

## *Primula lihengiana* (Primulaceae), a new species from Yunnan, China

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A new species of Primulaceae, *Primula lihengiana* C.M. Hu & R. Li, from W Yunnan, China is described and illustrated. It resembles *P. ovalifolia* and *P. klaveriana*; it differs from the former by the leaves tapering gradually at base, the calyx being longer and lobed below middle into lanceolate 3–5-nerved lobes, and by the exannulate corolla; from the latter it can be easily distinguished by its scapes, pedicels and abaxial surface of leaves densely covered with tawny multicellular hairs and especially by its heterostylous flowers.

Key words: Primulaceae, *Primula*, new species, taxonomy

During the past ten years a continuing program of Biodiversity Survey of Gaoligong Shan has been carried out jointly by Kunming Institute of Botany, Chinese Academy of Sciences and Department of Botany, California Academy of Sciences, USA. The area is a hotspot of biodiversity in E Asia (Myers *et al.* 2000), and the research program is quite fruitful.

***Primula lihengiana*** C.M. Hu & R. Li, *sp. nova* (Fig. 1)

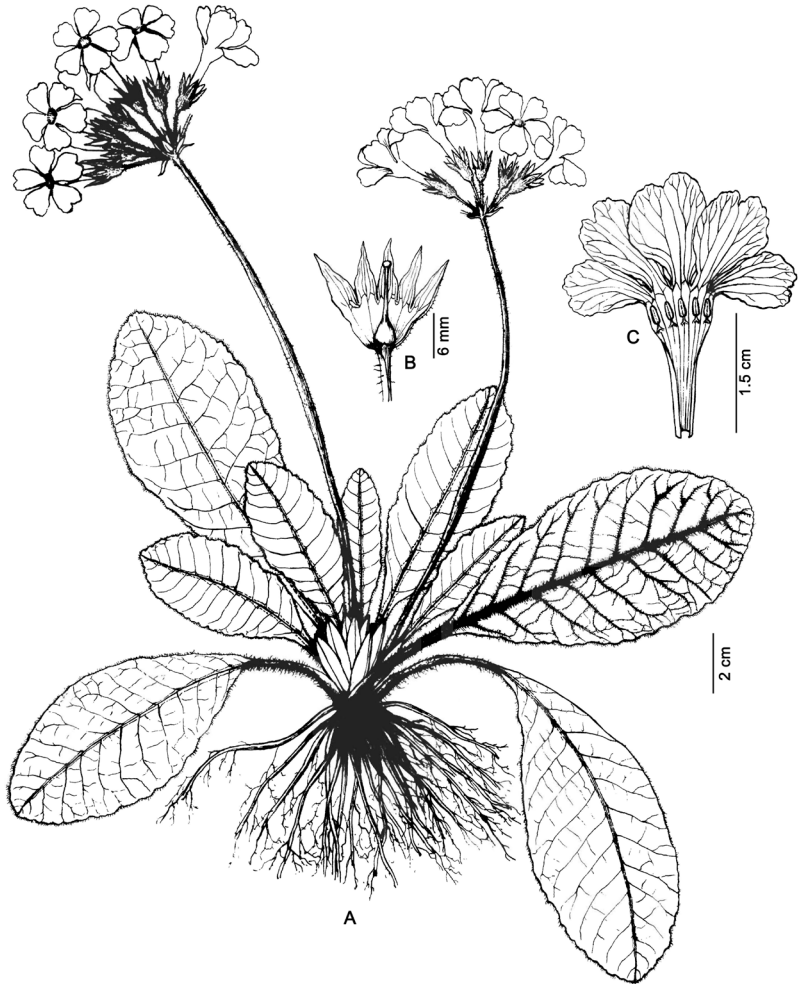
*Proxima P. ovalifoliae* et *P. klaverianae*; *a priore foliis obovato-ellipticis, basi attenuatis, calyce 10–13 mm longo, anguste campanulato, ultra medium in lobos lanceolatos, manifeste 3–5-nerves fisso, corolla exannulata differt; ab altera foliis longe petiolatis, subtus ad costam et nervos*

*aeque ac scapi pedicellique densius pilosis, imprimis floribus heterostylis recedit.*

TYPE: China. Yunnan Province, Gongshan Xian, Cikai Zheng, Heiwadi, E side of Gaoligong Mountains, 27°47'39.4"N, 98°35'12.9"E, alt. 2020 m, secondary evergreen broad-leaved forest, growing on the roadside, 15.IV.2002 Li Heng, Ji Yunheng et Li Rong 14321 (holotype KUN).

