NOMENCLATURE ARTICLE

From Tranquebar to Madras and back again, again: Typification of the plant names published in Rottler's account of an Indian journey in 1799–1800

I.M. Turner[1,2]

1 *Singapore Botanical Liaison Officer, Science Directorate, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AB, United Kingdom*
2 *Herbarium, Singapore Botanic Gardens, National Parks Board, 1 Cluny Road, Singapore 259569*
Address for correspondence: *I.M. Turner*, *i.turner@kew.org*

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Abstract The typification of names validated in a paper of 1803 concerning the plants encountered on a journey through what is now Tamil Nadu in southern India is reviewed. A number of name changes are necessitated. *Psilotrichum patulum* becomes the correct name for *P. elliotii*, *Euphorbia glaucescens* is the correct name for *E. corrigioloides*, *Oldenlandia pusilla* is the correct name for *O. attenuata* and *Kohautia attenuata* is the correct name for *K. aspera*.

Keywords India; Klein; lectotype; Rottler; Willdenow

■ INTRODUCTION

In 1803, Carl Willdenow had a paper published in a Berlin journal (Rottler, 1803). The core of the article was a report by Johann Peter Rottler of a journey made from Tranquebar to Madras in southern India and his return by a different route. An account of this trip had already been published in a Missionary journal (Rottler, 1802), but the botanical digressions included therein were limited. The focus of Rottler's 1803 report was botanical, with many species being listed and a fair number formally described by Rottler. Willdenow added a series of notes to the paper including some new descriptions of his own. This account of a botanical excursion was not widely circulated and certainly in the English-speaking world remained poorly known for much of the nineteenth century (Anonymous, 1894). Daniel (1991) and Matthew (1993) then reintroduced the paper to the late-twentieth century audience. Matthew (1993) provided a translation in English and Daniel (1991) a nomenclatural analysis clarifying which names were validated in the paper and the correct author citation of those names. However, the typification of the names was not fully elucidated. Daniel effectively typified some of the names to specimens in the Willdenow Herbarium (B-W) in Berlin, but otherwise there has been no concerted effort to settle the typification of these names. While many of them are now considered synonyms of minor interest, there are some names still in use. Also by studying these specimens, some changes in the accepted disposition of the names have come to light.

■ JOHANN PETER ROTTLER

Johann Peter Rottler (1749–1836) spent 60 years as a Christian missionary in southern India. From 1776 to 1806, he served the Royal Danish Mission in Tranquebar. Besides his religious vocation, pastoral activites and linguistic studies, he also investigated the botany of the area. At around the time of the journey to Madras, Rottler collaborated extensively in the botanical exploration of the area with Johann Gottfried Klein, amongst others. Klein, the son (and grandson) of a Tranquebar Missionary, was medically trained and worked at the hospital in Tranquebar (Stansfield, 1957). Klein collected plant specimens in southern India and Sri Lanka and sent many to Willdenow in Berlin (Stansfield, 1957). Rottler also sent specimens to Willdenow, and in the Rottler paper, Willdenow acknowledged receiving specimens of most of the plants mentioned in the account. There is a degree of confusion in the material in the Willdenow Herbarium with respect to Rottler and Klein as the source of specimens. Schlechtendal, who annotated many of the sheets in the Willdenow Herbarium, sometimes indicated Klein as the collector when the accompanying original ticket is in Rottler's rather angular hand compared to Klein's more loopy script. However, there are specimens where the label data clearly match place and date given by Rottler yet are in Klein's hand. There is no mention that Klein accompanied Rottler on the journey. It may be that Rottler gave specimens to Klein, or that Klein assisted Rottler in writing tickets for his specimens.

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■ TYPIFICATION

Rottler made little explicit citation of specimens in his report though there is sufficient to confirm that he did actively collect on the journey. The implicit assumption can be made that there were specimens gathered that correspond to the dates and locations given in the text. Willdenow noted that he received specimens of most of the taxa and Daniel (1991: 607), effectively lectotypifying 15 of Rottler's names, stated that "They all have labels in Rottler's hand and the places and dates mentioned tally exactly with those given in his itinerary in the paper." Therefore, I take it that Rottler (or Klein) specimens with original labels giving localities and dates that match the published account can be considered as cited specimens in the protologue and should therefore receive precedence in type designation. Rottler distributed specimens to various botanists in India and Europe, and his personal herbarium is now, thanks to Royle, split between K and LIV (Stansfield, 1957). The specimens now in B-W cannot therefore be assumed to be the only material used by Rottler in writing his descriptions, and it is clear that there are specimens collected on the Madras trip to be found elsewhere. I have therefore here accepted typifications of Rottler names that match the collection data given in the text by Rottler and designated new lectotypes accordingly. To avoid repetition below, when more than one specimen was located the best one was selected as lectotype.

For the names in the paper validated by Willdenow, the relevant material in B-W is clearly the most likely to have been seen by Willdenow when describing the species. Even when only one specimen is present in B-W, I prefer to consider effective typifications as lectotype designation rather than treating the specimen as a holotype, as it is possible Willdenow saw material elsewhere or material was subsequently dispersed to other collections. The same arguments apply to type designations made here.

The search for type material of the Rottler and Willdenow names involved searching various online databases, published microfiches of historical herbaria, obtaining images from relevant herbaria and searching the collection of the Royal Botanic Gardens Kew. Regarding place names, I follow the forms used on the original labels on the specimens, mostly written by Rottler. Matthew (1993) provides the modern equivalents.

■ NOMENCLATURE

Names validated by Rottler

***Andropogon nervosus*. —** A Rottler specimen in K has been designated as lectotype for this name but the sheet from the Rottler Herbarium bears three original collection labels, so the lectotype choice is here refined to one piece that is presumed to relate to the label for the gathering cited in the protologue.

Sehima nervosa (Rottler) Stapf in Oliver, Fl. Trop. Afr. 9: 36. 1917 ('*nervosum*') ≡ *Andropogon nervosus* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 218. 1803 ('*nervosum*') – **Lectotype** (first step designated by Cope in Nasir & Ali, Fl. Pakistan 143: 323. 1982, **second step designated here**): [India, Tamil Nadu], Wândawasi, "hab. ad radices montium" (fide protologue), 6 Jan 1800, *J.P. Rottler s.n*. (K barcode K000245767!, restricting choice to the inflorescence-bearing stem mounted at the top-right of the sheet; isolectotypes: B-W barcode B -W 18633 -01 0 [image!], JE barcode JE00007303 [image!]).

***Bryonia callosa*. —** The epithet of this name was published as '*collosa*'. I have not found any meaning in Latin for this. Rottler's specimens are clearly labelled by him as '*callosa*', so I take the published version to be an orthographic error to be corrected to *callosa*.

Cucumis callosus (Rottler) Cogn. in Engler, Pflanzenr. IV. 275. II (Heft 88): 129. 1924 ≡ *Bryonia callosa* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 210. 1803 ('*collosa*') – Lectotype (designated by Jeffrey in Kew Bull. 34: 793. 1980): [India, Tamil Nadu], Kollensâwadi, 29 Dec 1799, *J.P. Rottler s.n*. (K barcode K000794987!; possible isolectotypes: LIV Nos. LIV.1952.121.1646(i) [image!], LIV.1952.121.1646(ii) [image!]).

***Bryonia epigaea*. —** A Rottler specimen in K with collection date and locality matching the protologue is selected as lectotype.

Corallocarpus epigaeus (Rottler) C.B.Clarke in Hooker, Fl. Brit. India 2: 628. 1879 ('*epigaea*') ≡ *Bryonia epigaea* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 223. 1803 – **Lectotype (designated here):** [India, Tamil Nadu], Oreiur, 11 Jan 1800, *J.P. Rottler s.n*. (K barcode K001129787!; isolectotypes: LIV Nos. LIV1952.121.1629 (i) [image!], LIV1952.121.1629(ii) [image!], LIV1952. 121.1629(iii) [image!]).

***Bryonia rostrata*. —** A Rottler specimen in K that represents original material for this name is selected as lectotype. There does not seem to be any original herbarium material available of Jacquin's *Trichosanthes foetidissima*. I therefore select the plate published in the following year as neotype here.

