

PAULDOPIA, A NEW GENUS OF SOUTHEAST ASIAN BIGNONIACEAE

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During a cursory inspection of Asiatic *Bignoniaceae* in the Kew Herbarium in November 1946 I found that *Tecoma bipinnata* Coll. & Hemsl. from Yunnan still remained in the antiquated collective generic concept *Tecoma*. From its foliage it seemed to belong in the affinity of *Radermachera* and I tentatively referred it in sched. to that genus, anticipating a later, closer study. Shortly afterwards Chatterjee (1948) in a review of the family in India and Burma published this tentative transfer. In my opinion (1953) the species differs so much from the current circumscription of *Radermachera* that I accommodated it in a special section *Exalatae*.

Recently some Bignoniaceous material from Thailand came to hand which at once reminded me of the Yunnan plant, because of the winged rachis of the leaves which is a unique feature among bipinnate Asiatic *Bignoniaceae*. Fortunately now also ripe fruit and seed was available which are so essential in the classification of this family. As will be seen below, the absence of fruit led to the description of this plant under three different names, referred to four generic names. Under these three names no mention was even made in the diagnosis of the arrangement of the ovules.

The affinity of the plant seems clearly with *Radermachera* and somewhat less so with *Stereospermum*, but it differs from both in too many characters, especially in the fruit and seed structure which is so characteristic generically.

I have named the genus after the late Dr. P. Dop (1876–1954), formerly professor of botany in the University of Toulouse, in recognition of the good revisions he gave in the *Flore de l'Indo-Chine* of the *Bignoniaceae*, *Verbenaceae*, and various other families.

Pauldopia, nov. gen.

Radermachera sect. *Exalatae* Steen. Act. Bot. Neerl. 2: 307. 1953.

Ex affinitate generis *Radermacherae*, differt: Folia bipinnata rachi alata nota; foliola papyraceae, utrinque glandulis paucis prominentibus munita. Paniculae coarctatae, plerumque laterales insuper supra-axillares, dependentes. Calyx membranaceus, in parte inferiori areis glandulosis longitudinalibus 5 notatus, praeterea dense obscure subtilissime glanduloso-punctatus, aestivatione aperta superne induplicato-valvata, truncatus, minute quinquelobatus lobulis aequalibus plerumque acuminatis. Corollae tubus sordide flavus, ore ac lobis rubro-fuscis; tubus infra faucem angustus, superne dilatatus ac plus minusve cylindricus, sat erectus, limbo interdum + unilaterali, omnino sparse obscure

