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## Some new combinations and new names for Flora of India

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### ABSTRACT

During the verification of nomenclature in connection with the preparation of 'Supplement to *Florae Indicae Enumeratio*' and 'Flora of Tamil Nadu', the authors came across a number of names that need to be updated in accordance with the changing generic concepts. Accordingly the required new names and new combinations are proposed here for the 50 taxa belonging to 17 families.

### Introduction

India is the seventh largest country in the world, and is home to 18,948 species of flowering plants (Karthikeyan, 2018), of which 4,303 taxa are endemic (Singh et al., 2015). During the preparation of 'Supplement to *Florae Indicae Enumeratio*' and 'Flora of Tamil Nadu', we came to know that several angiosperms described from various parts of India need new combinations and new names that are dealt hereunder in their respective families.

### Taxonomic treatment

#### ACANTHACEAE

***Andrographis longipedunculata* (Sreem.)  
L.H.Cramer ex Gnanasek. & Kottaim., comb. nov.**

Basionym: *Nesiella longipedunculata* Sreem. in  
*Phytologia* 15: 271. 1967.

Distribution: INDIA (Andhra Pradesh, Karnataka, Kerala, Maharashtra, Odisha, Rajasthan, West Bengal & Tamil Nadu) and MYANMAR.

Note: Cramer (1996) transferred *Indoneesiella longipedunculata* to *Andrographis* and proposed new combination *A. longipedunculata* (Sreem.) L.H.Cramer. However his new combination is invalid due to indirect basionym ref. contrary to Art. 41.5 ICN (Turland et al., 2018) and thus the combination need to be validated. Here correct reference for the basionym is given to validate the combination.

**Justicia gracilis** (Wight) T.Anderson var. **saldanhae** (Mascar. & Janarth.) Kottaim., **comb. nov.**

Basionym: *Rungia linifolia* Nees  
var. *saldanhae* Mascar. & Janarth. in Novon 20(2): 182. 2010.

Distribution: INDIA (Karnataka & Tamil Nadu).

Note: Following Vollesen (2010), Wood (2014) transferred the Indian species of *Rungia* under *Justicia*. While doing so, he proposed *Justicia heyneana* as a replacement name for *Rungia linifolia* Nees. However, he overlooked the fact that the next available name *Justicia gracilis* (Wight) T.Anderson is not a later homonym of *Justicia gracilis* Lyall ex Nees (1847) because the latter name is an invalid name when published (*pro synonymo*).

## APOCYNACEAE

Note: As a result of recent molecular phylogenetic studies (Bruyns et al., 2014 2015), generic circumscription of *Ceropegia* has undergone tremendous changes (Bruyns et al., 2017, 2018a, b). The suggestion by Bruyns et al. (2017) to include all species of *Brachystelma* in *Ceropegia* is accepted by Endress et al. (2018) and POWO (2019). Hence, the following 21 new combinations and two new names are needed to reflect the current inclusion of *Caralluma* R. Br. and *Brachystelma* R.Br. in *Ceropegia* L.

**Ceropegia adscendens** (Roxb.) Bruyns var. **bicolor** (V.S. Ramac., S. Joseph, H. A. John & Sofiya) Kottaim., **comb. et stat nov.** Basionym: *Caralluma bicolor* V.S. Ramac., S. Joseph, H. A. John & Sofiya in Nordic J. Bot. 29(4): 447. 2011.

Distribution: INDIA (Kerala & Tamil Nadu), Endemic.

**Ceropegia adscendens** (Roxb.) Bruyns var. **carinata** (Gravely & Mayur.) Kottaim., **comb. nov.**

Basionym: *Caralluma adscendens* (Roxb.) Haw. var. *carinata* Gravely & Mayur. in Bull. Madras Gov. Mus. n.s., 4(1): 16. 1931.

Distribution: INDIA (Tamil Nadu).