Kedrostis foetidissima (Jacq.) Cogn. in Candolle & Candolle, Monogr. Phan. 3: 634. 1881 ≡ *Trichosanthes foetidissima* Jacq., Collectanea 2: 341. 1789 – **Neotype (designated here):** [illustration] "*Trichosanthes foetidissima*" in Jacquin, Icon. Pl. Rar. 2&3(4): t. 624. 1790.

= *Bryonia rostrata* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 212. 1803 – **Lectotype (designated here):** [India, Tamil Nadu], "Den 31sten reiste ich nach Mênpâkkam" (fide protologue), Tirappanam, 31 Dec 1799, *J.P. Rottler s.n*. (K barcode K001129788!).

***Caesalpinia digyna*. —** A lectotype from B-W has been designated for this name.

Moullava digyna (Rottler) Gagnon & G.P.Lewis in PhytoKeys 71: 67. 2016 ≡ *Caesalpinia digyna* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 200, t. 3. 1803 – Lectotype (designated by Vidal in Larsen & al., Fl. Cambodge, Laos, Vietnam 18: 42. 1980): [India, Tamil Nadu], Marmelon, 9 Oct 1799, *J.P. Rottler s.n.* (B-W barcode B -W 08026 -01 0 [image!]; isolectotypes: K barcode K000789346! in part, LIV No. LIV1952.121.2323 [image!]).

***Capparis rotundifolia*. —** A lectotype was designated by Daniel (1991) for this name of Rottler's, which is still in use. Recently, Maurya & al. (2021) selected the fragment from Willdenow's material in P as the lectotype, but this is not required as Daniel's lectotype sheet is still extant.

Capparis rotundifolia Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 185. 1803 – Lectotype (designated by Daniel in Taxon 40: 607. 1991): [India, Tamil Nadu], "Zwischen Pondischery und Alamparvei" (fide protologue), Tureirengapulleitsāwadi, 1 Oct 1799, *J.P. Rottler s.n.* (B-W barcode B -W 10035 -01 0 [image!]; isolectotypes: K barcode K000247323!, P barcode P04022372 [image!]).

***Cedrela toona*. —** A specimen in B-W has an original label in Klein's hand, the location and date match those given by Rottler in the protologue. Therefore, it is chosen as lectotype for this name.

Toona ciliata M.Roem., Fam. Nat. Syn. Monogr. 1: 139. 1846 ≡ *Cedrela toona* Roxb. ex Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 198. 1803 – **Lectotype (designated here):** [India, Tamil Nadu], Madras, 6 Nov 1799, *J.G. Klein s.n.* [?J.P. Rottler leg.] (B-W barcode B -W 04828 -01 0 [image!]).

***Celosia glauca*. —** A fertile specimen in LIV that has the correct collection details is selected as lectotype for Rottler's name. See below under *Celosia patula* Willd. for further details.

Celosia glauca Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 198. 1803, nom. illeg., non Wendl. 1798 – **Lectotype (designated here):** [India, Tamil Nadu], Mount, 7 Nov 1799, *J.P. Rottler s.n.* (LIV No. LIV1952.121.939 (i) [image!]; isolectotypes: B-W barcode B -W 05012 -03 0 [image!], LIV Nos. LIV1952.121.939 [image!], LIV1952.121.939(ii) [image!]).

***Cissus indica*. —** The specimen in the Willdenow Herbarium is annotated with the place name Arasur and the date 25 September 1799. There is a village of this name near Sirkazhi [Siakhi of Rottler], not to be confused with the place of the same name near Coimbatore, which was not on Rottler's route for this journey. A specimen from Rottler's herbarium in K has a ticket bearing the same locality and date to make the specimen an isolectotype, but another ticket states "ab amiciss. Heinio" indicating material received from Benjamin Heyne, so the sheet may include more than one gathering but there is no indication of which is which.

There are two specimens in C labelled as *Cissus repanda* by Vahl. One is a Commerson specimen from Isle de France (Mauritius) that Vahl received from Thouin, and the other a specimen received from Lamarck and annotated as from "India orientalis". As the latter is the locality cited by Vahl in the protologue, it is here selected as the lectotype.

Cissus repanda Vahl, Symb. Bot. 3: 18. 1794 – **Lectotype (designated here):** India orientalis, *Anon. s.n.* (C barcode C10020292 [image!]).

= *Cissus indica* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 183. 1803 – Lectotype (designated by Daniel in Taxon 40: 607. 1991): [India, Tamil Nadu], "hinter Siakhi" (fide protologue), Arasur, 25 Sep 1799, *J.P. Rottler s.n.* (B-W barcode B -W 03001 -01 0 [image!]; isolectotype: K barcode K000736270!).

***Convolvulus heptaphyllus*. —** As noted by Verdcourt (1961), there is a sheet from Rottler's herbarium at Kew labelled *Convolvulus heptaphyllus*. This bears at least five pieces of plant material and six original tickets. Verdcourt suggested that most of the material represented *Ipomoea cairica* var. *indica* but that one piece with fine pedicels could be his *Ipomoea tenuipes*. There is no indication on the sheet that this piece is the material collected in Marmelon on the 16 November 1799. Proximity would suggest that it is a specimen collected by Heyne. Therefore, to avoid confusion the much less ambiguous specimen in B-W is selected as lectotype for Rottler's name. Although Rottler's is the oldest available for this species, its transfer to *Ipomoea* is blocked as this binomial was used first by Sweet for Roxburgh's later homonym:

Ipomoea tenuipes Verdc. in Kew Bull. 15: 12. 1961 – Holotype: Tanzania, Masai District, about 1.5 km N. of Kwakuchinja, 22 Jul 1956, *E. Milne-Redhead & P. Taylor 11194* (K barcode K000097171!; isotypes: BR barcode BR000000888591 [image!], EA barcode EA000001228 [image!], SRGH [handwritten barcode] SRGH0106525-0 [image!]).

= *Convolvulus heptaphyllus* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 196. 1803 – **Lectotype (designated here):** [India, Tamil Nadu], Marmelon, 16 Nov 1799, *J.P. Rottler s.n.* (B-W barcode B -W 03721 -01 0 [image!]).

A citation is given that includes Roxburgh's later homonym:

Ipomoea cairica var. ***indica*** Hallier f. in Annuario Reale Ist. Bot. Roma 7: 231. 1898 ≡ *Convolvulus digitatus* Roxb., Fl. Ind. 2: 65. 1824 – Lectotype (designated by Verdcourt

in Kew Bull. 15: 13. 1961): [unpublished illustration] Icones Roxburghianae 566 (K).
= *Convolvulus heptaphyllus* Roxb., Fl. Ind. 2: 66. 1824, nom. illeg., non Rottler 1803 ≡ *Ipomoea heptaphylla* Sweet, Hort. Brit., ed. 2: 372. 1830 – Lectotype (designated by Verdcourt in Kew Bull. 15: 11. 1961): [unpublished illustration] Icones Roxburghianae 1950 (K).

***Convolvulus pilosus*. —** A lectotype in B-W has been designated for this name.

Ipomoea purpurea (L.) Roth, Bot. Abh. Beobacht.: 27. 1787 ≡ *Convolvulus purpureus* L., Sp. Pl., ed. 2, 1: 219. 1762 – Lectotype (designated by Austin in Ann. Missouri Bot. Gard. 62: 193. 1975): [illustration] "Convolvulus folio cordato glabro, flore violaceo" in Dillenius, Hort. Eltham. 1: t. 84, fig. 97. 1732.
= *Convolvulus pilosus* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 196. 1803 – Lectotype (designated by Daniel in Taxon 40: 607. 1991): [India, Tamil Nadu], Marmelon, 16 Oct 1799, *J.P. Rottler 13* (B-W barcode B -W 03646 -01 0 [image!]).

***Convolvulus rugosus*. —** The sheet in B-W has an original label stating "Marmelon, Octobr 16, 1799//Tirappanam Xbr. 31, 1799" leading to the expectation that the material on the sheet represents two gatherings. There is no indication which material goes with which collection, so arbitrarily I exclude the shoot mounted to the right as the Tirappanam collection. There is also a sheet in K that includes a label matching the protologue but it also bears several other labels and no indication of the disposition of specimens to labels, so I refrain from referring to an isolectotype.

