Chirita lijiangensis (Gesneriaceae), a new species from limestone area in Guangxi, China

Wei-Bin Xu, Bo Pan, Yu-Song Huang & Yan Liu*

Guangxi Institute of Botany, Guangxi Zhuangzu Autonomous Region and the Chinese Academy of Sciences, Guilin 541006, Guangxi, China (*corresponding author's e-mail: gxibly@163.com)

Received 27 Nov. 2009, revised version received 8 Feb. 2010, accepted 25 Feb. 2010

Xu, W. B., Pan, B., Huang, Y. S. & Liu, Y. 2011: *Chirita lijiangensis* (Gesneriaceae), a new species from limestone area in Guangxi, China. — *Ann. Bot. Fennici* 48: 188–190.

Chirita lijiangensis B. Pan & W.B. Xu, a new species of Gesneriaceae from Guangxi, China, is described and illustrated. It is similar to *C. pteropoda*, but differs by its leaf blade that is densely pilose on both surfaces; by the leaf base being cuneate to broadly cuneate; by the peduncle, the pedicel and calyx being densely pilose; by the corolla that is purple, 2.2–2.8 cm long, and with a slender, ca. 1.5 cm long tube; by the filaments being purple, ca. 8 mm long, and glabrous; by the lateral staminodes that are ca.1 mm long; and by the the pubescent, ca. 4 mm long ovary.

In the course of a floristic survey of limestone areas in Guangxi, China in 2009, we collected an interesting plant of Gesneriaceae near the riverside of Lijiang. After consulting national floras and other relevant literature (Wang *et al.* 1998, Li & Wang 2004, 2008, Wei *et al.* 2007, Xu *et al.* 2008, Li & Moeller 2009, Pan *et al.* 2009) as well as herbarium specimens, we concluded that the plant represented a new species of *Chirita*, which is described and illustrated here.

Chirita lijiangensis B. Pan & W.B. Xu, *sp. nova* (Fig. 1)

Affinis C. pteropodae W. T. Wang, sed differt foliis utrinque dense pilosis, basi cuneatis usque late cuneatis, peduneulis pedicellis calycibusque dense pilosis, corolla purpurea, 2.2–2.8 cm longa, filamentis purpureis, ca. 8 mm longis, glabris, ovario pubescenti.

Type: China. Guangxi, Guilin City, Yangshuo County, Xingping Town, on moist rock face, rare, alt. 145 m, 5.VII.2009 Bo Pan & Wei-Bin Xu 09690 (holotype IBK; isotype PE). — Paratypes: China. Guangxi, Yangshuo County, Xingping Town, on moist rock face, alt. 145 m, 2.VIII.2009 Yan Liu & Wei-bin Xu 09802 (IBK).

ETYMOLOGY. The specific epithet is derived from the type locality, Lijiang river, Yangshuo County, Guangxi.

Herbs, perennial. Rhizome subterete. 10-13(15) cm long, 2-2.5 cm wide. Leaves 5-10, crowded at apex of rhizome, petiolate; petiole applanate, 6-15 cm long, 5-9 mm wide; leaf blade herbaceous, rhomboid-ovate to elliptic, $6-20(30) \times 3-10(15)$ cm, apex obtuse to round, base cuneate to broadly cuneate, inequilateral, margin repand to crenate, densely pilose on both surfaces, lateral veins 5-7 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 wide, densely pilose; pedicel 1–3 cm long, densely pilose; bracts opposite,

linear, $10-20 \times 2-3.5$ mm, margin entire, apex acute, pilose on both sides. Calyx 5-parted nearly to base, lobes narrowly lanceolate, $10-15 \times ca$. 1 mm, outside densely pilose, inside sparsely pilose. Corolla purple, 2.2-2.8 cm long, outside pubescent; corolla tube slender, ca. 1.5 cm long, tube base swollen, ca. 3.5 mm in diam., ca. 2.5 mm in diam. at middle, ca. 6-8 mm in diam. at mouth; limb distinctly 2-lipped, adaxial lip 2-lobed to over half-length, lobes oblong, apex round, 4-6 × 5-7 mm, abaxial lip 3-lobed to over half-length, lobes oblong, apex round, $6-10 \times 5-7$ mm. Stamens 2, adnate to 9 mm above corolla tube base, filaments ca. 8 mm long, purple, upper parts twisted, 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, pubescent; style puberulent, 1.2-1.4 cm long; stigma obtrapeziform, apex emarginate, 0.7 mm long. Capsule not seen. Flowering from July to August.

