

COELOSTEGIA MONTANA, A NEW SPECIES OF BOMBACACEAE FROM BORNEO

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INTRODUCTION

Coelostegia is a small Bombacaceae genus from western Malesia (Peninsular Malaysia, Sumatra and Borneo). Soegeng Reksodihardjo (1960), in his revision of the genus recognizes five species. Since Soegeng's work no attempt at a revision has been made and no new species have been described.

Coelostegia and *Durio* are very difficult to distinguish by vegetative characters only. Flower and fruit characters are very important for species recognition. During field work in the Kayan Mentarang National Park, East Kalimantan, Indonesia, the author collected specimens of a *Coelostegia*-like plant that proved to be a new species. This species is described below.

Coelostegia montana Sidiyasa, *spec. nov.* — Fig. 1 & 2

Arbor 30–40 m alta. Folia petiolata, petiolus dense lepidotus, lamina subcoriacea elliptica vel rare obovata 4.5–8 cm longa 1.5–3.5 cm lata, apex breviter acuminatus, basis rutundata ad obtusa, margin integra, supra glabra, infra dense lepidota, nervi secundarii 6–8 paria. Stipulae anguste obovatae ad 8 mm longa, apex obtusus acumine obtuse, extra dense lepidotae, intra stellate pilosae, caducae. Inflorescentia brevissima ad 2 cm longa. Alabastra dense lepidota depresso conica ca. 2 mm longa 5.5 mm in diam. Fructus ovoidei ad globosi 8–10 cm in diam., submuricati atro-caerulei ad 2/3 longitudinis dehiscentes in valvis 5 lignosis duris. — Typus: *Sidiyasa & Arifin 1529* (holo WAN; iso BO, L), Indonesia, East Kalimantan, Bulungan District, Kayan Mentarang National Park, Gunung Lunjut, 2° 36' N, 115° 35' E.

Tree, 30–40 m high, 40–70 cm dbh. *Buttresses* steep, up to 3 m high. *Bark* shallowly fissured, brown to reddish brown; inner bark pale brown, mottled with white strips, thick and with a rather sticky sap. *Branchlets* terete, lepidote, striate when dried, brown. *Leaves* petiolate; petiole lepidote, 7–12 by 0.9–1.4 mm, slightly swollen at the apex, caniculate above; blade pale to dark brown above, paler beneath, subcoriaceous when dried, elliptic or rarely slightly obovate, 4.5–8 by 1.5–3.5 cm, apex shortly acuminate and with a blunt acumen up to 1 cm long, base rounded to obtuse, entire, glabrous above, densely lepidote beneath; midrib flat or impressed above; secondary veins in 6–8 pairs, arched, forming an angle of 50–60° with the midrib, irregularly spaced, 3–8 mm from each other; tertiary venation reticulate and with some short intermediate veins, conspicuous above. *Stipules* narrowly obovate, up to 8 by 1 mm, apex obtuse with a blunt tip, densely lepidote outside, stellate hairy inside, caducous.

