

A SECOND SPECIES OF SARACA FROM EAST MALESIA
AND ADDITIONAL NOTES ON SARACA CELEBICA
(CAESALPINIACEAE)

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Beside *Saraca celebica* from Celebes, presently a second species from East Malesia is described. As based on the revision by Zuyderhoudt (Blumea 15, 1967: 413–425), with 8 accepted species, there are now 9 species of *Saraca*, ranging from India and Indo-China into Malesia east to the Lesser Sunda I. (Flores) and the Moluccas (Halmaheira). The new species, *Saraca monadelpha*, was initially recognized through a specimen from Halmaheira which was difficult to determine as a *Saracca* because of its deviating partly fused stamens and its origin beyond the known area of the genus.

Of *S. celebica* the pods were not known until recently collected in Central Celebes. The fruits of *S. monadelpha* are still unknown.

Saraca celebica de Wilde

S. celebica de Wilde, Blumea 15 (1967) 393, fig. 1C.; Zuyderhoudt, Blumea 15 (1967) 417

To this the following description of the fruit can be added:

Pods c. 1–6 per corymb, woody, oblong to oblong-lanceolate, c. 15–18 × 5–6 cm, up to c. 16 mm thick, base obliquely cuneate, top acute-acuminate, 15–20 mm beaked, 5–6-seeded; dry mature valves somewhat coiled, c. 1.5 mm thick, inside with traces of the seed-compartments; immature (though full-grown) pod flat with somewhat thickened margin. Mature *seed* (1 seen) suborbicular, ± depressed at the side of the hilum, c. 37 × 31 × 12 mm, hard, edge rounded, glossy dark brown; hilum small, c. 2 mm.

In addition to the previously known collections of flowering material from Central and East Celebes (*Eyma* 3943, *Kaudern* 381, *Kjellberg* 2130, *b.b.* 19532), the following collection with flowers and fruit should be added:

CELEBES. Central: c. 15 km E. of Malili, along Larona R., c. 100 m alt., 19 June 1979, fl., fr., *van Balgooy* 3785.

Notes. 1. Fieldnotes. Trees c. 8 m tall, locally common on a single stretch of about 100 m along the Larona River, which flows from lake Towuti; at c. 100 m alt. The species was not seen elsewhere in the region. In June abundantly flowering, as well as with separate corymbs with submature flat fruits, still green, of c. 12–16 cm length. In the older collections flowers were collected in September and October.

Flowers orange-red. The somewhat coiled mature pod valves were collected from the ground where they obviously had dropped the season before. Only one undamaged seed was found.

2. Mature seeds of *Saraca* appeared to be rare in the herbarium collections. The single mature seed of *S. celebica*, as described above, apparently is from the basal compartment in the pod, because the seeds of the higher compartments generally are more laterally compressed (i.e. narrower) in *Saraca*.

***Saraca monadelpha* de Wilde, sp. nov. — Fig. 1.**

Saraca floribus carnosus; *staminibus* 4 fertilibus ceteris sterilibus, basi tubo 4–8 mm longo connatis; *antheris* c. 4 mm longis; *tubo calycis* 18–23 mm longo, *faucibus* 4–5 mm latis; *bracteis* caducis, 3–4 mm longis; *bracteolis* plerumque caducis, 4–9 mm longis. — T y p u s: *de Vogel 4375* (L).

Tree to 15 m tall. *Leaves* (1–)3–6-jugate, glabrous, subsessile, top of rhachis without free appendage; *leaflets* chartaceous, drying olivaceous, elliptic-oblong to oblong-lanceolate, at base subcordate to short-attenuate, top rounded to acute-acuminate, c. (6–)12–30 × 4–10 cm, the uppermost leaflets generally largest; basal *glands* present, apical glands sometimes present. *Corymbs* ± compact to

