

Primulina gongchengensis (Gesneriaceae), a new species from Guangxi, China

Yu-Song Huang¹, Wei-Bin Xu^{1,3}, Lei Wu^{1,2} & Yan Liu^{1,*}

¹ Guangxi Institute of Botany, Guangxi Zhuang Autonomous Region, Guilin 541006, Guangxi, China (*corresponding author's e-mail: gxibly@163.com)

² College of Life Sciences, Guangxi Normal University, Guilin 541004, China

³ College of Forestry, South China Agricultural University, Guangzhou 510642, China

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Primulina gongchengensis Y.S. Huang & Yan Liu (Gesneriaceae) is described and illustrated as a new species from Guangxi, China. It is similar to *P. macrodonta*, but its leaves are densely glandular-pubescent on both surfaces, with a cuneate or broadly cuneate base and a repand or crenate margin; densely glandular-pubescent petiole and peduncle; purple corolla, with the tube ca. 1.5 cm long, 6–8 mm in diam. at the mouth; ca. 2 mm long, glabrous anthers; 3 staminodes, the lateral ones 1 mm long and the middle one 0.5 mm long; 1.5–1.8 cm long pistil; ca. 4 mm long ovary; and ca. 1 mm long stigma.

Until recently *Chirita* used to be a large genus in the subfamily Cyrtandroideae of Gesneriaceae, including about 150 species in the sections *Chirita*, *Microchirita*, *Gibbosaccus* and *Liebigia* (Wood 1974, Wang *et al.* 1998, Hilliard 2004). A great morphological heterogeneity was noted by Weber (2004), implying problems in delimitation of the genus and the subdivisions. To no surprise, a polyphyly of *Chirita* was demonstrated in recent publications, using molecular phylogenetic approaches (Li & Wang, 2007, Möller *et al.* 2009, 2011, Wang *et al.* 2011, Weber *et al.* 2011).

Taxonomic treatments of *Chirita* were provided by Wang *et al.* (2011) and Weber *et al.* (2011), and five genera are currently recognized: (1) *Henckelia*, which only includes the type sections of *Chirita* (excluding the species placed in *Damrongia*) and *Henckelia* (excluding sects. *Loxocarpus*, *Didymanthus*, *Heteroboaea* and

Glossadenia); (2) *Damrongia* including presently six species previously placed in *Chirita*; (3) *Microchirita*, which includes the species of *Chirita* sect. *Microchirita*; (4) *Liebigia*, including the species of *Chirita* sect. *Liebigia*; (5) *Primulina*, which includes the species of *Chirita* sect. *Gibbosaccus* and those previously placed in the genera *Chiritopsis*, *Primulina*, and *Wentsai-boea* (excluding *W. tiandengensis*).

In the course of a floristic survey of limestone areas in Guangxi, China, in 2010, we discovered a rare plant of Gesneriaceae near the town of Lianhua (Gongcheng County). After consulting national floras and other relevant literature (Fang *et al.* 1994, Wang *et al.* 1998, Li & Wang 2004, Wei *et al.* 2007, Li & Wang 2008, Xu *et al.* 2008, Li & Möller 2009, Huang *et al.* 2010a, Huang *et al.* 2010b, Xu *et al.* 2011) as well as herbarium specimens, it was concluded that the plants rep-

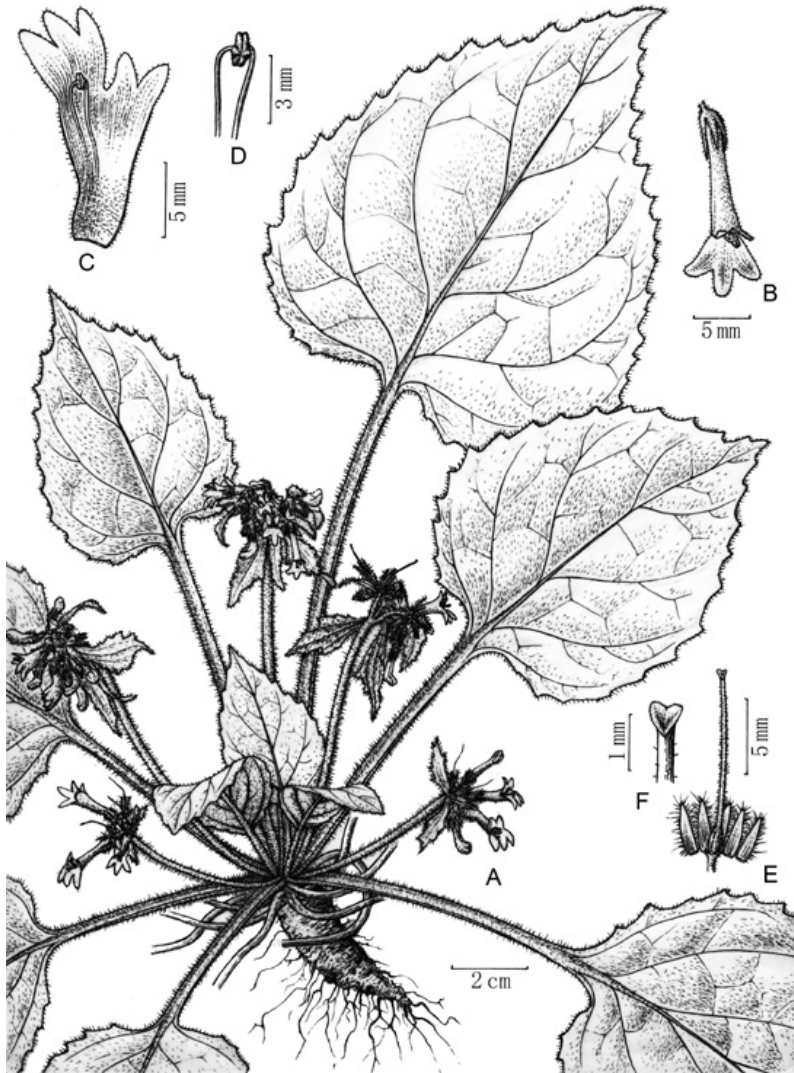


Fig. 1. *Primulina gongchengensis* (from the holotype, drawn by Y. X. Zhu). — **A:** Habit. — **B:** Flower. — **C:** Corolla opened showing stamens. — **D:** Stamens. — **E:** Pistil and calyx. — **F:** Stigma.