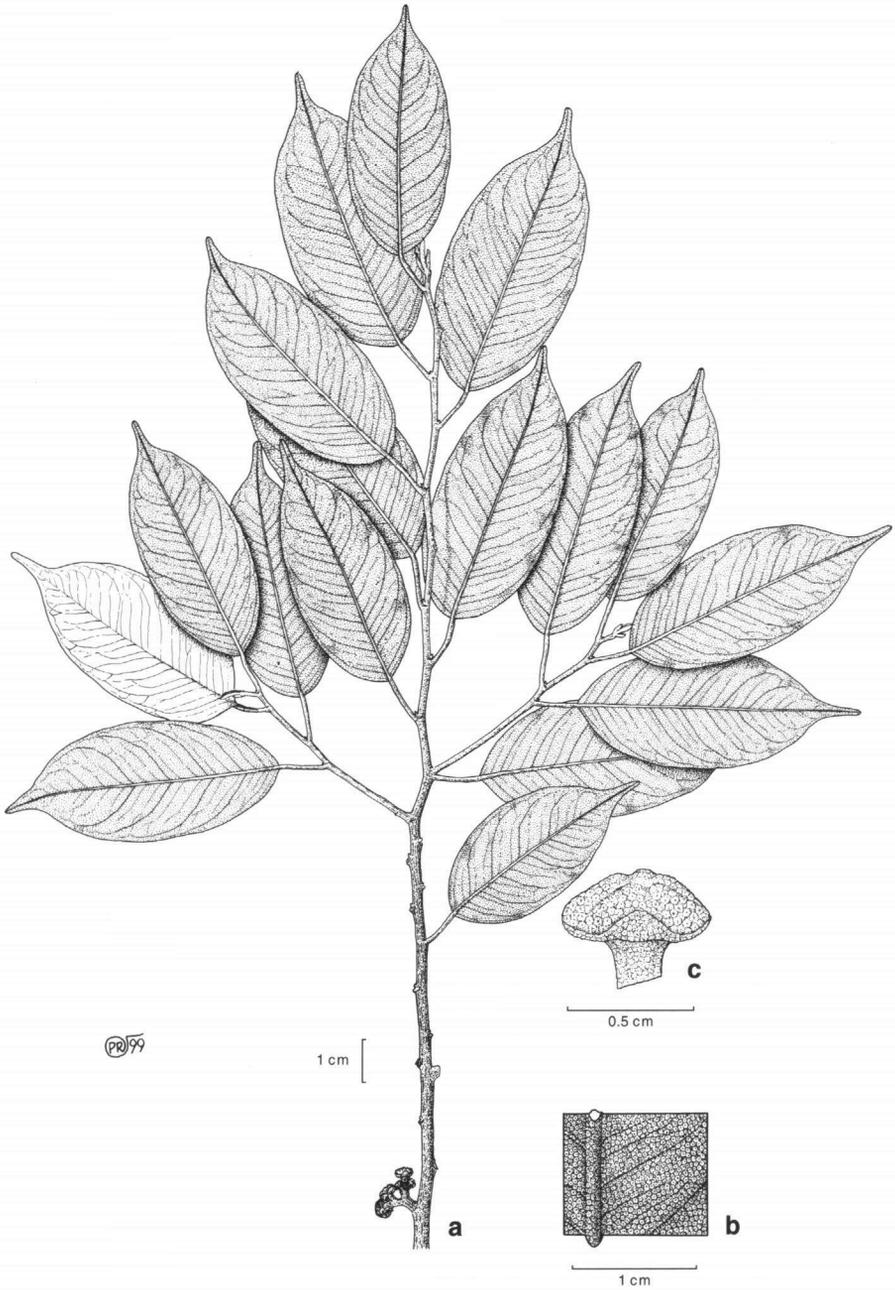


Fig. 1. *Coelostegia montana* Sidiyasa. a. Flowering branch; b. lepidote leaf beneath in detail; c. flower bud (a–c: Sidiyasa & Arifin 1529).

