Chiritopsis hezhouensis (Gesneriaceae) from Karst Caves in Guangxi, China

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ABSTRACT: *Chiritopsis hezhouensis* W. H. Wu & W. B. Xu, a new species of Gesneriaceae from karst caves in Guangxi, China, is described and illustrated. The new species is similar to *C. glandulosa* D. Fang, L. Zeng et D. H. Qin in the leaf shape, but differs in leaf, peduncle and pedicel glandular-pubescent, bracts lanceolate, appressed glandular-pubescent, flowers congested, calyx 2.5-3 × ca. 1 mm, outside puberulent and sparsely glandular-puberulent, corolla 3-5 mm long, glabrous, constricted at the mouth, limb retrocurved, indistinctly 2-lipped, stamens, pistil and disc glabrous.

KEY WORDS: *Chiritopsis*, Gesneriaceae, karst cave, limestone flora, new species.

INTRODUCTION

The genus *Chiritopsis* (Gesneriaceae) is endemic to China, members of this genus mainly distributed in Guangxi (Li *et al.*, 2004). During a botanic expedition to limestone areas in Hezhou City, eastern Guangxi, China, we collected an interesting plant of Gesneriaceae from the entrance of karst caves in July 2009. After consulting national floras and relevant literatures (Wang 1981; Fang *et al.*, 1993; Wang *et al.*, 1998; Liu *et al.*, 2006; Wen *et al.*, 2008; Xu *et al.*, 2009; Pan *et al.*, 2010) and herbarium specimens, we concluded that it was a new species of the genus. In the present study, this new species from Guangxi is reported in details below.

TAXONOMIC TREATMENTS

Chiritopsis hezhouensis W. H. Wu & W. B. Xu *sp. nov.* Figs. 1 & 2.

Species forma foliorum C. glandulosae D. Fang, L. Zeng et D. H. Qin affinis est, sed differt foliis pedunculis pedicellisque glanduloso-pubescentibus, bracteis lanceolatis, appresse glanduloso-pubescentibus, floribus congestis, calyce 2.5-3mm longo circ. 1 mm lato, extus puberulo sparse glanduloso-pubescentique, corolla 3-5mm longa, glabra, ore contracta, limbo reflexo, inconspicue 2-labiato, staminibus pistillo discoque glabris.

Type: China. Guangxi, Hezhou City. Etang Town, Lugang Village, at the entrance of karst caves, rare, 12 July 2009, Wang-Hui Wu & Wei-Bin Xu 091748 (holotype, IBK; isotype, PE).

Herbs perennial; rhizome subterete, 3-6 mm long, 1-3 mm wide. Leaves 5-15, basal, petiolate; petioles cylindrical, 5-17 cm long, 5-7 mm wide, glandular-pubescent. Leaf blades herbaceous membranous when dry, broadly triangular-ovate, 7-13 × 6-12 cm, glandular-pubescent on both surfaces, base cordate, margin deeply lobed, apex broadly acute, obtuse to rounded, subpalmately veined; lateral veins 3-4 on each side of midrib, impressed adaxially, prominent abaxially. Cymes 4-8, axillary, 1-4-branched, flowers numerous, congested; peduncle 8-20 cm long, 2-3.5 mm wide, glandular-pubescent; bracts 2, opposite, lanceolate, 1-2 × 0.7-1 cm, appressed glandular-pubescent on both surfaces, margin entire; pedicels 1-3 mm long, glandular-puberulent. Calyx 5-lobed to base, lobes lanceolate, 2.5-3 × ca. 1 mm, apex acute, outside puberulent and sparsely glandular-puberulent, inside sparsely puberulent, margin entire; corolla white, 3-5 mm long, glabrous, constricted at the mouth; corolla tube 3-4 mm long, ca. 2.5 mm in diam. at the mouth, ca. 2 mm in diam. at the base; limb retrocurved, indistinctly 2-lipped; adaxial lip 2-lobed, lobes oblong, ca. 1.2 × 0.8 mm; abaxial lip 3-lobed, lobes oblong, ca. 1.2 × 0.8 mm; stamens 2, adnate to 1.2 mm above the corolla tube base; filaments linear, 3-3.5 mm long, geniculate below the middle, glabrous; anthers ca. 1.7 mm long, glabrous, dorsifixed, longitudinal; staminodes 3, adnate to ca. 1.2 mm above the corolla tube base, lateral ones ca. 1 mm long, middle one 0.5 mm long. Disc annular, ca. 0.3 mm in height, margin repand, glabrous. Pistil ca. 4 mm long, glabrous, ovary spheroidal, ca. 1.2 mm long, ca. 1 mm across, glabrous; style ca. 3 mm long, glabrous; stigma 2-lobed, lobes suborbicular, ca. 0.7 mm wide. Capsule ellipsoid, 4-5 mm long, 1-2 mm across, bivalvular; seed

