

TWO NEW SPECIES OF SAUROPUS (EUPHORBIACEAE) FROM THAILAND, AND A NEW COMBINATION

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SUMMARY

Two new species of *Sauropus* are described, both endemic to Thailand. The two species have long, cauliflorous inflorescences. *Sauropus discocalyx* has very broad staminate flowers and *S. thyrsiflorus* has thyrsoid inflorescences with per node a single pistillate flower and cymes with staminate flowers. A new combination for *Glochidion subterblancum* C.E.C. Fisch. (*Breynia subterblancum* (C.E.C. Fisch.) C.E.C. Fisch.) is made in *Sauropus*.

Key words: Euphorbiaceae, *Sauropus*.

INTRODUCTION

The majority of *Sauropus* species have axillary fascicles (to very short racemes, less than 1 cm long). The two new species have real, long inflorescences, like several other species, all mainly from Thailand and Indochina. The species with long inflorescences are usually herb-like shrubs or small shrubs up to 1.5 m high with ramiflorous and/or cauliflorous inflorescences, often only at the base of the trunk. The species are quite rare and are only represented by a few specimens in all herbaria combined.

Only two specimens are known of the new *S. discocalyx*. They resemble *S. racemosus* Beille. The type of that species (*Balansa* 3202, P) is quite unlike *S. discocalyx* in the leaves (smaller and narrower: up to 10.5 by 3.5 cm, length/width ratio c. 3) and the staminate flowers (also broad, c. 15 mm in diameter, but very distinctly lobed, with free lobes up to halfway the calyx). A second specimen from Paris, doubtfully identified as *S. racemosus* (leaves basally rounded instead of narrowly cuneate), has pistillate flowers with short, up to 2.2 mm long, pedicels and an ovary which is basally rounded and not narrow, also the diameter of the flower is much smaller, c. 7 mm and the calyx lobes are c. 3.5 by 2 mm.

The second new species, *S. thyrsiflorus*, was tentatively identified as *S. bonii* Beille (Airy Shaw, 1972) or as *S. racemosus* Beille (Maxwell on his specimens). The species resembles *S. micrasterias* Airy Shaw from Borneo, but the latter has racemes or panicles with racemous, staminate branches. *Sauropus thyrsiflorus* also resembles *S. bonii* Beille, known from Indochina. Both species have very long cauliflorous inflorescences with short cymous branches with staminate flowers. However, the leaves of *S. bonii* are thicker, more ovate, less long and the staminate flowers have a hardly lobed calyx with obovate lobes (pistillate flowers not seen).