Ipomoea asarifolia (Desr.) Roem. & Schult., Syst. Veg. 4: 251. 1819 ≡ *Convolvulus asarifolius* Desr. in Lamarck, Encycl. 3: 562. 1792 – Lectotype (designated by Austin in Harling & Sparre, Fl. Ecuad. 15: 39. 1982): Senegal, *Roussilon s.n*. (P-LA barcode P00357544 [image!]; isolectotype: P-JU No. 6798 [image!]).
= *Convolvulus rugosus* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 196. 1803 – Lectotype (designated by Daniel in Taxon 40: 607. 1991): [India, Tamil Nadu], Marmelon, 16 Oct 1799, *J.P. Rottler s.n*. (B-W barcode B -W 03683 -01 0 [image!], taken to exclude the shoot mounted on the right side of the sheet).

***Croton nervosus*. —** In the Willdenow Herbarium, Rottler's original label giving the details as in the protologue is stuck on the folder cover not on one of the two sheets in the folder. There is also a label stating "Klein Ind. 1797". One assumes, therefore, that a Klein collection from earlier than the Rottler one, is also included. Unfortunately it is not possible to tell which material goes with which collection. To avoid confusion, I select a specimen in K with the correct details as lectotype for Rottler's name.

Mallotus rhamnifolius (Willd.) Müll.Arg. in Linnaea 34: 196. 1865.
For typification, see below.

Croton nervosus Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 190. 1803 ('*nervosum*') – **Lectotype (designated here):** [India, Tamil Nadu], Mavulibaram, 4 Oct 1799, *J.P. Rottler s.n*. (K barcode K000247001!; isolectotypes: B-W [probably either barcode B -W 17872 -01 0 [image!] or barcode B -W 17872 -02 0 [image!]], LIV No. LIV1952.121.3338 [image!]).

***Croton repandus*. —** A specimen in the Royle Herbarium in LIV has been designated as lectotype for this name.

Mallotus repandus (Rottler) Müll.Arg. in Linnaea 34: 197. 1865 ≡ *Croton repandus* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 206. 1803 ('*repandum*') – Lectotype (designated by Sierra & al. in Blumea 50: 234. 2005): [India, Tamil Nadu], Marmelon, 10 Dec 1799, *J.P. Rottler s.n*. (LIV No. LIV1952.121.335 [image!]).

***Diospyros glauca*. —** No original material has been found for this name. Hence, it is not possible to resolve the identity of the plant or the typification of the name.

Diospyros glauca Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 221. 1803 – Type: India, Tamil Nadu, Mt Wandiwash, 4–5 Jan 1800, *J.P. Rottler s.n*. (not traced).

***Ficus repens*. —** In the absence of any definite original material, this name remains unresolved.

Ficus repens Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 208. 1803 – Type: India, Tamil Nadu, Marmelon, 16 Oct 1799, *J.P. Rottler s.n*. (not traced).

***Flemingia*. —** Rottler validated the generic name *Flemingia* in the sense of *Thunbergia* (Acanthaceae). The name has been rejected in favour of its junior homonym *Flemingia* Roxb. ex W.T.Aiton (Leguminosae).

Flemingia Roxb. ex Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 202. 1803, nom. rej. – Type: *Flemingia grandiflora* Roxb. ex Rottler.

***Flemingia grandiflora*. —** Although Willdenow corrected Rottler's identification to *Thunbergia fragrans* Roxb., Bremekamp (1955) took Rottler's plant to be *Thunbergia grandiflora* Roxb., which he considered to be a combination based on *Flemingia grandiflora* Roxb. ex Rottler. Unfortunately, no original material for Rottler's name has been located, but Rottler's description conforms with *Thunbergia grandiflora*. Cramer (1998) referred to a Roxburgh drawing in K as the type of *Flemingia grandiflora*. Rottler specifically noted that he had not seen Roxburgh's description of the plant,

so it is highly unlikely that Rottler's description was based either directly or indirectly on Roxburgh's drawing, but Cramer's statement is effectively a neotypification of the name and is acceptable as such. Bremekamp (1955) attributed the combination *Thunbergia grandiflora* to Loddiges (1819) in the *Botanical Cabinet*, but there is no citation of any synonyms or bibliographic references and no descriptive content to the account so the name is not validated. Similarly, Cramer (1998) attributed the combination to Roxburgh in the *Hortus Bengalensis* of 1814, but again there is nothing presented on which to validate the name. Ker Gawler (1820) in the *Botanical Register* included Roxburgh's unpublished description and attributed both the name and description to Roxburgh, thus validating *Thunbergia grandiflora* Roxb. No reference to Rottler's publication or name was made. Kartesz & Gandhi (1991) designated the accompanying plate as lectotype of Roxburgh's name. The plate is of a plant that flowered in England in the summer of 1819, which Ker Gawler believed was the first to flower in England (though Loddiges's must have flowered in the same year).

Thunbergia grandiflora Roxb. in Bot. Reg. 6: t. 495. 1820 – Lectotype (designated by Kartesz & Gandhi in Phytologia 71: 89. 1991): [illustration] Bot. Reg. 6: t. 495. 1820.
= *Flemingia grandiflora* Roxb. ex Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 202. 1803 – Neotype (designated by Cramer in Dassanayake, Rev. Handb. Fl. Ceylon 12: 9. 1998): [unpublished illustration] Icones Roxburghianae 959 (K).

***Gardenia stipularis*. —** A Rottler specimen in B-W has been designated for this name.

Catunaregam spinosa (Thunb.) Tirveng. in Taxon 27: 515. 1978 ≡ *Gardenia spinosa* Thunb., Gardenia: 16, t. II, fig. 4. 1780 – Lectotype (designated by Tirvengadum in Taxon 27: 515. 1978): Macao, *J.B. Bladh s.n*. (BM barcode BM000945258 [image!]).
= *Gardenia stipularis* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 182. 1803 – Lectotype (designated by Daniel in Taxon 40: 607. 1991): [India, Tamil Nadu], "hinter Siakhi" (fide protologue), Arasur, 25 Sep 1799, *J.P. Rottler s.n*. (B-W barcode B -W 05133 -01 0 [image!]).

***Gratiola nudicaulis*. —** A lectotype in B-W has been designated for this name. There is an inconsistency in the dates for this collection, as well as spelling of the type locality. The protologue gives the month as October, but original tickets on two of the syntypes say "Xbr". A compilation error in the paper seems the likely explanation.

Dopatrium nudicaule (Rottler) Benth., Scroph. Ind.: 31. 1835 ≡ *Gratiola nudicaulis* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 193. 1803 – Lectotype (designated by Daniel in Taxon 40: 607. 1991): [India, Tamil Nadu], "Gallaburam ad Montes Madras patens. Oct. 28. 1799" (fide protologue), Pallaburam, 28 Dec 1799, *J.P. Rottler s.n.* (B-W barcode B -W 00373-01 0 [image!]; isolectotypes: HAL barcode HAL0115587 [image!] (fragment ex B-W), K-W barcode K001117543!, LIV No. LIV.1952.121.8997 [image!]).

***Grewia arborea*. —** A specimen in K that matches the details from the protologue has been chosen as lectotype.

Grewia damine Gaertn., Fruct. Sem. Pl. 2: 113, t. 106, fig. [7] a–f, E–I. 1790 – Lectotype (designated by Kishor & al. in Taxon 67: 1036. 2018): [illustration] "Damine" in Gaertner, Fruct. Sem. Pl. 2: t. 106, fig. [7]a–f, E–I. 1790 – Epitype (designated by Kishor & al. in Taxon 67: 1036. 2018): Ceylon, Galle District, Galle, 19 Nov 1973, *Sohmer & al. 8900* (US barcode 01173200 [image!]).
= *Grewia arborea* Roxb. ex Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 205. 1803, nom. illeg., non (Forssk.) Lam. 1789 – Lectotype (designated by Turner in Taxon 70: 391. 2021): [India, Tamil Nadu], Marmelon, 11 Oct 1799, *J.P. Rottler s.n*. (K barcode K001129758!).

