marquartia* Vogel, *M. tomentosa* Vogel being originally described as the type of a new genus. Endlicher published no binomial (Gen. Suppl. 3: 104. 1843), this apparently appearing first in Index Kewensis.

Pycnospora lutescens (Poir.) Schindl. Jour. Bot. 64: 145. 1926.

Hedysarum lutescens Poir. in Lam. Encycl. 6: 417. 1804.

Desmodium viride Vogel, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 29. 1843. "In pratis circa Macao, Chinae."

Meibomia viridis O. Ktz. Rev. Gen. Pl. 198. 1891.

Poiret's type of *Hedysarum lutescens* was from the vicinity of Canton. Vogel's species was admitted by Hemsley as a valid species of *Desmodium*, without comment. It was not mentioned by Dunn and Tutcher. Schindler's reduction of it to the common and widely distributed *Pycnospora lutescens* (Poir.) Schindl. is unquestionably correct. Other synonyms are *Pycnospora nervosa* W. & A., *Crotalaria ? nervosa* Wall., *Zornia lutescens* Steud., *Phyllodium lutescens* Desv., *Meibomia lutescens* O. Ktz., *Flemingia monosperma* Moon, *Pycnospora hedysaroides* R. Br., *Indigofera desmodioides* Benth., and *Crotalaria Tappenbeckiana* K. Schum. It is usually known as *Pycnospora hedysarioides* R. Br. It is common in Kwangtung Province and extends from India to Formosa southward through Malaysia to tropical Australia.

Tephrosia vestita Vogel, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 15. 1843. "In promontorio Syng-Moon Chinae."

A well-known strongly marked species extending from southeastern China to Java and New Guinea.

VITACEAE

Ampelopsis cantoniensis (Hook. & Arn.) Planch. in DC. Monog. Phan. 5: 460. 1887.

Cissus cantoniensis Hook. & Arn. Bot. Beechey Voy. 175. 1833.

Vitis cantoniensis Seem. Bot. Voy. Herald 370. 1857.

Cissus diversifolia Walp. Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 314. 1843. "China: Cap Syng-moon."

Hedera hypoglauca Hance, Walp. Ann. 2: 724. 1852.

This is the synonymy as given by Planchon, it apparently being correct. The species is common in Kwangtung Province.

MALVACEAE

Urena lobata Linn. Sp. Pl. 692. 1753.

Urena diversifolia Walp. Nova Acta Acad. Leop.-Carol. Nat. Cur.

19: Suppl. 1: 305. 1843. "China: Macao."

This seems clearly to be only a form of the very common and variable *Urena lobata* Linn. to which it was reduced by Hemsley.

MYRTACEAE

Eugenia microphylla Abel, Narr. Jour. China 181. 364. 1818; Forbes, Jour. Bot. 22: 124. 1884.

Syzygium ? buxifolium Hook. & Arn. Bot. Beechey Voy. 187. 1833.

Syllisium buxifolium Meyen & Schauer, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 334. 1843. "China: Macao."

Eugenia sinensis Hemsl. Jour. Linn. Soc. Bot. 23: 298. 1887.

Meyen and Schauer described this as the type of a new genus with no reference to the earlier *Syzygium ? buxifolium* Hook. & Arn., the type of the latter also from Macao or in its general vicinity. The species is common and widely distributed in southeastern China.

ARALIACEAE

Acanthopanax trifoliatum (Linn.) Merr. Philip. Jour. Sci. 1: Suppl. 217. 1906; Schneider, Ill. Handb. Laubholzk. 2: 427. 1909.

Zanthoxylum trifoliatum Linn. Sp. Pl. 270. 1753.

Panax aculeatum Ait. Hort. Kew. 3: 448. 1789.

Acanthopanax aculeatum Seem. Jour. Bot. 5: 238. 1867.

Aralia trifoliata Meyen, Reise 2: 332. 1835 [China], *nomen nudum*.

This is the only new binomial that I have detected in Meyen's own account of his visit to China in 1831 (*Reise um die Erde . . . in den Jahren 1830, 1831, und 1832*. **2**: 292–400, 1835). There is no description but Walpers (*Nova Acta Acad. Leop.-Carol. Nat. Cur.* **19**: Suppl. **1**: 348, 1843) and K. Koch. (*Wochenschr. Gärtn. Pflanzenk.* **2**: 366, 1859) examined Meyen's specimen in the Berlin Herbarium and reduced *Aralia trifoliata* Meyen to *Panax aculeatum* Ait.

UMBELLIFERAE

Ferula marathrophylla Walp. *Nova Acta Acad. Leop.-Carol. Nat. Cur.* **19**: Suppl. **1**: 347, 1843. "China: Cap Syng-moon."

