

# SARCOSPERMACEAE (H. J. Lam, Leyden)

## 1. SARCOSPERMA

HOOK. *f.* in B. & H. Gen. Pl. 2 (1876) 655; RIDL. Fl. Mal. Pen. 2 (1923) 260; H. J. LAM, Bull. J. B. B. III, 7 (1925) 248; *l.c.* 8 (1926) 18; Philip. J. Sc. 49 (1932) 143; Blumea 3 (1938) 183; *l.c.* 3 (1939) 261; *l.c.* 4 (1941) 322.—*Bracea* KING, J. As. Soc. Beng. 64, II (1896) 101.—*Apoia* MERR. Philip. J. Sc. 17 (1920) 605.

Trees or shrubs, at least two *spp.* laticiferous. *Leaves* simple, entire, subopposite or opposite, rarely subverticillate; often with some alternate ones between, penninerved; petiole sometimes with auricles at the top; blade often with glandular pits in the axils of the secondary nerves or scattered on the undersurface; tertiary nerves slender but conspicuous, transverse and usually crowded, more or less perpendicular to the midrib. Stipules small, caducous. *Flowers* bisexual, in small fascicles or solitary, placed along racemose or more or less broadly paniculate axillary shoots; bracts minute deltoid. Sepals 5, quincuncially imbricate, two inner ones with scarious margins. Corolla infundibuliform, tube short, slightly thickened; lobes spreading, imbricate in bud. Stamines 5, alternipetalous, inserted in the throat. Stamens 5, epipetalous; filaments short, connate with the base of the petals; anthers basifix, slightly extrorse, 2-celled, longitudinally dehiscent. Ovary superior, 1–2-celled, glabrous, contracted into a short stout style; cells with 1 apotropous, ascending ovule, attached to the basis of the central axis; stigma truncate, capitate or faintly 2-lobed. *Fruit* drupaceous, 1–(2)-seeded, ovoid to oblong; pericarp thin. Seeds with a thin-crustaceous pale dull testa. Hilum small, round, basal; albumen absent; cotyledons thick; radicle inferior.

Distr. 6 *spp.* of this mono-generic family occur in SE. Asia and Malaysia.

Ecol. Scattered in mixed forests from the lowland up to  $\pm$  1100 m.

Uses. The wood of the moderate-sized *S. paniculatum* is rather soft and not durable; in Sumatra it is used as timber (HEYNE, Nutt. Pl. (1927)1245); MARCO described it in detail anatomically (Trop. Woods 5 (1933) 1).

Notes. The genus is closely allied to the *Sapotaceae*; its wood anatomy is only slightly different. Herbarium specimens are often not recognized and confused with other families.

### KEY TO THE SPECIES

1. Apex of the petiole with distinct auricles. Leaves oblong to elliptic, 6–28, by 3½–10 cm, dark brown *s.s.*; glandular pits scattered on undersurface; secondary nerves 6–11. Ovary 2-celled . . . . . 1. *S. paniculatum*
1. Auricles absent. Leaves rather broad, 11–36 by 3–13 cm, slightly pubescent below, light brown *s.s.*; glandular pits absent; secondary nerves 7–16. Ovary 1-celled . . . . . 2. *S. ulttienii*

1. *Sarcosperma paniculatum* (KING) STAFF & KING, *l.c.* Pl. 7 (1901) t. 2690; LAM, *ll.c.*—*Bracea paniculata* KING, *l.c.*—*Discocalyx macrocarpa* ELMER, Leaf. 8 (1915) 2781.—*Apoia macrocarpa* MERR. *l.c.*—*Sarcosperma breviracemosum* H. J. LAM, Bull. J. B. B. III, 8 (1926) 21.

Laticiferous tree, 12–27 m, unbranched bole 6–17 m, 20–50 cm diam., crown spreading. *Leaves* glabrous, opposite or scattered, oblong to elliptic, base acute to  $\pm$  acuminate, apex gradually bluntly acuminate, 6–28 by 3½–10 cm, auricles acute ½–2 mm long; petiole 1–2½ cm. Stipules subulate, glabrous, ca 4 mm long. Inflor. glabrous or slightly tomentose, either paniculate, 1–14 cm long with branches 2–9 cm, or hardly branched 8–16 mm long; bracts glabrous, acute, 1 mm long. *Flowers*

thickish, waxy yellow to pale greenish white, fascicled or solitary; pedicels 1–1½ mm. Sepals roundish or broadly acute 2 mm through. Corolla tube 1 mm, lobes ovate 3 by 2 mm. Stamines acute 1 mm. Stamens ovoid 1 mm through. Ovary 2 by 1 mm; style 1 mm. *Fruit* ovoid, 17–20 by 17–15 mm, 1-(rarely 2-) seeded, 3 mm stalked; hilum 3 by 4 mm.

Distr. *Malaysia*: Mal. Peninsula (Perak), N. Sumatra, Br. N. Borneo, Mindanao, S. Celebes, Ternate, Flores, and E. New Guinea.

Ecol. Scattered in dense or open mixed rainforests, rarely in forest borders, among bamboos, or in secondary jungle, in the Malay Peninsula below 250 m, elsewhere ascending to 1100 m. Fl. and fr. irregularly.

