

Typification of thirty-five names in Rubiaceae of the Southern Western Ghats, India

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ABSTRACT. Lectotypes are selected for 29 names in Indian Rubiaceae. Second step lectotypes are selected for an additional six names to avoid any ambiguities in the application of these names. Detailed nomenclatural notes for selected type specimens are also provided.

Keywords. Distribution, endemic, lectotype, protologue

Introduction

Found throughout the world, the Rubiaceae is the fourth largest family of angiosperms, with around 605 genera (POWO, 2021) and 13,000 species (Bremer, 2009). It is easily identified in the field by its simple, opposite or whorled, entire leaves, interpetiolar stipules, and gamopetalous flowers with an inferior ovary (Davis et al., 2009). In India, it is represented by 637 taxa (572 species, 14 subspecies, and 51 varieties) (Deb, 2001; Gangopadhyay et al., 2020) of which 130 species are endemic to the Southern Western Ghats (Nayar et al., 2014; Singh et al., 2015). During taxonomic studies on the Rubiaceae in South India, the authors found that 29 names had not yet been typified and a further six had only been partially typified. Therefore, these 35 names are here lectotypified, including six in a second step lectotypification.

Materials and methods

The protologue of each name and the following publications were screened: Brown (1829), Don (1834), Wight & Arnott (1834), Wight (1846a, 1846b), Beddome (1864, 1865, 1868–1874, 1869–1874), Hooker (1880), Gage (1906) and Gamble (1919, 1920a, 1920b, 1921). In addition, relevant generic revisions in India were consulted: Deb & Gangopadhyay (1989a, 1989b, 1991), Deb & Mondal (2001), Rout & Deb (2002) and Dutta & Deb (2004). Online herbaria were searched for the corresponding names, and curators and collections managers of the following herbaria were consulted: BM, BR,

C, CAL, E, F, GH, K, L, M, MH and NY. Lectotypes are selected after an analysis of protologues, syntypes and in accordance with Art. 9.3, 9.12 and Rec. 9A of the ICN (Turland et al., 2018).

In the list below, the names are arranged alphabetically by basionym. The current name is given in bold and synonyms in italics. All specimens cited have been seen; those that were seen only as digital images are marked with an asterisk (*).

Typifications

1. ***Acranthera anamallica*** Bedd., Icon. Pl. Ind. Or. 1: 5 (1869). – TYPE: India, Anamallays [Anaimalai], 4000 ft [1219 m], s.d., *Beddome s.n.* (lectotype MH [MH00122861], designated here; isolectotypes BM [BM000945217*], MH [MH00122862]).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Remaining syntypes. INDIA. Anamallays [Anaimalai], 4–5000 ft [up to 1524 m], s.d., *Beddome s.n.* [95] (K [K000030955*]); *ibidem*, 3–4500 ft [up to 1372 m], s.d., *Beddome 3750* (BM [BM000945216*]); *ibidem*, 4000 ft [1219 m], s.d., *Beddome s.n.* (MH [MH00122866]); *ibidem*, s.d., *Beddome s.n.* (MH [MH00122860]).

Notes. When Beddome described *Acranthera anamallica*, he mentioned only the locality in the protologue, but did not mention collection dates and numbers. We have traced seven specimens from different herbaria, four at MH [MH00122860, MH00122861, MH00122862, MH00122866], two at BM [BM000945216, BM000945217] and one at K [K000030955]. Among these, the MH specimen [MH00122861] is the best-preserved and most complete and is designated here as the lectotype.

Of the four specimens collected by Beddome from Anamallays at MH, only one of them [MH00122866] has a date, 1865, on the herbarium label. The labels pasted on these sheets are standard Madras Museum Herbarium labels and the information on the labels is not in Beddome's handwriting. It is possible that the date given on these sheets is not the date of collection of specimens, but rather the date of inclusion of these specimens in Madras Museum Herbarium (MH). Likewise, it is possible that dates on Beddome specimens at K are dates of receipt of specimens at K. In MH, most Beddome specimens have the Madras Museum Herbarium labels, with fewer having the original Beddome labels in his handwriting. The specimens with only the Madras Museum Herbarium labels are not listed here as isolectotypes due to uncertainty as to whether they are duplicates or not.

2. ***Acranthera grandiflora*** Bedd., Icon. Pl. Ind. Or. 1: 5 (1869). – TYPE: India, Tinnevely hills [Tirunelveli], South of Courtallum [Courtallam], s.d., *Beddome s.n.* (lectotype MH [MH00122847], designated here).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Remaining syntypes. INDIA. Paupanasam hills [Papanasam hills], s.d., *Beddome s.n.* (MH [MH00002182, MH00122846]); Tinnevelly [Tirunelveli], s.d., *Beddome s.n.* (MH [MH00002183]); Tinnevelly hills [Tirunelveli], s.d., *Beddome 3747* (BM [BM000945214*]); ibidem, s.d., *Beddome 3748* (BM [BM000945215*]); Travancore-Tinnevelly [Tirunelveli], 3–5000 ft [up to 1372 m], s.d., *Beddome s.n.* [62] (K [K000030956*]).