This is admitted by Hemsley as the only *Ferula* known from China, and by Dunn and Tutcher without comment. Doctor Mattfeld reports that there is no specimen in the Berlin Herbarium under *Ferula*, representing this species. Because of the description of the leaf segments as "lineari-capillaceis" I suggested search in those genera known to have representatives in Kwangtung Province having slender leaf segments but Meyen's specimen could not be found under *Apium*, *Foeniculum* and *Coriandrum*. There is the possibility that the Meyen specimen was erroneously localized, or again the record may have been based on an introduced plant that perhaps has not persisted. I cannot place the species on the basis of the rather short description.

LOGANIACEAE

Mitrasacme nudicaulis Reinw. ex Blume, *Bijdr.* 849, 1826.

Mitrasacme chinensis Griseb. *Nova Acta Acad. Leop.-Carol. Nat. Cur.* **19**: Suppl. **1**: 51, 1843. "Locus natalis Cap Syng-moon Chinae."

The Chinese form does not appear to be specifically distinct from the Javan one as originally described by Reinwardt. It is therefore believed that the current reduction of Grisebach's species as a synonym of *M. nudicaulis* Reinw. is correct. The species is one of wide geographic distribution in the Indo-Malaysian region.

ASCLEPIADACEAE

Toxocarpus Wightianus Hook. & Arn. *Bot. Beechey Voy.* 200, 1836.

Schistocodon Meyenii Schauer, *Nova Acta Acad. Leop.-Carol. Nat. Cur.* **19**: Suppl. **1**: 363, 1843. "China: Promont. Syng-moon."

Here described as the type of a new genus, but manifestly the same as *Toxocarpus Wightianus* Hook. & Arn., the type of the latter from Macao or in its immediate vicinity. The species is common in Kwangtung Province.

LENTIBULARIACEAE

Utricularia racemosa, Wall. List, no. 1496. 1829, *nomen nudum*; Walp. Nova Acta Acad. Leop.-Carol. Nat. Cur. **19**: Suppl. **1**: 401. 1843. "China: Cap Syng-moon"; DC. Prodr. **8**: 21. 1844.

Walpers' description is one year earlier than is that of deCandolle. It was apparently based on both Wallich 1496 and on Meyen's Syng-moon specimen.

SCROPHULARIACEAE

Adenosma glutinosum (Linn.) Druce, Bot. Exch. Club Brit. Isles Rep. **3**: 413. 1914; Merr. Philip. Jour. Sci. **12**: Bot. 109. 1917.

Gerardia glutinosa Linn. Sp. Pl. 611. 1753; Osbeck, Dagbok Ostind. Resa 229. t. 9. 1757.

Digitalis sinensis Lour. Fl. Cochinch. 478. 1790.

Pterostigma grandiflorum Benth. Scroph. Ind. 21. 1835; Hook. & Arn. Bot. Beechey Voy. 204. t. 45. 1836.

Adenosma grandiflorum Benth. ex Hance, Jour. Linn. Soc. Bot. **13**: 114. 1872.

Pterostigma rubiginosum Walp. Nova Acta Acad. Leop.-Carol. Nat. Cur. **19**: Suppl. **1**: 393. 1843. "China: Macao."

The Linnaean type was a specimen collected by Osbeck in the vicinity of Canton; it was illustrated by Osbeck four years after it was originally characterized. The types of all the species above listed as synonyms were from the neighborhood of Macao or of Canton, where the plant is still common.

Lindernia crustacea (Linn.) F. Muell. Census 97. 1882.

Capraria crustacea Linn. Mant. **1**: 87. 1767.

Vandellia crustacea Benth. Scroph. Ind. 35. 1835.

Vandellia limosa Walp. Nova Acta Acad. Leop.-Carol. Nat. Cur. **19**: Suppl. **1**: 394. 1843. "China: in limosis prope Lintin"; Hemsl. Jour. Linn. Soc. Bot. **26**: 190. 1890.

Hemsley admits this as a valid species but quotes Bentham who suggested that it might be the same as *Vandellia crustacea* Benth. It was not accounted for by Dunn and Tutchter. From the short description I could see no reason for distinguishing it from the very common *Lindernia crustacea* (Linn.) F. Muell. (*Vandellia crustacea* Benth.) and Dr. Mattfeld confirms this by an examination of the type specimen in Berlin.

RUBIACEAE

Oldenlandia corymbosa Linn. Sp. Pl. 119. 1753.

Scoparia gypsophiloides Walp. Nova Acta Acad. Leop.-Carol. Nat. Cur. **19**: Suppl. **1**: 394. 1843. "China: Lintin" (syn. nov.).

