SHORT COMMUNICATION

Synostemon convallarioides (J.T.Hunter & J.J.Bruhl) Guymer, comb. nov. is distinct from *S. sphenophyllus* Airy Shaw (Phyllanthaceae)

Gordon P. Guymer[1]

Key Words: Phyllanthaceae; *Synostemon convallarioides*; *Synostemon sphenophyllus*; flora of Australia; flora of Queensland; taxonomy; identification key

[1]c/o Queensland Herbarium & Biodiversity Science, Department of the Environment, Tourism, Science and Innovation, Brisbane Botanic Gardens, Mt Coot-tha Road, Toowong, Queensland 4066, Australia. Email: guymerg@internode.on.net

Sauropus convallarioides J.T.Hunter & J.J.Bruhl was described as a new species from Cape York Peninsula by Hunter & Bruhl (1997) and later placed into the synonymy of *Synostemon sphenophyllus* Airy Shaw by Telford *et al.* (2014). Examination of the Type specimen of *Synostemon sphenophyllus* from Papua New Guinea and the Australian collections at BRI referred to this species show that the Australian specimens are distinct from *S. sphenophyllus*. Consequently, the new combination *Synostemon convallarioides* (J.T.Hunter & J.J.Bruhl) Guymer is made to accommodate this species in *Synostemon*. A key to Queensland and Papua New Guinea *Synostemon* is provided.

Taxonomy

Synostemon convallarioides (J.T.Hunter & J.J.Bruhl) Guymer, **comb. nov.**

Sauropus convallarioides J.T.Hunter & J.J.Bruhl, *Austrobaileya* 4: 666–667, fig. 3 (1997). **Type:** Australia. Queensland. Cook District: South Pap, Tozer Gap area, Cape York Peninsula, 16 September 1983, *D.L.Jones 1244* (holo: BRI [AQ0452404]).

Sauropus sp. (Iron Range D.G.Fell DF2321): Forster & Henderson (1997: 75).

Synostemon sphenophyllus auct. non Airy Shaw: Telford *et al.* (2014: 456–459, fig. 4 C&D) all Queensland specimens; Zich *et al.* (2020).

Refer to Hunter & Bruhl (1997) and Telford *et al.* (2014, under *S. sphenophyllus*) for descriptions of this species.

Additional specimens examined (excluding the Type and specimens cited by Hunter & Bruhl (1997) and Telford *et al.* (2014)): **Queensland.** Cook District (all BRI): 8 km W of Cholmondeley Creek crossing, Mar 1992, *Johnson 5159*; Between Dulhunty River & Bertie Creek, Mar 1993, *Clarkson 9346*; 2 km W of Glennie Creek, May 2003, *Gray 8597 & Jones*; Glennie Creek crossing, Jun 2007, *Forster PIF32635 & McDonald*; Bromley, track to Wattle Hills, Jun 2016, *Wannan 6834 et al.*; 11.8 km E of Bromley on track to Cannon Valley, Jul 1990, *Clarkson 8885 & Neldner*; 48.3 km E by road of Moreton Telegraph Station, Jun 1989, *Forster PIF5333*; 24 km by road E of Bromley Homestead, Jun 2007, *Forster PIF32622 & McDonald*; Portland Roads, Pascoe River, Jun 2007, *Smith 5202 & Nelson*; 7.4 km past Tin Creek crossing on road to Kennedy Hill, Jul 1990, *Forster PIF8927*; Wattle Hills, Pascoe River, *Waterhouse BMW7545*; Nelson Creek, Jacky Jacky Range, May 1991, *Fell DF2321*; Wattle Hills, 35.8 km NW of Lockhart River, Jul 2010, *McKenna SGM761*; 9.2 km N of Lockhart River, Aug 1991, *Clarkson 9080 & Neldner*; N of Mt Tozer, Jul 2004, *Wannan 3670 et al.*; Mt Tozer, Jun 1948, *Brass 19023*; *ibid.*, Feb 1980, *Clarkson 2882*; 7 km E of Garraway Creek crossing, Aug 1987, *Clarkson 7348*; *c.* 1.5 km upstream from Brown Creek

Accepted for publication 29 October 2026, published online 4 November 2026

© Queensland Herbarium 2026. ISSN 2653-0139 (Online)

crossing, Apr 1988, *Forster PIF4166 & Liddle*; Brown Creek area, *c.* 23 km E of Pascoe River crossing, Jun 2017, *Fell DGFBC23/23a & Pritchard*; *c.* 26 km WSW of Lockhart River, Apr 1993, *Clarkson 9930 & Neldner*; Hill 334, Pascoe River, Jun 1994, *Forster PIF15393 & Tucker*; Pascoe River, Jun 1993, *Hyland 14794*; NE corner of Piccaninny Wildlife Sanctuary, Jan 2019, *Jensen 3184 & Kemp*; Top Dusty Lagoon, Mar 2008, *Smith 5331 & Claudie*; Fox Creek, Orchid Creek Station, Apr 2014, *Forster PIF41066 et al.*; Wallaby Range, Orchid Creek Station, Apr 2014, *Forster PIF40908 et al.*