***Grewia orbiculata*. —** This name, still in use, has been lectotypified to a Rottler specimen in K.

Grewia orbiculata Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 205. 1803 – Lectotype (designated by Turner in Taxon 70: 392. 2021): [India, Tamil Nadu], Marmelon, 11 Oct 1799, *J.P. Rottler s.n*. (K barcode K001129759!).

***Hedysarum punctatum*. —** No suitable candidates for typification of this name have been located.

Rhynchosia densiflora (B.Heyne ex Roth) DC., Prodr. 2: 386. 1825 ≡ *Glycine densiflora* B.Heyne ex Roth, Nov. Pl. Sp.: 348. 1821 – Lectotype (designated by Turner in Taxon 70: 389. 2021): *B. Heyne s.n*. (L barcode L 0019253 [image!]).
= *Hedysarum punctatum* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 222. 1803, non *Rhynchosia punctata* DC. 1826 – Type: [India, Tamil Nadu], Wollimôdu, 10 or 11 Jan 1800, *J.P. Rottler s.n*. (not traced).

***Hedysarum venosum*. —** No suitable candidates for typification of this name have been located but the identity of the plant can be confirmed from other Rottler specimens bearing the name.

Rhynchosia suaveolens (L.f.) DC., Prodr. 2: 387. 1825 ≡ *Glycine suaveolens* L.f., Suppl. Pl.: 326. 1782 – Lectotype (designated by Mishra & al. in Phytotaxa 513: 172. 2021): India, intra rupes propre Madrass, *J. Koenig s.n*., Herb. Linnaeus No. 901.18 (LINN [image!]).
= *Hedysarum venosum* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 220. 1803, nom. illeg., non Desf. 1799

– Type: [India, Tamil Nadu], Wandiwash, 5 or 6 Jan 1799, *J.P. Rottler s.n*. (not traced).

***Ipomoea phoenicea*. —** A specimen in B-W with the correct locality and date details is selected here as lectotype, though the label is in Klein's rather than Rottler's hand.

Ipomoea hederifolia L., Syst. Nat., ed. 10, 2: 925. 1759 – Lectotype (designated by O'Donell in Lilloa 29: 48. 1959): [illustration] "Ipomoea foliis cordatis" in Burman, Pl. Amer. [Plumier]: t. 93, fig. 2. 1756.

= *Ipomoea phoenicea* Roxb. ex Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 197. 1803 – **Lectotype (designated here):** [India, Tamil Nadu], Marmelon, 16 Oct 1799, *J.G. Klein s.n*. [?J.P. Rottler leg.] (B-W barcode B -W 03748 -03 0 [image!]; isolectotype: K barcode K001129792!).

***Ischaemum melicoides*. —** A specimen in B-W has been designated as lectotype. It does not agree with the protologue in locality or date, but the collection was certainly made on Rottler's trip and no other likely original material has been located.

Enteropogon monostachyos (Vahl) K.Schum. in Abh. Königl. Akad. Wiss. Berlin 1894: 17. 1894 ≡ *Cynosurus monostachyos* Vahl, Symb. Bot. 2: 20. 1791 – Lectotype (designated by Renvoize in Polhill, Fl. Trop. E. Africa, Gram. (Part 2): 333. 1974): Ind. Orient., *J.G. Koenig s.n*. (C barcode C10016898 [image!]).

= *Ischaemum melicoides* J.Koenig ex Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 211. 1803 – Lectotype (designated by Daniel in Taxon 40: 607. 1991): [India, Tamil Nadu], "Auf dem Wege nach Tirappanam" (fide protologue), Wandawasi, 6 Jan 1800, *J.P. Rottler 793* (B-W barcode B -W 18873 -01 0 [image!]).

***Jasminum cuspidatum*. —** The material on the sheet in B-W appears to be mixed. The flowering shoot mounted top right, above a label in Rottler's hand, best matches the description and is here selected as lectotype.

Jasminum cuspidatum Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 192. 1803 – **Lectotype (designated here):** [India, Tamil Nadu], Marmelon in horto botan., 9 Oct 1799, *J.P. Rottler s.n.* (B-W barcode B -W 00094 -01 0 [image!], including shoot mounted at the top right only).

***Justicia dichotoma*. —** It has not proved possible to find any original material for this name, so the typification is left open. A lectotype is designated for the Linnaean name *Justicia nasuta* as it has not been typified (Jarvis, 2007). The good specimen in the Linnaean herbarium indicated by Jarvis as original material is selected here as lectotype.

Rhinacanthus nasutus (L.) Kurz in J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 39: 79. 1870 ≡ *Justicia nasuta* L., Sp. Pl.: 16. 1753 – **Lectotype (designated here):** *Torén s.n*., Herb. Linnaeus No. 28.24 (LINN [image!]).

= *Justicia dichotoma* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 221. 1803 – Type: India, Tamil Nadu, Wollimôdu, 10 Jan 1800, *J.P. Rottler s.n*. (not traced).

***Justicia glauca*. —** A specimen in E with the correct collection details has been designated as lectotype.

Justicia glauca Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 219. 1803 – Lectotype (designated by Turner in Taxon 70: 398. 2021): [India, Tamil Nadu], Wandawash, 6 Jan 1800, *J.P. Rottler s.n*. (E [ex GL] barcode E00273664 [image!]).

***Linum trigynum*. —** A specimen in B-W with location and date matching the protologue is here selected as lectotype.

Reinwardtia indica Dumort., Commentat. Bot.: 20. 1822 – Lectotype (designated by Turner in Eur. J. Taxon. 108: 9. 2015): [illustration] "Linum trigynum" in Smith, Exot. Bot. 1: t. 17. 1804.

= *Linum trigynum* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 199. 1803, nom. illeg., non L. 1753, nec Roxb. ex Hardw. 1799 – **Lectotype (designated here):** [India, Tamil Nadu], Marmelon, 26 Dec 1799, *J.P. Rottler s.n*. (B-W barcode B -W 06241 -01 0 [image!]; isolectotype: K barcode K001129790!).

***Milium tomentosum*. —** No material of the gathering noted in the protologue has been found, so the typification is left unresolved.

Digitaria tomentosa (J.Koenig ex Rottler) Henrard in Blumea 1: 100. 1934 ≡ *Milium tomentosum* J.Koenig ex Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 220. 1803 – Type: India, Tamil Nadu, intra fissuas rupium in monte Wandiwash, 5–6 Jan 1799, *J.P. Rottler s.n*. (not traced).

***Mimosa chundra*. —** The lectotype chosen is annotated 4 rather than 9 October as given in the protologue. I take this as a minor clerical lapse at some point.

Senegalia chundra (Roxb. ex Rottler) Maslin in Nuytsia 22: 466. 2012 ≡ *Mimosa chundra* Roxb. ex Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 207. 1803 – **Lectotype (designated here):** [India, Tamil Nadu], Marmelon, 4 Oct 1799, *J.P. Rottler 785* (B-W barcode B -W 19164 -02 1 [image!]).

***Mimosa ferruginea*. —** For this and the next name, Rottler cited a Roxburgh binomial before his own name. I assume in both cases that Rottler was accepting his own name and treating the Roxburgh name as a synonym. No specimen matching the details of the protologue has been located for *Mimosa ferruginea* Rottler and, therefore, the typification is left open.

Senegalia pennata (L.) Maslin in Nuytsia 22: 466. 2012 ≡ *Mimosa pennata* L., Sp. Pl. 1: 522. 1753 – Lectotype (first step designated by Brenan & Exell in Bol. Soc. Brot., sér. 2, 31: 101. 1957; second step designated by Nielsen in Leroy, Fl. Cambodge, Laos, Vietnam 19: 66. 1981): Herb. Hermann 3: 7, No. 216 (BM barcode BM999594649 [image!]).

= *Mimosa ferruginea* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 208. 1803 – Type: India, Tamil Nadu, Madras in horto Anderson., 23 Oct 1799, *J.P. Rottler s.n.* (not traced).

***Mimosa tomentosa*. —** A lectotype has been designated for this name, though the specimen is apparently one of Klein's rather than Rottler's.