Doctor Mattfeld reports that no specimen representing this species is to be found in the Berlin herbarium under *Scoparia*. On the basis of the short description, this works out as *Oldenlandia corymbosa* Linn., the only Kwangtung species known in any family that conforms to the characters indicated by Walpers. The above reduction is made with considerable confidence that it is correct. *Oldenlandia corymbosa* Linn. is a very common weed in Kwangtung Province, and is now of pantropic distribution. Hemsley merely listed the species, in brackets, as a Chinese plant unknown to him, realizing that no *Scoparia* was represented. Fries, in his "Systematische Übersicht der Gattung *Scoparia*." Arkiv Bot. 6(9): 1-31. t. 1-8. 1907, places it among the *species dubiae* and merely states: "Ist mit aller Wahrscheinlichkeit keine *Scoparia*."

COMPOSITAE

Aster panduratus Nees, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 258. 1843. "China: Lintin"; Hemsl. Jour. Linn. Soc. Bot. 23: 415. 1888; Dunn & Tutcher, Kew Bull. Add. Ser. 10: 141. 1912.

Aster Fordii Hemsl. Jour. Linn. Soc. Bot. 23: 410. 1888; Dunn & Tutcher, l.c. (syn. nov.).

Hemsley admitted Nees' species without comment. Dunn and Tutcher distinguished *A. Fordii* Hemsl. and *A. panduratus* Nees (having seen no specimens representing the latter) as follows: "Upper leaves entire, obtuse, *A. Fordii*"; "Upper leaves serrate, acuminate, *A. panduratus*." Doctor Mattfeld examined Nees' type in the Berlin Herbarium and states that it represents the same species as *Hongkong herb.* 2824, distributed as *A. Fordii* Hemsl. The leaves of Nees' species are mostly entire, some with 1 to 3 small teeth in the upper one-third. Some of the leaves are blunt and mucronate, others somewhat acute.

Aster Walpersianus Nees, Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 259. 1843. "China: Lintin."

Hemsley admits this species without comment, but Dunn and Tutcher do not include it. Doctor Mattfeld reports that the type specimen consists only of a small twig, that, however, agrees with Nees' description although the label bears the statement "Macao, in convallibus montium inferiorum" not Lintin as stated in the description. The heads are hemispheric. The specimen does not conform to the characters of any of the species of *Aster* credited by Dunn and Tutcher to Kwangtung Province. It is somewhat similar to those forms of the North American *Aster laevis* Linn. that also bear larger leaves on the lateral branches. From the data at present available I am unable to associate this species with any other described species of the genus from China.

Blumea hieracifolia (D. Don) DC. in Wight, Contrib. Bot. Ind. 15. 1834, Prodr. 5: 442. 1836.

Erigeron hieracifolium D. Don, Prodr. Fl. Nepal. 172. 1825.

Blumea chinensis Walp. Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 294, 1843. "China: Cap Syng-moon" (sub *Vernonia conyzoides* DC. p. 254), non DC. 1834.

Walpers first referred the specimen to *Vernonia conyzoides* DC., but in the *addenda* characterized it as a new species of *Blumea*, overlooking the fact that deCandolle had already applied the specific name *chinensis* to a very different species. In Index Kewensis it is reduced to *Blumea hieracifolia* DC., the species to which Walpers compared it, and Hemsley states that it is perhaps a form of *B. hieracifolia* DC. Dunn and Tutcher do not mention it, although they admit deCandolle's species as growing in Kwangtung Province. There is a portion of the type specimen in the Klatt collection at the Gray Herbarium labeled "*Blumea chinensis* Walp. China-Cap Syng-moon" and this seems safely to represent the same species as the Chinese material referred by Hemsley and by Dunn and Tutcher to *B. hieracifolia* DC.; the label bears also an unpublished binomial accredited to Dietrich. The Chinese specimens, however, are by no means identical with the Indian material on which deCandolle's species was originally based, but may still represent *Blumea hieracifolia* (D. Don) DC. sensu latiore.

Blumea obliqua (Linn.) Druce, Bot. Exch. Club Brit. Isles Rep. 4: 609. 1917.

Erigeron obliquum Linn. Mant. 2: 573. 1771.

Conyza obliqua Willd. Sp. Pl. 3: 1930. 1804.

Conyza amplexicaulis Lam. Encycl. 2: 84. 1786.

Blumea amplexens DC. in Wight, Contrib. Bot. Ind. 13. 1834. Prodr. 5: 433. 1836.

Vernonia Gomphrena Walp. Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 253. 1843. "China: Lintin" (syn. nov.).

