

CARDAMINE XINFENII (BRASSICACEAE), A NEW SPECIES FROM SICHUAN (CHINA)

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Abstract. *Cardamine xinfenii*, a new species from southern Sichuan Province, is described and illustrated. It does not seem to be closely related to any of the known Asian species of the genus. It is easily distinguished by the scapose habit and by having slender stolons, 7–9-foliolate, strongly toothed basal leaves, spreading floral parts, and filiform, non-auriculate cauline leaves (bracts) subtending the base of lowermost 1 or 2 pedicels of the raceme.

Keywords: Brassicaceae, *Cardamine*, China, Cruciferae, Sichuan.

During my 2014 visit to the main herbaria in Sichuan Province (China), CDBI and SZ, to work on the treatment of Brassicaceae (Cruciferae) for the Flora of Pan-Himalayas, the following new species of *Cardamine* L. was discovered. Unfortunately, no other collections of the species were found among the holdings of these and other Chinese herbaria. Although the type locality of this novelty falls outside the boundaries of that flora, two other species, *C. hongdeyuana* Al-Shehbaz and *C. pseudotrifoliolata* Al-Shehbaz, have recently been described from Xizang (Al-Shehbaz, 2015a, b).

Cardamine xinfenii Al-Shehbaz, *sp. nov.* TYPE: China, [South] Sichuan, Leibo Xian, Xining, 214 farm (forestry farm), moist rocky areas, 1,250 m, 16 May 1983, *S. H. Zhao & J. B. Shi 117125* (Holotype: CDBI-10034702; Isotypes: SZ 00172780, SZ 00172784). Fig. 1.

Plants perennial, scapose, with long, slender stolon and no bulbils. *Stems* 15–30 cm, few branched above middle, sparsely pilose proximally, glabrous distally. *Basal leaves* 7–9-foliolate; petiole 3–7 cm, pilose, slender, not expanded at base; terminal leaflet suborbicular to broadly ovate, 6–17 x 7–20 mm, slightly wider than long, pilose, apex acute, margin 9–11-toothed, with the proximal teeth smallest, most teeth terminated in a mucro 0.1–0.3 mm, base truncate to shallowly cordate; lateral leaflets ovate, 5–8 x 3–5 mm, 1–3-toothed on each side, cuneate to subobtusate at base, apical tooth acute; cauline leaves few, filiform, entire, glabrous, 5–10 x 0.2–0.3 mm, reduced to bracts subtending lowermost pedicels, not auriculate at base. *Raceme* 6–18-flowered, lowermost 1 or 2 flowers bracteate; rachis straight, glabrous; lowermost flowering pedicels divaricate, slender 1–2 cm, glabrous. *Sepals* green, oblong, 2.5–3 mm, spreading, glabrous; petals pink, narrowly obovate, not

clawed, 4–4.5 mm x 2.5–3 mm, spreading, apex obtuse; stamens subequal, spreading; filament 2.5–3 mm; anthers yellowish brown, oblong, ca. 1 mm; median nectaries absent; lateral nectaries oblong, to 0.5 mm; style in developing fruits 1–2 mm. *Mature fruits* and seeds unknown.

Eponymy: This novelty is named after Dr. Gao Xinfen, director of the herbarium CDBI, Chengdu Institute of Biology.

Distribution: China (south Sichuan). Known only from the type collection.

IUCN Red List Category: *Cardamine xinfenii* is only known from the type collection and is therefore given the assessment of Data Deficient (DD) according to the IUCN (2001) criteria.

Cardamine xinfenii does not seem to be closely related to any known Asian species of the genus. It is readily distinguished by the scapose habit and by having slender stolons, 7–9-foliolate, strongly toothed basal leaves, spreading floral parts, and filiform, non-auriculate cauline leaves (bracts) subtending the base of lowermost 1 or 2 pedicels. Two Himalayan species, *C. lihengeana* Al-Shehbaz and *C. pseudotrifoliolata* Al-Shehbaz, have bracteate racemes, but these have the inflorescence bracteate throughout, are rhizomatous (vs. stoloniferous), and the former has simple (vs. 7–9-foliolate) leaves, and the latter has trifoliolate cauline leaves and auriculate simple bracts. From the stoloniferous and scapose *C. scaposa* Franch. and *C. fargesiana* Al-Shehbaz, *C. xinfenii* is easily distinguished by having compound (vs. simple) basal leaves. Furthermore, the presence in *C. xinfenii* of flowers with spreading sepals, petals, and stamens is a rather rare feature and should readily distinguish it from the vast majority of the 55 species of *Cardamine* that grow in China and the Himalayan Mountains.