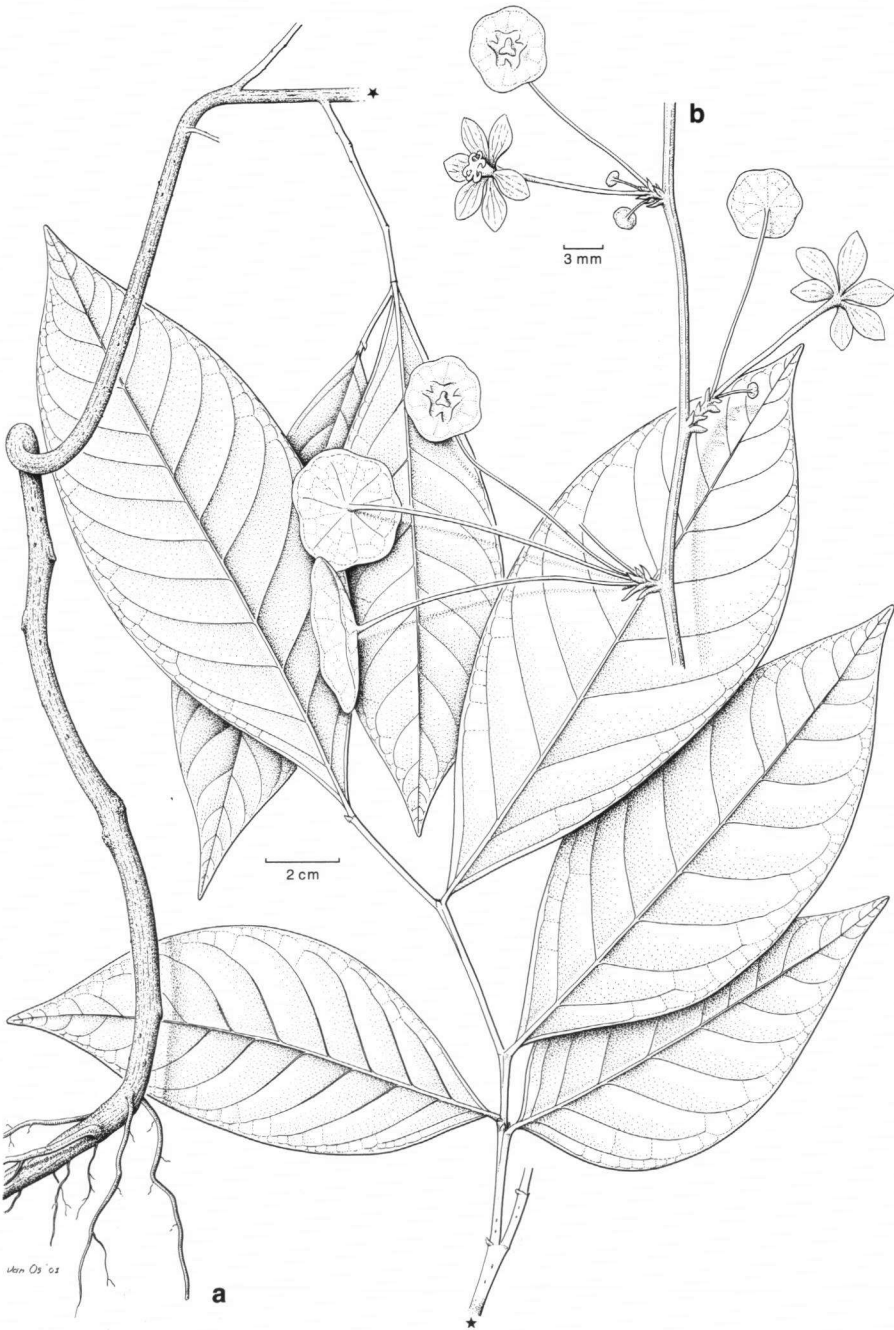


Fig. 1. *Sauropus discocalyx* Welzen. a. Habit; b. inflorescence (Van Beusekom & Phengklai 566, L).

Another very rare *Sauropus* species was originally described in the genera *Glochidion* (*G. subterblancum*) and *Breynia* (*B. subterblancum*) by Fischer (1927, 1939, respectively). The type is from Myanmar, but another collection from an adjacent area in Thailand (*Kerr 11745*, K) appeared to be similar. The species belongs to the so-called *Hemisauiropus* group (Pax & Hoffmann, 1922; Airy Shaw, 1980) in which the staminate flowers deviate from the other *Sauropus* species. The sepals lack scales, all apices are more or less involute, but the apex of three sepals is grown together with the rest of the sepal blade; the anthers are much larger than in other *Sauropus* species and more or less directed upwards instead of horizontal. The stigmas in the *Hemisauiropus* group are erect instead of horizontal and partly grown together with the ovary (they then have the typical shape of a crescent moon). However, this type of stigma is also found outside the *Hemisauiropus* group. Most species in the *Hemisauiropus* group have small leaves, but, relative to them, *S. subterblancus* is large-leaved, just like *S. pierrei* (Beille) Croizat (originally described in the monotypic genus *Breyniopsis*). *Sauropus subterblancus* has broader leaves than *S. pierrei*, and the leaves are glaucous in *S. subterblancus*.

***Sauropus discocalyx* Welzen, spec. nov. — Fig. 1**

Folia 11.5–17.5 cm longa 5.8–7.2 cm lata ratione 2–2.3. Racemi cauliflores terram proximi ad 7.5 cm longis. Flores staminales 12–13 mm in diam., calyx discoideus translucens vix lobatus. Flores pistillati ovario triangulato. — Typus: *Van Beusekom & Phengkhlai 566* (holo L; iso AAU, BKF, C, E, K, P), Thailand, Ranong Prov., Khao Saideng, near Ranong.