***Distribution and habitat*:** *Synostemon convallarioides* is endemic to Queensland on Cape York Peninsula from Cholmondeley Creek, NE of Mapoon to the Archer River, north of Coen. It occurs in open forests and woodlands with *Corymbia* and *Eucalyptus* dominant in the tree layer with species of *Acacia*, *Grevillea* and *Melaleuca* on sand plains, alluvial terraces, slopes, plateaus and hills. The species has also been recorded from heathlands of *Leptospermum*, *Banksia*, *Asteromyrtus* and *Hibbertia* and on the margins of simple notophyll vineforest.

***Notes*:** *Synostemon convallarioides* is closely allied to *S. podenzanae* (S.Moore) I.Telford & Pruesapan based on morphological characters. This is supported by ITS nrDNA sequence data (Telford *et al.* 2014) that used samples from *Gray 8597* (cited as *S. sphenophyllus* but is *S. convallarioides*) and *Blake 23210* (*S. podenzanae*).

Synostemon sphenophyllus Airy Shaw, *Kew Bulletin* 33: 37–38 (1978); *Sauropus sphenophyllus* (Airy Shaw) Airy Shaw, *Kew Bulletin Additional Series* 8: 221 (1980). **Type:** Papua New Guinea. Western Province: Morehead Subprov., Sibidiri, Mai Kussa River, 11 July 1968, *E.E. Henty & P. Katik NGF38763* (holo: BRI [AQ0196364]; iso: L 0016477[2]).

Refer to Airy Shaw (1978) for a description of this species. [2]image viewed online.

***Notes*:** *Synostemon convallarioides* differs from *S. sphenophyllus* by the characters listed in **Table 1**.

Table 1. **Character comparison between *Synostemon convallarioides* and *S. sphenophyllus***

Character	***S. convallarioides***	***S. sphenophyllus***
Habit	subshrub 0.2–0.6 m	shrub 1.0 m
Stipule base	truncate to rounded	cordate, sagittate
Stipule colour	cream with brown apex	pale tan
Stipule direction & shape	spreading, narrowly triangular, 0.2–0.3 mm wide	± appressed, triangular, 0.4–0.8 mm wide
Flower colour	white	yellow
Sepals (♂ flower)	connate ½ their length	connate at base
Stigma	clavate, bifid, recurved	subulate, entire, ± erect
Leaf blade shape	elliptic to obovate	oblanceolate, obovate
Leaf blade length	5–24 mm long	10.5–40 mm long
Leaf blade width	2–16 mm wide	8–12 mm wide
Leaf base	rounded to obtuse	cuneate or acute
Leaf margin	revolute to flat, thickened	reflexed, not thickened
Tertiary venation	obscure & flush	prominent & raised
Leaf lateral veins	3–7 pairs	5–11 pairs
Inflorescence (♂)	1–10-flowered fascicle	solitary
Pedicel (♀ flower)	1.5–6.2 mm long	4–13 mm long
Ovary	sessile	shortly stipitate

***Distribution and habitat*:** This species is only known from the type collection from Sibidiri where it was reported from woodland on a low hill.

Key to Queensland and Papua New Guinea species of *Synostemon*

1 Branchlets spinescent; flowers in fascicles on branchlets in axils of spines; central Qld ..... ***Synostemon spinosus***

1. Branchlets not spinescent; flowers axillary, solitary or in fascicles **2**

2 Branchlets and leaves viscid; widespread (except SE Qld)..... ***Synostemon ramosissimus***

2. Branchlets and leaves not viscid..... **3**

3 Branchlets leafless or with leaves reduced to triangular-ovate scales 1–1.6 mm long; NE Qld..... ***Synostemon aphyllus***

3. Branchlets with leaves..... **4**

4 Stipules with bases cordate or sagittate..... **5**

4. Stipules with bases truncate to obtuse..... **7**

5 Leaf blades concolorous; pedicels 0.4–1.4 mm long; N Qld ..... ***Synostemon elachophyllus***

5. Leaf blades discolorous; pedicels 2–15 mm long (to 25 mm long in fruit) **6**

6 Leaf blades with obscure and flush reticulate venation, bases rounded to obtuse; pedicels of female flowers 1.5–6.2 mm long; stigmas clavate, recurved; flowers white; E Qld ..... ***Synostemon albiflorus***

