

# 中国广西石灰岩地区苦苣苔科 ——新种——鹿寨唇柱苣苔

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**摘要:** 描述了中国广西石灰岩地区苦苣苔科(Gesneriaceae) 1 新种——鹿寨唇柱苣苔(*Chirita luzhaiensis* Yan Liu, Y. S. Huang & W. B. Xu)。该种与桂林唇柱苣苔(*Chirita gueilinensis* W. T. Wang) 相似, 但叶面被长柔毛和短柔毛, 花药无毛, 花丝近基部膝状弯曲, 退化雄蕊 3 枚, 无毛, 花期 12 月至次年 1 月可与后者区别。目前, 鹿寨唇柱苣苔仅见于广西鹿寨县中渡镇的两个石灰岩山洞中。

**关键词:** 鹿寨唇柱苣苔; 唇柱苣苔属; 苦苣苔科; 新种; 石灰岩植物区系; 广西; 中国

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## *Chirita luzhaiensis*, A New Species of Gesneriaceae from Limestone Areas in Guangxi, China

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**Abstract:** *Chirita luzhaiensis* Yan Liu Y. S. Huang & W. B. Xu, a new species of Gesneriaceae from limestone areas in Guangxi, China, is described and illustrated. The new species is similar to *Chirita gueilinensis* W. T. Wang, but it differs in its leaf-surface villous and pubescent adaxilly, anthers glabrous, filaments geniculate near base, staminodes 3, glabrous, flowering period from December to January of the following year. It was only found in two karst caves from Zhongdu Town of Luzhai County, Guangxi, China.

**Key words:** *Chirita luzhaiensis*; *Chirita*; Gesneriaceae; New species; Limestone flora; Guangxi; China

*Chirita* Buch.-Ham. ex D. Don is a gesneriaceous genus of approximately 140 species and China has 105 species and 5 subspecies. There are 55 species and 2 subspecies in Guangxi<sup>[1]</sup>.

In the course of investigating the karst cave plants in Luzhai county, Guangxi, we discovered a rare plant of *Chirita*. After comparing it with all described species of *Chirita*<sup>[1-5]</sup>, we found that it is different from all the known species of *Chirita* and represents a new species described below.

*Chirita luzhaiensis* Yan Liu, Y. S. Huang & W. B. Xu, sp. nov. Fig. 1

**Type:** China, Guangxi: Liuzhou city, Luzhai county, in karst caves, rare, alt. 210 m, 2008-12-26 W. B. Xu & Y. S. Huang 08460 (holotype IBK; isotypes IBSC, IBK).

Species affinis *C. gueilinensi* W. T. Wang, sed foliis supra villosis pubescentibusque, antheris glabris, filamentis juxta basin geniculatis, staminodiis 3, glabris, floescentia tardiore differt.

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Fig. 1 *Chirita luzhaiensis* Yan Liu, Y. S. Huang & W. B. Xu

A. Habit; B. Opened corolla showing stamens and staminodes; C. Stamens; D. Calyx and pistil; E. Stigma [Drawn by S. Q. HE, based on W. B. Xu & Y. S. Huang 08460 (IBK)]

Herbs perennial. Rhizome subterete, 2~4 cm long, 0.5~1.5 cm across. Leaves 5~10; petiole appanate, 1~5 cm long; leaf blade narrowly elliptic or rhombic-elliptic, 8~20 cm × 2.5~8 cm; apex acute or obtuse, base cuneate, oblique, margin entire or repand, villous and pubescent adaxilly, villus 4~8 mm long, abaxially pubescent; lateral nerves 4~6 pairs. Cymes 2~3-branched, each inflorescence with 1~10-flowered; peduncle 2~6 cm, densely villous; pedicel 2~15 mm long, villous. Bracts opposite, linear to lanceolate, 2~8 mm × 0.5~1.5 mm, densely villous. Calyx 5-lobed nearly to the base; lobes lanceolate, 5~10 mm × 1~2 mm, outside villous. Corolla purple, 3.5~6 cm long, abaxially pubescent;

tube 2.5~3.5 cm long, limb distinctly 2-lipped, adaxial lip 0.7~1.1 cm long, 2-lobed, abaxial lip 1~1.4 cm long, 3-lobed. Stamens adnate to 1.4~1.7 mm above the corolla base, filaments 1.1~1.4 cm long, geniculate near the base; anthers 3~5 mm long, glabrous; staminodes 3, lateral ones adnate to 1~1.2 cm above the corolla base, 5~7 mm long, middle one adnate to 3~8 mm above the corolla base, 1~3 mm long. Disc annular, 0.5~1 mm high. Pistil 2~3 cm long, ovary ovoid, 1.5~2.5 cm long, pubescent; style puberulent; stigma 2.5~4.3 mm long, about 1~1.5 mm across, 2-lobed.

**Ecology.** The species grows in the karst caves at altitude of 150~300 m.

**Phenology.** The new species was observed to flower December to January.

**Etymology.** The specific epithet is named after the type locality, Luzhai County, Liuzhou City, Guangxi Zhuangzu Autonomous Region.

**Notes.** *Chirita luzhaiensis* Yan Liu Y. S. Huang & W. B. Xu is similar to *Chirita gueilimensis* W. T. Wang, but differs from the latter by its leaf blade villous and pubescent (vs. pubescent), anthers glabrous (vs. pubescent), filament geniculate near base (vs. geniculate in the middle), and staminodes 3, glabrous (vs. 2, glandulose), bracts villous (vs. pubescent). In addition, the flowering period is December to January of the following year (vs.

March ~ April). A comparison of the distinguishing characters of *Chirita luzhaiensis* with three other species is shown in Table 1<sup>[1-5]</sup>.

**Additional specimens examined.** CHINA. **Guangxi:** Luzhai county, on moist rock face in karst caves, alt. 210 m, 2008-12-26, W. B. Xu & Y. S. Huang 08461 (IBK).

The new species is only found from its type locality, Luzhai County, Guangxi. Current information shows that the population size of this new species is fewer than 250 mature individuals, and only known from two karst caves. We therefore assess *Chirita luzhaiensis* as endangered degree (EN) using the IUCN categories and criteria<sup>[6]</sup>.

Table 1 The distinction of three species similar to *Chirita luzhaiensis*

	<i>Chirita luzhaiensis</i>	<i>C. gueilimensis</i>	<i>C. fordii</i>	<i>C. linglingensis</i>
Leaf surface	Villous (4~8 mm) and pubescent	Pubescent	Villous and pubescent	Villous (2~4 mm) and pubescent
Anthers	Glabrous	Pubescent	Glabrous	Pubescent
Filament	Geniculate in the lower part	Geniculate at the middle	Geniculate in the lower part	Geniculate in the lower part
Staminodes	3, glabrous	2, piloglandulose	2, puberulent	3, puberulent
Bracts	Villous	Pubescent	Puberulent	Villous
Efflorescence	Dec. ~ Jan.	Mar. ~ Apr.	Aug. ~ Oct.	Mar. ~ Apr.

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