Note: Gravely and Mayurnathan (1931) while revising the genus *Caralluma* for India; they recognized 6 varieties under *Caralluma adscendens*. Bruyns et al. (2018) have merged all the varieties of *Caralluma adscendens* under *Ceropegia adscendens* without providing any reasons. However, most of them show consistent morphological and floral variations and deserve distinct rank. Interestingly many of the workers accepted the varieties proposed by Gravely & Mayurnathan (1931) and recognized in several works (Albers and Meve, 2002; Gilbert, 1990; Jagtap and Singh, 1999; Karuppusamy et al., 2013; Meve and Liede, 2002; Plowes, 1995; POWO, 2019; Gandhi, 1999; Singh et al., 2015). *C. adscendens* var. *carinata* is one of the most beautiful and distinct variant. It can be easily distinguished from its allies by its pendulous flower and unbranched stem.

**Ceropegia muruganii** Kottaim., **nom. nov.**

Replaced synonym: *Caralluma adscendens* var. *geniculata* Gravely & Mayur. in Bull. Madras Gov. Mus. n.s., 4(1): 16. 1931., non *Ceropegia geniculata* R.A.Dyer in Bothalia 12: 631. 1979.

**Etymology:** The specific epithet is named to honor Dr. C. Murugan, Botanical Survey of India, Southern Regional Centre, Coimbatore, for his remarkable contributions to the Flora of Tamil Nadu.

Distribution: INDIA (Tamil Nadu).

Note: According to the latest taxonomical approach, *Caralluma adscendens* var. *geniculata* Gravely & Mayur. is considered to be a distinct species, namely *Caralluma geniculata*, which differs from its allied species by its pedicel bent at

an angle just below the flower (Karuppusamy et al., 2013; Meve and Liede, 2002; POWO, 2019). When *Caralluma geniculata* (Gravely & Mayur.) Meve & Liede is transferred to *Ceropegia*, the epithet is occupied by Dyer's 1979 name. Thus a new name is required, and is proposed here.

**Ceropegia adscendens** (Roxb.) Bruyns var. **gracilis** (Gravely & Mayur.) Kottaim., **comb. nov.**

Basionym: *Caralluma adscendens* (Roxb.) Haw. var. *gracilis* Gravely & Mayur. in Bull. Madras Gov. Mus. n.s., 4(1): 14. 1931.

Distribution: INDIA (Tamil Nadu).

Note: This endemic variety can be easily recognized in the field by its much branched acute stem, smaller flowers, erect slender pedicels and rotate corolla with pale expanded portion of the petals larger in proportion to the dark folded portion.

**Ceropegia ananthapuramense** (K.Prasad, A. Naray. & Meve) Kottaim., **comb. nov.**

Basionym: *Brachystelma ananthapuramense* K.Prasad, A.Naray. & Meve, Kew Bull. 73(1)-16: 1. 2018.

Distribution: INDIA (Andhra Pradesh).

**Ceropegia annamacharyae** (K. Prasad, Prasanna, Meve, Sankara Rao & T. Thulasaiah) Kottaim., **comb. nov.**

Basionym: *Brachystelma annamacharyae* K. Prasad, Prasanna, Meve, Sankara Rao & T. Thulasaiah in Nord. J. Bot. 34(3): 360. 2016.

Distribution: INDIA (Andhra Pradesh).

**Ceropegia gondwanense** (Govekar, Kahalkar & Sardesai) Kottaim., **comb. nov.**

Basionym: *Brachystelma gondwanense* Govekar, Kahalkar & Sardesai in Rheedea 26(2): 145. 2016.

Distribution: INDIA (Maharashtra).

**Ceropegia gandhiana** Kottaim., **nom. nov.**

Replaced synonym: *Brachystelma maculatum* Hook.f., Fl. Brit. India 4(10): 65. 1883., non *Ceropegia maculata* Bedd. in Madras J. Lit. Sci., ser. 3, 1: 52. 1864.

**Etymology:** The specific epithet is named to honour Dr. Kanchi N. Gandhi (Senior Nomenclatural Registrar, Harvard University Herbaria, USA) for his valuable contribution in plant taxonomy and nomenclature.

Distribution: INDIA (Karnataka & Tamil Nadu), Endemic.

Note: Bruyns et al. (2017) did not accept the specific status of *Brachystelma maculata*, *B. rangacharii*, *B. penchalakonense* and *B. nallamalayanum* hence they synonymized under *Ceropegia bourneae* (Gamble) Bruyns without ample reasons. All four species share similar habit with slender, sturdy and erect stems and long drooping leaves. However, they differ from each other by their floral characters viz., corolla colour, ornamentation, indumentum and corona structure and thus hold their specific identities (Prasad and Rao, 2013; Prasad and Venu, 2018; Pullaiah et al., 2019; Rasingam et al., 2013; Sadasivaiah et al., 2016).