Shrublet with ascending habit, up to 0.5 m high; young branches with 4 distinct ribs. *Indumentum* absent. *Stipules* triangular, basally eared, 2.5–3 by 2–2.5 mm, stiff, rather persistent. *Leaves*: petiole 2.5–4 mm long, flattened above with 3 longitudinal (indistinct) ridges; blade (ovate to) elliptic, 11.5–17.5 by 5.8–7.2 cm, length/width ratio 2–2.3, papery, base attenuate, descending into petiole, margin entire, flat, apex cuspidate, usually mucronulate, lower surface not papillate; venation flat to somewhat sunken above, distinct beneath, nerves 12–15 per side, looped and closed near margin, veins and veinlets reticulate. *Inflorescences* cauliflorous at ground level to axillary, racemes (to panicles), up to 7.5 cm long, with per node groups of staminate flowers and a single pistillate flower; flowers sometimes on short, up to 2 mm long, branches with (sub)apically the pistillate flower. *Flowers* reddish green. *Staminate flowers* 12–13 mm in diameter; pedicel 13.5–15 mm long; calyx hardly lobed, disc-like, translucent when mature; lobes very broadly triangular, 1–1.5 by c. 4.5 mm, patent, apex rounded, scales small; stamens: androphore c. 0.3 mm high, anthers c. 0.3 by 0.7 mm. *Pistillate flowers* c. 11 mm in diameter; pedicel c. 13 mm long; calyx almost completely split, lobes only basally attached, obovate, c. 5 by 3 mm, more or less with claw, apex rounded; ovary obtriangular, c. 2 by 2 mm, basally very narrow, green; stigmas horizontal, c. 2 mm long, split up to halfway, forming more than a circle, green. *Fruits* red, not seen. *Seeds* unknown.

Distribution — Thailand (northern part Peninsular floristic district: Chumphon, Ranong Province). Perhaps also in Malaysia (Perak).

