



A new species of *Polyosma* (Escalloniaceae / Polyosmaceae) from Thailand and new synonyms

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Abstract

Polyosma pilosa sp. nov. is described as a new species from Thailand. *Polyosma arguta*, *P. bracteolata*, *P. elongata*, and *P. oblonga* are proposed as new synonyms of other Thai species, and five species from Bangladesh, Indonesia and Thailand are lectotypified

Introduction

The South-East Asian *Polyosma* Blume (1826: 658) is still a poorly studied genus of ca. 60–80 species, with its highest diversity in Malesia, but extending to China, Indochina and even New Caledonia with few taxa. Its placement in the phylogenetic system of Angiosperms is still somewhat problematic. Whereas APGII treated it in the separate family Polyosmaceae (Angiosperm Phylogeny Group 2003), more recent studies point to a close (sister group) relationship with Escalloniaceae, in which family it might also be included (APGIII; Angiosperm Phylogeny Group 2009, Soltis *et al.* 2011). Therefore it seems a matter of opinion whether to include the genus in a separate family Polyosmaceae (e.g., Lundberg in press) or in Escalloniaceae.

In connection with a study of this genus for the Flora of Thailand (Esser in prep.), a new Thai species as well as some additional synonyms were found.

Taxonomy

Polyosma mutabilis Blume (1851: 261). Lectotype (designated here):—INDONESIA. Borneo: s. loc., s. dat., *P.W. Korthals* s.n. (L 908234-1180!).

Polyosma arguta Craib (1929: 110; 1931: 583); **syn. nov.** Lectotype (designated here):—THAILAND. Trat: Koh Chang, Kao Faimai hill, 05 June 1925 (fr), *Rabil* 7 (K!, isoelectotypes BK!, BM!, TCD!).

Polyosma bracteolata Craib (1929: 111; 1931: 583); **syn. nov.** Lectotype (designated here):—THAILAND. Surat Thani: Koh Samui, 09 April 1927 (fl), *A.F.G. Kerr* 12561 (K!, isoelectotypes BK!, BM!).

Polyosma oblonga Craib (1929: 112; 1931: 585); **syn. nov.** Lectotype (designated here):—THAILAND. Nakhon Si Thammarat: Sichon, 11 May 1928 (immat fr), *A.F.G. Kerr* 15673 (K!, isoelectotypes BK!, BM!, TCD!).

Note:—The name of *P. mutabilis* caused some confusion in the past, as its interpretation was not unambiguous. The locality information in the protologue was vague (‘in sylvis montanis archipelagi indici’), and the diagnosis listed mostly more general characters, not allowing a certain determination. With this lectotype we apply the name to plants with distinctly sulcate fruits truncate at base.

Polyosma arguta agrees well with the Malesian lectotype of *P. mutabilis*. The fruits of the type of *P. oblonga* are immature and flattened by pressing. They appear obtuse at base (not truncate), and the ribs are indistinct. The indumentum of the vegetative parts, however, agrees well with *P. mutabilis*. The type of *P. bracteolata* is a poor collection that is

difficult to determine, but does most certainly not represent a separate taxon. It is referred to *P. mutabilis* because of the general distribution of the latter, and because of the elevation: *Polyosma mutabilis* is a widespread lowland species, in Thailand collected not above 200 m, whereas the other common Thai species, *P. integrifolia* Blume (1826: 658) occurs in 800–1600 m. The type specimen of *P. bracteolata* does not give data on elevation, but as Ko Samui mostly consists of lowland, with the highest peak just reaching 600 m, the proposed synonymy seems plausible.

By this lectotype, *Polyosma mutabilis* becomes identical with *Polyosma conocarpa* Ridley (1917: 31) as it has been applied for plants from the Malay Peninsula. This name, however, was based on several syntypes, one of them being the single type of *Itea fragrans* Wall. in Roxburgh (1824: 420) = *Polyosma fragrans* (Wall.) Bennett (1840: 196), namely SINGAPORE: 1822, *N. Wallich 8472* (B!, BM!, G!, K!, L, TCD!, W!). *Polyosma conocarpa* therefore is an illegitimate and superfluous name (Art. 52 ICN, McNeill *et al.* 2012) for *Polyosma fragrans*.

