

## ADDITIONS TO BORNEAN SYMPLOCACEAE

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### SUMMARY

Additional collections to *Symplocos goodeniacea* Noot. are mentioned and *S. costatifructa* Noot and *S. iliaspaiensis* Noot. are newly described.

*Symplocos goodeniacea* Noot., Leiden Bot. Ser. 1 (1975) 204; Fl. Males. I, 8 (1977) 261, was described on only one collection, SAN 74567 from Sabah, Sandakan, along a logging trail from mile 79½ Labuk road, altitude 150 m. Meanwhile two additional collections became available, one also from Sabah, SAN 94875, Hap Seng logged area, mile 12, Kalabakan District. The other, *Veldkamp* 8349, was found in Indonesia, Central Kalimantan, Bukit Raya area, Tumbang Tapi.

Both new collections match very well the description except that the SAN collection is described as a 15 m high tree (in the other collections the height is at most 7½ m). In the description the petiole length should be changed: 15–40 mm instead of 15–25 mm. All three collections only bear flowers.

Another Bornean collection, already available while revising the genus *Symplocos*, apparently represented a new species. Only fruits being present, I refrained from describing it then. Because now already four collections are available – alas all with fruits only – I decided to describe the species:

### *Symplocos costatifructa* Noot., *spec. nov.* – Fig. 1.

Arbuscula glabra 3 ad 8 m alta foliis infra nitidis pallide viridibus 13–28 cm longis et 5–8.5 cm latis venis lateralibus utroque latera 6 ad 10 petiolo 12 ad 20 mm longo. Inflorescentia parva spicata vel fasciculata fructu uno 2 ad 3 cm longo et 1 ad 1.5 cm lato putamine costis quinque c. 5 mm longis ornato. – *Typus*: *Paul Chai* S 34756 (L; iso K, KEP, SAR), Sarawak, Mata Kuching.

Treelet 3–8 m, nearly entirely glabrous. Twigs stout, glabrous, yellowish green when young, becoming blackish brown. *Leaves* glabrous, pale green, glossy underneath, spirally arranged, mostly narrowly elliptic, 13–28 by 5–8.5 cm, index 2.5–

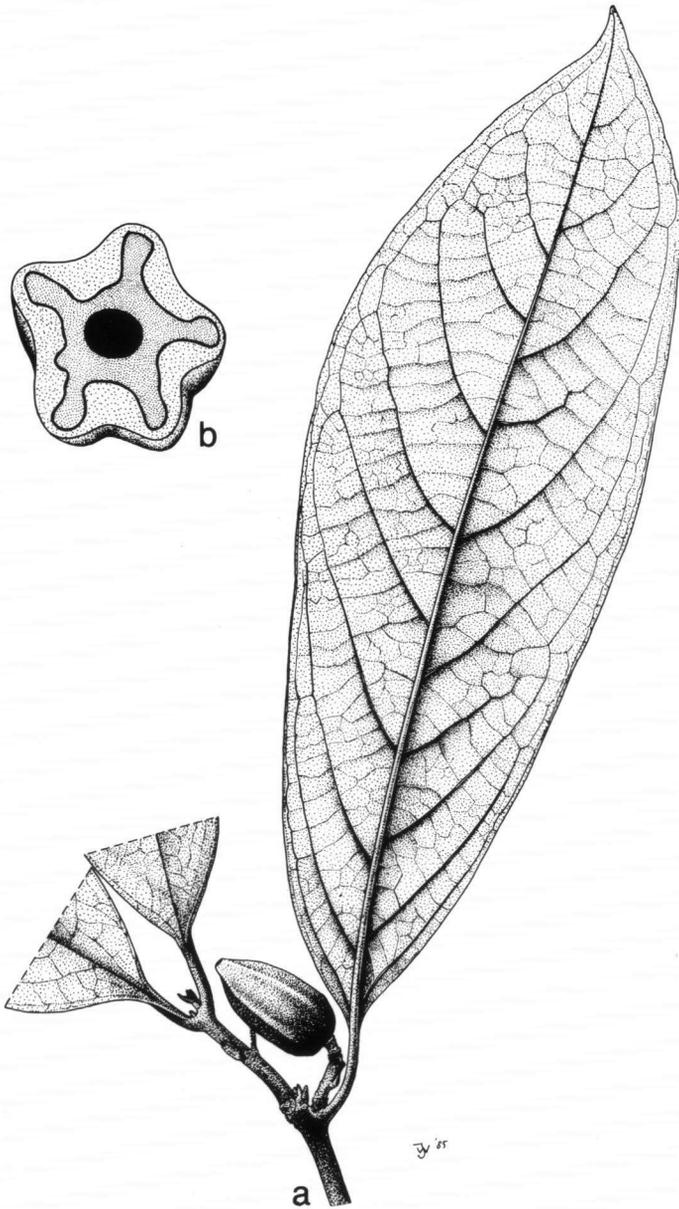


Fig. 1. *Symplocos costatifructa* Noot. a. Habit showing leaf underside and fruit,  $\times \frac{2}{3}$ ; b. cross-section of fruit,  $\times 2$  (a Paul Chai S 34756; b BRUN 216).