Notes. Beddome described *Acranthera grandiflora* from material from ‘Tinnevelly Mountains, south of Courttalam in moist forests 2000 to 3000 feet’. We have traced seven herbarium specimens from three different herbaria, four at MH [MH00002182, MH00002183, MH00122846, MH00122847], two at BM [BM000945214, BM000945215] and one at K [K000030956]. The MH specimen [MH00122847] is designated here as the lectotype.

3. *Griffithia speciosa* Bedd., Icon. Pl. Ind. Or. 1: 8 (1869). – *Randia rugulosa* Thwaites var. *speciosa* (Bedd.) Hook.f., Fl. Brit. India 3: 113 (1880). – *Aidia rugulosa* (Thwaites) Swamin. var. *speciosa* (Bedd.) Swamin., Biol. Mem. 2(1–2): 67 (1977). – ***Pseudaidia speciosa*** (Bedd.) Tirveng., Bull. Mus. Natl. Hist. Nat., B, Adansonia Ser. 4, 8(3): 287 (1987). – TYPE: India, Nilgiris, Sisparah Ghat, s.d., *Beddome s.n.* (lectotype MH [MH00165031], designated here).

Distribution. India (Karnataka, Kerala, Maharashtra and Tamil Nadu). Endemic to the Western Ghats.

Remaining syntypes. INDIA. Coorg, s.d., *Beddome s.n.* (MH [MH00123622]); Waynad, s.d., *Beddome s.n.* (MH [MH00123620]).

Notes. In the protologue of *Griffithia speciosa*, Beddome mentioned ‘Western slopes of the Neilgherries (up to 4,500 feet); Coorg, South Canara, Travancore, &c’. Hooker (1880) transferred *Griffithia speciosa* to the genus *Randia* L. and reduced the species to a variety as *Randia rugulosa* var. *speciosa* (Bedd.) Hook.f. Sharma et al. (1977) transferred *Randia rugulosa* var. *speciosa* to the genus *Aidia* Lour. as *Aidia rugulosa* (Thwaites) Swamin. var. *speciosa* (Bedd.) Swamin. Later, Tirvengadam & Sastre (1986) transferred *Griffithia speciosa* to the new genus *Pseudaidia* Tirveng. as *Pseudaidia speciosa* (Bedd.) Tirveng. Tirvengadam & Sastre (1986) designated a specimen at MH as the lectotype giving the specimen details as ‘Nilgiri, Sisparah Ghat, s.d., Beddome s.n. (Acc. No. 25312)’. Our efforts to locate the lectotype sheet (Acc. No. 25312) were futile and finally the curator at MH confirmed the specimen to be missing. Consequently, a duplicate sheet at MH (Acc. No. 25313) is chosen here as the lectotype.

The reported occurrence of the species from Sri Lanka by Senaratna (2001) is doubtful because it was not reported by earlier workers on the Rubiaceae of Ceylon (Bremer, 1987; Fosberg, 1987; Sohmer, 1987; Ridsdale, 1998).

4. *Grumilea subintegra* Wight & Arn., Prodr. Fl. Ind. Orient. 1: 432 (1834). – ***Psychotria subintegra*** (Wight & Arn.) Hook.f., Fl. Brit. India 3: 162 (1880). – TYPE: India, s.l., s.d., *R. Wight 1346* (lectotype MH [MH00007026], first step designated by Deb & Gangopadhyay (1989b), second step designated here; isolectotypes E [E00174831*, E00174832*], MH [MH00002207]).

Distribution. India (Karnataka, Kerala and Tamil Nadu). Endemic to the Western Ghats.

Notes. Wight & Arnott (1834), when describing *Grumilea subintegra*, mentioned the gathering ‘Wight Cat. No. 1346’ in the protologue. Hooker (1880) transferred *Grumilea subintegra* into the genus *Psychotria* L. as *Psychotria subintegra* (Wight & Arn.) Hook.f. Two duplicates of *Wight 1346* are found at MH [MH00002207, MH00007026] and two at E [E00174831, E00174832]. Deb & Gangopadhyay (1989b) unintentionally lectotypified the name with MH material but as they did not distinguish between the two sheets, we designate the specimen [MH00007026] as a second step lectotype because it matches well with the protologue.

5. ***Hedyotis articularis*** R.Br. ex Wight & Arn., Prodr. Fl. Ind. Orient. 1: 407 (1834). – TYPE: India, Neelgherries [Nilgiris], s.d., *R. Wight 1291* (lectotype E [E00174755*], designated here; isolectotype K [K000031067*]).

Distribution. India (Karnataka, Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Remaining syntypes. INDIA. Nilghiry [Nilgiris], s.d., *Noton s.n.* [EIC 854] (K [K000031065*, K001110070*]).

Notes. Brown (1829) proposed *Hedyotis articularis* in Wallich (1828–1849) as ‘854, *H. articularis* Brown, Nilghiry [Nilgiri], E. Noton’ and separately as ‘854 B Spermac., Herb. Wight, Nilghiry a dom [Nilgiri dam], Bonner lecta’ but the name was not validly published. Wight & Arnott (1834) subsequently validated the name and indicated ‘Brown in Wall.! L. n. 854; Wight Cat. N. 1291. —Neelgherries’. Dutta & Deb (2004) did not lectotypify the name but gave the details of both syntypes in their revision. We have traced four specimens of the two syntype collections in two herbaria, three at K [K000031065, K000031067, K001110070] and one at E [E00174755]. Of these, the E specimen [E00174755] is designated here as the lectotype.