Vachellia tomentosa (Rottler) Maslin & al. in Blumea 58: 43. 2013 ≡ *Mimosa tomentosa* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 207–208: 1803 – Lectotype (designated by Kostermans in Fosberg & Dassanayake, Rev. Handb. Fl. Ceylon 1: 492. 1980): [India, Tamil Nadu], Marmelon 16 Oct 1799, *J.G. Klein 784* [?J.P. Rottler leg.] (B-W barcode B -W 19188 -01 0 [image!]).

***Oldenlandia pusilla*. —** Rottler described *Oldenlandia pusilla*. In a related footnote, Willdenow called the plant *Hedyotis attenuata* and provided a brief diagnosis. I believe that this is a case where Willdenow did not see specimens of Rottler's plant and assumed what he called *Hedyotis attenuata* was the same as *Oldenlandia pusilla*. Later authors have also assumed this and *Oldenlandia attenuata* (Willd.) M.R.Almeida is considered the correct name for Rottler's plant. However, the material of *Hedyotis attenuata* in B-W is not an *Oldenlandia* but a *Kohautia*, so Rottler's name is correct for the *Oldenlandia*. There is a specimen in K with the correct location and date that is selected as lectotype for Rottler's name.

Oldenlandia pusilla Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 216. 1803 – **Lectotype (designated here):** [India, Tamil Nadu], Wandiwāsi, 6 Jan 1800, *J.P. Rottler s.n.* (K barcode K000760534!).

***Panicum nervosum*. —** A lectotype in B-W has been designated for this name.

Digitaria sanguinale (L.) Scop., Fl. Carniol., ed. 2, 1: 52. 1771 ≡ *Panicum sanguinale* L., Sp. Pl. 1: 57. 1753 – Lectotype (designated by Henrard, Monogr. Gen. Digitaria: 649. 1950): *Anon. s.n.*, Herb. Linnaeus No. 80.31 (LINN [image!]).

= *Panicum nervosum* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 194. 1803, nom. illeg., non Lam. 1798, ≡ *Panicum rottleri* Kunth, Révis. Gramin. 1: 33. 1829 ≡ *Digitaria sanguinalis* var. *rottleriana* Henrard, Monogr. Gen. Digitaria: 492. 1950 – Lectotype (designated by Henrard, Monogr. Gen. Digitaria: 492. 1950): [India, Tamil Nadu], Madras, "In Gubernatoris horto Madras. Novembr. 29. 1799. Semina huj. graminis e Cap. B. Sp. delata." (fide protologue), 29 Nov 1799, *J.G. Klein s.n.* [?J.P. Rottler leg.] (B-W barcode B -W 01647 -04 0 [image!]).

***Physalis esculenta*. —** A lectotype in B-W has been selected for this name.

Physalis peruviana L., Sp. Pl., ed. 2, 2: 1670. 1763 – Lectotype (designated by Heine in Aubréville & Leroy, Fl. Nouvelle-Calédonie 7: 132. 1975): Peru, Lima, *Alstroemer s.n.*, Herb. Linnaeus No. 247.7 (LINN [image!]).

= *Physalis esculenta* Roxb. ex Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 197. 1803 – Lectotype (designated by Daniel in Taxon 40: 607. 1991): [India, Tamil Nadu], Marmelon, 16 Oct 1799, *J.P. Rottler 722* (B-W barcode B -W 04298 -01 0 [image!]).

***Poa coromandeliana*. —** A specimen in B-W with the correct collection details is here selected as lectotype.

Eragrostiella bifaria (Vahl) Bor in Indian Forester 66: 270. 1940 ≡ *Poa bifaria* Vahl, Symb. Bot. 2: 19. 1791 – Lectotype (designated by Philipps in Polhill, Fl. Trop. E. Africa, Gram. (Part 2): 244. 1974): *Anon. s.n.* [ded. Banks] (C barcode C10015011 [image!]).

= *Poa coromandeliana* J.Koenig ex Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 191. 1803 – **Lectotype (designated here):** [India, Tamil Nadu], Tiruporeiur, 4 Oct 1799, *J.G. Klein s.n.* [?J.P. Rottler leg.] (B-W barcode B -W 01950 -02 0 [image!]).

***Poa indica*. —** A specimen from B-W has been designated as lectotype.

Eragrostis pilosa (L.) P.Beauv., Ess. Agrostogr.: 71. 1812 ≡ *Poa pilosa* L., Sp. Pl.: 68. 1753 – Lectotype (designated by Koch in Illinois Biol. Monogr. 48: 24. 1974): [illustration] "Gramen paniculis elegantissimus, majus, locustis purpureo-spadiceis, minoribus" in Scheuchzer, Agrostographia: t. 4, fig. 3. 1719 – Epitype (designated by Scholz in Taxon 49: 256. 2000): Italy, Piemonte, Alluvium der Sesia bei Vercelli und an den Wegen zwischen den Reisfeldern von Oldenico unweit Vercelli in Oberitalien, 9–10 Aug 1902, *A. Kneucker Gram. exsicc. XII*, *No. 344* (B n.v.; possible isoepitypes: L n.v., W n.v.).

= *Poa indica* J.Koenig ex Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 194. 1803 – Lectotype (designated by Daniel in Taxon 40: 607. 1991): [India, Tamil Nadu], Red hills near Madras, 25 Nov 1799, *J.P. Rottler s.n.* (B-W barcode B -W 01960 -01 0 [image!]; isolectotype: K barcode K000245105!).

***Poa polymorpha*. —** The original label on the specimen in the Willdenow Herbarium that was effectively designated

as lectotype by Daniel, is annotated with two collecting localities and dates but without any indication of which material on the sheet relates to which gathering. I therefore arbitrarily select one piece of the material as being that collected in the Red Hills as Rottler mentions in the protologue.

Eragrostis cilianensis (All.) Vignolo ex Janch. in Mitt. Naturwiss. Vereins Univ. Wien 5: 110. 1907 ≡ *Poa cilianensis* All., Fl. Pedem. 2: 246. 1785 – Lectotype (designated by Vignolo in Malpighia 18: 380. 1904): Italy, in agris patrio Ciliani, *Bellardi s.n*. (TO No. TO-8242 n.v.; isolectotypes: BRI n.v., F n.v.).

= *Poa polymorpha* J.Koenig ex Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 194. 1803 – Lectotype (designated by Daniel in Taxon 40: 607. 1991): [India, Tamil Nadu], Red hills near Madras, 25 Nov 1799, *J.P. Rottler s.n*. (B-W barcode B -W 01925 -01 0 [image!], restricting choice to the plant mounted on the left of the sheet),

***Pommereulla monoica*. —** A lectotype in K-W has been designated for this name.

Melanocenchris rothiana Nees in Proc. Linn. Soc. London 1: 95. 1841 ≡ *Pommereulla monoica* Roth, Nov. Pl. Sp.: 33. 1821, nom. illeg., non Rottler 1803 ≡ *Melanocenchris monoeca* Kuntze, Revis. Gen. Pl. 2: 780. 1891, nom. superfl. & illeg. – Neotype (designated by Turner in Taxon 70: 411. 2021): 15 Nov [sine anno], *B. Heyne 130* [EIC 8905B] (K-W barcode K001131814!).

= *Pommereulla monoica* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 218. 1803 ('*Pommereullia*') ≡ *Melanocenchris monoica* (Rottler) C.E.C.Fisch. in Bull. Misc. Inform. Kew 1934: 148. 1934, nom. illeg., non Kuntze 1891 – Lectotype (designated by Turner in Taxon 70: 411. 2021): [India, Tamil Nadu], Wandawasi, 5 Jan 1800, *J.P. Rottler s.n*. [EIC 8905A] (K-W barcode K001131813!).

***Premna corymbosa*. —** Although Daniel (1991) effectively designated the specimen in B-W as lectotype, this had already been formalised by Munir.

Premna corymbosa Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 187. 1803 – Lectotype (designated by Munir in J. Adelaide Bot. Gard. 7: 13. 1984): [India, Tamil Nadu], "Zwischen Pondischery und Alamparvei" (fide protologue), Tênpakkam, 2 Oct 1799, *J.G. Klein s.n*. [?J.P. Rottler leg.] (B-W barcode B -W 11493 -01 0 [image!]).