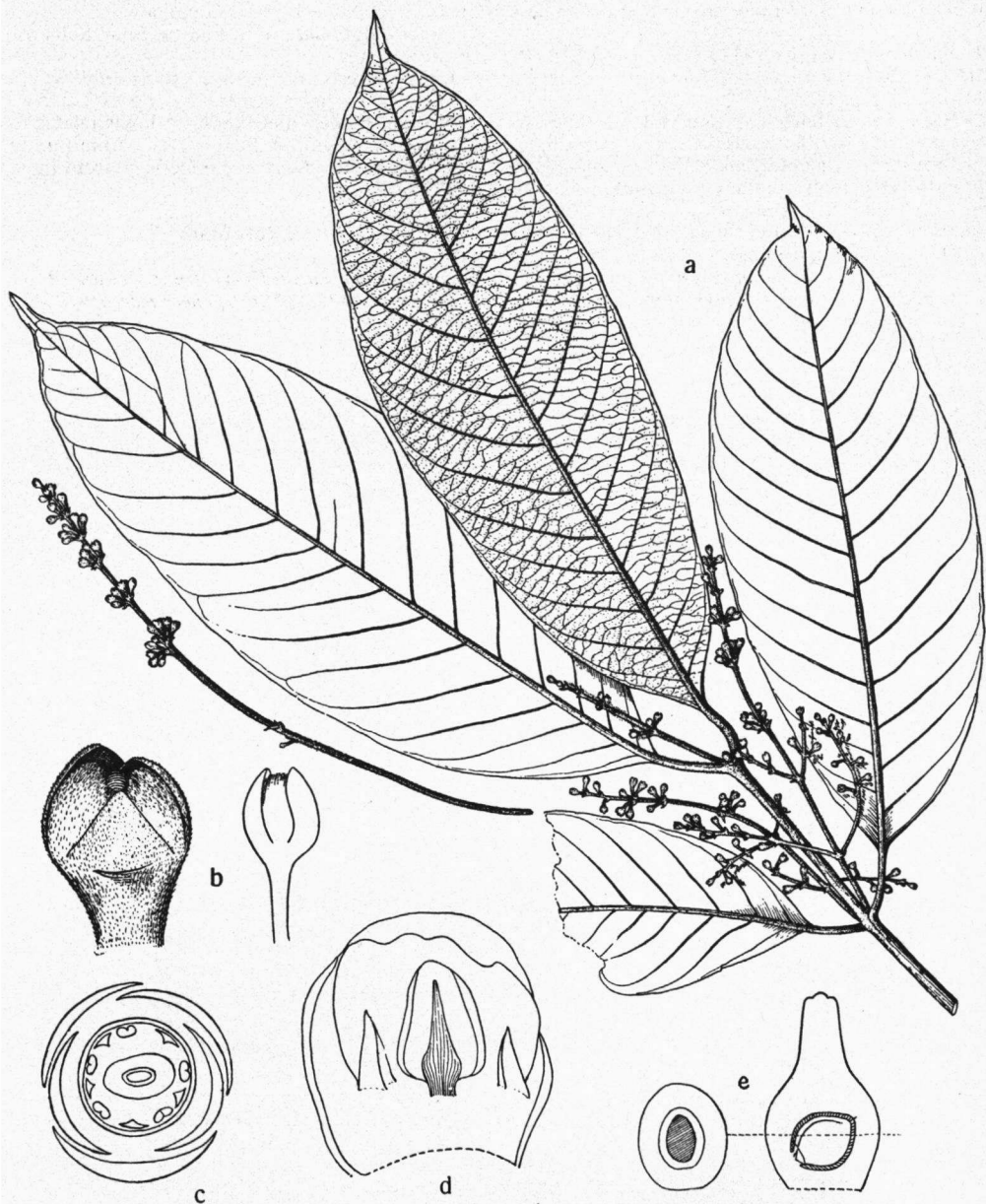


Fig. 1. *Sarcosperma uittienii* H. J. L. a. flowering branch,  $\times 1/2$ , b. bud, c. flower diagram, d. part of the corolla and calyx within, e. ovary in longitudinal and cross-section.

Vern. Not constant, few noted.

Notes. It is probable that more specimens are hidden among indeterminates in several families.

2. *Sarcosperma uittienii* H. J. LAM, Bull. J. B. B. III, 8 (1926) 19, f. 1, &c.—*S. sumatranum* UITT. ex LAM, l.c.—Fig. 1.

?Tree. Leaves fairly opposite, oblong-elliptic to ovate or obovate, both base and apex acuminate, glabrous above glabrescent below; petiole 12–20 mm. Inflor. densely minutely tomentose, generally broadly and laxly paniculate, sometimes almost unbranched, 3<sup>3</sup>/<sub>4</sub>–13<sup>1</sup>/<sub>4</sub> cm long, branches 1<sup>1</sup>/<sub>2</sub>–6<sup>3</sup>/<sub>4</sub> cm long; bracts tomentose, deltoid 1–2 mm long. Flowers fascicled or solitary *only known in bud*; pedicels 2–4 mm. Calyx densely tomentose, 2<sup>1</sup>/<sub>2</sub> by 2 mm. Corolla tube <sup>1</sup>/<sub>2</sub> mm long, lobes obovate,

2–2<sup>1</sup>/<sub>2</sub> mm. Stamines deltoid <sup>1</sup>/<sub>2</sub> by <sup>1</sup>/<sub>3</sub> mm. Stamens ovoid, 1 mm through. Ovary glabrous, 2<sup>1</sup>/<sub>2</sub> by 1<sup>1</sup>/<sub>2</sub> mm. Style 1 mm. Fr. unknown.

Distr. *Malaysia*: only known from Sumatra (Eastcoast Res.).

Ecol. Forests, ca 500 m. Fl. June–July.

Vern. Only once noted.

Notes. Inadequately known. Closely related to *S. kachinense* (KING & PRAIN) EXELL from Burma & China, and to *S. arboreum* HOOK. f. from India to China.

#### Excluded

*Sarcospermum petasites* REINW. ex DE VRIESE, Reinwardt's reize (1858) 576 = *Gunnera macrophylla* BL. (*Halorrh.*).