6. ***Hedyotis beddomei*** Hook.f., Fl. Brit. India 3: 52 (1880). – *Hedyotis capitata* Bedd., Icon. Pl. Ind. Or. 44, t. 191 (1873), nom. illeg. – TYPE: India, Palghat hills, 6500 ft [1981 m], s.d., *Beddome s.n.* (lectotype MH [MH00002167], designated here).

Distribution. India (Kerala). Endemic to Kerala.

Remaining syntypes. INDIA. Palghat, s.d., *Beddome s.n.* (MH [MH00002168]).

Notes. *Hedyotis beddomei* was originally described by Beddome as *Hedyotis capitata* from his collections from Palghat at an elevation of 6500 ft. Later Hooker (1880), in his *Flora of British India*, proposed the new name *Hedyotis beddomei* because *Hedyotis capitata* was preoccupied by *H. capitata* Lam. We have traced two herbarium specimens from MH [MH00002167, MH00002168]. Of these, the best one [MH00002167], is designated here as the lectotype, because it agrees well with the protologue.

7. *Hedyotis hirsutissima* Bedd., Madras J. Lit. Sci. Ser. III, 1: 49 (1864). – TYPE: India, Nilgiris, 7000 ft [2134 m], s.d., *Beddome s.n.* (lectotype MH [MH00002177], designated here; isolectotype K [K000031037*]).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Remaining syntypes. INDIA. Nilgiris, Kondahs, s.d., *Beddome s.n.* (BM [BM000839330*]); Nilgiris, s.d., *Beddome s.n.* (MH [MH00002178]); Nilgiris, Koondah mountains, s.d., *Beddome s.n.* (MH [MH00120210]).

Notes. Beddome (1864) mentioned ‘Kundas, Nilagiri 7000 feet elevation in moist woods’ in the protologue of *Hedyotis hirsutissima*. We have traced five herbarium specimens from different herbaria, three at MH [MH00002177, MH00002178, MH00120210] and one each at BM [BM000839330] and K [K000031037]. Of these, the specimen [MH00002177] matches well with the protologue and is designated here as the lectotype.

8. *Hedyotis lentiginosa* Bedd., Icon. Pl. Ind. Or. 1: 2, t. 6 (1868). – TYPE: India, Quilon [Kollam], banks of back waters, s.d., *Beddome s.n.* (lectotype MH [MH00119531], designated here). = *Hedyotis pruinosa* Wight & Arn., Prodr. Fl. Ind. Orient. 1: 408 (1834).

Distribution. India (Kerala and Tamil Nadu) and Myanmar.

Remaining syntypes. INDIA. Quilon, near plains, s.d., *Beddome s.n.* (MH [MH00119532]); Travancore [Thiruvananthapuram], near Mundykaim [Mundakayam], s.d., *Beddome 3667* (BM [BM000945165*]); ibidem, s.d., *Beddome 3668* (BM [BM000945166*]).

Notes. Beddome (1868–1874) did not cite any specimens when describing *Hedyotis lentiginosa* but mentioned only the locality ‘Back waters about Quilon and Trevandrum’. We have traced four Beddome collections from Quilon and Travancore

(one specimen of each) in two herbaria, of which two of the collections are mounted on a single sheet [BM000945165, BM000945166]. The other two collections are in MH [MH00119531, MH00119532]. Of these, the specimen [MH00119531] is chosen here as the lectotype as it agrees well with the protologue.

9. *Hedyotis pruinosa* Wight & Arn., Prodr. Fl. Ind. Orient. 1: 408 (1834). – TYPE: India, Travancore [Thiruvananthapuram], s.d., *R. Wight 1293* (lectotype E [E00174756*], designated here; isolectotypes E [E00174757*, E00174758*, E00174759*, E00174760*], K [K000031070*]).

Distribution. India (Kerala and Tamil Nadu) and Myanmar.

Remaining syntypes. INDIA. Travancore, s.d., Herb. Madr., *Unknown collector* [EIC 6202] (K [K000031071*, K001123282*, K001123283*]).

Notes. *Hedyotis pruinosa* was originally described by Wight & Arnott (1834) from Travancore. ‘Wight Cat. n. 1293, b.—*H. corymbosa*, Wall.! L. n. 6202, b.’ was cited in the protologue. The Dutta & Deb (2004) type designation is not valid as the term ‘designated here’ or an equivalent was not used as required after 1 January 2001 (Turland et al., 2018, Art. 7.11). We have traced nine specimens in different herbaria [E00174756, E00174757, E00174758, E00174759, E00174760, K000031070, K000031071, K001123282, K001123283]. Among these, the sheet [E00174756] matches well with the protologue, and hence it is designated here as the lectotype.