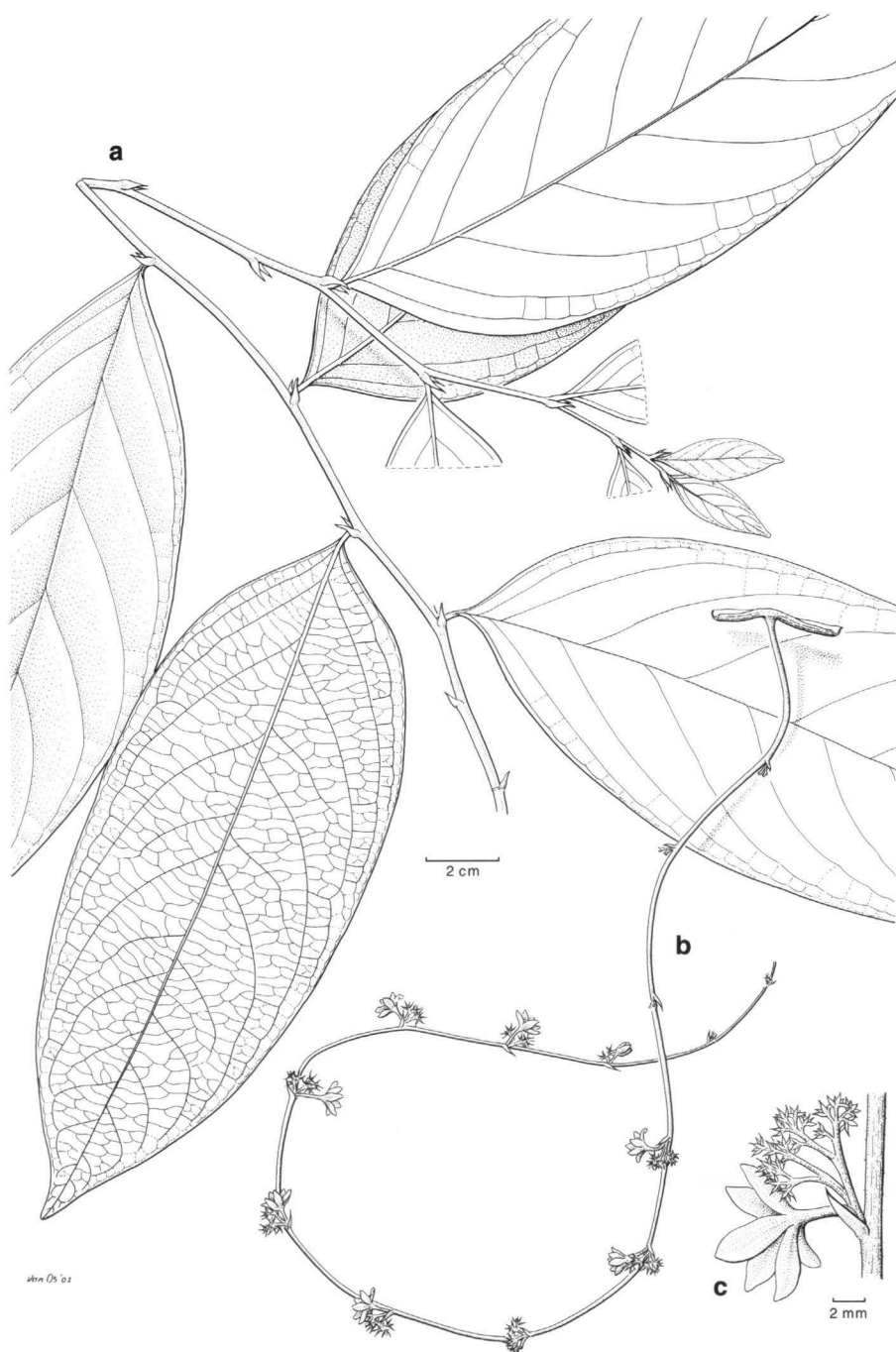


Fig. 2. *Sauropus thyrsiflorus* Welzen. a. Habit; b. cauliflorous inflorescence with per node a single pistillate flower and cymes with staminate flowers; c. detail of b (a: Maxwell 96-499, L; b, c: Maxwell 96-74, A).

Habitat & Ecology — Wet evergreen forest. Altitude 400–1500 m. Flowering: February, May.

Note — A third specimen from Malaysia (Goping/Gopeng in Perak, *King's collector* 477) bears a strong resemblance to the Thai specimens in the leaves. The staminate flowers are still too young. The pistillate flowers are also somewhat younger.

***Sauropus thyrsiflorus* Welzen, *spec. nov.* — Fig. 2**

Arbuscula. Folia magna 6.5–26 cm longa. Inflorescentiae thyrsoidae in quoque nodo ac flore pistillato ac ramis cymosis floribus staminalibus gerentes. Flores staminales calycis lobis angustis triangularibus. Sauropo micrasterias arcte similis, qui floribus staminalibus in racemis vel paniculis ramis racemosis gaudet. — Typus: *Maxwell 94-499* (holo L; iso A), Thailand, Kanchanaburi Prov., Sangklaburi Distr., Lai Wo Subdistr., Toong Yai Naresuan Wildlife Reserve, Ban Sanah Pawng area (Karen hilltribe village).

Sauropus bonii auct. non Beille: *Airy Shaw, Kew Bull.* 26 (1972) 334.

Treelet up to 3 m tall, basal diameter up to 20 cm; glabrous; young branches without ribs; flowering branches 11–20 mm thick; sometimes smell of fenugreek. *Bark* thin, smooth to rather rough, finely pustular-lenticellate, dark grey to tan to dark brown. *Stipules* triangular, 6.5–8 by 1.7–3 mm, basally eared, pergamentaceous, persistent. *Leaves*: petiole 4–5 mm long, pulvinate, flattened above and with 3 longitudinal ridges; blades elliptic, 6.5–26 by 2.7–8 cm, length/width ratio 2–3.7, papery, base attenuate to cuneate, margin entire, flat, apex acuminate to cuspidate, mucronulate, upper surface dark green, glossy; lower surface light green, not papillate; venation distinct on both sides, nerves 10–12 per side, closed near margin, veins and veinlets reticulate. *Inflorescences* cauliflorous to ramiflorous, thyrsoid, up to 12–51 cm long, rachis dull dark pink, with per node basally a single pistillate flower and cymose branches with staminate flowers, up to 5 mm long. *Staminate flowers* 6–7 mm in diameter, buds light green; pedicel c. 5.5 mm long; calyx 3–3.5 mm deep, dull pale light pinkish, lobes triangular, 2–2.2 by 1.5–2.1 mm, basally dull red inside, apex acute, scales as wide as lobes, thin; stamens: androphore 0.2–0.3 mm high, connectives dull light pinkish, anthers c. 0.4 by 0.4 mm. *Pistillate flowers* 11–12 mm in diameter; pedicel 3–6 mm long; calyx almost completely lobed, lobes elliptic, thick, light greenish to yellow, apex usually acute, outer lobes 5.5–6 by 3.3–4 mm, inner lobes 4.8–5.5 by 3.3–4 mm; ovary cup-shaped, 1.2–2.3 by 1.8–2.7 mm, light yellowish to pale light pinkish; stigmas up to 2 mm long, flat, split up to 1 mm, forming more than a circle. *Fruit* c. 19 by 15 mm, rather woody, with 6 longitudinal ridges. *Seeds* crescent moon-shaped, sharply triangular in transverse section, c. 14 by 8 by 6 mm.

