Liparis damingshanensis (Orchidaceae), a new species from Guangxi, China

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(Manuscript received 31 August 2011; accepted 17 November 2011)

ABSTRACT: A new species of Orchidaceae, *Liparis damingshanensis*, from evergreen broad-leaved forest of south-central Guangxi, China, is described, illustrated, and compared with three similar species *Liparis cordifolia, L. cathcartii, and L. pauliana*.

KEY WORDS: China, Guangxi, *Liparis*, new species, Orchidaceae.

INTRODUCTION

The genus *Liparis* L. C. Rich. consists of approximately 320 species that are mostly from tropical areas. Only a few species extend to the temperate or alpine regions (Seidenfaden, 1976, 1992, Comber, 2001; Pearce and Cribb, 2002; Chen et al., 2009). In China, the genus is represented by approximately 65 species, and nearly 22 of them are endemic to China, including many recently described species (Chen et al., 2009, Yang, 2009; Jin, 2009, 2011).

During our expedition to Mt. Damingshan in Guangxi for the floristic survey in March, 2011, we found the peculiar specimens of *Liparis* (collected by the first and second authors of this paper). Careful studies of these specimens and literature indicate the specimens represent a new species of *Liparis* that has not been known which is described here.

TAXONOMIC TREATMENT

Liparis damingshanensis L. Wu & Y. S. Huang *sp. nov.* Figs. 1 & 2 A-D

Affinis Liparis cordifoliae J. D. Hooker, *sed differt lamina lanceolata, ovato-lanceolata vel oblongo-lanceolata; inflorescentia 3-5 cm longa, laxe 2-7-flora, pedicello ovarioque 1-1.5 cm longa, sepalis anguste oblongo; fl. Mart. usque ad Apr. Etiam similis L. paulianae* Handel-Mazzetti *et L. cathcartii* J. D. Hooker, *ab utraque folio uno, lamina lanceolata, ovato-lanceolata vel oblongo-lanceolata, apice acuminata; sepalis 6-8 mm longis, petalis 6-8 mm longis; labio obovato-trianqulato, rarissime late elliptico, 5-7 mm longo, 5-6 mm lato, lamellis 2 brevibus longitudinalibusque instructo differt.*

Type: China. Guangxi: Nanning, Damingshan Natural Reserve. alt. 1,082 m, 23°31′20″ N, 108°23′13″ E, 24 Mar. 2011, *Lei Wu and Y. S. Huang D1695* (holotype IBK; isotypes IBK).

Terrestrial herbs. Pseudobulbs ovoid or oblong-ovoid, 0.6-1.2 × 0.6-1.3 cm, ± enclosed by white membranous sheaths. Leaf single, simple; petiole sheathing, 1.2-1.8 cm in length, amplexicaul, not articulate; blade lanceolate, ovate-lanceolate to oblong-lanceolate, 2-6 × 1.2-2.5 cm, contracted and decurrent into petiole at base, and acuminate at apex; leaf margin slightly crisped. Inflorescence 3-5 cm long; peduncle slightly compressed cylindric, narrow wing on either side; rachis laxly 2-7-flowered; floral bracts ovate-triangular, ca. 1.3 mm long. Flowers purple, purplish to green; pedicel and ovary 1-1.5 cm long. Sepals narrowly oblong, 6-8 × 1.5-2 mm; lateral sepals slightly oblique. Petals nearly filiform, 6-8 × ca. 0.3 mm; lip obovate-triangular, rarely broadly elliptic, 5-7 × 5-6 mm, narrowed toward base, with 2 short longitudinal lamellae, sometimes lamellae inconspicuous, irregularly toothed on the margin, truncate and mucronate at apex; midvein dull-purple, broad and stout, conspicuous from the base up to near the apex. Column arcuate, 3-3.5 mm long, dilated and thick at the base, winged at apex. Fruit not observed.