10. *Hedyotis purpurascens* Hook.f., Fl. Brit. India 3: 50 (1880). – *Hedyotis purpurea* Bedd., Icon. Pl. Ind. Or. 1: 1 (1868), nom. illeg. – TYPE: India, Calcad hills [Kalakad], Tinnevely, s.d., *R.H. Beddome s.n.* (lectotype MH [MH00002173], designated here).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Remaining syntypes. INDIA. Calcad hills [Kalakad], Tinnevely [Tirunelveli], s.d., *Beddome s.n.* (MH [MH00002174]); Hills South of Courtallum [Courtallam], s.d., *Beddome s.n.* (MH [MH00002175]).

Notes. Beddome (1868–1874) originally described *Hedyotis purpurea* from his collections from Calcad and Tinnevely Mountains. Later, Hooker (1880) proposed the new name *Hedyotis purpurascens* for *H. purpurea*, because the name was preoccupied by *H. purpurea* (L.) Torr. & A.Gray. We have traced three specimens at MH [MH00002173, MH00002174, MH00002175]. Of these, the best one [MH00002173] is designated here as the lectotype because it agrees well with the protologue.

11. *Hedyotis stylosa* R.Br. ex Wight & Arn., Prodr. Fl. Ind. Orient. 1: 407 (1834). – TYPE: India, Nilghiry [Nilgiris], s.d., *E. Noton s.n.* [EIC 853] (lectotype K [K001110068*], first step designated by Deb & Dutta (1985), second step designated here; isolectotypes K [K000031073*, K001110069*]). = *Hedyotis leschenaultiana* DC., Prodr. 4: 422 (1830).

Distribution. India (Karnataka, Kerala, Maharashtra and Tamil Nadu). Endemic to the Western Ghats.

Remaining syntypes. INDIA. Neelghery [Nilgiris], s.d., *Wight 1290* (E [E00174751*, E00174752*, E00174753*, E00174754*, E00438140*], K [K000031074*]).

Notes. Brown (1829) proposed *Hedyotis stylosa* in Wallich (1828–1849) as ‘853, *H. stylosa* R.Br., Nilghiry [Nilgiri], E. Noton’ and again as ‘853 B Spermac., Herb. Wight, Nilghiry a dom [Nilgiri dam], Bonner lecta’ but the name was not validly published. Wight & Arnott (1834) subsequently validated the name, citing ‘Brown in Wall! L. n. 853; Wight Cat. n. 1290.—*H. leschenaultii*, a, DC. ? prod. 4. p. 422. Neelgherries’. Later, Deb & Dutta (1985) gave the type details as ‘Nilgiri, E. Noton s.n. ex Wallich, EIC 853 (K-W photo. CAL!)’. We have traced three specimens of *E. Noton s.n.* [EIC 853] at K [K000031073, K001110068, K001110069], none of which has been distinguished as the lectotype. We therefore narrow down the designation here by selecting the specimen [K001110068] as the lectotype in a second step since it agrees well with the protologue.

12. *Hedyotis swertioides* Hook.f., Fl. Brit. India 3: 51 (1880). – TYPE: India, Pulney Mountains [Palani Mountains], September 1836, *R. Wight 1359* (lectotype K [K000031042*], designated here; isolectotypes C [C10018223*], K [K000031043*, K000031044*], L [L0000456*]).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Notes. Hooker (1880) described *Hedyotis swertioides* from specimens collected from Tirunelveli; Pulney Mountains by Wight (Cat. no. 1359). We have traced five herbarium specimens from different herbaria, three at K [K000031042, K000031043, K000031044], one at L [L0000456] and one at C [C10018223]. We select the K specimen [K000031042] as the lectotype because it matches well with the protologue. The collection number *Wight 359* in the protologue is a typographical error for *Wight 1359*.

13. *Hedyotis travancorica* Bedd., Icon. Pl. Ind. Or. 1: 2 (1868). – TYPE: India, Travancore hills, 3–4000 ft, s.d., *Beddome s.n.* (lectotype MH [MH00002151], designated here).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Remaining syntypes. INDIA. Travancore, 4000 ft [1219 m], s.d., *Beddome s.n.* (K [K000031046*]); Tinnevely hills [Tirunelveli], s.d., *Beddome 3694* (BM [BM000839375*]); *ibidem*, s.d., *Beddome s.n.* (MH [MH00120064]).

Notes. In the protologue of *Hedyotis travancorica*, Beddome (1868–1874) mentioned ‘Travancore and Tinnevely mountains 3000 to 4000 feet’. We have traced four specimens in three herbaria, two at MH [MH00002151, MH00120064], one at K [K000031046] and one at BM [BM000839375], which can be considered as syntypes (Turland et al., 2018, Art. 40, Note 1). Among these, the specimen [MH00002151] is the best-preserved and most complete and is designated here as the lectotype.

14. *Hedyotis verticillaris* Wall. ex Wight & Arn., Prodr. Fl. Ind. Orient. 1: 409 (1834). – TYPE: India, Nilghiry [Nilgiri], s.d., *R. Wight 1367* (lectotype K [K000760571*], designated here; islectotype GH [GH00097092*]).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Remaining syntype. INDIA. s.l., s.d., *Unknown collector s.n.* [(Herb. Wight) EIC 6188] (K [K001123256*]).

