

Primula dejuniana (Primulaceae), a new species from Sichuan, China

Yuan Xu¹, Shuai Yuan^{2,3}, Chi-Ming Hu² & Gang Hao^{1,*}

¹ College of Life Sciences, South China Agricultural University, Guangzhou 510642, China
(*corresponding author's e-mail: haogang@scau.edu.cn)

² South China Botanical Garden, Chinese Academy of Sciences, Guangzhou 510650, China

³ University of Chinese Academy of Sciences, Beijing 100049, China

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Primula dejuniana G. Hao, C.M. Hu & Y. Xu *sp. nova* (Primulaceae) is described and illustrated from Sichuan, China. In general morphology it is clearly related to the section *Petiolares* subsection *Davidii*, which is characterized by firmly papery or leathery leaves, with veins impressed adaxially, often prominently raised and alveolate abaxially. The new species is similar to *P. davidii* in the indumentum and to *P. tenuituba* in the slender long corolla tube, but can be easily distinguished from all other species in this subsection by its leaves with an acute-apiculate apex and a sharp dentate margin.

Section *Petiolares* of the genus *Primula* (Primulaceae) is well represented in the Hengduan Mts., with only few members extending into Kashmir, central China, and N Myanmar and N Vietnam (Hu 1990, Hu & Kelso 1996). One of the most important diagnostic characters of this section is a globose capsule with a persistent calyx. The capsule does not open by valves but by crumbling at the membrane apex (Smith *et al.* 1941–1949, Hu 1990). Nearly 60 species are now recognized worldwide in sect. *Petiolares* (Hu 1994, Hu & Kelso 1996).

The subsection *Davidii* is a small group within the section *Petiolares* characterized by basal buds with a covering of paleaceous scales, and by leaves being firmly papery to more or less leathery, with veins impressed adaxially, but often prominently raised and alveolate abaxially (Smith *et al.* 1941–1949). Including two recently described species (Hu & Geng 2003), subsect.

Davidii comprises 18 species in total, mainly distributed in Sichuan and Yunnan of southwestern China, with only one species further extending into Guizhou, Hubei, and Hunan provinces of central China. Here we report a new species belonging to section *Petiolares* subsection *Davidii* recently discovered in south-central Sichuan.

***Primula dejuniana* G. Hao, C.M. Hu & Y. Xu, *sp. nova* (Fig. 1)**

TYPE: China. Sichuan, Jiayang Xian, Xiema Xiang, Xinlin village, Caihong Gou, on shady and moist cliffs, 618 m a.s.l., 29°46'09.63''N, 103°23'45.87''E, 23 Feb. 2014 Y. Xu & S. Yuan Xu140005 (holotype IBSC). — PARATYPES: China. Sichuan, Hong Ya Xian, without precise locality, 1959 X.L. Jiang (H.L. Tsiang) 11201 (IBSC); China. Sichuan, Hong Ya Xian, Cao-yu-tan Town, Pan-jiao-zui Forestry Farm, on humid soil at forest margin or shady cliff, 979 m a.s.l., 29°50'13.41''N, 103°09'51.83''E, 28 May 2014 Y. Xu & T.J. Liu Xu140128 (IBSC).