***Scirpus brevifolius*. —** A specimen in B-W that bears the details given in the protologue is here selected as lectotype.

Fimbristylis dichotoma (L.) Vahl, Enum. Pl. 2: 287. 1805 ≡ *Scirpus dichotomus* L., Sp. Pl. 1: 50. 1753 – Lectotype (designated by Koyama in Smith, Fl. Vit. Nov. 1: 244. 1979): Herb. Hermann 2: 63, No. 40 (BM barcode BM000621720 [image!]).

= *Scirpus brevifolius* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 190. 1803 – **Lectotype (designated here):** [India, Tamil Nadu], Pagarthakârersāwādi, 4 Oct 1799, *J.P. Rottler s.n*. (B-W barcode B -W 01254 -10 0 [image!]).

***Spondias simplicifolia*. —** A Rottler specimen in K is selected as lectotype for Rottler's name. A Sonnerat specimen in the Lamarck Herbarium is designated as lectotype for *Mangifera axillaris* Desr.

Buchanania axillaris (Desr.) Ramamoorthy in Saldanha & Nicolson, Fl. Hassan Distr.: 374. 1976 ≡ *Mangifera axillaris* Desr. in Lamarck, Encycl. 3: 697. 1792 – **Lectotype (designated here):** India, *P. Sonnerat s.n*. (P-LA barcode P00295740 [image!]).

= *Spondias simplicifolia* Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 187. 1803 – **Lectotype (designated here):** [India, Tamil Nadu], "Zwischen Pondischery und Alamparvei" (fide protologue), Tênpâkkam, 2 Oct 1799, *J.P. Rottler s.n*. (K barcode K000695232!).

***Suregada*. —** After supplying the Tamil name of this plant, Rottler stated "Roxburghii Suregada". I take this to mean "the *Suregada* of Roxburgh" and not a transposition of "*Suregada roxburghii*". The specimen in B-W with Rottler's handwritten label says "*Suregada* Roxb.", providing further evidence of Rottler's intention. Willdenow appears to have based his *Gelonium lanceolatum* on the same gathering, which he cited as a Klein collection, so this is selected here as the type of *Suregada*.

Suregada Roxb. ex Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 206–207. 1803 – Type: *Gelonium lanceolatum* Willd.

Suregada lanceolata (Willd.) Kuntze, Revis. Gen. Pl. 2: 619. 1891 ≡ *Gelonium lanceolatum* Willd., Sp. Pl., ed. 4, 4: 832. 1806 – **Lectotype (designated here):** [India, Tamil Nadu], Madras ex horto Anderson., 8 Oct 1799, *J.G. Klein 782* [J.P. Rottler leg.] (B-W barcode B -W 18502 -01 0 [image!]).

***Tamarix ericoides*. —** A Rottler specimen in K has been designated as lectotype for this name.

Tamarix ericoides Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 214, t. 4. 1803 – Lectotype (designated by Turner in Taxon 70: 419. 2021): [India, Tamil Nadu], "Den folgenden Tag [2 Jan 1800], da mich der Weg durch den ausgetrockneten Fluss selbst führte" (fide protologue), 2 Jan 1800, *J.P. Rottler s.n*. (K barcode K000641945!).

***Uvaria esculenta*. —** A Rottler specimen in B-W has been designated as lectotype for this name.

Artabotrys hexapetalus (L.f.) Bhandari in Baileya 12: 149. 1965 ≡ *Annona hexapetala* L.f., Suppl. Pl.: 270. 1783 – Lectotype (designated by Bhandari in Baileya 12: 149. 1965): India, Madras, *J.G. Koenig s.n.*, Herb. Linnaeus No. 708.9 (LINN [image!]).

= *Uvaria esculenta* Roxb. ex Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 201. 1803 – Lectotype (designated by Daniel in Taxon 40: 607. 1991): [India, Tamil Nadu], Madras, 7 Nov 1799, *J.P. Rottler s.n.* (B-W barcode B -W 10398 -01 0 [image!]).

***Vitex appendiculata*. —** As no original material of this name has been traced, the identity of Rottler's plant cannot be confirmed or typified.

Vitex appendiculata Rottler in Neue Schriften Ges. Naturf. Freunde Berlin 4: 203. 1803 – Type: India, Tamil Nadu, Madras in horto Andersoniano, 15 Oct 1799, *J.P. Rottler s.n.* (not traced).

Names validated by Willdenow

***Agyneia multilocularis*. —** Yao & Zhang (2010) selected "ETC 7864 K" as lectotype. I imagine that this refers to a collection under the East India Company Herbarium number 7864. As this includes more than one collection, none of which Willdenow can have seen in 1803 or earlier, I do not accept this typification and make a new one here.

Phyllanthus multilocularis (Roxb. ex Willd.) Müll.Arg. in Flora 48: 370. 1865 ≡ *Agyneia multilocularis* Roxb. ex Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 206. 1803 ('*Agyneja*') ≡ *Bradleia multilocularis* (Roxb. ex Willd.) Roxb., Hort. Bengal.: 69. 1814 ≡ *Glochidion multiloculare* (Roxb. ex Willd.) Voigt, Hort. Suburb. Calcutt.: 152. 1845 – **Lectotype (designated here):** India, *W. Roxburgh s.n.* (B-W barcode B -W 17938 -01 0 [image!]).

***Bryonia alceifolia*. —** A specimen in B-W has been chosen as lectotype for this name.

Coccinia grandis (L.) Voigt, Hort. Suburb. Calcutt.: 59. 1845 ≡ *Bryonia grandis* L., Mant. Pl.: 126. 1767 – Lectotype (designated by Nazimuddin & Naqvi in Nasir & Ali, Fl. Pakistan 154: 19. 1984): India, *Anon. s.n.*, Herb. Linnaeus No. 1153.2 (LINN [image!]).

= *Bryonia alceifolia* Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 223. 1803 ('*alceaefolia*') – Lectotype (designated by Holstein in PhytoKeys 54: 86. 2015): [India, Tamil Nadu], Tiruchinapally, Nov 1793, *J.G. Klein 177* (B-W barcode B -W 18065 -01 0 [image!]; isolectotype: K barcode K001129791 [image!]).

***Celosia patula*. —** Willdenow noted that Rottler's *Celosia glauca* represented a later homonym and proposed *Cyathula patula* as an alternative. However, Willdenow seems later to have decided that *Achyranthes sarmentosa* Vahl was the correct name for Rottler's plant as Rottler's specimens are filed under this name in B-W. Vahl stated that his species was from the West Indies, rather than the East Indies and Willdenow's material seems to be a mixture of sheets of an alternate-leaved plant and Rottler's opposite-leaved *Celosia glauca*. There are sheets bearing Rottler's name and the collecting locality and date as given in the protologue in Rottler's hand in B-W and LIV. The B-W specimen is sterile but the one in LIV is fertile and has been identified as *Psilotrichum elliotii*. I agree with this determination and as Willdenow's name is the earliest available for this species, I propose a new combination in *Psilotrichum* for it.

The species is widespread in East Africa, India and Sri Lanka (Townsend, 1985) but seems not to have any widely reported cultural, economic or scientific importance. I therefore think it would be difficult to get support for a proposal to conserve the name *Psilotrichum elliotii* and publish the new combination based on Willdenow's much older name.

As most of the type material was readily located, a more extensive synonymy is presented for this name, then the rest.

Psilotrichum patulum (Willd.) I.M.Turner, **comb. nov.** ≡ *Celosia patula* Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 198. 1803 – **Lectotype (designated here):** [India, Tamil Nadu], Mount, 7 Nov 1799, *J.P. Rottler s.n.* (LIV No. LIV1952.121.939(i) [image!]; probable isolectotypes: B-W barcode B -W 05012 -03 0 [image!], LIV Nos. LIV1952.121.939 [image!], LIV1952.121.939 (ii) [image!]).