ETYMOLOGY. *Primula lihengiana* is named in honor of Li Heng, Professor of Kunming Institute of Botany and the manager of the project, in recognition of her outstanding contributions to our knowledge of the flora of Hengduan and Gaoligong Mountains.

Perennial herbs, efarinose, with a short root stock and numerous fibrous roots, encircled at base at flowering time by deep reddish-brown membranous bud-scales; scales ovate-lanceolate, 1.5–2.5 cm long, 5–8 mm broad. Leaves in a rosette; petioles 3–4.5 cm, about 1/3 of length



**Fig. 1.** *Primula lihengiana* (from the holotype, drawn by Miss Liu Yunxiao). — **A:** Habit. — **B:** Calyx opened up to show pistil. — **C:** Short-styled-flower, opened corolla showing stamens.

of leaf blade, densely tawny pilose; leaf blade of current years' growth elliptic to ovate-elliptic, 5–7.5 cm long and 2.5–3.5 cm broad at flowering time, apex obtuse to rounded, base attenuate, decurrent to petioles, margin obscurely repand-crenate, adaxially glabrous except sparsely pubescent on proximal part of mid-vein, abaxially with multicellular hairs along mid-vein, lateral veins and veinlets; lateral veins 7–8 on each side of mid-vein, reticulation of veins conspicuous on both surfaces, raised abaxially, but not foveolate. Overwintering leaves larger, 9–12 cm long and 4–6 cm broad, glabrous adaxially, pilose on veins abaxially. Scapes 15–18 cm, 1–2 per plant, together with pedicels and lower part of calyx densely tawny pilose, with multicellular hairs. Umbels 6–7-flowered; bracts lanceolate,

6–8 mm, slightly pubescent. Pedicels 6–10 mm. Calyx campanulate, 1–1.2 cm, parted to below middle; lobes lanceolate, ca. 7 mm long, prominently 3–5-veined, pubescent and minutely ciliate. Corolla pink; tube ca. 1.5 cm; limb 2–2.5 cm in diameter; lobes obovate-cuneate, apex emarginate, 8–10 mm broad. Thrum flowers: stamens inserted toward apex of corolla-tube; style ca. 8 mm, to the middle of corolla-tube.

According to the monograph by Smith and Fletcher (1944), the new species clearly belongs to *Primula* sect. *Petiolares* subsect. *Davidi*, which is characterized by the leaves persisting into the following spring, often bullate adaxially and more or less honeycombed-reticulate abaxially, and by the leaf rosette encircled at base with brown paleaceous scales. Subsection *Davidi* is a

well-defined group consisting of 15 species with its distribution center in Sichuan, Guizhou and Yunnan; only one species extends eastwards to Hubei and W Hunan and one species occurs on the border between Yunnan and N Myanmar (Hu 1990, Hu *et al.* 1996). They are mostly growing on margins of broad-leaved forests and shady thickets, or on cliffs exposed to running water, at an altitude of 600–2700 m (Hu 1990, Hu *et al.* 1996).

*Primula lihengiana* is closely related to *P. ovalifolia* and *P. klaveriana*. It differs from the former by the leaves tapering gradually at base, the calyx being longer and lobed below middle into lanceolate 3–5-nerved lobes, and by the exannulate corolla; from the latter it can be easily distinguished by its scapes, pedicels and abaxial surface of leaves densely covered with tawny multicellular hairs and especially by its heterostylous flowers.

*Primula lihengiana* can be considered rare as it is currently known only from the type gathering (*see above*).

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