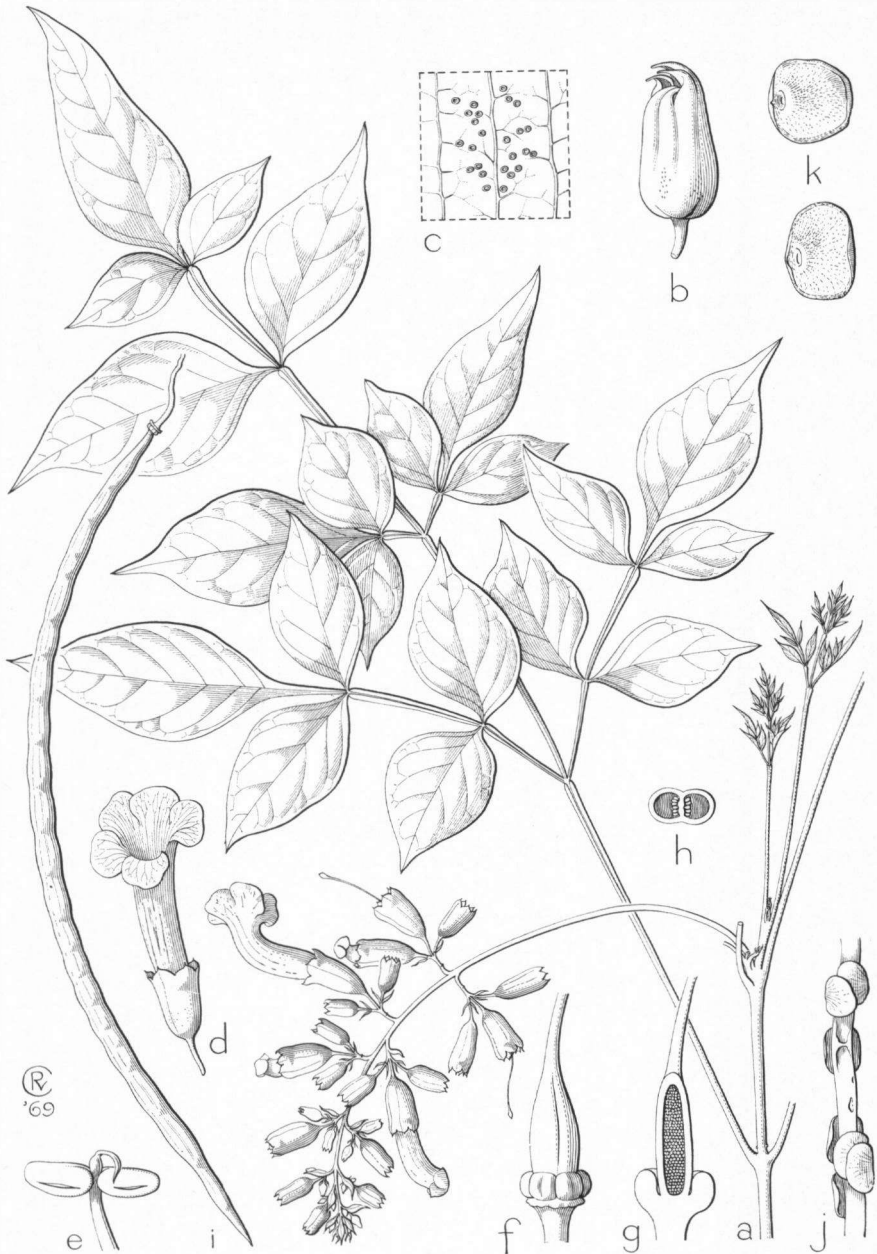


Fig. 1. *Pauldopia ghorta* (Buch. Ham. ex G. Don) Steen. a. habit, $\times \frac{1}{2}$, b. young calyx, $\times 2$, c. gland fields on calyx, $\times 4$, d. mature flower, $\times \frac{1}{2}$, e. anthers, $\times 4$, f. gynoecium surrounded by disk, $\times 4$, g. ovules on septum, $\times 4$, h. ovary in cross section, $\times 4$, i. mature pod, $\times \frac{1}{2}$, j. thin septum with seeds, 3 scars visible, nat. size, k. two seeds, $\times 2$ (after v. Beusekom & Phengkhilai 266).

glanduloso-punctato; aestivatione valde imbricata. Ovarium seriebus ovulorum 6–8 in utroque loculo. Capsula subfalcato-linearis acuta loculicida, in vivo probabiliter teres; septum membranaceum, margine seminiferum. Semina in utroque loculo 1–2-seriata, anguste marginata, attamen non-alata, crassa, ovalia, irregulariter sublentiformia.

Notes. The new genus belongs in the alliance of *Radermachera* and somewhat less so of *Stereospermum*. From both it differs in the obviously lateral thyrse, in having a very thin septum in the fruit, which is corky and swollen in these genera, in the wingless seed, the rather tubular not more or less campanulate or funnel-shaped corolla, the finely dotted calyx and corolla (as in *Lamiodendron*), and in the very thin, almost stunted but still short-lobed calyx which is open in bud (though induplicately folded at apex). In the two other genera the calyx has always a thick texture and is almost or entirely closed in bud, rupturing later rather irregularly in pseudolobes. The corolla is yellow with brown-red, a very uncommon feature in this alliance, but reported also for *Radermachera flavida* and *R. sinica*. It has not the resinous (lacquered) inflorescence and buds of *Radermachera*. The winged rachises are very uncommon in *Radermachera*, but a tendency towards this is found in *R. ramiflora* Steen. from Mt Kinabalu. For the rest the leaf reminds of *Radermachera*, not *Stereospermum*. Though the ovary cells contain many rows of ovules, only rather few develop into seed so that the first impression in opening a pod is about 1–2 rows of seed per cell. The seeds are wingless, which is unknown from both genera. They are thick, but not so thick as in *Stereospermum*; *Radermachera* has small very thin seed.