The specific epithet "*maculata*" cannot be used in combination with *Ceropegia*, as it would be a later homonym of *Ceropegia maculata* Bedd. (1864). since it has no taxonomic synonyms, a new replacement name is proposed above in accordance with the Shenzhen code (Turland et al., 2018).

**Ceropegia mahendragiriense** (K.Prasad, Chorghe & Venu) Kottaim., **comb. nov.**

Basionym: *Brachystelma mahendragiriense* K.Prasad, Chorghe & Venu in Rheedea 27(2): 135. 2017.

Distribution: INDIA (Andhra Pradesh).

**Ceropegia megamalayana** (Karupp.) Kottaim., **comb. nov.**

Basionym: *Brachystelma megamalayana* Karupp. in Pull. et al., Monogr. Brachystema & Ceropegia in India: 40. 2019.

Distribution: INDIA (Tamil Nadu).

**Ceropegia moorei** (Aditya) Kottaim., **comb. nov.**

Basionym: *Caralluma moorei* Aditya in *Asklepios* 110: 7. 2011.

Distribution: INDIA (Odisha).

Note: Bruyns et al. (2017) have erroneously merged this species under *Ceropegia stalagmifera*. But *Caralluma moorei* can be easily distinguished in the field by its two or three flowers in axils (vs solitary flowers in *C. stalagmifera*), bracts linear-subulate (vs. bracts triangular in *C. stalagmifera*) and corolla margin tipped with needle like hairs (vs. corolla margin tipped with stalagmiferous shaped hairs in *C. stalagmifera*). Moreover, Karuppusamy et al. (2013), Singh et al. (2015) and POWO (2019) maintained it as distinct species under the name *Caralluma moorei*, and the new combination is made here for those agree with this view.

**Ceropegia nallamalayanum** (K. Prasad & B. R. P. Rao) Kottaim., **comb. nov.**

Basionym: *Brachystelma nallamalayanum* K. Prasad & B. R. P. Rao in *J. Threat. Taxa* 5(14): 4904. 2013.

Distribution: INDIA (Andhra Pradesh & Telengana).

**Ceropegia naorojii** (P.Tetali, D.K.Kulk., S. Tetali & M.-S.Kumbhojkar) Kottaim., **comb. nov.**

Basionym: *Brachystelma naorojii* P.Tetali, D.K.Kulk., S.Tetali & M.-S.Kumbhojkar in *Rheedea* 8(1): 75. 1998.

Distribution: INDIA (Maharashtra).

Note: Bruyns et al. (2017) treated this species as a heterotypic synonym of *Ceropegia malwanensis* (S.R. Yadav & N.P. Singh) Bruyns without any substantial reasons. However, most of the Indian workers treated it as an endemic species of Maharashtra (Almeida, 2001; Jagtap and Singh, 1999; Mishra and Singh, 2001; Pullaiah et al., 2019; Singh et al., 2015) and the new combination is made here for those agree with this view.

**Ceropegia nigidianum** (Raja Kullayisw., Sandhyar. & Pull.) Kottaim., **comb. nov.**

Basionym: *Brachystelma nigidianum* Raja Kullayisw., Sandhyar. & Pull. in *Kew Bull.* 71(4)-50: 5. 2016.

Distribution: INDIA (Andhra Pradesh).

**Ceropegia penchalakonense** (Rasingam, Chorghe, Meve, Sankara Rao & Prasanna) Kottaim., **comb. nov.**

Basionym: *Brachystelma penchalakonense* Rasingam, Chorghe, Meve, Sankara Rao & Prasanna in *Kew Bull.* 68(4): 663. 2013.

Distribution: INDIA (Andhra Pradesh).

**Ceropegia rangacharii** (Gamble) Kottaim., **comb. nov.**

Basionym: *Brachystelma rangacharii* Gamble in *Bull. Misc. Inform. Kew* 1922(3): 120. 1922.

Distribution: INDIA (Karnataka & Tamil Nadu), Endemic.

