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Wikstroemia fuminensis (Thymelaeaceae), a New Species from Yunnan, China

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ABSTRACT. A new species, *Wikstroemia fuminensis* Y. D. Qi & Y. Z. Wang, is described and illustrated. The type specimen was collected from Mt. Maying of Fumin County, Yunnan Province. The new species is distinct in section *Wikstroemia*. Based on the glabrous pentamerous flower and head-like inflorescence, it is somewhat similar to *W. fargesii* (Lecomte) Domke and *W. huidongensis* C. Y. Chang, but differs in its inflorescence without peduncle, floral size (compared with *W. huidongensis*), glabrous ovary, and plant habit (compared with *W. fargesii*).

Key words: China, Thymelaeaceae, *Wikstroemia*.

The genus *Wikstroemia* Endlicher, with about 70 species, is widely distributed in eastern Asia, Malesia, and the islands in the Pacific. In China, the genus, represented by 44 species, mainly occurs in southern China, especially in the Hengduan Mountains. *Wikstroemia* is considered to be closely related to *Daphne* (Hou, 1960; Tan, 1980; Dute et al., 1996). The delimitation of the two genera is usually based on the shape of the disc and phyllotaxy, i.e., a scale-like disc and opposite leaves in *Wikstroemia* and an annular or cup-shaped disc and alternate leaves in *Daphne*. Even though there are transitional forms in the shape of the disc and the phyllotaxy, most species of *Wikstroemia* can be clearly identified based on their membranous scale-like disc, smaller flowers, and shorter floral lobes.

The unusual new species described here was found during our revision of the Chinese Thymelaeaceae. We recognize it as a distinct species belonging to *Wikstroemia*, after checking specimens of those species close to it in KUN and PE.

Wikstroemia fuminensis Y. D. Qi & Y. Z. Wang, sp. nov. TYPE: China. Yunnan: Fumin County, Yongding District, Mt. Maying, on shrubby slope, 2700 m, 20 Oct. 1964, Bin-Yun Qiu 596135 (holotype, KUN; isotype, PE). Figure 1.

Species nova *W. huidongensi* et *W. fargesii* affinis; ab

illa differt floribus 6–10 fasciculatis pedunculo non manifesto, tubo floris 11–13 mm longo, pistillo 2.5–3 mm longo, ab hac differt floribus fasciculatis pedunculo non manifesto, foliis densis, ovario glabro.

Shrub up to 0.8–1.2 m tall; young branches light green, old ones dark purple-brown, glabrous. Leaves opposite or subopposite, densely arranged on the branchlets, papyraceous, ovate or broad-ovate, 1.7–3 × 0.7–1.4 cm, apex acute, rarely obtuse, base rounded or slightly attenuate, entire, margins of dry leaves slightly revolute, adaxial surface green or brown, abaxial surface light green or brown, glabrous, midrib concave adaxially and elevated abaxially, lateral nerves in 5 to 7 pairs, inconspicuous adaxially and conspicuous abaxially, petioles very short, ca. 1–2 mm long. Flowers 6 to 10, constituting a terminal head without peduncle, yellow, glabrous, pedicel short, ca. 1 mm long. Perianth cylindrical, tube ca. 11–13 mm long, 5-lobed, lobes ovate to ovate-elliptic, obtuse, 2–2.5 mm long. Stamens 10 in 2 series inserted on the tube, the upper 5 on the throat and the lower 5 on the middle part of the tube, 1–1.2 mm long. Disc scale-like, membranous, 2 mm long, apex irregularly deep or shallow-lobed. Pistil 2.5–3 mm long, ovary ellipsoid, glabrous, style short, 0.2 mm long, stigma globose, papillate.

Flowering in October; fruit not seen.

Specimens of this species were originally identified as *Daphne aurantiaca* Diels. However, its pentamerous flower is distinctively different from the tetramerous flower of *D. aurantiaca*. Domke (1932) transferred *D. aurantiaca* into the genus *Wikstroemia* (*W. aurantiaca* (Diels) Domke) because of its pentamerous flower, long style, and scale-like disc. Stapf (1933) and Hamaya (1963) noted that Domke might have confused the numbers of floral lobes and stamens. We also found all specimens of *D. aurantiaca* were tetramerous, without exception. At the same time, Hamaya (1963) mentioned that *D. aurantiaca* showed close affinity to *Daphne* based on characteristics of its wood anatomy, such as the lack of internal phloem in the leaves and