Distribution, ecology and phenology: *Liparis damingshanensis* is found on rocks at the mouth of caverns along a valley in Damingshan Natural Reserve,

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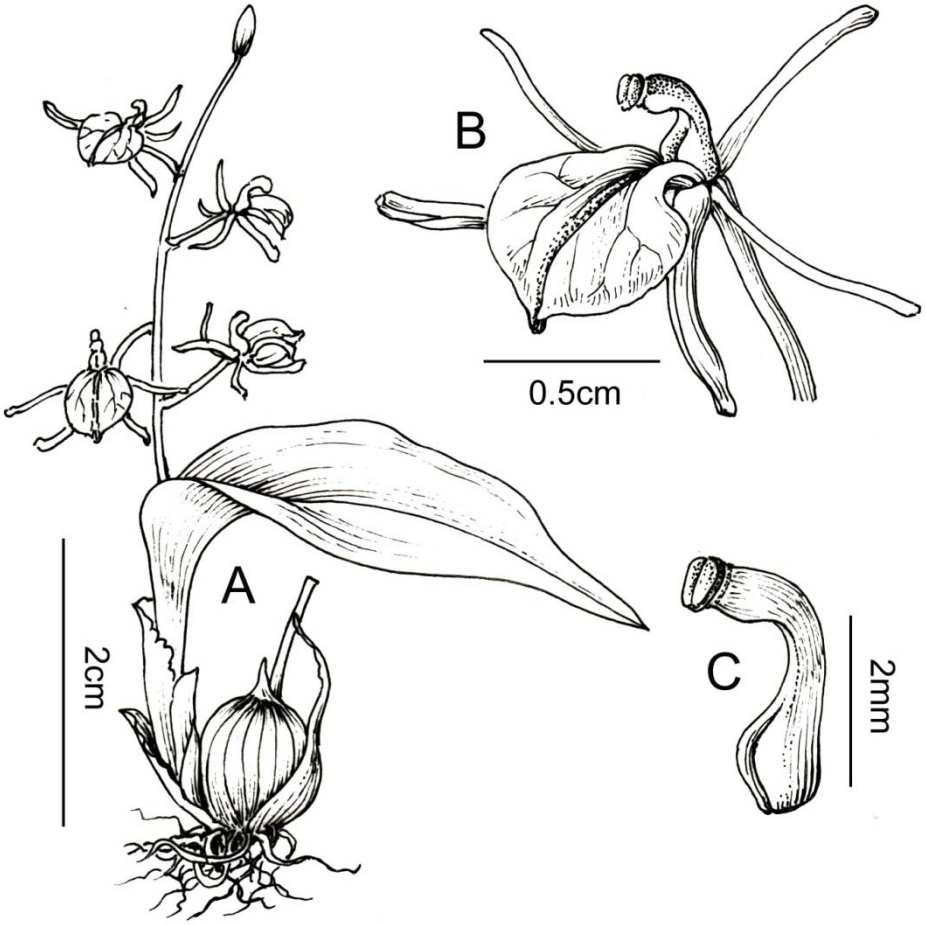


Fig. 1. *Liparis damingshanensis* (Drawn by W. H. Lin from the holotype). A: Habit. B: Flower. C: Column.

Guangxi, China, at 1,000-1,150 m. The populations are small, with less than 200 individuals. It flowers from March to April.

Etymology: The specific epithet is derived from the type locality, Damingshan Natural Reserve, Guangxi.

Notes: This new species mostly resembles *Liparis cordifolia* J. D. Hooker, but differs by the following characters: lanceolate, ovate-lanceolate to oblong-lanceolate leaf blade, smeller, 2-6 × 1.2-2.5 cm, shorter inflorescence, 3-5 cm long, and longer pedicel and ovary, 1-1.5 cm long (See Table 1). *Liparis cordifolia* also occurs in Guangxi, but is only found in limestone areas and flowers in Oct-Dec, whereas the new species occurs in acid soil areas and flowers in Mar-Apr. This new species is also similar to *L. pauliana* Handel-Mazzetti (Figs. 2E-G) and *L. cathcartii* J. D. Hooker, but differs by having a single leaf only and the lip is obovate-triangular and smaller (See Table 1). In addition, *Liparis cathcartii* has not been reported from Guangxi.