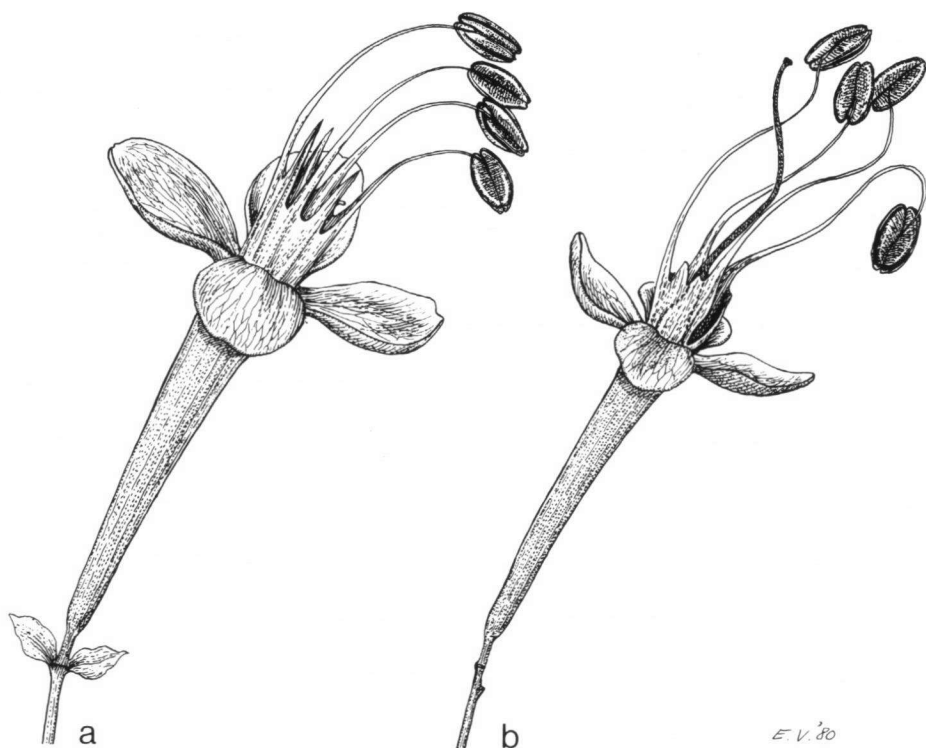


Fig. 1. *Saraca monadelpha* de Wilde — a. flower of *Schmutz 293* (L), vestigial ovary not visible, bracteoles still present ($\times 2$); b. flower of *de Vogel 4375* (type, L), hermaphroditic with well developed pistil, bracteoles fallen ($\times 2$).

loose, *c.* 5–12 cm diam., the branches *c.* 1 mm diam.; *bracts* smaller than the bracteoles, rather caducous, finely pubescent or glabrous with minutely lacerate-ciliate margin, elliptic-ovate, 3–4 mm long, top bluntish or acuminate; *bracteoles* finely pubescent or with ciliate margin, generally caducous, spreading, elliptic, 4–9 mm long. *Flowers* fleshy; *pedicel* 10–15 mm, the bracteoles 2–5 mm below the calyx tube; *calyx tube* 18–23 mm long, rather tapering to the base, 4–5 mm wide at the throat; *calyx lobes* 4, broadly ovate-elliptic, 8–12 × 6–10 mm. Perfect *stamens* 4, together with 6 tooth-like staminodes at base united into a filamental tube 4–8(–9) × 4–5 mm, sometimes split open to the base at the side of insertion of the (vestigial) ovary; free *filaments* of perfect stamens 17–20 mm long, dilated towards the base; free parts of staminodes (0.5–)1–5 mm; *anthers c.* 4 mm long. *Pistil* glabrous; *stipe of ovary* 2–2.5 mm, curved or not; *ovary* 4–5 mm long; *style* slender, (15–)18–22 mm, *stigma* minute. *Pod* not seen.

LESSER SUNDA ISLANDS. *Flores*: Régo, *Verheyen 01298/99*; Labuanbadjo, *Schmutz 293*; Watu Panggal, *Schmutz 3099*.

MOLUCCAS. *Halmaheira*: Central part, Akelamo Oba, 0° 34'N. – 127° 36'E., *de Vogel 4375*.

*Eco*logy: In Flores an indigenous shrubby tree, very scattered in the forest; at 20–350 m alt.; flowering in January (buds), March, and June; once found close to a river. In Halmaheira in depleted open forest 15 m tall, with much undergrowth, on alluvial flat with deep clayey soil near small stream, at 25 m alt.; flowering in December.

Vernacular names: *bikuning*, *lentan r'mba* (Flores); *sayamami* (Tobarolang, Halmaheira).

Notes: 1. Fieldnotes. Flowers in Flores recorded as deep yellow. In Halmaheira: flowers yellow tinged orange, filaments tinged magenta, anthers purple, pollen dirty yellow; tree with clear bole *c.* 7 m, 19 cm dbh., very straight, without buttresses, bark brown, not fissured, not peeling, with transverse small warty lenticels.

2. A specimen of this species, *Verheyen 01298/99*, was formerly erroneously recorded under *S. declinata*, a species which apparently does not occur in the Lesser Sunda I.

3. The present new species differs from all other *Saracas* by its relatively large fleshy flowers with broad calyx tube, deleted filaments, and large anthers, *c.* 4 mm long; in other *Saracas* the anthers measure 1–2(–3) mm. The staminodes, with tooth-like free parts up to 5 mm long, form with the perfect stamens a broad tube. This is new in *Saraca*, where the 3–8(–10) filaments generally are inserted on a slightly thickened 'disc' (presumably formed from the fused bases of the filaments) of up to *c.* 1 mm high, and go for being free.

In the key to the species by Zuyderhoudt (*Blumea* 15, 1967: 415) the new species fits in as follows:

3. Bracteoles 4–19 mm long.

3'. Calyx tube 18–23 mm long, at the throat 4–5 mm wide. Stamens and staminodes at base united into a tube 4–9 mm long. *Flores, Halmaheira.*

S. monadelphica

3'. Calyx tube at throat up to 2 mm wide. Stamens free, inserted on a 'disc' up to *c.* 1 mm long.

4. Variation. The specimens from Halmaheira and Flores rather differ in certain aspects of especially the flowers, but apparently they belong to a single species. In the collection from Halmaheira the bracts are apiculate-mucronate, the bracteoles are rather narrow and only *c.* 4 mm long, the flowers apparently hermaphrodite with well-developed stamens and pistil. The specimens from Flores are somewhat stouter of habit; the bracts are rounded at the top, the bracteoles broadly (ob)ovate, 5–9 mm long, and all inspected flowers have a vestigial pistil.

5. The connation of the filaments becomes apparent in a rather late stage in the development of the flower, evidently because of the late expansion of the filaments into their final size. I observed that in young flower buds the filaments of the four fertile stamens are still short, and straight and erect (but with the anthers relatively large and well developed), and at base hardly connate. In mature buds the lengthened filaments have become curved or wrinkled, and are connate at the base into the distinct tube.