**Ceropegia sarkariae** (Lavranos & R.Frandsen) Bruyns var. **longipedicellata** (Aditya) Kottaim. **comb.nov.**

Basionym: *Caralluma sarkariae* Lavranos & R.Frandsen var. *longipedicellata* Aditya in *Asklepios* 110: 21. 2011.

Distribution: INDIA (Tamil Nadu), Endemic.

**Ceropegia seshachalamense** (K. Prasad & Prasanna) Kottaim., **comb. nov.**

Basionym: *Brachystelma seshachalamense* K.Prasad & Prasanna in *Bangladesh J. Pl. Taxon.* 23(1): 53. 2016.

Distribution: INDIA (Andhra Pradesh).

**Ceropegia shrirangii** (Kambale, Gholave & Sardesai) Kottaim., **comb. nov.**

Basionym: *Brachystelma shrirangii* Kambale, Gholave & Sardesai in *Rheedea* 26(2): 145. 2016.

Distribution: INDIA (Maharashtra).

**Ceropegia truncatocoronata** (Sedgw.)  
Kottaim. **comb. nov.**

Basionym: *Boucerosia truncatocoronata* Sedgw. in  
J. Indian Bot. 2: 125. 1921.

Distribution: INDIA (Karnataka, Maharashtra &  
Tamil Nadu), Endemic.

Note: Bruyns et al. (2017) have merged this species  
under *C. crenulata* (Wallich) Bruyns. However it is  
distinct in its bifid corona lobes reduced to a  
broadly truncate top with minute horns or teeth at  
each end.

**Ceropegia vemanae** (A.M.Reddy, M.V.S.Babu &  
K.Prasad) Kottaim., **comb. nov.**

Basionym: *Brachystelma vemanae* A.M.Reddy,  
M.V.S.Babu & K.Prasad in Nordic J. Bot. 36(10)-  
e02067: 2. 2018.

Distribution: INDIA (Andhra Pradesh).

**Vincetoxicum balakrishnanii** (P.M.Salim &  
J.Mathew) Kottaim., **comb. nov.**

Basionym: *Tylophora balakrishnanii* P.M.Salim &  
J.Mathew in P.M. Salim et al., NeBIO 8(3): 2017.

Distribution: INDIA (Kerala).

Note: Recent molecular phylogenetic analysis  
(Liede-Schumann et al., 2012, 2016) supported the  
reduction of *Tylophora* under *Vincetoxicum*  
(Liede-Schumann and Meve 2018). However two  
recently described species viz., *Tylophora*  
*balakrishnanii* P.M.Salim & J.Mathew and  
*Tylophora neglecta* J.Mathew were never  
transferred hence, a necessary new combination is  
proposed here.

**Vincetoxicum neglectum** (J.Mathew) Kottaim.,  
**comb. Nov** Basionym: *Tylophora neglecta*  
J.Mathew in P.M. Salim et al., NeBIO 8(3): 132.  
2019.

Distribution: INDIA (Kerala).

Note: Recently, Liede-Schumann and Meve (2018)

proposed a broader circumscription of  
*Vincetoxicum* [*sensu lato*] based on molecular  
phylogenetic analysis (Liede-Schumann et al.,  
2012, 2016). The new combination under  
*Vincetoxicum* is therefore required.

## ASPARAGACEAE

**Asparagus biradarii** (Kamble) Kottaim., **comb.**  
**nov.**

Basionym: *Protasparagus biradarii* Kamble in J.  
Econ. Taxon. Bot. 17(1): 197. 1993.

Distribution: INDIA (Odisha).

Note: This species was not included in Endemic  
Vascular Plants of India (Singh et al., 2015).  
Moreover, POWO (2019) treated as an unplaced  
name.

## ASTERACEAE

**Lactuca bandyopadhyana** Kottaim., **nom.**  
**nov.**

Replaced synonym: *Lactuca pygmaea* Bhellum in  
Current Life Sci. 1: 2. 2015, nom. illeg., non  
*Lactuca pygmaea* Zoll. & Moritz in Natuur-  
Geneesk. Arch. Ned.-Indië 2: 565. 1845.

**Etymology:** The specific epithet is named to  
honour Dr. Subir Bandyopadhyay, distinguished  
legume expert, Botanical Survey of India for his  
remarkable contribution to Indian plant taxonomy.

Distribution: INDIA (Jammu & Kashmir).