***Polyosma pilosa* Esser, *sp. nov.* (Fig.1)**

A species easily separated from all other Thai species by the characteristic pilose indumentum of remarkably long [1–2(–3) mm] hairs on all parts, in particular on both leaf sides (0.1–0.5 mm long in the other Thai taxa).

Type:—THAILAND. Chaiyaphum: Phu Khieo Wildlife Sanctuary, 700 m, 03 May 1997 (fl), *R. Pooma 1540* (holo BKF SN 099365!, iso BKF SN 099364!).

Tree to 15 m tall. Indumentum consisting of 1–2(–3) mm long, loosely erect, simple hairs of yellowish(-brown) colour, appearing nearly golden. Leaves: petiole 10–15 mm long, densely pubescent; blade chartaceous, 12–19 by 4–6 cm, obovate(-elliptic), base acute, margin entire in lower half, distinctly dentate in upper half with the teeth 8–10 mm apart, apex acuminate, only slightly brighter below, above and below with scattered hairs on the whole surface and with dense hairs on margin, midvein and sideveins, side veins distinct on both sides, in 11–15 pairs, veinlets only visible below. Inflorescences terminal, racemose, creamy, 9–14 cm long, with c. 35–85 flowers, distinctly to densely pubescent on all surfaces, even more so on pedicels and calices; bracts 3–5 mm long, bracteoles 2–3 mm long, at base of pedicel or along the upper part of it. Flowers: pedicel 1 mm long; calyx tube 1–2 mm long, sepals 4, the free lobes c. 1 mm long; corolla 8–10 mm long; petals 4; inner parts not seen. Fruits green; pedicel to 5 mm long, pubescent; drupe 1-seeded, 10–11 by 5–5.5 mm, ovoid, obtuse at both ends, smooth and not ribbed, with scattered hairs.

Additional specimens studied (paratypes):—THAILAND. Chaiyaphum: Phu Khieo Wildlife Sanctuary, 1000 m, 12 July 1973 (fr), *T. Smitinand 11873* (BKF-3 sheets!), same place, 1000 m, 22 February 1931 (fl), *A.F.G. Kerr 20214* (B!, BK!, BM!, K!, L).

Distribution:—Endemic.

Ecology:—Along roads in shaded mixed evergreen forest; elevation 700–1000 m. Flowering in February, May, fruiting in July.

Thai name:—Me hang.

Notes:—This species was not included by Craib (1931). It is similar to the Indochinese *Polyosma dolichocarpa* Merrill (1938: 32), described from Vietnam. Both taxa are the only ones in SE Asia with a long-pilose indumentum. *Polyosma dolichocarpa* differs however sufficiently in distinctly sulcate fruits and longer (2–3 mm) pedicels in flowers.

Schulze-Menz annotated specimens of this new species as *Polyosma dolichotricha*, a name that remained unpublished like so many other names he suggested. But to prevent possible confusion with *P. dolichocarpa*, we here propose a different name.

***Polyosma wallichii* Bennett (1840: 196). Lectotype (designated here):**—BANGLADESH. Chittagong Division: Silhet, in montibus Pandooah, s. dat. (fl), *N. Wallich 8471* (BM!, isoelectotypes G!, K!, K-W).

Polyosma elongata Geddes (in Craib 1928: 66), ***syn. nov.*** Type:—THAILAND. Chiang Mai: Doi Angka [= Doi Inthanon], 01 May 1921 (fl), *A.F.G. Kerr 5289* (holo K!, iso B!, BK!, BM!, E!, P, TCD!).

Note:—The thin leaves and the smooth fruits with oblique base are typical for *P. wallichii*. The Thai plants (with soon glabrescent leaves with appressed hairs) differ slightly from collections from India, Bangladesh and Myanmar (slowly glabrescent leaves with mostly erect hairs), whereas flowers and fruits are indistinguishable. Therefore the two are proposed here as synonyms.