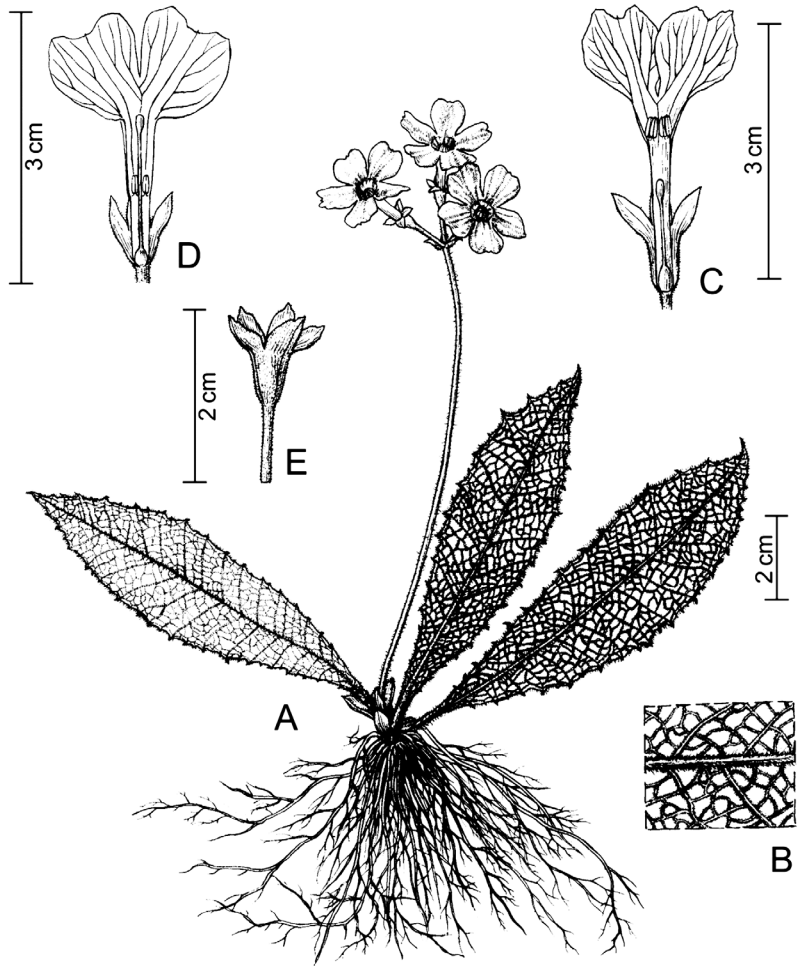


Fig. 1. *Primula dejuniana* (from the holotype). — **A:** Habit. — **B:** Leaf on abaxial surface. — **C:** Short-styled flower. — **D:** Long-styled flower. — **E:** Calyx.

ETYMOLOGY: The species is named in honour of Prof. Yu Dejun (Yu Te Tsun), a taxonomist and horticulturist and the late Director of the Institute of Botany, Chinese Academy of Sciences. From 1937 to 1939 he collected extensively in Yunnan and Sichuan, and later devoted his adult life to the development of botanic gardens in China and made valuable contributions to the study of the Rosaceae.

Herbs perennial, evergreen, pilose, hairs on petioles, midvein of leaves and at base of scapes dull red in fresh state, turning brownish when dry; rhizome comparatively stout with numerous fibrous roots. At flowering time each rosette with only 2–4 leaves of previous year; resting bud of rosette clothed by a few small paleaceous scales; petiole 1–2(–3) cm long, narrowly winged and densely covered with multicellular hairs; leaf blade oblanceolate, 8–13(–22) × 2–3(–5.5) cm, apex acute but with a small point at tip, cuneate

at base, firmly papery when dry, abaxial surface densely along midvein, sparser on lateral veins covered with multicellular hairs; veinlets puberulous, adaxial surface covered with multicellular hairs along midvein and on lateral veins, but much more sparsely, margin ciliate, sharply and remotely dentate; teeth 4–8 mm spaced; veins impressed adaxially, prominently raised and subalveolate abaxially. Scape usually 1 per rosette, 8–12(–18) cm long, pilose, carrying a terminal umbel of 2–6 flowers; bracts lanceolate, 5–6 mm long, minutely ciliate, otherwise glabrous. Pedicels 1–1.6 cm long, sparsely pilose. Flowers distylous. Calyx campanulate, 8–10 mm long, puberulous, split nearly to middle; lobes ovate-elliptic, apex acute. Corolla pale rose-purple, annulate, limb 2–2.5 cm across, lobes broadly elliptic, ca. 10 × 9 mm, emargi-

Table 1. Key morphological differences between *Primula dejuniana* and two similar species.

Characters	<i>P. dejuniana</i>	<i>P. davidii</i>	<i>P. tenuituba</i>
Petiole	distinct, 1–3 cm long	indistinct to nearly obsolete	very short or almost obsolete
Leaves			
Shape	oblanceolate, apex acute	oblong to obovate-oblong, apex rounded	oblong-obovate to oblanceolate, apex rounded
Margin	sharp dentate	erose-dentate	crenate-dentate
Indumentum	hairy on both surfaces	hairy abaxially, glabrous adaxially	glabrous
Scape	hairy	hairy	glabrous
Calyx	8–10 mm long, puberulent	9–10 mm long, puberulent	ca. 7 mm long, glabrous
Corolla tube	1.8–2 cm, twice as long as calyx	ca. 1.2 cm, slightly longer than calyx	ca. 1.2 cm, almost twice as long as calyx
Flowering	early February to early March	April	May

nate; thrum flower with corolla tube ca. 2 cm long, stamens inserted towards apex, style ca. 9 mm long reaching to middle of corolla; pin flower with corolla tube ca. 1.8 cm long, stamens inserted at middle of corolla tube, style reaching annulus. Capsule globose, ca. 6 mm long, slightly shorter than persistent calyx, crumbling at membrane apex. Flowering from early February to early March.

DISTRIBUTION AND HABITAT: *Primula dejuniana* has been collected from Jia Jiang Xian and the adjacent county Hong Ya Xian, a small area of southcentral Sichuan, China. It grows on shady and moist cliffs and humid soil at forest margin, at 618–979 m a.s.l.

Primula dejuniana is an evergreen herb, with all the characters of *Primula* sect. *Petiolares* subsect. *Davidii*, but it can be easily distinguished from all other species in this subsection by its acute, apiculate leaves, and sharply dentate leaf margins. Its indumentum is similar to that of *P. davidii*; its slender corolla tube, almost twice as long as calyx, is similar to that of *P. tenuituba*. The main morphological differences between *P. dejuniana*, *P. davidii* and *P. tenuituba* are summarized in Table 1.

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