Note: A replacement name is required as the name  
*Lactuca pygmaea* has already been used by  
Zollinger and Moritz (1845).

**Monosis kannikattiensis** (Rajakumar, Selvak.,  
S.Murug. & Chellap.) Kottaim., **comb. nov.**

Basionym: *Vernonia kannikattiensis* Rajakumar,  
Selvak., S.Murug. & Chellap. in Indian J. Forest.  
38(3): 269. 2015.

Distribution: INDIA (Tamil Nadu).

Note: Recent molecular and phylogenetic studies  
supported the polyphyletic nature of *Vernonia*

Schreb. sensu lato (Keeley et al. 2007; Keeley and Robinson 2009; Loeuille et al. 2015). A few workers in India transferred the known species of *Vernonia* to the respective segregated genera (Kumar, 2014; Kottaimuthu, 2015; Punekar and Vasudeva Rao, 2006; Rasiya Beegam and Sibi, 2012). The newly described *Vernonia kannikattiensis* (Rajakumar et al., 2015) falls within the circumscription of *Monosis*. Hence the necessary new combination is presented above.

## CYPERACEAE

**Carex khasiana** (Jana & V.S.Kumar) Kottaim., **comb. nov.**

Basionym: *Kobresia khasiana* Jana & V.S.Kumar in J. Jap. Bot. 92(2): 94. 2017.

Distribution: INDIA (Assam).

Note: This combination is needed to reflect the current inclusion of *Kobresia* in *Carex* (GCG, 2015).

**Cyperus melanospermus** (Nees) Valck. var. **gudaluriensis** (Wad.Khan & R. D. Taur) Kottaim., **comb. nov.**

Basionym: *Kyllinga melanosperma* Nees var. *gudaluriensis* Wad.Khan & R.D.Taur in Wad.Khan, Cyperaceae W. Ghats, W. Coast & Maharashtra: 269. 2014.

Distribution: INDIA (Tamil Nadu).

Note: According to the recent generic concept of *Cyperus* (Larridon et al., 2013, 2014), *Kyllinga melanosperma* var. *gudaluriensis* should be transferred to *Cyperus* and hence a new combination is made here.

**Cyperus pluristamineus** (Govind. & Ramani) Kottaim., **comb. nov.**

Basionym: *Kyllinga pluristaminea* Govind. & Ramani in J. Econ. Taxon. Bot. 18(2): 336. 1994.

Distribution: INDIA (Tamil Nadu).

Note: This combination is needed to reflect the current inclusion of *Kyllinga* in *Cyperus* (Larridon

et al., 2013, 2014).

**Cyperus pseudoalatus** (Wad.Khan & R.D.Taur) Kottaim., **comb. nov.**

Basionym: *Kyllinga pseudoalata* Wad.Khan & R.D.Taur in Wad.Khan, Cyperaceae W. Ghats, W. Coast & Maharashtra: 274. 2014.

Distribution: INDIA (Tamil Nadu).

Note: This combination is needed to reflect the current inclusion of *Kyllinga* in *Cyperus* (Larridon et al., 2013 & 2014).

## CLEOMACEAE

**Corynandra chelidonii** (L.f.) Cochrane & Iltis var. **pallae** (C.S.Reddy & V.S.Raju) Kottaim., **comb. nov.**

Basionym: *Cleome chelidonii* L.f. var. *pallae* C.S. Reddy & V.S.Raju in J. Econ. Taxon. Bot. 25(1): 217. 2001.

Distribution: INDIA (Andhra Pradesh).

Note: As per the recent generic concept of Cleomaceae (Cochrane and Iltis, 2014), *C. chelidonii* var. *pallae* should be transferred to *Corynandra* and consequently a new combination is made here.

## FABACEAE

**Grona saulierei** (Schindl.) Kottaim., **comb. et stat. nov.**

Basionym: *Nicolsonia barbata* (L.) DC. var. *saulierei* Schindl., Repert. Spec. Nov. Regni Veg. 23: 359. 1927.

Distribution: INDIA (Tamil Nadu), Endemic.