= *Ptilotus ovatus* Moq. in Candolle, Prodr. 13(2): 281. 1849 ≡ *Psilotrichum calceolatum* Hook.f., Fl. Brit. India 4: 725. 1885, nom. superfl. & illeg. ≡ *Psilotrichum ovatum* (Moq.) Hauman in Bull. Jard. Bot. État Bruxelles 18: 11. 1946, nom. illeg., non Peter 1932 ≡ *Psilotrichum moquinianum* Abeyw. in Ceylon J. Sci., Biol. Sci. 2: 83. 1959 – Lectotype (designated by Townsend in Polhill, Fl. Trop. E. Africa, Amaranth.: 98. 1985): India, Madras, *R. Wight s.n.* (K barcode K001129815!).

= *Psilotrichum elliotii* Baker in Oliver, Fl. Trop. Afr. 6(1): 58. 1909 ('*elliottii*') – Lectotype (designated by Townsend in Dassanayake & Fosberg, Rev. Handb. Fl. Ceylon 1: 45. 1980): Uganda, east side of Lake Albert Edward, Ruwenzori Expedition 1893–1894, *G.F. Scott Elliot 8062* (K barcode K000243683!).

= *Psilotrichum mildbraedii* Gilg ex Schinz in Vierteljahrsschr. Naturf. Ges. Zürich 57: 553. 1912 – Lectotype (designated by Townsend in Polhill, Fl. Trop. E. Africa, Amaranth.: 98. 1985): Niavarongo, westlich vom Akanjaro-Einfluss, 5 Aug 1907, *G.W.J. Mildbraed 681* (B n.v.; isolectotype: Z barcode Z-000000322 [image!]).

= *Psilotrichum ovatum* Peter in Repert. Spec. Nov. Regni Veg. Beih. 40(2, Anh.): 28. 1932 ≡ *Psilotrichum peterianum* Suess. in Mitt. Bot. Staatssamml. München 4: 131. 1952, nom. superfl. & illeg. – Lectotype (designated by Townsend in Polhill, Fl. Trop. E. Africa, Amaranth.: 98. 1985): Tanzania, Mbula District, Bonga-Bereku, 13–14

Aug 1926, *A. Peter 44174* (B barcode B 10 0154190 [image!]).

= *Psilotrichum africanum* var. *pilosum* Seuss. in Kew Bull. 4: 478. 1950 – Holotype: Uganda, Masaka District, Kabula, Sep 1945, *J.W. Purseglove 1824* (EA n.v.; isotypes: K!, KAW barcode KAW000119 [image!]).

***Crotalaria foliosa*. —** A Klein specimen in B-W is here designated as lectotype for this name.

Crotalaria medicaginea Lam., Encycl. 2: 201. 1786 – **Lectotype** (first step designated by Ali in Biologia 12: 25. 1966; **second step designated here**): *Anon. s.n*. [?P. Sonnerat leg.] (P-LA barcode P00295938 [image!]).

= *Crotalaria foliosa* Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 217. 1803 – **Lectotype (designated here):** [India, Tamil Nadu], in itinere Velurensi collecta, s. dat., *J.G. Klein 37* (B-W barcode B -W 13277 -01 0 [image!]).

***Crotalaria hirta*. —** A specimen in B-W has been chosen as lectotype for this name.

Crotalaria hirta Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 217. 1803 – Lectotype (designated by Polhill, Crotalaria Africa & Madagascar: 371. 1982): India, *J.G. Klein 673* (B-W barcode B -W 13254 -01 0 [image!]).

***Crotalaria orixensis*. —** There are two sheets in the B-W folder for this name. Polhill was not specific to sheet in his typification. The two sheets may represent the same gathering, but they do not look very similar, so I select the one with the original label as the second-step lectotype.

Crotalaria orixensis Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 217. 1803 – **Lectotype** (first step designated by Polhill, Crotalaria Africa & Madagascar: 249. 1982; **second step designated here**): India, *J.G. Klein 957* (B-W barcode B -W 13264 -02 0 [image!]).

***Croton rhamnifolius*. —** In the Rottler paper, Willdenow proposed the alternative of *Croton rhamnifolius* for *Croton nervosus* Rottler. However, he seems to have changed his mind and soon after named it again as *Croton reticulatus*. As noted above under *Croton nervosus*, the folder for *Croton reticulatus* in the Willdenow Herbarium contained two sheets probably representing two gatherings. For the typification of *Croton reticulatus*, I choose the second sheet as lectotype, not being certain which gathering it represents.

Mallotus rhamnifolius (Willd.) Müll.Arg. in Linnaea 34: 196. 1865 ≡ *Croton rhamnifolius* Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 190. 1803 ('*rhamnifolium*') – **Lectotype (designated here):** [India, Tamil Nadu], Mawulibaram, 4 Oct 1799, *J.P. Rottler s.n*. (K barcode K000247001!; isolectotypes: B-W [either barcode B -W 17872 -01 0 [image!] or barcode B -W 17872 -02 0 [image!]], LIV No. LIV1952.121.3338 [image!]).

= *Croton reticulatus* Willd., Sp. Pl. 4(1): 545. 1805 – **Lectotype (designated here):** [India, Tamil Nadu], Mawulibaram, 4 Oct 1799, *J.P. Rottler s.n*. or India, *J.G. Klein s.n*. (B-W barcode B -W 17872 -02 0 [image!]).

***Euphorbia glaucescens*. —** Willdenow noted that the collection Rottler referred to *Euphorbia rosea* Retz. did not belong to that species and described it as *Euphorbia glaucescens*. The specimen designated as lectotype by Daniel represents the same species as *Euphorbia corrigioloides* Boiss. and as *Euphorbia glaucescens* is older, it is the correct name for the species.

Euphorbia glaucescens Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 183. 1803 – Lectotype (designated by Daniel in Taxon 40: 607. 1991): [India, Tamil Nadu], "hinter Siakhi" (fide protologue), Arasur, 25 Sep 1799, *J.P. Rottler s.n*. (B-W barcode B -W 09287 -01 0 [image!]).

= *Euphorbia corrigioloides* Boiss., Cent. Euphorb.: 11. 1860 – Type: India orientalis, *Heyne* (LE n.v.).

***Glycine aurea*. —** A specimen in B-W has been designated as lectotype for this name.

Rhynchosia aurea (Willd.) DC., Prodr. 2: 386. 1825 ≡ *Glycine aurea* Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 218. 1803 – Lectotype (designated by Turner in Taxon 70: 390. 2021): [India, Tamil Nadu], prope Pondichery, 1792, *J.G. Klein 30* (B-W barcode B -W 13467 -01 0 [image!]).

***Glycine rufescens*. —** A lectotype has been designated for this name.

Rhynchosia rufescens (Willd.) DC., Prodr. 2: 387. 1825 ≡ *Glycine rufescens* Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 222. 1803 – Lectotype (designated by Thuân in Aubréville & Leroy, Fl. Cambodge, Laos & Vietnam 17: 134. 1979): [India, Tamil Nadu], Mont. Velorens., 27 Nov 1792, *J.G. Klein 31* (B-W barcode B -W 13455 -01 0 [image!]).

***Glycine viscida*. —** This represents a new combination published by Willdenow.

Pseudarthria viscida (L.) Wight & Arn., Prodr. Fl. Ind. Orient. 1: 209. 1834 ≡ *Hedysarum viscidum* L., Sp. Pl. 2: 747. 1753 ≡ *Glycine viscida* (L.) Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 209. 1803 – Lectotype (designated by Rudd in Dassanayake & Clayton, Rev. Handb. Fl. Ceylon 10: 196. 1996): Herb. Hermann 1: 22, No. 295 (BM barcode BM000594453 [image!]).

***Grewia villosa*. —** A lectotype in B-W has been designated for this name.

Grewia villosa Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 205. 1803 – Lectotype (designated by Turner in Taxon 70: 392. 2021): [India, Tamil Nadu], in montib. Palmacottensib., 8 Nov 1795, *J.G. Klein 517* (B-W barcode B -W 10137 -01 0 [image!]; isolectotypes: K barcode K001129784!, LINN Herb. Smith No. 1423.14 [image!]).