resent a new species of *Primulina*, which is described here.

Primulina gongchengensis Y.S. Huang & Yan Liu, *sp. nova* (Fig. 1)

Affinis Primulinae macrodontae D. Fang et D. H. Qin, *sed distinguitur foliis utrinque dense glanduloso-pubescentibus, basi cuneatis late cuneatisve, margine repandis crenatisve, petiolis pedunculisque dense glanduloso-pubescentibus; corolla purpurea, tubo ca. 1.5 cm longo, ore 6–8 mm diam., antheris ca. 2 mm longis, glabris;*

staminodiis 3, eo laterali 1 mm longo, medio 0.5 mm longo; pistillo 1.5–1.5 cm longo, ovario ca. 4 mm longo, stigmatate ca. 1 mm longo.

TYPE: China. Guangxi, Guilin city, Gongcheng County, Lianhua town, on rock face, rare, alt. 200 m, 1 July 2010, *Yu-Song Huang et Wei-Bin Xu 10496* (holotype IBK; isotype PE). — PARATYPE: China. Guangxi, Gongcheng county, Lianhua town, on rock face, alt. 200 m, 1 July 2010, *Yu-Song Huang et Wei-Bin Xu 10500* (IBK).

ETYMOLOGY. The specific epithet is derived from the type locality, Gongcheng County, Guilin City, Guangxi, China.

Herbs perennial. Rhizome subterete, 10–13(15) cm long, 2–2.5 cm across. Leaves

Table 1. Morphological comparison of *Primulina gongchengensis* and *P. macrodonta*.

Character	<i>Primulina gongchengensis</i>	<i>P. macrodonta</i>
Leaf surfaces, petiole and peduncle	densely glandular-pubescent	densely jointed villous and glandular-pubescent
Base of blade	cuneate or broadly cuneate	cordate
Margin	repand or crenate	dentiform biserrate
Corolla	purple, tube ca. 1.5 cm long, 6–8 mm in diam. at mouth	white or slightly purple, tube 1.7–2.5 cm long, 10 mm in diam. at mouth
Anthers	ca. 2 mm long, glabrous	ca. 4 mm long, dorsally bearded
Staminodes	3, lateral ones 1 mm long, middle one 0.5 mm long	2, 5.5 mm long
Stigma	ca. 1 mm	ca. 2 mm
Pistil	1.5–1.8 cm long	ca. 2.1 cm long
Ovary	ca. 4 mm long	ca. 6 mm long

5–10, crowded at apex of rhizome, petiolate; petiole appanate, 6–15 cm long, 5–9 mm wide, densely glandular-pubescent; leaf blade herbaceous, rhomboid-ovate or elliptic, 6–20(30) × 3–10(15) cm, apex obtuse or round, base cuneate or broadly cuneate, inequilateral, margin repand or crenate, densely glandular-pubescent on both surfaces, lateral veins 2–3 on each side, impressed adaxially and prominent abaxially. Cymes 4–10, 1–3-branched, 10–20-flowered; peduncle 6–25 cm long, 2.5–3.5 mm across, densely glandular-pubescent; pedicel 1–3 cm long, densely glandular-pubescent; bracts opposite, linear, 10–20 × 2–3.5 mm, margin entire, glandular-pubescent, apex acute, glandular-pubescent on both sides. Calyx 5-parted nearly to base, lobes narrowly lanceolate, 10–15 × ca. 1 mm, outside densely glandular-pubescent, inside sparsely glandular-pubescent. Corolla purple, 2.2–2.8 cm long, outside glandular-pubescent; tube slender, ca. 1.5 cm long, tube base swollen, ca. 3.5 mm in diam., ca. 2.5 mm in diam. in middle, ca. 6–8 mm in diam. at mouth; limb distinctly 2-lipped, adaxial lip 2-lobed to over middle, lobes oblong, apex round, 4–6 × 5–7 mm, abaxial lip 3-lobed to over middle, lobes oblong, apex round, 6–10 × 5–7 mm. Stamens 2, adnate to 9 mm above corolla tube base, filaments ca. 8 mm long, curved at over middle, anthers elliptic or reniform, ca. 2 mm long, glabrous; staminodes 3, lateral ones 1 mm long, adnate to 5 mm above corolla tube base; middle one 0.5 mm long, adnate to corolla tube

base. Disc annular, ca. 0.7 mm in height, margin repand. Pistil 1.5–1.8 cm long, ovary ovoid, ca. 4 × 1.5 mm, glandular-pubescent; style glandular-pubescent, 1.2–1.4 cm long; stigma obtrapeziform, ca. 1 mm long, apex 2-lobed. Capsule not seen. Flowering from June to August.

Primulina gongchengensis is similar to *P. macrodonta*, but can be distinguished from it by several characters (Table 1).

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