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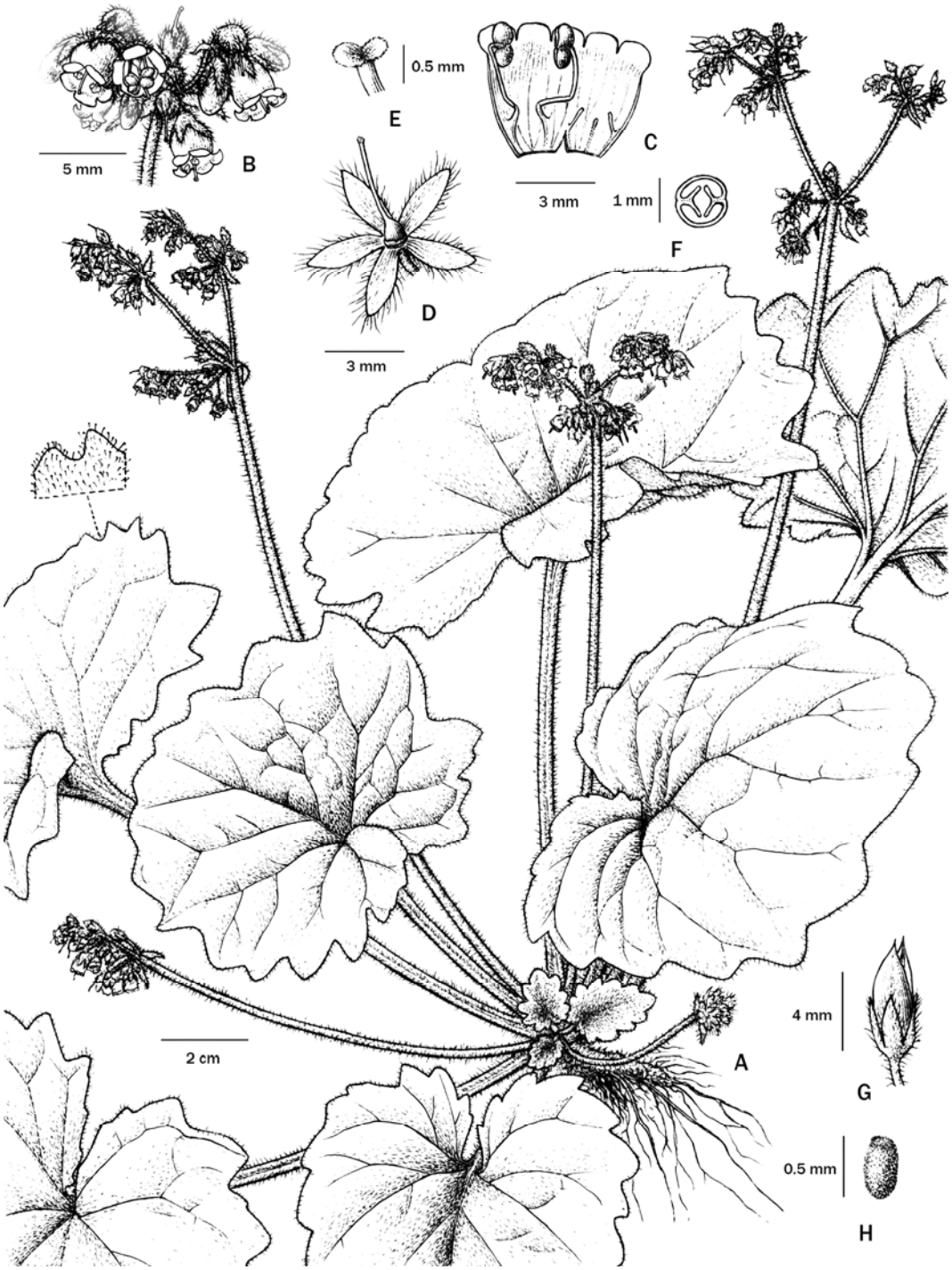


Fig. 1. *Chiritopsis hezhouensis* (Drawn by Y. X. Zhu based on W. H. Wu et W. B. Xu 091748). A: Habit. B: Cymes. C: Corolla opened showing stamens and staminodes. D: Calyx and pistil. E: Stigma. F: Placenta. G: Capsule. H: Seed.

ellipsoid, ca. 0.5 mm long, ca. 0.2 mm across, tuberculate outside.