ACKNOWLEDGEMENTS

The authors are grateful to Prof. Fa-Nan Wei (IBK) for the Latin diagnosis, to Prof. Yan Liu (IBK) for his help in preparing the paper, to Dr. Jenny Xiang (Department of Plant Biology, North Carolina State University) for improving English, and to Mr. Wen-Hong Lin (IBK) for the illustration. We thank Mr. Yun-Biao Liao and Mr. Sheng-Fu Liu for assistance in the field work. We also thank the Administrative Bureau of Damingshan National Nature Reserve for their kind help during the field work. This study was supported by the Guangxi Natural Science Foundation, Grant No. 2010GXNSFE013004 to Yan Liu and the Knowledge Innovation Program of the Chinese Academy of Sciences, Grant No. KSCX2-YW-Z-0912 to Yan Liu.

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Fig. 2. A-D: *Liparis damingshanensis* (Photographed by Lei Wu). A: Habitat (the red arrow shows the place where the new species grows). B: Habit. C: Flower in face view. D: Flower in side view. E-G: *L. pauliana* (Photographed by Yan Liu). E: Habit. F: Flower in face view. G: Flower in side view.

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Table 1. Morphological comparison of four Chinese species of *Liparis*.

Character	*L. damingshanensis*	*L. cordifolia*	*L. cathcartii*	*L. pauliana*
Leaf	1	1	2	2, very rarely 1
Leaf blade	lanceolate, ovate-lanceolate to oblong-lanceolate, apex acuminate	ovate to cordate, apex acuminate.	elliptic, ovate, or ovate-oblong, apex acute or obtuse	ovate to elliptic, apex acuminate
Inflorescence	3-5 cm	6-12(-25) cm	7-25 cm	7-28 cm
Rachis	laxly 2-7-flowered	often more than 10-flowered	several to more than 10-flowered	laxly several flowered, very rarely many flowered or 1- or 2-flowered
Pedicel and ovary	1-1.5 cm	0.6-1 cm	0.7-0.8 cm	1-1.8 cm
Sepals	narrowly oblong, 6-8 × 1.5-2 mm	linear-lanceolate or sublinear, 6-7 × ca. 1.8 mm	narrowly oblong, 7-9 × ca. 2.5 mm	linear-lanceolate, 11.5-18 × 2-2.5 mm
Petals	6-8 × ca. 0.3 mm	6-7 × ca. 0.5 mm	7-9 × ca. 0.4 mm	11.5-18 × ca. 0.3 mm
Lip	obovate-triangular, very rarely broadly elliptic, 5-7 × 5-6 mm	obovate-triangular, 6-7 × ca. 6 mm	obovate to elliptic-obovate, 8-9 × 7-8 mm	obovate-elliptic, 1.3-2 × 0.8-1.2 cm
Phenology	Mar-Apr	Oct-Dec	Jun-Jul	May

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中國廣西蘭科植物一新種 – 大明山羊耳蒜

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(收稿日期：2011 年 8 月 31 日；接受日期：2011 年 11 月 17 日)

摘要：本文報導了廣西中南部常綠闊葉林下蘭科植物一新種 – 大明山羊耳蒜（*Liparis damingshanensis* L. Wu & Y. S. Huang），並將該種與其相近種心葉羊耳蒜（*Liparis cordifolia*）、長唇羊耳蒜（*Liparis pauliana*）和二褶羊耳蒜（*Liparis cathcartii*）進行比較。

關鍵詞：中國、廣西、羊耳蒜屬、新種、蘭科。

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