Notes. Wight & Arnott (1834) cited the specimens ‘Wall.! L. n. 6188’ and ‘Wight Cat. n. 1367’ in the protologue. From these two collections, we have traced three specimens in two herbaria, two at K [K000760571, K001123256] and one at GH [GH00097092]. Of these, the specimen [K000760571] is the best-preserved and most complete and is designated here as the lectotype.

15. *Hedyotis viscida* Bedd., Icon. Pl. Ind. Or. 1: 1 (1868). – TYPE: India, Tinnevely hills [Tirunelveli], s.d., *Beddome s.n.* [49] (lectotype K [K000031069*], designated here).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Remaining syntypes. INDIA. Tinnevely hills [Tirunelveli], s.d., *Beddome s.n.* (MH [MH00119872]); Tinnevely hills [Tirunelveli], South of Courtallum [Courtallam], s.d., *Beddome s.n.* (MH [MH00002153]); Tinnevely hills [Tirunelveli], s.d., *Beddome 3707* (BM [BM000945162*]).

Notes. Beddome (1868–1874) described *Hedyotis viscida* from his collections from Tinnevely Mountains, 3000 ft. We have traced four specimens in three herbaria, two at MH [MH00002153, MH00119872] and one each at K [K000031069] and BM [BM000945162]. Of these, the K specimen [K000031069] is designated here as the lectotype.

16. ***Knoxia wightiana*** Wall. ex Wight & Arn., Prodr. Fl. Ind. Orient. 1: 440 (1834). – TYPE: India, Courtallum [Courtallam], s.d., *R. Wight 1365* (lectotype E [E00081264*], first step designated by Bhattacharjee & Deb (1985), second step designated here; isolectotypes E [E00081265*], K [K000031545*, K000031546*]).

Distribution. India (Andhra Pradesh, Karnataka, Kerala and Tamil Nadu). Endemic to Southern India.

Remaining syntypes. INDIA. Courtallum [Courtallam], s.d., *Unknown collector s.n.* [(Herb. Wight) EIC 6184] (K [K000031547*, K001123249*]).

Notes. Wallich (1828–1849) listed ‘*Knoxia wightiana*’ but the name is invalid since he did not provide a diagnosis or description. Later, Wight & Arnott (1834) validated the name, citing ‘Wall.! L. n. 6184; Wight! cat. n. 1365’. Bhattacharjee & Deb (1985) gave the type details as Wight cat. n. 1365 at E. Since there are two specimens at E and neither is distinguished as the lectotype, we select the specimen [E00081264] as the lectotype in a second step since it agrees well with the protologue. Two isolectotypes were traced at K [K000031545, K000031546] as well as two remaining syntypes [K000031547, K001123249].

17. ***Lasianthus blumeanus*** Wight, Calcutta J. Nat. Hist. 5: 507 (1846). – TYPE: India, Courtallum [Courtallam], August 1835, *R. Wight 1404* (lectotype K [K000031605*], designated here; isolectotypes CAL [CAL0000016457], E [E00174032*], K [K000031603*, K000031604*]), MH [MH00006970]).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Notes. Wight (1846a) described *Lasianthus blumeanus* from specimens collected from Courtallam. We have traced six duplicates of *Wight 1404* from four herbaria, three at K [K000031603, K000031604, K000031605], one at E [E00174032], one at MH [MH00006970] and one at CAL [CAL0000016457]. We select the K specimen [K000031605] as the lectotype because it matches well with the protologue.

18. ***Lasianthus capitulatus*** Wight, Calcutta J. Nat. Hist. 5: 511 (1846). – TYPE: India, Sisparah, s.d., *R. Wight s.n.* (lectotype K [K000031639*], first step designated by Deb & Gangopadhyay (1989a), second step designated here; isolectotype K [K000031640*]).

Distribution. India (Karnataka, Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Remaining syntype. INDIA. s.l., s.d., *Wight 1405* (CAL [CAL0000016559]).

Notes. Wight (1846a) described *Lasianthus capitulatus* from specimens collected from Sisparah, Nilgheries [Nilgiris]. We have traced three herbarium specimens from two herbaria, two at K [K000031639, K000031640] and one at CAL [CAL0000016559]. Deb & Gangopadhyay (1989a) indicated the type as ‘Nilgiris, Sispara, s.d., Wight s.n.’ at K, a statement which has to be considered as an inadvertent lectotypification. Since there are two specimens at K and neither is distinguished as the lectotype, we select the specimen [K000031639] as the lectotype in a second step since it agrees well with the protologue.

19. *Lasianthus cinereus* Gamble, Bull. Misc. Inform. Kew 1920(7): 249 (1920). – TYPE: India, Tinnevely [Tirunelveli], Kalivayalpil, 31 May 1901, *C.A. Barber 3014* (lectotype K [K000031631*], designated here; isolectotypes CAL [CAL0000016565], MH [MH00002218, MH00002219, MH00002220, MH00002221]).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Remaining syntypes. INDIA. Tinnevely [Tirunelveli], Kannikatti, 9 June 1899, *C.A. Barber 454* (MH [MH00002222, MH00002223]); Travancore boundary near Naterikal, Tinnevely [Tirunelveli], 4 March 1917, *C. Rangachari 14501* ([MH00002224, MH00002225, MH00002226, MH00002227]).