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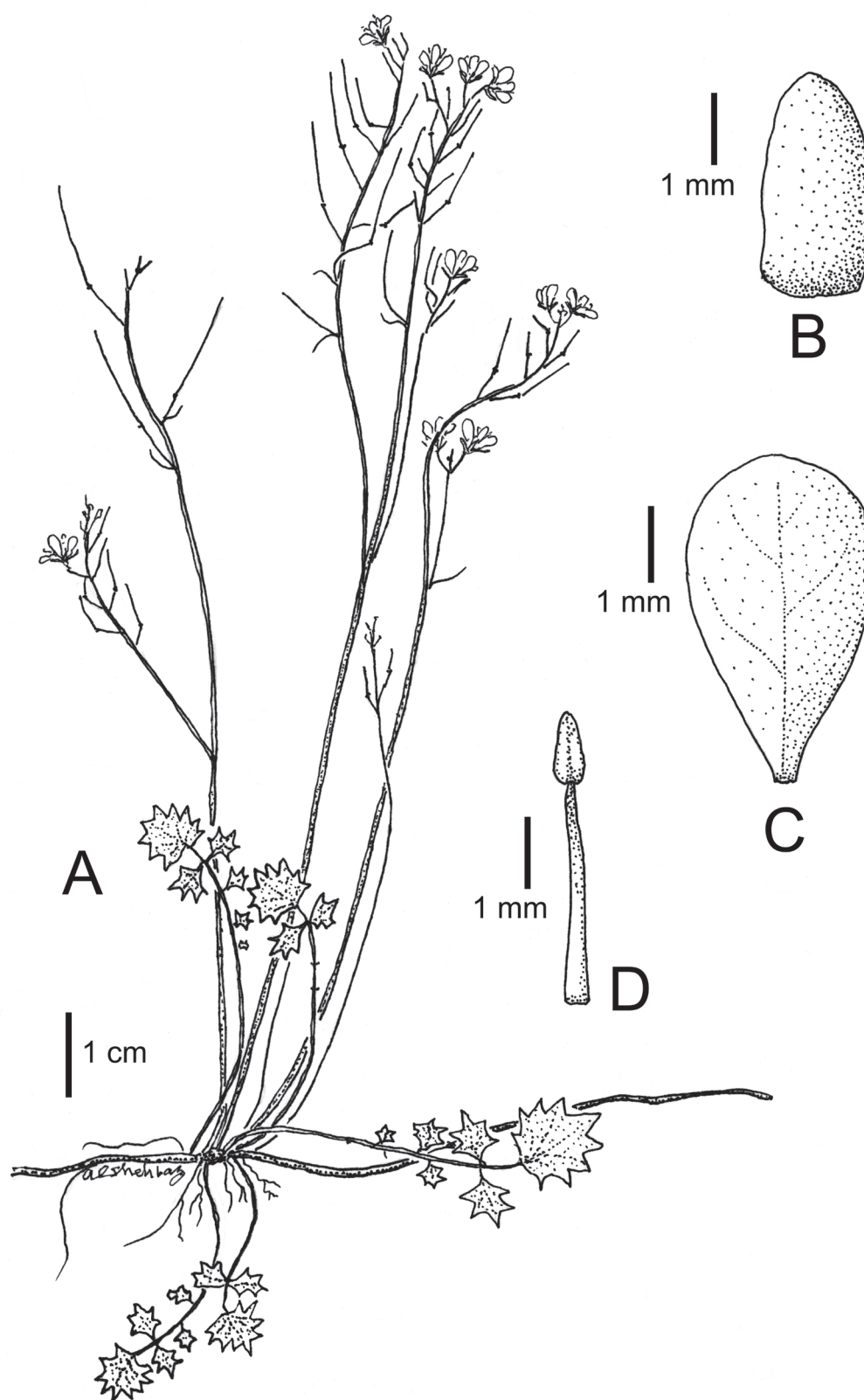


FIGURE 1. *Cardamine xinfenii* Al-Shehbaz. A, plant; B, sepal; C, petal; D, stamen. Drawn by Al-Shehbaz from the holotype, S. H. Zhao & J. B. Shi 117125 (CDBI-10034702).