Hemsley admitted this as *Vernonia Gomphrena* Walp., without comment other than the slightly erroneous statement that it was from China "without locality"; Dunn and Tutcher did not account for it. Doctor Mattfeld states that Walpers' type specimen in the Berlin herbarium bears also an unpublished binomial, sub *Blumea*, proposed by Schulz-Bipontinus. He further states that it is very similar to, if not identical with, the Indian *Blumea amplexens* DC. There is an excellent sketch of Walpers' type, with fragments (a leaf and immature heads), in the Klatt collection now at the Gray Herbarium. On the basis of the data and information now available I believe that *Vernonia Gomphrena* Walp. is but a form of the Indian and Ceylon *Blumea obliqua* (Linn.) Druce (*B. amplexens* DC.), in spite of the fact that the species is not repre-

sented by any modern collections from Kwangtung. Because of the very extensive early commerce between India and Macao and Canton, it is entirely possible that here we have an introduced plant that perhaps has not persisted. Gagnepain does not admit the Linnaean species for the Indochina flora, neither does Craib record it from Siam. In attempting possibly to connect *Vernonia Gomphrena* Walp. with some one of the Indochina species of *Blumea* all of Gagnepain's descriptions were scanned; at first it was thought that possibly *Blumea hongkongensis* Vaniot might be the one sought. However Vaniot's original description does not at all apply to Walpers' species, while the Indo-China plant that Gagnepain described (Lecomte Fl. Gén. Indo-Chine 3: 531. 1924) under Vaniot's binomial apparently does not represent the same species that Vaniot had. The original description calls for a plant with petioled leaves attenuate below into a long cuneate base; while Gagnepain described a plant with sessile and somewhat stem-clasping leaves, citing only specimens from Indochina and Siam; Vaniot's type was from Hongkong. *Blumea obliqua* (Linn.) Druce, except for this Lintin Island record for China, is known from Central India, the western Peninsula, Bengal and Ceylon, and as interpreted by Hooker f. is distinctly a collective species. The type of *Vernonia Gomphrena* Walp. closely approximates specimens of *Blumea amplexens* DC. from Madras and Ceylon.

Glossogyne tenuifolia (Labill.) Cass. Dict. Sci. Nat. 51: 475. 1827.

Bidens tenuifolia Labill. Sert. Austr. Caled. 44. t. 45. 1824-25.

Bidens Meyeniana Walp. Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 271. 1843. "China: Cap Syng-moon" (syn. nov.).

Hemsley admitted *Bidens Meyeniana* Walp. as a valid species, stating that it might be referable to *B. parviflora* Willd. or *B. pinnata* Linn. It is not accounted for by Dunn and Tutcher. Cassini's species is common in southeastern China. Walpers' description conforms to its characters, and from the description alone *Bidens Meyeniana* Walp. is safely referable to *Glossogyne tenuifolia* Cass. This disposition of it is confirmed by Sherff's reference of Meyen's type in the Berlin Herbarium to Cassini's species.

Inula Cappa (Ham.) DC. Prodr. 5: 469. 1836.

Conyza Cappa Ham. in D. Don, Prodr. Fl. Nepal. 176. 1825.

Inula pseudo-cappa DC. l.c.

Duhaldea chinensis DC. op. cit. 366.

Vernonia congesta Benth. Hook. Lond. Jour. Bot. 1: 487. 1842.

Vernonia eriosematoides Walp. Nova Acta Acad. Leop.-Carol. Nat. Cur. 19: Suppl. 1: 254. 1843. "China: Cap Syng-moon."

Moquinia eriosematoides Walp. Repert. 6: 317. 1846-47.

Hamilton's original description was based on Indian material. The other binomials listed above were all based on Chinese specimens. As *Inula Cappa* DC. is currently interpreted this seems to be the correct disposition of Walpers' species.

Microglossa pyrifolia (Lam.) O. Ktze. Rev. Gen. Pl. 353. 1891; Merr. Lingnan Sci. Jour. **15**: 428. 1936.

Conyza pyrifolia Lam. Encycl. **2**: 89. 1786.

Conyza volubilis Wall. List no. 3057. 1831, *nomen nudum*.

Microglossa volubilis DC. Prodr. **5**: 320. 1836.

Conyza syringaefolia Meyen & Walp. Nova Acta Acad. Leop.-Carol. Nat. Cur. **19**: Suppl. **1**: 263. 1843. "China: Cap Syng-moon. Insula Zbar."; Hemsley Jour. Linn. Soc. Bot. **23**: 420. 1888.

Conyza syringaefolia Meyen & Walp. was admitted by Hemsley who states that in many respects the description agrees with *Microglossa volubilis* DC. It was not accounted for by Dunn and Tutcher. An examination of the type by Dr. Mattfeld shows that it is the same as *Microglossa volubilis* (Wall.) DC. = *M. pyrifolia* (Lam.) O. Ktze. This is verified by an excellent sketch of Meyen and Walpers' type, together with a fragment of it in the Klatt collection now in the Gray Herbarium. The species is common and is widely distributed in the Indo-Malaysian region.

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Merrill, Elmer D. 1937. "The Chinese species described in Meyen's "Observationes Botanicae" (Beiträge zur Botanik)." *Journal of the Arnold Arboretum* 18(1), 54–77. <https://doi.org/10.5962/bhl.part.24290>.

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