Note: During the studies of legumes of Dindigul District for the Ph.D. dissertation of the first author, he has located a small population of *Desmodium barbatum* (L.) Benth. subsp. *saulieri* (Schindl.) H. Ohashi in Sottimalai, Palani Hills. Critical studies with protologues and type specimens of infraspecific categories of *Desmodium barbatum*, it was found that the

variety *saulierei* Schindl. warrant acceptance as distinct species. Hence, it is raised to species status. As per the recent generic concept of Desmodieae (Ohashi and Ohashi, 2018) a new combination is made here.

**Indigofera trifoliata** L. var. **prostrata** (Willd.) Kottaim., **comb. et. stat. nov.**

Basionym: *Indigofera prostrata* Willd., Sp. Pl. 3: 1226. 1802.

Distribution: INDIA (Andhra Pradesh, Goa, Gujarat, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa and Tamil Nadu) and BANGLADESH (Mostaph & Uddin, 2013).

Note: Matthew (1983, 1999), Sanjappa (1995) and Chauhan and Pandey (2015) who in turn had followed Gamble (1919) in treating this taxon at a specific status. De Kort and Thijssse (1984) treated it as a synonym under *Indigofera trifoliata* L. The present studies at MH, RHT, and ATREE in addition to field observations, indicate that it is very difficult to segregate *Indigofera prostrata* from *I. trifoliata*. However, the former is quite distinct for its torulose pods and bilateral seeds with coarsely reticulate surface where as *I. trifoliata* has non-torulose pods and cylindrical seeds with fossulate surface. Therefore, *Indigofera prostrata* Willd. is reduced here as a variety under *Indigofera trifoliata* L.

**Solori scandens** (Roxb.) Sirich. & Adema var. **saharanpurensis** (Thoth.) Kottaim., **comb.nov.**

Basionym: *Derris timorensis* (DC.) Pittier var. *saharanpurensis* Thoth. in Bull. Bot. Surv. India 105. 1972.

Distribution: INDIA (Uttar Pradesh), Endemic (Khanna, 2001; Singh et al., 2015).  
Note: This varietal combination is needed to reflect the current inclusion of *Derris scandens* in *Solori* (Sirichamorn *et al.*, 2014).

## HYPOXIDACEAE

Note: Traditionally the genus *Molineria* is distinguished from its allied genus *Curculigo* by

having comparatively a smaller and unbeaked seed without an extended end in the funicle and striate testa ornamentation. Since morphologically both the genus are similar, Christenhusz & Byng (2018) have merged the former under latter. Hence, the following two new combinations are needed to reflect the current inclusion of *Molineria* in *Curculigo*.

**Curculigo garoense** (D.K.Roy & D.Vijayan) Kottaim., **comb. nov.**

Basionym: *Molineria garoense* D.K.Roy & D.Vijayan in Pleione 10(2): 366. 2016.

Distribution: INDIA (Meghalaya).

**Curculigo prainiana** (Deb) Bennet & Raizada var. **josephii** (D. K. Roy, D. Verma & Talukdar) Kottaim., **comb. nov.**

Basionym: *Molineria prainiana* Deb var. *josephii* D. K. Roy, D. Verma & Talukdar in J. Jap. Bot. 90(1): 61. 2015.

Distribution: INDIA (Arunachal Pradesh).

## LAMIACEAE

**Platostoma menthoides** (L.) A. J. Paton var. **longiracemosum** (Ramam. & Sebastine) Kottaim., **comb. nov.**

Basionym: *Geniosporum prostratum* (L.) Benth. var. *longiracemosum* Ramam. & Sebastine in Bull. Bot. Surv. India 6: 325. 1964.

Distribution: INDIA (Tamil Nadu), Endemic.

Note: Paton (1997) while revising the genus *Platostoma*, he transferred *Geniosporum menthoides* to *Platostoma* as *P. menthoides* but overlooked the variety endemic to Tamil Nadu viz., *Geniosporum prostratum* var. *longiracemosum* Ramam. & Sebastine. This endemic variety differs from the typical variety by its bracts deltoid, membranous, transparent at margins (bracts cordate, not membranous, not transparent, at margins in var. *menthoides*) and lateral calyx-teeth lanceolate, awned (lateral calyx-teeth neither lanceolate nor awned in var. *menthoides*).

## LAURACEAE

**Machilus macrantha** Nees var. **brevifolia** (M.Gangop.) Kottaim., **comb. nov.**

Basionym: *Persea macrantha* (Nees) Kosterm. var. *brevifolia* M. Gangop. in Bangladesh J. Plant Taxon. 16(2): 144. 2009.