3.5 with cuneate or slightly decurrent base and acuminate apex, acumen 10–15 mm; margin recurved, entire or minutely denticulate; nerves conspicuously prominent beneath in 6–10 pairs, curved upwards and meeting in a looped intramarginal vein at least towards the apex of the leaf; primary veins  $\pm$  transverse to nerves, much prominent beneath; reticulation rather dense, prominent below, visible at both surfaces. Petiole stout, 12–20 mm long. *Infructescence* a short spike or fascicle, each infructescence bearing only one fruit; bracts and bracteoles fallen in fruit. *Fruit* ovoid but the ribs of the stone clearly visible when dry through shrinking of the mesocarp, 2–3 by 1–1.5 cm, at the inside of apex the glabrous thickened style base and 5 glabrous glands visible, calyx lobes fallen; stone nearly the same size as fruit with five c. 5 mm long ribs; only one cell developed. *Seed* one, straight, with straight embryo.

*Distribution*. Borneo: Sarawak, Mata Kuching, south of Dulith range (*Paul Chai S 34756*) and Ulu Sg. Sah, Niah, near Miri (*Ilias Paie S 39075*); Brunei, Ulu Belait (*Ashton BRUN 216*); Sabah, Mt Lumaku forest reserve, Sipitang District (*Saileh SAN 72131*).

*Ecology*. Primary kerangas and mixed dipterocarp forest up to 400 m. Fr. March–August.

*Note*. In the 'Key to the species' in *Flora Malesiana I*, 8 (1977) 235 this species should appear under lead 15, together with *S. barringtoniifolia*, from which it can be distinguished by the lateral nerves in 6–10 pairs versus 10–16 pairs in *S. barringtoniifolia* and the petiole being 15–20 mm versus 20–50 mm in *S. barringtoniifolia*. Furthermore the pale green glossy underside of the leaves is very different from *S. barringtoniifolia*.

Two recent collections from Sarawak by Ilias Paie also appeared to constitute a new species:

***Symplocos iliaspaiensis* Noot., *spec. nov.***

*Arbor parva glabra foliis anguste ellipticis 15 ad 25 cm longis et 4.5 ad 7.5 cm latis base cuneata margine integro vel undulato-denticulato apice acuminato venis primariis 6 ad 10 paribus in venam intramarginalem conspicue convenientibus petiolo 15 ad 20 mm longo. Inflorescentia fasciculata bracteis bracteolisque persistentibus c. 1 mm longibus. Flora glabra juvenes. Fructus juvenes fere cylindracei. – Typus: Ilias Paie S 42494 (L; iso A, K, SAR), Sarawak, path to Gunung Silantek, Ulu Sg. Silantek Kiri.*

Glabrous treelet to 3.5 m high. *Leaves* yellowish green when dry, narrowly elliptic, 15–25 by 4.5–7.5 cm, index 3–4, base cuneate decurrent in 2 ridges on the petiole, margin entire to undulating-denticulate, recurved, apex acuminate with an acumen of 15–22 mm; nerves in 6–10 pairs prominent on the undersurface and meeting in a conspicuous much prominent intramarginal vein which runs at 5 mm or more from the margin in the middle of the leaf, reticulation densely prominently netted at both surfaces. Petiole 15–20 mm. *Inflorescence* reduced to a fascicle with

sessile flowers or fruits, axis entirely absent, bracts and bracteoles persistent under the fruit, glabrous but ciliolate, c. 1 mm long. *Flowers* rather young. Ovary glabrous, c. 1 mm high, calyx c. 1 mm long, wholly divided into the lobes. Corolla c. 2.5 mm. Stamens c. 40. Disk glabrous, flat. Style glabrous, c. 2 mm. Young *fruits* nearly cylindrical but narrowed towards the apex, up to 13 by 5 mm, seed and embryo apparently straight.

**Distribution.** Borneo: Sarawak, 2nd Division, path to Gunung Silantek near the Indonesian border, except the type also *Ilias Paie S 42517*. A sterile collection from E. Kalimantan, Sg. Wain region, north of Balikpapan (*Kostermans 4480*) probably also belongs to this species.

**Ecology.** Mixed dipterocarp forest; altitude 180–250 m.

**Notes.** The species is probably closely related to *S. tricoccata* Noot. and *S. goodeniacea* Noot. In the 'Key to the species' in *Flora Malesiana I*, 8 (1977) 227 this species should appear under lead 15, where also *S. ophirensis* subsp. *cumingiana* should be inserted:

15. Leaves longer than 5 cm.

15a. Inflorescence a fascicle . . . . . **S. iliaspaiensis**

15a. Inflorescence a (short) spike, raceme, or panicle.

16a. Inflorescence a (compound) spike . . . . . **S. cochinchinensis** subsp. *laurina*

16a. Inflorescence a short raceme or a panicle . . **S. ophirensis** subsp. *cumingiana*

In the key on page 235 (l.c.) the species should appear under lead 10:

10. Inflorescence not a spike.

10a. Inflorescence a fascicle . . . . . **S. iliaspaiensis**

10a. Inflorescence a raceme or panicle . . . . . **S. ophirensis**