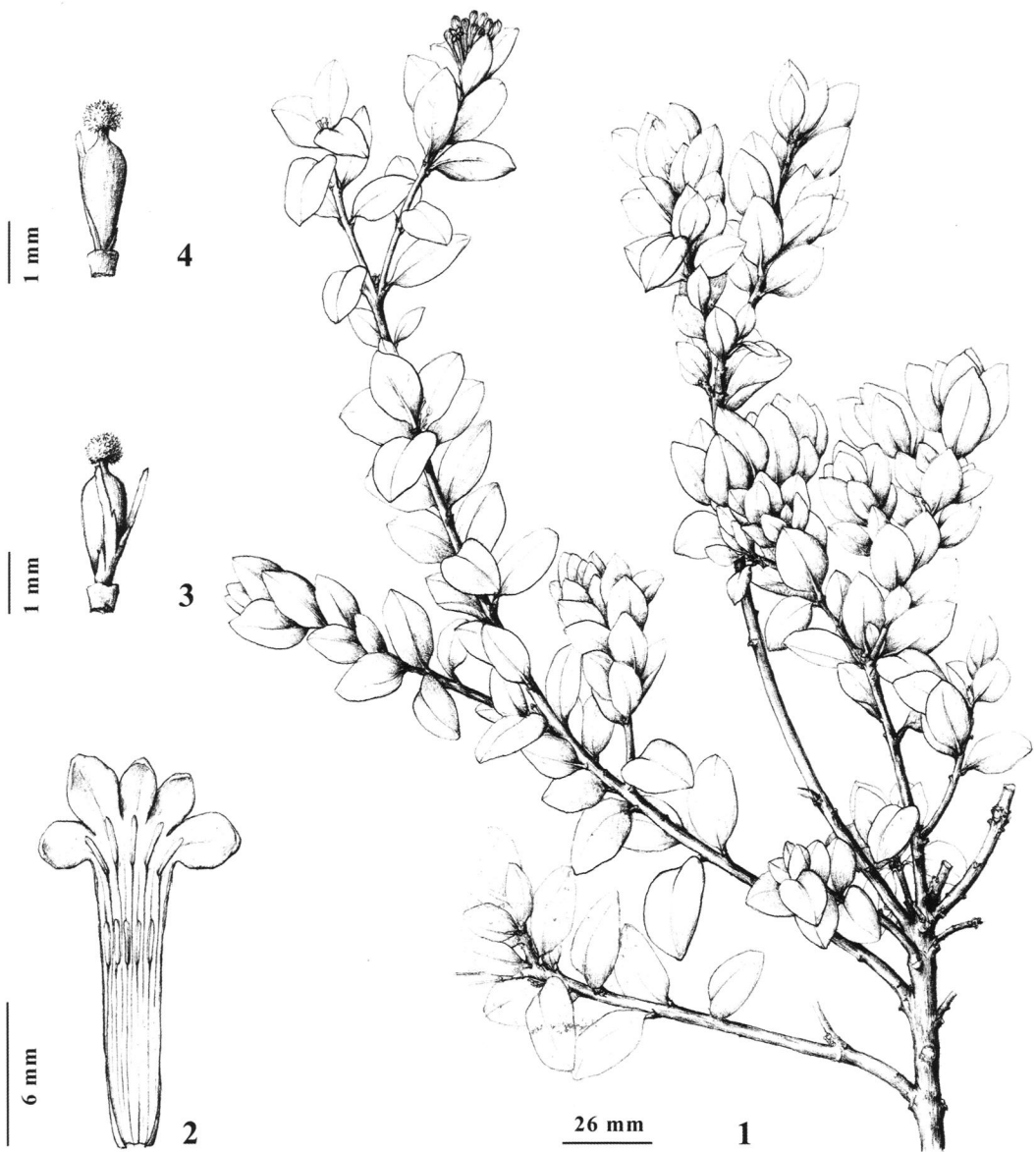


Figure 1. *Wikstroemia fuminensis* Y. D. Qi & Y. Z. Wang. —1. Habit. —2. Perianth and stamens. —3. Pistil and scale-like disc, lateral-abaxial view. —4. Pistil and scale-like disc, lateral-adaxial view. (Drawn from the KUN holotype Bin-Yun Qiu 596135.)

the pattern of distribution of tracheal elements in the wood. Although Hamaya's evidence supported *D. aurantiaca* as a member of *Daphne*, the species is more similar to *Wikstroemia* than to *Daphne* on external morphological characteristics, such as its scale-like disc and opposite leaves. Therefore, its systematic position remains in question. But *W. fuminensis* obviously differs from *D. aurantiaca* (see Table 1), and undoubtedly belongs to *Wikstroemia* based on its scale-like disc, opposite leaves, and shorter floral lobes.

According to the classification of Huang (1985), *Wikstroemia fuminensis* belongs in section *Wikstroemia* because of its glabrous flowers and head-like inflorescence. After we checked specimens and literature of pentamerous species in this section, we believed that *W. fuminensis* resembled *W. huidongensis* and *W. fargesii*. Although we had no specimens of these two species, we checked the original description (Lecomte, 1916; Chang, 1986), type photograph (the type of *W. fargesii* was deposited in NY), and figures (Chang, 1986). We found that

Table 1. Character differences between *Wikstroemia fuminensis* and *Daphne aurantiaca*.

	Number of floral lobes	Number of flowers in inflorescence	Leaf size (cm)	Flowering time
<i>W. fuminensis</i>	5-merous	6 to 10	1.7–3 × 0.7–1.4	October
<i>D. aurantiaca</i>	4-merous	2 to 4	0.8–2.3 × 0.4–1.2	May–July

the new species differed in several key characters, such as its sessile inflorescence, floral size, glabrous ovary, and plant habit (see diagnosis).

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