Ecology: On moist rock face at the entrance of karst caves.

Phenology: Flowering from June to July, fruiting from July to September.

Etymology: The specific epithet is derived from the

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Fig. 2. *Chiritopsis hezhouensis* (Photographed by Wang-Hui Wu). A: Habitat. B: Habit. C: Cymes. D: Flower. E: Capsule.

type locality, Hezhou City, Guangxi.

Notes: *Chiritopsis hezhouensis* W. H. Wu & W. B. Xu resembles *C. glandulosa* D. Fang, L. Zeng et D. H. Qin (Fig. 3) in the leaf shape, but differs in leaf, peduncle and pedicel glandular-pubescent, bracts lanceolate, appressed glandular-pubescent, flowers congested, calyx 2.5-3 × ca. 1 mm, corolla 3-5 mm long, glabrous, constricted at the mouth, limb retrocurved, indistinctly 2-lipped, stamens, pistil and disc glabrous. Morphological comparison of the two species is shown

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Fig. 3. *Chiritopsis glandulosa* (Photographed by Wei-Bin Xu). A: Full view of the collection locality. B: Habitat. C: Habit. D: Flower.

in Table 1.

Additional specimens examined: CHINA. Guangxi, Hezhou City. Etang Town, Lugang Village, at the entrance of karst caves, 10 July 2009, *Yan Liu & Wei-Bin Xu 091739* (IBK).

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Table 1. Morphological comprasion of *Chiritopsis hezhouensis* and *C. glandulosa*.

Characters	*C. hezhouensis*	*C. glandulosa*
Leaf, peduncle and pedicel	Glandular-pubescent	Glandular-pubescent and purple glandular
Bracts	Lanceolate, appressed, glandular-pubescent, margin entire	Obovate to oblong or narrowly lanceolate, glandular-pubescent and purple glandular, margin serrate to entire
Cymes	Flowers congested	Flowers lax
Calyx	5-lobed to base, 2.5-3 × ca. 1 mm, outside puberulent and sparsely glandular-puberulent	(4)5-lobed to base, 3-8 × 1.3-2 mm, outside glandular-pubescent and purple glandular
Corolla	3-5 mm long, glabrous, constricted at the mouth, tube 3-4 mm long, white	1.1-1.3cm long, puberulent and glandular-puberulent, tube 7-8 mm long, sparsely purple
Limb	Retrocurved, indistinctly 2-lipped	Patent, distinctly 2-lipped
Stamens	2, adnate to 1.2 mm above corolla base, glabrous, connective glabrous	(1)2, adnate to 2.5 mm above corolla base, sparsely pubescent, connective pubescent
Staminodes	3, adnate to ca. 1.2 mm above the corolla tube base	(2)3, adnate to ca. 0.6 mm above the corolla tube base
Disc	ca. 0.3 mm in height, glabrous	ca. 0.7 mm in height, glandular
Pistil	ca. 4 mm long, glabrous	ca. 1 cm long, glandular-puberulent

preparing the illustration. This study was supported by Western Program for Fostering Personal Ability, CAS (2007) and Knowledge Innovation Project of the Chinese Academy of Sciences, Grant No. KSCX2-YW-Z-0912 to Yan Liu.

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中國廣西岩溶洞穴苦苣苔科植物一新種 – 賀州小花苣苔

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摘要：本研究報導了廣西石灰岩地區苦苣苔科小花苣苔屬 *Chiritopsis* W. T. Wang 一新種 – 賀州小花苣苔（*Chiritopsis hezhouensis* W. H. Wu & W. B. Xu）。該種在葉子形狀上與紫腺小花苣苔（*C. glandulosa* D. Fang, L. Zeng et D. H. Qin）較相近, 但不同在於葉、花序梗及花梗被腺狀短柔毛，苞片披針形，被貼伏腺狀短柔毛，花密集，萼片大小爲長 2.5-3 毫米、寬約 1 毫米，花冠長 3.5 毫米，無毛，在口部縊縮，簷部反折，不明顯二唇形，雄蕊、雌蕊及花盤無毛。

關鍵詞：小花苣苔屬、苦苣苔科、岩溶洞穴、石灰岩植物區系、新種。

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