

**NINETEEN NEW COMBINATIONS AND A NEW NAME IN  
BREYNIA J.R. FORST. & G. FORST. (PHYLLANTHACEAE)  
FROM INDIAN SUBCONTINENT**

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**Abstract**

Nineteen new combinations and one new name are proposed in *Breynia* for taxa previously treated in *Sauropus*.

**Introduction**

The concept of the family Euphorbiaceae has changed as a result of evidence obtained from molecular studies and the current trend is to divide the family into several segregate families and merger of several genera. Consequent upon the creation of the family Phyllanthaceae based on the subfamily Phyllanthoideae of Euphorbiaceae, the genera *Breynia*, *Glochidion* and *Sauropus* were combined with *Phyllanthus* (Hoffmann *et al.*, 2006; Kathriarachchi *et al.*, 2006). However, latest molecular studies by Pruesapan *et al.* (2008) indicated the need for a relook into these mergers. Pruesapan (2010) has expressed reservations on the advisability of these mergers and made some logical suggestions. It is necessary to quote the statement of Pruesapan (2010) as follows:

“Molecular phylogenetic studies focused on the genus *Phyllanthus* L. (Phyllanthaceae) showed that *Sauropus* Blume (including *Synostemon* F.Muell.) and its related genera *Breynia* J.R. Forst. & G. Forst. and *Glochidion* J.R. Forst. & G. Forst. should be united with *Phyllanthus* to create a monophyletic genus. The relationships within *Sauropus* and its relationship with *Breynia* were studied to test/corroborate such a broad definition of *Phyllanthus*. The molecular phylogenetic analyses show that *Sauropus* in the broad sense is composed of two distinct groups, the former Australian *Synostemon* and the Southeast Asian *Sauropus* in the strict sense with the monophyletic *Breynia* embedded in the latter. As the phylogeny of the species rich *Phyllanthus* is still far from completed and the results here strongly support the distinction of monophyletic groups such as *Glochidion*, former *Synostemon*, and *Sauropus/Breynia*. These genera are recognizable, while union with *Phyllanthus* (suggested by Hoffmann and co-authors in 2006) will turn the latter into an unrecognizable monolithic giant of a genus. It is a much better strategy to use the complete phylogeny of *Phyllanthus* to render it into smaller, monophyletic genera that can be characterized. The present study shows *Synostemon* has to be recognised again on generic level. *Breynia*, the older name, is nested within *Sauropus*, leading us to transfer the latter to *Breynia*. Within this broadened *Breynia*, two subgenera and two sections are distinguished, subgenus *Sauropus* and subgenus *Breynia* with section *Cryptogynium* and section *Breynia* under the latter”.

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A revision of the family Phyllanthaceae for Indian subcontinent is nearing completion and the authors favour and accept the concept of Pruesapan (2010) which necessitates the transfer of the species of *Sauropus* of Indian subcontinent to *Breynia*. The necessary new combinations and a new name proposed here are given below.

#### New combinations

1. ***Breynia androgyna*** (L.) Chakrab. & N.P. Balakr., **comb. nov.**  
*Clutia androgyna* L., Mant. Pl. 1: 128. 1767.  
Type: "Habitat in India" (van Welzen, *Blumea* 48: 340. 2003), Herb. Linn. No. 1206.14 (LINN lecto).  
*Sauropus androgynus* (L.) Merr., Bull. Bur. Forest. Philipp. Islands 1: 30. 1903.
2. ***Breynia assimilis*** (Thwaites) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus assimilis* Thwaites, Enum. Pl. Zeyl. 4: 284. 1861. Type: Sri Lanka, 1857, *Thwaites* CP 2855 (CAL syn, G-DC microfiche! syn, K 000246336 photo! syn, P 00318208 syn).
3. ***Breynia bacciformis*** (L.) Chakrab. & N.P. Balakr., **comb. nov.**  
*Phyllanthus bacciformis* L., Mant. Pl. 2: 294. 1771. Type: "Habitat in Tranquebaria" (Scott in Bosser *et al.*, *Fl. Mascareignes* 160: 37. 1982), *König s.n.*, Herb. Linn. No. 1105.6 (LINN lecto).  
*Sauropus bacciformis* (L.) Airy Shaw, Kew Bull. 35: 685. 1980 & 36: 343. 1981.  
*Agyneia bacciformis* (L.) Blume, Bijdr. Fl. Ned. Ind. 595. 1826.  
*Synostemon bacciformis* (L.) G.L. Webster, Taxon 9: 26. 1960, *in adnot.*
4. ***Breynia bicolor*** (Craib) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus bicolor* Craib, Bull. Misc. Inform. Kew 1914: 11. 1914. Type: Thailand, Chiangmai, Doi Suthep, *Kerr* 651 (K lecto; BM, K, A 00135515 isolectotypes).
5. ***Breynia bishnupadae*** (M. Gangop. & Chakrab.) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus bishnupadae* M. Gangop. & Chakrab. *apud* Chakrab. & M. Gangop., J. Econ. Taxon. Bot. 20: 524, 544, f. 2 A–D. 1996. Type: India, Sikkim, Gulma, n.d., *Modder* 114 (CAL holo).
6. ***Breynia brevipes*** (Müll.-Arg.) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus brevipes* Müll.-Arg., *Linnaea* 32: 73. 1863. Type: Myanmar, Prome, 16 Sept. 1826, *Wallich* 7918 B (G-DC microfiche! holo, K-WALL microfiche! iso).
7. ***Breynia compressa*** (Müll.-Arg.) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus compressus* Müll.-Arg. in DC., *Prodr.* 15(2): 243. 1866. Type: India, Sikkim, 1861, *J.D. Hooker s.n.* (*Sauropus* no. 8) (K 000246346–7 photo! syn, G-DC microfiche! syn, P 00237393–4 syn); West Bengal, Darjeeling dist., Pankhabari, *J.D. Hooker s.n.* (K 000246345 photo! syn).  
*S. quadrangularis* (Willd.) Müll.-Arg. var. *compressus* (Müll.-Arg.) Airy Shaw, Kew Bull. 26: 337. 1972.
8. ***Breynia compressa*** (Müll.-Arg.) Chakrab. & N.P. Balakr. var. ***puberula*** (Kurz) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus quadrangularis* (Willd.) Müll.-Arg. var. *puberulus* Kurz, *Forest Fl. Burma* 2: 350. 1877; Type: Myanmar, Pegu Yomah, 25 Jan. 1869, *Kurz* 1586 (CAL holo).  
*S. compressus* var. *puberulus* (Kurz) Chakrab. & M. Gangop., J. Econ. Taxon. Bot. 20: 528. 1996.
9. ***Breynia garrettii*** (Craib) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus garrettii* Craib, Bull. Misc. Inform. Kew 1914: 284. 1914. Type: Thailand, Doi Angka, Me Wang drainage, 7 Sept. 1910, *Garrett* 37 (K holo, BM 000606479 iso, CAL iso, L iso).