DISTRIBUTION AND ECOLOGY. The species is only known from one population on moist rock face in forest of limestone hills in Yangshuo County, Guangxi, China.

Chirita lijiangensis is similar to *C. ptero-poda*, but it can be distinguished by several characters (Table 1).

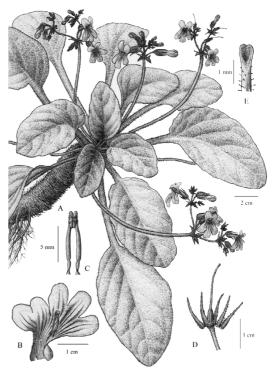


Fig. 1. Chirita lijiangensis (from the holotype, drawn by Y. X. Zhu). — **A**: Habit. — **B**: Corolla opened with stamens and staminodes. — **C**: Stamens. — **D**: Calyx and pistil. — **E**: Stigma.

Acknowledgements

We thank Prof. Fa-Nan Wei (IBK) for writing the Latin diagnosis, and Dr. Xin-Wei Li (HIB) for revising the manuscript, and anonymous reviewers for making useful comments. We are also grateful to Mr. Yun-Xi Zhu (IBK) for the drawing. This study was supported by Western Program for Fostering

Table 1. Morphological comparison of Chirita lijiangensis and C. pteropoda.

Characters	Chirita lijiangensis	C. pteropoda
Leaf blade	densely pilose on both surfaces	sparsely puberulent on both surfaces
Base of blade	cuneata or broadly cuneata	broadly cuneate and decurrent into broad wings of petiole
Peduncle	densely pilose	glandular-puberulent and sparsely puberulent
Pedicel	densely pilose	glandular-puberulent
Calyx	outside densely pilose, inside sparsely pilose	outside glandular-puberulent, inside puberulent
Corolla	purple, 2.2-2.8 cm long, corolla tube slender,	white to purplish, 3.6–4 cm long,
	ca. 1.5 cm long	corolla tube ca. 2.5-2.8 cm long
Filaments	purple, ca. 8 mm long, glabrous	white, ca. 1.2 cm long, glandular-puberulent
Staminodes	lateral staminodes 1 mm long	lateral staminodes 4.5-5 mm long
Ovary	pubescent, 4 mm long	densely glandular-puberulent, 1.3-1.6 cm long
Flowering	July to August	November

Personal Ability, CAS (2007) and Knowledge Innovation Project of the Chinese Academy of Sciences, Grant No. KSCX2-YW-Z-0912 to Yan Liu (IBK).

References

- Li, J. M. & Moeller, M. 2009: Chirita grandibracteata (Gesneriaceae), a new species from Yunnan, China. Annales Botanici Fennici 46: 125–129.
- Li, J. M. & Wang, Y. Z. 2008: Chirita longicalyx (Gesneriaceae), a new species from Guangxi, China. Annales Botanici Fennici 45: 212–214.
- Li, Z. Y. & Wang, Y. Z. 2004: [Plants of Gesneriaceae in China]. — Henan Sci. & Technol. Publ. House,

- Zhengzhou. [In Chinese].
- Pan, B., Mo, D., Xu, W. B. & Zhou, T. J. 2009: Chirita pseudoheterotricha T. J. Zhou, B. Pan & W. B. Xu, a new species of Gesneriaceae from limestone areas in Guangxi, China. — Journal of Tropical and Subtropical Botany 17: 596–599.
- Wang, W. T., Pan, K. Y., Li, Z. Y., Weitzman, A. L. & Skog,
 L. E. 1998: Gesneriaceae. In: Wu, Z. H. & Raven, P.
 H. (eds.), Flora of China, vol. 18: 244–401. Sci. Press,
 Beijing & Missouri Bot. Garden Press, St. Louis.
- Wei, Y. G., Pan, B. & Tang, W. X. 2007: Chirita guihaiensis sp. nov. (Gesneriaceae) from Guangxi, China. — Nordic Journal of Botany 25: 296–298.
- Xu, H., Li, Z. Y. & Jiang, H. 2008: A new species of *Chirita* (Gesneriaceae) from Yunnan, China. — *Botanical Journal of the Linnean Society* 158: 269–273.