***Hedyotis attenuata*. —** There is one sheet in B-W under this name. It bears two original tickets, apparently written by J.G. Klein, numbered 118 and 824 (labelled as "*Hedyotis paniculata*"), with the latter reporting the specimen as received from Heyne. It is not obvious which plant material belongs to which label, so I select a single plant on the sheet as lectotype. As noted above under *Oldenlandia pusilla* Rottler, the material on the sheet belongs in the genus *Kohautia*, not *Oldenlandia*. Material in K-W under number 865 includes Rottler specimens labelled "*Hedyotis paniculata*". These are what is generally called *Kohautia aspera* (B.Heyne ex Roth) Bremek. and match the material in B-W.

The species occurs widely in Africa and also Arabia and the Indian Subcontinent (Bremekamp, 1952). However, it seems to have no great economic, cultural or ecological significance. Internet searches for the name produce hundreds rather than thousands of results. I therefore do not find a strong case for proposing conservation of *Kohautia aspera* and make a new combination based on *Hedyotis attenuata* Willd.

Kohautia attenuata (Willd.) I.M.Turner, **comb. nov.** ≡ *Hedyotis attenuata* Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 216. 1803 ≡ *Oldenlandia attenuata* (Willd.) M.R.Almeida, Fl. Maharashtra 3A: 43. 2001 – **Lectotype (designated here):** *J.G. Klein 118* or *824* (B-W barcode B -W 02593 -01 0 [image!], restricting choice to the plant mounted on the far right).

= *Hedyotis aspera* B.Heyne ex Roth, Nov. Pl. Sp.: 94. 1821 ≡ *Kohautia aspera* (B.Heyne ex Roth) Bremek. in Verh. Kon. Ned. Akad. Wetensch., Afd. Natuurk., Sect. 2, 48(2): 113. 1952 – Neotype (designated by Turner in Taxon 70: 393. 2021): *B. Heyne s.n.* [EIC 865[.1]] (K-W barcode K001110087!).

***Ipomoea angularis*. —** A specimen in B-W is selected as lectotype for this name.

Ipomoea hederifolia L., Syst. Nat., ed. 10, 2: 925. 1759 – Lectotype (designated by O'Donell in Lilloa 29: 48. 1959): [illustration] "Ipomoea foliis cordatis" in Burman, Pl. Amer. [Plumier]: t. 93, fig. 2. 1765.

= *Ipomoea angularis* Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 197. 1803 – **Lectotype (designated here):** [India, Tamil Nadu], Marmelon, 28 Nov 1799, *J.P. Rottler s.n.* (B-W barcode B -W 03747 -01 0 [image!]).

***Lumnitzera*. —** Possibly the most important name published in the 1803 paper, commemorates the Hungarian botanist István Lumnitzer (1749–1806).

Lumnitzera Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 186. 1803 – Type: *Lumnitzera racemosa* Willd.

***Lumnitzera racemosa*. —** A lectotype from B-W has been designated for this name.

Lumnitzera racemosa Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 187 – Lectotype (designated by Wickens in Polhill, Fl. Trop. E. Africa, Combret.: 93. 1973): India, *J.G. Klein s.n.* (B-W barcode B -W 08141 -01 0 [image!]; isolectotypes: DNA barcode D0005316 [image!] (fragment), HAL barcode HAL0138532 [image!]).

***Panicum adpressum*. —** Willdenow seems to have renamed his *Panicum adpressum* as *Digitaria barbata* but without referring to the earlier name in publishing the later one.

Digitaria bicornis (Lam.) Roem. & Schult., Syst. Veg. 2: 470. 1817 ≡ *Paspalum bicorne* Lam., Tab. Encycl. 1: 176. 1791 – Holotype: *P. Sonnerat s.n.* (P-LA barcode P00563991 [image!]).

= *Panicum adpressum* Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 193. 1803, nom. illeg., non *P. appressum* Forssk. 1775 – **Lectotype (designated here):** [India, Tamil Nadu], Redhills near Madras, 25 Nov 1799, *J.P. Rottler s.n.* (B-W barcode B -W 01653 -01 0 [image!]).

= *Digitaria barbata* Willd., Enum Pl. 1: 91. 1809 – Lectotype (designated by Henrard, Monogr. Gen. Digitaria: 64. 1950): [India, Tamil Nadu], Redhills near Madras, 25 Nov 1799, *J.P. Rottler s.n.* (B-W barcode B -W 01653 -01 0 [image!]).

***Plectranthus menthoides*. —** The sheet in B-W that is annotated with Willdenow's name bears a label in Rottler's hand listing two gatherings. Therefore, only one piece of the material is here selected as lectotype to avoid the possibility of including more than one gathering in the type.

Ocimum filamentosum Forssk., Fl. Aegypt.-Arab.: 108. 1775 – Lectotype (designated by Paton & al. in Hiltunen & Holm, Basil Genus Ocimum: 30. 1999): Yemen, Mt Milhan, *P. Forsskål 324* (C barcode C10002651 [image!]).

= *Plectranthus menthoides* Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 181. 1803 – **Lectotype (designated here):** [India, Tamil Nadu] Arasur, 25 Sep 1799; or Mount near Madras, 7 Nov 1799, *J.P. Rottler s.n.* (B-W barcode B -W 11080 -01 0 [image!], restricting selection to the branched stem with inflorescences mounted on the right only).

***Poa cernua*. —** The material of *Poa cernua* Willd. is missing from B-W (Eckhardt & Hiepko, 1970). There is a specimen in HAL (HAL0106874) that came from Willdenow's herbarium, but it lacks any original labels.

Poa cernua Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 182. 1803 – Type: India, Tamil Nadu, Arasur, 25 Sep 1799, *J.P. Rottler s.n*. (not traced).

***Poa riparia*. —** A lectotype from B-W is selected here.

Eragrostis riparia (Willd.) Nees in Martius & al., Fl. Bras. Enum. Pl. 2: 512. 1829 ≡ *Poa riparia* Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 185. 1803 – **Lectotype (designated here):** [India, Tamil Nadu], Collaram river, 26 Sep 1799, *J.P. Rottler s.n*. (B-W barcode B -W 01940 -02 0 [image!]; possible isolectotype: HAL barcode HAL0133220 [image!]).

***Premna integrifolia*. —** A lectotype from B-W is selected here.

Premna serratifolia L., Mant. Pl.: 252. 1771 – Lectotype (designated by Munir in J. Adelaide Bot. Gard. 7: 13. 1984): *Anon. s.n*., Herb. Linnaeus No. 782.4 (LINN [image!]).
= *Premna integrifolia* Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 187. 1803 – **Lectotype (designated here):** India, 1797, *J.G. Klein s.n*. (B-W barcode B -W 11492 -01 0 [image!]; isolectotype: HAL barcode HAL0115103 [image!]).

***Tamarix indica*. —** A lectotype from B-W has been designated for this name.

Tamarix indica Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 214. 1803 – Lectotype (designated by Baum, Monogr. Rev. Gen. Tamarix: 60. 1966): India, 1799, *J.G. Klein s.n*. (B-W barcode B -W 06063 -01 0 [image!]).

***Tonsella prinoides*. —** A lectotype has been designated for this name.

Salacia chinensis L., Mant. Pl.: 293. 1771 – Lectotype (designated by Ding Hou in Blumea 12: 34. 1963): China, *Anon. s.n*., Herb. Linnaeus No. 1066.1 (LINN [image!]).
= *Tonsella prinoides* Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 184. 1803 ≡ *Salacia prinoides* (Willd.) DC., Prodr. 1: 571. 1824 – Lectotype (designated by Daniel in Taxon 40: 607. 1991): [India, Tamil Nadu], Pudur, 26 Sep 1799, *J.G. Klein s.n*. [?J.P. Rottler leg.] (B-W barcode B -W 00862 -01 0 [image!]).

***Vitex alata*. —** A lectotype from B-W is designated here.

Vitex altissima L.f., Suppl. Pl.: 294. 1781 – Lectotype (designated by Moldenke & Moldenke in Dassanayake & Fosberg, Rev. Handb. Fl. Ceylon 4: 354. 1983): Zeylonae, 1777, *J.G. Koenig s.n*., Herb. Linnaeus No. 901.18 (LINN [image!]).
= *Vitex alata* Willd. in Neue Schriften Ges. Naturf. Freunde Berlin 4: 203. 1803 – **Lectotype (designated here):** *W. Roxburgh s.n*. (B-W barcode B -W 11702 -01 0 [image!]).

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