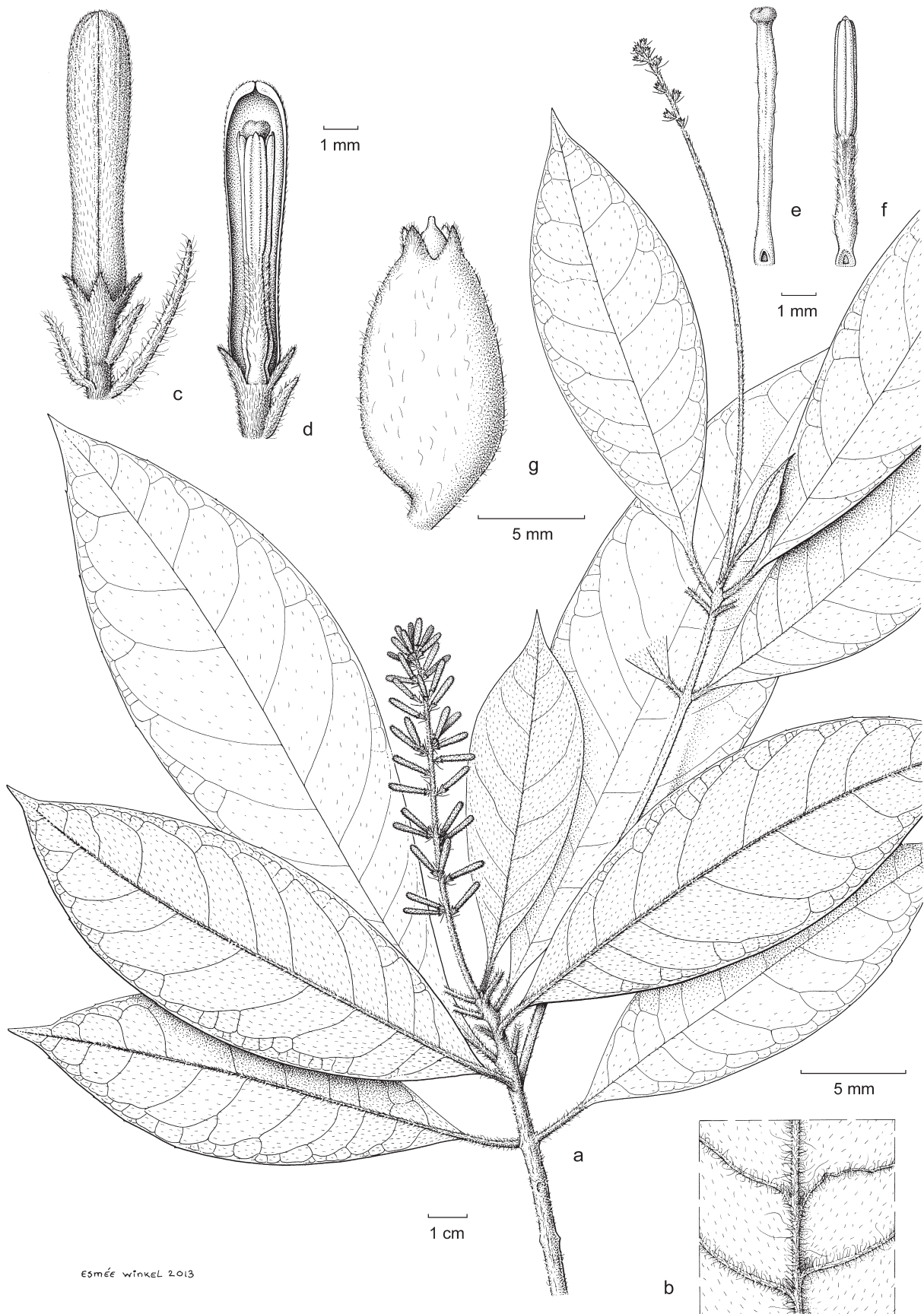


FIGURE 1. *Polyosma pilosa* Esser. a. Habit; b. detail of leaf showing long hairs; c. flower bud; d. flower bud with part of corolla removed; e. style and stigma; f. stamen; g. fruit [a–f: Pooma 1540; g: Smitinand 11873; all BKF]. Drawing: Esmée Winkel 2013.

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