Notes. In the protologue of *Lasianthus cinereus*, Gamble (1920b) cited ‘Barber 3014 & 454; Rangachari 14501’. Later, Deb & Gangopadhyay (1989a) transferred *Lasianthus cinereus* to the genus *Litosanthes* Blume as *Litosanthes cinereus* (Gamble) Deb & M. Gangop. and cited the type information as ‘C.A. Barber 3014 at K, CAL; Rangachari 1450 [14501] at MH’. This, however, is not an effective typification because a lectotype must be a single specimen or illustration. We found six duplicates of Barber 3014 from three herbaria, one at K [K000031631], one at CAL [CAL0000016565] and four at MH [MH00002218, MH00002219, MH00002220, MH00002221]. Among these, the K specimen [K000031631] has a dissected small branch of flowers, a stipule pasted on the sheet, and a line drawing on the sheet by Gamble. Hence it is designated here as the lectotype.

20. *Lasianthus foetens* Wight, Calcutta J. Nat. Hist. 4: 517 (1846). – *Saprosma foetens* (Wight) K. Schum., Nat. Pflanzenfam. 4(4): 122 (1891). – TYPE: India, Nilgiri, Avalanche, s.d. *R. Wight s.n.* (lectotype K [K000761920*], designated here).

Distribution. India (Karnataka, Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Remaining syntype. INDIA. Tirunelveli, Shevagherry hills [Sivagiri hills], August 1836, *Wight s.n.* (K [K000761919*]).

Notes. Wight (1846a) described *Lasianthus foetens* from specimens collected from Neilgherries [Nilgiris] and Shevagherry [Sivagiri]. During a revision of Indian *Saprosma*, Gangopadhyay (1991) did not typify the name. We have traced two herbarium sheets at K [K000761919, K000761920], each belonging to a different gathering. Of these, the better one [K000761920] is designated here as the lectotype as it agrees well with the protologue.

21. *Lasianthus rostratus* Wight, Calcutta J. Nat. Hist. 5: 510 (1846). – TYPE: India, Shevagherry hills [Sivagiri hills], August 1836, *R. Wight s.n.* (lectotype K [K000031611*], designated here; isolectotype K [K000031612*]).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Notes. Wight (1846a) described *Lasianthus rostratus* from specimens collected from the Shevagherry hills [Sivagiri hills]. We have traced two herbarium sheets at K [K000031611, K000031612]. Of these, the best-preserved specimen [K000031611] is selected here as the lectotype.

22. *Mussaenda tomentosa* Wall. ex G.Don, Gen. Hist. 3: 491 (1834). – TYPE: India, Gingee hills, 29 September 1826, *Unknown collector s.n.* [(Herb. Wight) EIC 6265] (lectotype K [K001123466*], designated here; isolectotypes BR [BR0000005587261*], E [E00174726*, E00174727*, E00174728*, E00174729*, E00174730*], K [K000031983*, K000031984*, K000031985*]).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Notes. Nathaniel Wallich (1828–1849) listed ‘*Mussaenda tomentosa*’ as a new species but the name is invalid since he did not provide a diagnosis or description. Later, Don (1834) validated the name and cited ‘Wall. cat. no. 6265’. We have traced 10 specimens in three different herbaria, five at E [E00174726, E00174727, E00174728, E00174729, E00174730], four at K [K000031983, K000031984, K000031985, K001123466] and one at BR [BR0000005587261]. Of these, the best one [K001123466], is designated here as the lectotype.

23. *Oldenlandia barberi* Gamble, Bull. Misc. Inform. Kew 1920(2): 68 (1920). – *Hedyotis barberi* (Gamble) A.N.Henry & Subr., Proc. Indian Acad. Sci., B 76(1): 29 (1972). – TYPE: India, Tinnevely [Tirunelveli], Agastiyamalai, 22 May 1901, *C.A. Barber 2926* (lectotype K [K000031047*], designated here; isolectotypes CAL [CAL0000010848], MH [MH00002149, MH00002150]).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Notes. Gamble (1920a) indicated in the protologue of *Oldenlandia barberi* ‘Agastiamalai peak, on the boundary between Travancore and Tinnevely, at about 1500 m, May 1901, Barber 2926’. Four sheets of *Barber 2926* have been traced, two at MH [MH00002149, MH00002150] and one each at K [K000031047] and CAL [CAL0000010848]. Of these, the K specimen [K000031047] is selected here as the lectotype because it has dissected flower parts and a line drawing on the sheet by the author.

24. *Oldenlandia bourdillonii* Gamble, Bull. Misc. Inform. Kew 1919(10): 404 (1919). – *Hedyotis bourdillonii* (Gamble) Rao & Hemadri ex N.C.Nair et al., Bull. Bot. Surv. India 22: 205 (1982). – TYPE: India, Travancore, 2000–4000 ft [610–1219 m], August 1887, T.F. Bourdillon 111 (lectotype K [K000031072*], designated here; isolectotype MH [MH00002169]).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Notes. In the protologue of *Oldenlandia bourdillonii*, Gamble (1919) cited ‘Travancore, 610–1200 m, August 1887, Bourdillon 111’. We have traced two herbarium sheets of *Bourdillon 111* from two herbaria, one at K [K000031072] and one at MH [MH00002169]. Among these, the specimen [K000031072] matches well with the protologue and has dissected flowers on a small branch, a stipule pasted on the sheet, and a line drawing on the sheet by Gamble. Hence it is designated here as the lectotype.