Distribution: INDIA (Tamil Nadu).

Note: The genus *Machilus* was often treated as a synonym of *Persea* Miller, but recent molecular evidence supports that *Machilus* should be treated as a distinct genus (Rohwer et al., 2009, Li et al., 2011). Hence, a new varietal combination is proposed under *Machilus*.

## LORANTHACEAE

**Macrosolen pseudopsilantha** (Rajasek.) Kottaim., **comb. nov.**

Basionym: *Elytranthe pseudopsilantha* Rajasek. in J. Swamy Bot. Club 3(1-2): 15. 1986.

Distribution: INDIA (Kerala & Tamil Nadu), Endemic.

Note: *E. pseudopsilantha* was described by Rajasekaran (1986) based on the collections made from Munnar and High Wavy mountain in Tamil Nadu. On critical studies from the protologue, this new species falls within the circumscription of *Macrosolen* (Inflorescence capitulum, sessile, peduncles subtended by 3-4 whorls of bracts; corolla lobes 6, reflexed and coiled), and hence the new combination is provided. In the protologue, it is erroneously compared with *E. psilantha* but it is found to be allied to *Macrosolen parasiticus*.

## ORCHIDACEAE

**Bulbophyllum indicum** (C.S.Kumar & Garay) Kottaim., **comb. nov.**

Basionym: *Rhytionanthos indicus* C. S. Kumar & Garay, Proc. 20th World Orchid Conf.: 114. 2013.

Distribution: INDIA (Kerala & Tamil Nadu), Endemic.

Note: This combination is needed to reflect the current inclusion of *Rhytionanthos* in *Bulbophyllum* (Pridgeon et al., 2014; Vermeulen et al., 2014, 2015).

**Crepedium crenulatum** (Ridl.) Kottaim., **comb. nov.**

Basionym: *Microstylis crenulata* Ridl. in J. Linn. Soc., Bot. 24: 346. 1888.

Distribution:—INDIA (Tamil Nadu).

Note: On critical studies from the protologue and recent collection from Nilgiri, it is found that the species falls within the circumscription of *Crepedium* (Pankaj Kumar, pers. comm.) and hence the new combination is provided.

**Dendrolirium ferrugineum** (Lindl.) A.N.Rao var. **assamicum** (Gogoi, Das & Yonzon) Kottaim., **comb. nov.**

Basionym: *Eria ferruginea* Lindl. var. *assamica* Gogoi, Das & R.Yonzon in McAllen Int. Orchid Soc. J. 15(2): 5. 2014.

Distribution: INDIA (Assam).

Note: This combination is needed to reflect the current inclusion of *Eria ferruginea* in *Dendrolirium* (Sirichamorn et al., 2014).

**Porpax nana** (A.Rich.) Schuit., Y.P.Ng & H.A.Pedersen var. **brevilinguis** (Joseph & Chandras.) Kottaim., **comb. nov.**

Basionym: *Eria muscicola* (Lindl.) Lindl. var. *brevilinguis* Joseph & Chandras. in Bull. Bot. Surv. India 15: 267. 1973.

Distribution: INDIA (Kerala & Tamil Nadu), Endemic.

Note: The circumscription of this variety has been a matter of dispute among the orchidologists. Joseph and Chandrasekaran (1973) described this variety based on the specimens collected from the western slopes of Agasthyamalai, Kerala. This was accepted as a variety of *Eria muscicola* by Karthikeyan et al. (1989) and Pandey and Dwarakan (1995). However, Kumar and Manilal



(2006) considered it as a synonym of *Eria nana*, while Agrawala and Chowdhery (2009) treated it as a variety of *Eria nana*. Bajracharya and Shrestha (2009) elevated this variety as a species. Since the diagnostic characters are distinct and constant, liberty being taken here to treat it as a variety under *P. nana*.

## POACEAE

**Yushania longispiculatus** (R.B.Majumdar) Kottaim., **comb. nov.**

Basionym: *Chimonocalamus longispiculatus* R.B.Majumdar in S. Karthikeyan et al., Fl. Ind. Enumerat. - Monocot.: 276. 1989.