Distribution — Endemic in Thailand (Northern, Lampang Province, and South-western floristic district, Kanchanaburi Province).

Habitat & Ecology — Shaded area in evergreen and deciduous hardwood forest; rugged limestone terrain or limestone bedrock. Altitude 200–650 m. Flowering: January, April, May. Fruiting: May.

Note — The plants from Kanchanaburi have much shorter inflorescences, but these still seem young and can easily become much longer. The leaves in Kanchanaburi are broader (length/width ratio up to c. 3), those in Lampang are narrower.

Sauropus (§ Hemisauropus) subterblancus (C.E.C. Fisch.) Welzen, *comb. nov.*

Sauropus subterblancus (C.E.C. Fisch.) Welzen. — *Glochidion subterblancum* C.E.C. Fisch., Bull. Misc. Inform. (1927) 211. — *Breynia subterblancum* (C.E.C. Fisch.) C.E.C. Fisch., Bull. Misc. Inform. (1939) 98. — Type: *C.E. Parkinson 1669* (holo K; iso K), Myanmar (Burma), South Tenasserim, Kyein Chaung.

Low shrubs, up to 70 cm high, glabrous; only very young branches with 2 ribs; flowering branches 1–1.3 mm thick. *Stipules* triangular, 1.3–1.4 by 0.9–1 mm, basally eared, stiff, rather persistent. *Leaves*: petiole 2–2.5 mm long, pulvinate, ridged above, some asperities (= long, stiff papillae) above; blade ovate, 3.5–7.5 by 2–4.1 cm, length/width ratio 1.7–1.9, coriaceous, base attenuate, margin entire, somewhat revolute, apex acute, mucronulate, glaucous when dry, papillate below; venation indistinct above, indistinct beneath, nerves 6–8 per side, veins and veinlets reticulate. *Inflorescences* axillary fascicles with single flowers, staminate ones lower on the branches; flowers pale green. *Staminate flowers* c. 3.5 mm in diameter; pedicel c. 2 mm long; calyx c. 1.7 mm high, smaller sepals c. 1 by 2 mm, apex rounded, involute, larger ones c. 1 by 1.3 mm, emarginate, apex inflexed and grown with blade; stamens: androphore c. 1 mm long, yellow, anthers c. 1.2 by 1.2 mm. *Pistillate flowers* 5(–10.5 in fruit) mm in diameter; pedicel 2.5–3 mm; calyx lobes obovate, rounded, small ones c. 2 by 1.1 (to 2 by 3 in fruit) mm, larger ones c. 2.3 by 1.3 (to 2 by 6 in fruit) mm; ovary not measured; stigmas erect, c. 2 mm long, split in upper half, somewhat coiled, papillate above, basal to each stigma two fleshy, erect ovary lobes. *Fruits* ovoid, c. 7 by 5 mm, apically with rim formed by thickened apical ovary lobes; column not seen. *Seeds* not seen.

Distribution — Myanmar (S Tenasserim) and Thailand (Peninsular district: Ranong Province).

Habitat & Ecology — Evergreen forest. Altitude 50–70 m. Flowering and fruiting: February.

Vernacular names — Myanmar: Kyanna (Burmese); thakwan (Shan).

ACKNOWLEDGEMENTS

Jan Frits Veldkamp is heartily thanked for the Latin translations of the diagnoses, Jan van Os for his beautiful drawings, Ben Kieft for scanning the plates, and Connie Baak for the layout. The director of A is thanked for a loan of his *Sauropus* material.

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