Pauldopia ghorta (Buch. Ham. ex G. Don), comb. nov. - Fig. 1.

Bignonia ghorta Buch. Ham. [Wall. Cat. 6510] ex G. Don, Gen. Syst. 4 (1838) 222; DC. Prod. 9 (1845) 169. - *Stereospermum ghorta* (Buch. Ham. ex G. Don) Clarke, Fl. Br. Ind. 4 (1884) 384. - Type: B. Hamilton, 'Deviduba', Wall. Cat. 6510 (K).

Tecoma bipinnata Coll. & Hemsl. J. Linn. Soc. Bot. 28 (1890) 102. - *Radermachera bipinnata* (Coll. & Hemsl.) Steen. ex Chatterjee, Bull. Bot. Soc. Beng. 2 (1948) 71; Steen. Act. Bot. Neerl. 2 (1953) 306. - Type: Collett 685 (K).

Radermachera alata P. Dop, Bull. Mus. Hist. Nat. Paris 32 (1926) 184; Fl. Gén. Indo-Chine 4 (1930) 584, fig. 63 1–2. - Type: Eberhardt 4161 (P, not seen).

A shrub or small tree, up to c. 6 m. Leaflets with slightly varying indument, consisting of short hairs, mainly on midrib, nerves and margin, but sometimes also sparsely puberulous between the nerves. The insertion of the peduncle is lateral (axillary) on all specimens seen save the type of *T. bipinnata* where it is obviously terminal on a short-shoot. Upper leaves under the inflorescence sometimes untidily opposite; in some specimens leaves with a distinct tendency to become tripinnate in the lower jugae. Leaves variable in size; leaflets variable in shape (roundish to lanceolate) and size (2–8 cm). The size of the calyx varies in open flowers from c. 1 to 1.75 cm; also the calyx limb varies from almost stunt-

ed to rather well-defined lobed. In some specimens the lower part of the corolla tube is included in the calyx and rather abruptly widened above the throat, in others the transition is more gradual and the narrow part exceeds the calyx. Otherwise the material is very homogeneous. The pod is c. 15–30 cm long and 5–8 mm in diameter; the seed 6–7 by 5–6 mm.

INDO-CHINA. Tonkin, Laos, Cochinchina, Dop, l.c. Also said to be cultivated in Tonkin gardens.

YUNNAN. Szemeo, Sjemar, on E. Mts, *Henry 13220* (A), 1800 m, fl. yellow, 3 m; ditto W. Mts, *Henry 12447* (A), 1500 m, shrub 2½ m.

NORTH BURMA. Shan Hills, Live-kaw, *Collett 685* (K), 1200 m; Magok (Chapin), *Dickason 3255* (A); Wa States, *Po Khant 15334* (sec. Chatterjee); Ruby Mines *Oliver 166* (sec. Chatterjee).

THAILAND. SW. Thailand; Kanchanaburi, Lieuw Long Hill near Khao Ngi Yai, E. of Sangkhla, *Van Beusekom & Phengklai 266* (L, etc.) in rather dense evergreen forest, 800–900 m, shrub 5 m, along rivulet, shaded, corolla tube dirty yellow, lobes and mouth brown-red; Huai Krasa, c. 90 km S. of Tak, *Hansen & Smitinand 12984* (C, etc.), c. 1000 m, tree 4–6 m, common in old clearings, flowers yellow.

INDIA. Deviduba, Wallich Cat. 6510 (K), unlocalized.

Notes. The differences stated in Chatterjee's key, the more distinct calyx teeth and glabrescent leaflets in *R. ghorta* against *R. bipinnata*, seem to fall within the normal variation. *R. alata* P. Dop is confidently reduced on the strength of the description and figure.