6. Leaf blades with prominent and slightly raised reticulate venation, bases cuneate to acute; pedicels of female flowers 4–13 mm long; stigmas subulate, erect; flowers yellow; Papua New Guinea..... ***Synostemon sphenophyllus***

7 Leaves in fascicles or leaf margins involute; leaf blades 1.5–6 mm long, 0.9–3 mm wide **8**

7. Leaves not in fascicles and leaf margins flat, reflexed, recurved or revolute; leaf blades 4–28 mm long, 2–20 mm wide..... **9**

8 Leaves in fascicles; branchlets rounded not ribbed; leaf margins flat; central & SW Qld ..... ***Synostemon rigens***

8. Leaves not in fascicles; branchlets prominently 4–6-ribbed; leaf margins involute; Taravale area, NW of Townsville..... ***Synostemon anemoniflorus***

9 Leaf blades minutely tomentellous (hairs dense, curved to hooked, to 0.2 mm long) above and below; NW Qld..... ***Synostemon rigidulus***

9. Leaf blades glabrous or papillose..... **10**

10 Leaf blades orbicular, elliptic to obovate; perennials with annual stems..... **11**

10. Leaf blades oblong, narrowly elliptic, narrowly ovate or obovate; annuals or perennials without annual stems..... **12**

11 Male flowers with sepals connate for half their length (1–1.5 mm), 1–10 per fascicle, pedicels 1–3 mm long, sepals obovate, 0.5–1.2 mm long; stipules 0.4–0.8 mm long; N Cape York Peninsula..... ***Synostemon convallarioides***

11. Male flowers with sepals free, 1–3 per fascicle, pedicels 0.6–1.8 mm long, sepals elliptic, 2.6–3.2 mm long; stipules 0.7–1.7 mm long; N Qld (N of Chillagoe) ..... ***Synostemon podenzanae***

12 Plants perennial with thickened rootstock **13**

12. Plants annuals with fibrous root system or tap root **15**

13 Branchlets smooth; leaf margins recurved; sepals of male flower connate for 4–5 mm; male flowers solitary; fruits on pedicels 4–12 mm long; central & SE Qld ..... ***Synostemon hirtellus***

13. Branchlets ridged; leaf margins flat; sepals of male flower free; male flowers in 1–5-flowered fascicles; fruits on pedicels 0.5–3 mm long **14**

14 Stipules spreading, ± at right angle to stem; seeds irregularly ridged and pitted, 3.2–4.5 mm long, cream to pale brown, hilum elliptic; widespread (except SE Qld) ..... ***Synostemon rhytidospermus***

14. Stipules erect or appressed; seeds irregularly verrucate in longitudinal lines, 2.3–2.8 mm long, dark brown-black, hilum circular; N Qld ..... ***Synostemon lissocarpus***

15 Pedicels of male flowers 0.4–0.6 mm long; sepals of male flowers with scales present, subapically on inside; androphore splitting apically into 3 with anthers below; coastal Cape York Peninsula ..... ***Synostemon bacciformis***

15. Pedicels of male flowers 0.3–2 mm long; sepals of male flowers without scales; androphore not splitting **16**

16 Leaf blades ± concolorous; perianth narrowly campanulate; seeds colliculate-rugose, 4–5.2 mm long, cream; plants with fibrous root system; central & SW Qld ..... ***Synostemon trachyspermus***

16. Leaf blades discolorous, glaucous below; perianth broadly campanulate; seeds verrucate, warts often aligned longitudinally, 2.8–4 mm long, brown; plants with tap root; tropical Qld ..... ***Synostemon hubbardii***

References

Airy Shaw, H.K. (1978). Notes on Malesian and other Asiatic *Euphorbiaceae*. CCX. *Synostemon*. *Kew Bulletin* 33: 37–38.

Forster, P.I. & Henderson, R.J.F. (1997). Euphorbiaceae. In Henderson, R.J.F. (ed.) *Queensland Plants: Names and Distribution*: 75. Queensland Herbarium: Brisbane.

Hunter, J.T. & Bruhl, J.J. (1997). Four new rare species of *Sauropus* Blume (Euphorbiaceae: *Phyllantheae*) from north Queensland. *Austrobaileya* 4: 661–672.

Telford, I.R.H., Pruesapan, K., van Welzen, P.C. & Bruhl, J.J. (2014). Molecular data consistently recover a 'Queensland clade' of *Synostemon* (Phyllanthaceae, *Phyllantheae*) with distinctive floral morphology. *Australian Systematic Botany* 27: 450–461.

Zich, F.A., Hyland, B.P.M., Whiffin, T. & Kerrigan, R.A. (2020). *Synostemon sphenophyllus*. *Australian Tropical Rainforest Plants, Edition 8*. https://apps.lucidcentral.org/rainforest/, accessed 14 August 2026.