10. **Breynia gour-maitii** (Chakrab. & M. Gangop.) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus gour-maitii* Chakrab. & M. Gangop., J. Econ. Taxon. Bot. 20: 529, f. 5 A-E. 1996.  
Type : India, Kerala, Trivandrum dist., Way to Chamunji, 19 May 1979, Mohanan 61883 (CAL holo; MH iso).
11. **Breynia macrantha** (Hassk.) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus macranthus* Hassk., Retzia 1: 166. 1855. Type: Indonesia, Hortus Bogorensis, *Teysmann s.n.* (L, n.v. iso).
12. **Breynia po-khantii** (Chakrab. & M. Gangop.) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus po-khantii* Chakrab. & M. Gangop., J. Econ. Taxon. Bot. 20: 531, f. 7. 1996. Type: Myanmar, Tenasserim, Mergui dist., Chaegleya, 6 May 1932, *Maung Po Khant* 13451 (CAL holo).
13. **Breynia quadrangularis** (Klein ex Willd.) Chakrab. & N.P. Balakr., **comb. nov.**  
*Phyllanthus quadrangularis* Klein ex Willd., Sp. Pl. ed. 4, 4: 585. 1805. Type: India Orientali, *Klein s.n.* (B-WILLD, herb. cat. no. 17985 microfiche! holo).  
*Sauropus quadrangularis* (Klein. ex Willd.) Müll.-Arg., Linnaea 32: 73. 1863 & in DC., Prodr. 15(2): 242. 1866.
14. **Breynia repanda** (Müll.-Arg.) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus repandus* Müll.-Arg., Flora 55: 2. 1872. Type: India, Sikkim, near Nohore, Pashok, 2400 - 4000 ft., *T. Anderson* 922 (B syn, CAL - right hand side specimen, syn).
15. **Breynia retroversa** (Wight) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus retroversus* Wight, Icon. Pl. Ind. Orient. 6: 6, t. 1951(left). 1853. Type: Sri Lanka, *Walker* 2754 (K 000246332 photo! syn); *ibid.*, *Thwaites* CP 3134 (CAL syn, G-DC microfiche! syn, K 000246330 photo! syn, P 00318236-7 syn).
16. **Breynia rigida** (Thwaites) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus rigidus* Thwaites, Enum. Pl. Zeyl. 4: 284. 1861. Type: Sri Lanka, 1856, *Thwaites* CP 2135 (K 000246350 syn; CAL -2 sheets syn, BM syn, G-DC microfiche! syn, P 0023739897-8 syn).
17. **Breynia saksenana** (Manilal *et al.*) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus saksenanus* Manilal *et al.*, J. Indian Bot. Soc. 64: 294. 1985 (as *saksenianus*). Type: India, Kerala, Silent Valley, Nilikkal, 1150 m, 6 Aug. 1982, *S. V. Prasannakumar* 10398 (CAL holo, CALI iso).
18. **Breynia stipitata** (Hook.f.) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus stipitatus* Hook. f., Fl. Brit. India 5: 333. 1887. Type: India, Darjeeling, *Griffith* KD 4827 (CAL iso, K 000246337 photo! holo).
19. **Breynia trinervia** (Hook. f. & Thomson *ex* Müll.-Arg.) Chakrab. & N.P. Balakr., **comb. nov.**  
*Sauropus trinervius* Hook. f. & Thomson *ex* Müll.-Arg., Linnaea 32: 72. 1863 (as *trinervis*). Type: India, Khasi Hills, *Hooker & Thomson s.n.* (CAL syn, G-DC microfiche! syn, K syn). HBC, *Wallich* 7922 A (K 000246342-3 syn). Bangladesh, Silhet, 1835, *Wallich* 7922 B (CAL syn, G-DC microfiche! syn, K 000246341-44 photo! syn).

**New name**

**Breynia macrocalyx** Chakrab. & N.P. Balakr., **nom. nov.**

*Sauropus rhamnoides* Blume, Bijdr. Fl. Ned. Ind. 596. 1826, non *Breynia rhamnoides* (Willd.) Müll.-Arg. 1866. Type: Java, Montis Salak, *Blume s.n.* (L lecto *n.v.*, P 00360994 isolecto).

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