25. *Oldenlandia purpurascens* (Hook.f.) Kuntze var. *pallida* Gamble, Fl. Madras 2: 597 (1921). – TYPE: India, Tinnevely [Tirunelveli], Shevagherry hills [Sivagiri hills], August 1836, R. Wight s.n. (lectotype K [K000760289*], designated here; isolectotypes K [K000031077*], MH [MH00002164]). = *Hedyotis purpurascens* Hook.f., Fl. Brit. India 3: 50 (1880).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Notes. In the protologue of *Oldenlandia purpurascens* var. *pallida*, Gamble (1921) provided a note after the morphological description: ‘Sivagiri hills of Tinnevely (Wight)’. We traced two specimens at K [K000031077, K000760289] and one at MH [MH00002164] and all match with the description. Furthermore, all three sheets also carry the annotation ‘Shevagherry hills, August 1836’ and ‘Wight’ without number. Among the three sheets, [K000760289] has dissected flower parts and a drawing pasted on the sheet by Gamble. Hence it is designated here as the lectotype.

26. *Ophiorrhiza barberi* Gamble, Bull. Misc. Inform. Kew 1919(10): 406 (1919). – TYPE: India, Anamalais [Anaimalai], Paralai, 15 October 1901, C.A. Barber 3793

(lectotype K [K000031229*], designated here; isolectotypes MH [MH00002180, MH00002181]).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Notes. Gamble (1919) described *Ophiorrhiza barberi* from specimens collected from Anamalais hills, Barber 3793, and Travancore hills, K. Venkob Rao 3143. The type designation by Deb & Mondal (2001) is not valid as ‘designated here’ or an equivalent was not used as required after 1 January 2001 (Turland et al., 2018, Art. 7.11). We have traced three specimens of Barber 3793 from two herbaria, two at MH [MH00002180, MH00002181] and one at K [K000031229]. Deb & Mondal (2001) selected the specimen at MH as the lectotype but there are two specimens at MH without Gamble’s annotation and it cannot be ascertained which one of the two specimens was intended for lectotypification. Hence we designate the K specimen [K000031229] as the lectotype because it has dissected flower parts and a line drawing on the sheet by Gamble.

27. *Ophiorrhiza brunonis* Wight & Arn., Prodr. Fl. Ind. Orient. 1: 404 (1834). – TYPE: India, s.l., s.d., R. Wight 1288 (lectotype K [K000031153*], designated here; isolectotype NY [NY00132369*]).

Distribution. India (Karnataka, Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Notes. In the protologue of *Ophiorrhiza brunonis*, Wight & Arnott (1834), cited ‘Wight cat. no. 1288’. We have traced two specimens from two herbaria, one each at K [K000031153] and NY [NY00132369]. Of these, the specimen [K000031153] is the best-preserved and most complete and is designated here as the lectotype.

28. *Ophiorrhiza brunonis* Wight & Arn. var. *johnsonii* Hook.f., Fl. Brit. India 3: 80 (1880). – TYPE: India, Cochin, s.d., Johnson s.n. (lectotype K [K000031151*], designated here; isolectotype K [K000031150*]). = *Ophiorrhiza brunonis* Wight & Arn., Prodr. Fl. Ind. Orient. 1: 404 (1834).

Distribution. India (Karnataka, Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Notes. Hooker (1880) described *Ophiorrhiza brunonis* var. *johnsonii* from specimens collected from Cochin by Johnson. We were able to trace two herbarium sheets collected by Johnson at K [K000031150, K000031151]. We select the specimen [K000031151] as the lectotype because it is the best-preserved and most complete and matches well with the protologue.

29. *Ophiorrhiza grandiflora* Wight, Icon. Pl. Ind. Orient. 3(4): 4, t. 1069 (1846). – TYPE: India, Shevagherry [Sivagiri], August 1836, R. *Wight 1347* (lectotype K [K000031172*], designated here; isolectotypes CAL [CAL0000010930], K [K000031170*, K000031171*], L [L0281126*]).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Notes. In the protologue of *Ophiorrhiza grandiflora*, Wight (1846b) mentions this species occurs in the Shevagherry mountains and implies it was seen in August 1836 together with *O. roxburghiana*. In addition to the line drawing published with the original description, the collection *Wight 1347* fits the location and date given by Wight. We have traced five duplicates of this collection at three different herbaria, three at K [K000031170, K000031171, K000031172], one at CAL [CAL0000010930] and one at L [L0281126]. Among these, the specimen [K000031172] is the best-preserved and most complete and is designated here as the lectotype.

30. *Ophiorrhiza hirsutula* Wight ex Hook.f., Fl. Brit. India 3: 81 (1880). – TYPE: India, Sisparah, s.d., R. *Wight 1348* (lectotype K [K000031195*], designated here; isolectotype K [K000031196*]).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Notes. Hooker (1880) cited the specimen information as ‘Nilgherry Mountains; Sisparah, Wight’ in the protologue. We have traced two herbarium sheets at K [K000031195, K000031196]. Of these, the best-preserved specimen [K000031195], is selected here as the lectotype.