Distribution: INDIA (Arunachal Pradesh).

Note: This combination is needed to reflect the current inclusion of *Chimonocalamus* in *Yushania* (Borthakur and Sharma, 2018).

## RUBIACEAE

**Catunaregam brandisii** (Gamble) Kottaim., **comb. nov.**

Basionym: *Randia brandisii* Gamble, Fl. Pres. Madras: 416. 1921.

Distribution: INDIA (Andhra Pradesh, Karnataka, Kerala, Maharashtra & Tamil Nadu).

Note: Tirvengadam (1978) incorrectly merged *Randia brandisii* under *Catunaregam spinosa*. Till now, many taxonomists in India (Sasidharan, 2013) and Kew (Govaerts, 2003; Govaerts et al., 2011; POWO, 2019; Ruhsam, 2005) agree with the views of Tirvengadam. However, as indicated by Matthew (1991, 1999) and Pallithanam (2001), *Randia brandisii* and *R. dumetorum* (= *C. spinosa*) are quite distinct species.

## SOLANACEAE

**Solanum violaceum** Ortega var. **multiflorum** (Roth) Kottaim., **comb. nov.**

Basionym: *Solanum multiflorum* Roth, Syst. Veg., ed. 15 bis 4: 669. 1819.

Distribution: INDIA (Karnataka, Kerala & Tamil Nadu), Endemic.

Note: It is not easy to find good characters to separate *S. multiflorum* from *S. violaceum*. Hence it is reduced as a variety of *S. violaceum*. The only distinguishing character between the two taxa is plant height and number of flowers in an inflorescence. Plants < 3 m tall and flowers < 25 per inflorescence in var. *violaceum*, where as plants > 4 m tall and flowers > 50 per inflorescence in var. *multiflorum*.

## SCROPHULARIACEAE

**Veronica gandhii** Kottaim., **nom. nov.**

Replaced synonym: *Veronica biloba* var. *minima* N.C.Nair 5: 327. 1963, *nom. illeg.*, non *Veronica biloba* var. *minima* K.Koch Linnaea 17(3): 288. 1843. *Veronica minima* Chandra Sek. & S.K. Srivast., Fl. Pin Valley Natl. Park 180. 2009, *nom. illeg.*, non *Veronica minima* (K.Koch) K.Koch, Linnaea 22(6): 700. 1849.

**Etymology:** The specific epithet is named to honour Dr. Kanchi N. Gandhi (Senior Nomenclatural Registrar, Harvard University Herbaria, USA) for his valuable contribution in plant taxonomy and nomenclature.

Distribution: INDIA (Himachal Pradesh), Endemic.

Note: This distinct entity was originally described as a variety under *V. biloba*. Later, Chandra Sekar and Srivastava (2009) elevated this variety in to species status. Unfortunately, the name *V. minima* had been previously used by Koch in 1843, thus *Veronica minima* Chandra Sek. & S.K.Srivast. is a later homonym of *Veronica minima* (K.Koch) K.Koch and therefore illegitimate. Hence, a new replacement name is proposed above in accordance with the Shenzhen code (Turland et al., 2018). Interestingly, Agnihotri et al. (2014) while compiling the genus *Veronica* for India, they neither include nor comment on the status of the taxa.

## VIOLACEAE

**Afrohybanthus vatsavayae** (C.S.Reddy) Kottaim., **comb. nov.**

Basionym: *Hybanthus vatsavayae* C.S.Reddy in J. Econ. Taxon. Bot. 25(1): 219. 2001.

Distribution: INDIA (Andhra Pradesh).

Note: Recent molecular phylogenetic studies on Violaceae proved that *Hybanthus* is polyphyletic, with species in nine morphologically and biogeographically distinct clades (Wahlert et al., 2014). Hence, Flicker and Harvey (2015) erected a new genus *Afrohybanthus* that can be easily distinguished from *Hybanthus sensu stricto* by having solitary flowers, strongly zygomorphic corollas with a well differentiated bottom petal, filaments basally connate into a short “collar” with free portions to the filaments and two staminal glands. While scrutinizing the protologue of *Hybanthus vatsavayae* we found that this species falls within the circumscription of *Afrohybanthus*, and hence the new combination is provided.

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### Conflict of interest statement

Authors declare that they have no conflict of interest.

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