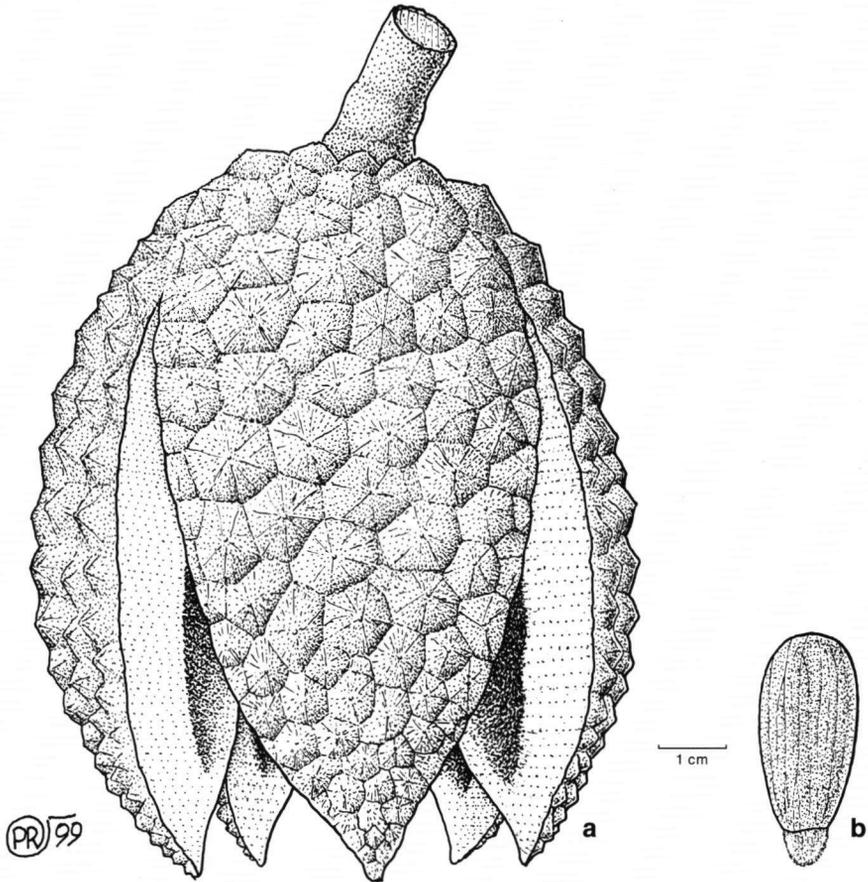


Fig. 2. *Coelostegia montana* Sidiyasa. a. Opening fruit; b. seed (a & b: Sidiyasa & Arifin 1529).

Inflorescence on bare branchlets (caulinascent), very short up to 2 cm long, few-flowered, sometimes clustered, 2–6 flowers; peduncle up to 1 cm long, lepidote; pedicels rather stout, up to 3 mm long, lepidote. *Bracts* and *bracteoles* caducous. *Flower buds* densely lepidote, depressed conical, c. 2 by 5.5 mm, more or less 5-angled, lobed at the apex, pale brown. *Fruits* ovoid or subglobose, sometimes globose, 8–10 cm in diam., submuricate, dark blue, dehiscent for about 2/3 of its length into 5 woody and very hard valves; fruit stalks stout, 1.5–2.8 by 1.2–1.6 cm, swollen at the apex. *Seeds* ovoid to obovoid or narrowly so with a blunt apex, 3–3.5 by 1.2–1.5 cm, sometimes slightly compressed, shiny dark brown, (1 or) 2 seeds in each valve, carunculate; caruncula at the base, c. 0.5 by 0.5 cm, fleshy, bright orange.

Distribution — Endemic to Borneo, known from two localities: E Sarawak and northern part of E Kalimantan.

Habitat & Ecology — Submontane primary forest, on well-drained soils on ridges or slopes. Altitude 970–1450 m.

Notes — The present species is closely allied to *Coelostegia kostermansii* Soengeng, which also has submuricate fruit. It differs from *C. kostermansii* in the dark blue fruits with a rounded base vs. yellowish green fruits with a distinctly clawed base in *C. kostermansii*. The flower bud is also different: compressed conical with a lobed or grooved apex instead of acuminate.

Apart from the morphological characters, the new species has a distinct altitudinal distribution pattern. It is only found at highland altitudes, while all the other species occur in lowlands.

So far, no mature flowers were observed for the new species.

Specimen studied: BORNEO. Sarawak: Kapit District, Head water of Balleh River, *Anderson S 28461* (BO); E Kalimantan, Bulungan District, *Sidiyasa & Arifin 1529* (type).

KEY TO THE SPECIES

A new key to the species of *Coelostegia* based on the description of the new species and the key by Soengeng Reksodihardjo (1960) has been constructed:

- 1a. Fruit spiny 2
- b. Fruit \pm smooth or submuricate 4
- 2a. Leaf upper surfaces often lepidote. Fruits 14–15 cm in diam., spines conical ..
..... **C. borneensis**
- b. Leaf upper surfaces glabrous. Fruits 7–12 cm in diam., spines angular 3
- 3a. Leaves up to 10(–15) cm long, secondary nerves 6–10 pairs **C. griffithii**
- b. Leaves 10–23 cm long, secondary nerves 11–16 pairs **C. chartacea**
- 4a. Fruit \pm smooth **C. neesiocarpa**
- b. Fruit submuricate 5
- 5a. Flower buds acuminate, 2.5 mm in diam. Fruits yellowish green, distinctly clawed
at base **C. kostermansii**
- b. Flower buds with a lobed or grooved apex, 5.5 mm in diam. Fruits dark blue,
rounded at base **C. montana**

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REFERENCE

- Soengeng Reksodihardjo, W. 1960. The genus *Coelostegia* Benth. (Bombacaceae). *Reinwardtia* 5: 269–291.