31. *Ophiorrhiza roxburghiana* Wight, Icon. Pl. Ind. Orient. 3(4): 4, t. 1068 (1846). – TYPE: India, Shevagherry [Sivagiri], August 1836, R. *Wight s.n.* (lectotype K [K000031168*], designated here; isolectotype K [K000031169*]).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Notes. Wight (1846b) described *Ophiorrhiza roxburghiana* from his collections from the Shevagherry mountains, August 1836. We have traced two herbarium sheets at K [K000031168, K000031169], of which the specimen [K000031168] is designated here as the lectotype because it agrees well with the protologue.

32. *Pavetta brunonis* Wall. ex G.Don, Gen. Hist. 3: 575 (1834). – TYPE: India, Neelghery [Nilgiris], s.d., *Unknown collector s.n.* [(Herb. Wight) EIC 6172] (lectotype K [K001123212*], first step designated by Bremekamp (1934), second step designated here).

Distribution. India (Karnataka, Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Remaining syntype. INDIA. Neelghery [Nilgiris], s.d., *E. Noton s.n.* [EIC 6172] (K [K001123211*]).

Notes. Wallich (1828–1849) listed '*Pavetta brunonis*' but the name is invalid since he did not provide a diagnosis or description. Later, Don (1834) validated the name, citing 'Wall.! L. n. 6172'. Bremekamp (1934) gave the type details as Wall. cat. n. 6172 at K. We have traced two specimens at K [K001123211, K001123212] although neither is distinguished as the lectotype. We select the specimen [K001123212] as the lectotype in a second step since it agrees well with the protologue.

33. *Psychotria truncata* Wall. in Roxb., Fl. Ind. 2: 162 (1824). – TYPE: s.l., s.d., *Heyne s.n.* [EIC 8327] (lectotype K [K001125255*], first step designated by Deb & Gangopadhyay (1989b), second step designated here; isolectotype K [K000031692*]).

Distribution. India (Goa, Karnataka, Kerala, Maharashtra and Tamil Nadu). Endemic to the Western Ghats.

Notes. Wallich in Roxburgh (1824), in the protologue of *Psychotria truncata*, cited 'Dr Heyne's hortus siccus [dried plants] dated 20 March 1817'. While revising the genus *Psychotria* for India, Deb & Gangopadhyay (1989b) gave the type details as 'Heyne s.n. ex Wall. cat. n. 8327' at K. We have traced two specimens of *Heyne s.n.* [EIC 8327] at K [K000031692, K001125255], neither of which is distinguished as the lectotype. We therefore narrow down the designation here by selecting the specimen [K001125255] as the lectotype in a second step.

34. *Serissa fragrans* Bedd., Madras J. Lit. Sci. Ser. III, 1: 50 (1864). – *Saprosma fragrans* (Bedd.) Bedd., Fl. Sylv. S. India: cxxxiv–11 (1872). – TYPE: India, Nilgiris, Western Walaghat, s.d., *Beddome 4045* (lectotype BM [BM000945574*], designated here).

Distribution. India (Karnataka, Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Remaining syntypes. INDIA. Malabar, Walaghat, s.d., *Beddome s.n.* (MH [MH00264173]); Nilgiris, Sispara Ghat, 4000 ft [1219 m], s.d., *Beddome s.n.* [4044] (BM [BM000945573*]).

Notes. In the protologue of *Serissa fragrans*, Beddome (1864) mentioned 'Western slopes of Nilagiris'. Although Gangopadhyay (1991) cited the type as 'India, Tinnevely hills, 2000 feet [600 m], August 1868, Beddome 31 at K', this specimen

is not original material because the specimen was collected after the publication of *Serissa fragrans*. Furthermore, the location is also in contradiction with the locality information provided in the protologue. We have traced three specimens belonging to three different collections in two herbaria, namely two specimens mounted on a single sheet at BM [BM000945573, BM000945574] and one at MH [MH00264173]. Of these the best one [BM000945574], is designated here as the lectotype as it agrees well with the protologue.

35. *Stylocoryna monosperma* Wight & Arn., Prodr. Fl. Ind. Orient. 1: 401 (1834). – ***Tarennia monosperma*** (Wight & Arn.) D.C.S.Raju, Sci. & Cult. 32: 554 (1966). – TYPE: India, s.l., s.d., *R. Wight 1284* (lectotype K [K000031414*], designated here; isolectotypes K [K000031415*, K000031416*], P [P02273288*, P02273289*, P02273290*]).

Distribution. India (Kerala and Tamil Nadu). Endemic to the Southern Western Ghats.

Notes. Wight & Arnott (1834) described *Stylocoryna monosperma* and cited ‘Wight cat. no. 1284’. Later Raju (1966) transferred *Stylocoryna monosperma* to the genus *Tarennia* Gaertn. as *T. monosperma* (Wight & Arn.) D.C.S.Raju. We have traced six herbarium sheets of *Wight 1284* in two herbaria, three at K [K000031414, K000031415, K000031416] and three at P [P02273288, P02273289, P02273290]. Of these, the best one [K000031414] is designated here as the lectotype as it agrees well with the protologue.

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