



A new species of *Neottia* (Orchidaceae, Epidendroideae) from southwestern China

XIAO-HUA JIN¹

¹State Key Laboratory of Systematic and Evolutionary Botany and Herbarium, Institute of Botany, Chinese Academy of Sciences, Nanxincun 20, Xiangshan, Beijing, 100093, China; e-mail: orchid@ibcas.ac.cn

Abstract

Neottia bicallosa, a new species from China, is described and illustrated. *Neottia bicallosa* is similar to *Neottia karoana* and *N. microphylla*, but differs from them by having oblong and erect lateral lobes with two fleshy calli between them, middle lobe elliptic and 3-lobed, and lateral lobules dentate.

Key words: China, *Neottia bicallosa*, new species, Orchidaceae

Introduction

Neottia s.l. Guettard (1754: 374), including *Listera* Brown (1813: 201), consists of approximately 50 species, distributed mainly in northern temperate areas with a few species extending into alpine mountains in tropical Asia (Pridgeon *et al.* 2005; Pearce & Cribb 2002; Chen 1999). This genus includes both autotrophic and mycoheterotrophic plants, characterized by having resupinate flowers, a more or less curved column, retrorse-inclined anthers, and two-sectile and naked pollinia.

There are about 35 species of *Neottia* in China, most of which are endemic to the alpine region in southwestern China (Chen 1999; Chen *et al.* 2009). During our fieldwork in this region from 2005 to 2010, a new species of *Neottia*, described below, was discovered.

Taxonomic treatment

Neottia bicallosa X.H. Jin, *sp. nov.* (Figs. 1–2)

Habitu *N. karoana* et *N. microphylla* *subsimilis*, *sed lobis lateralibus oblongis, callis carnosis, lobo medio trilobo distinguenda.*

Type:— CHINA. Xizhang (Tibet): Chayu County, east slope of Gaoligongshan Mountains, in the alpine grassland., 4100 m, 9 July 2008, DLJ-ET (*Dulongjiang Expedition Team*) 1736 (holotype PE!).

Autotrophic plants, 2–5 cm tall. Roots 1 mm in diam. Stem with several sheaths at base. Leaves 2, borne on ground, opposite, ovate, acute, 0.9–1 × 0.8–0.9 cm. Inflorescence 4–5 cm long, pubescent. Floral bract lanceolate, 0.5 cm long. Ovary and pedicel 1.5–3.5 mm long, glabrous, ovary fusiform. Dorsal sepal elliptic, 1-veined, obtuse, 2 × 0.8 mm; lateral sepals slightly oblique, 1-veined, obtuse, 3 × 1 mm; petals elliptic, 1-veined, obtuse, 2 × 0.8 mm; lip rhombic, 3-lobed, 2 × 3 mm; lateral lobes erect, base with two fleshy thickened calli between them, semi-orbicular, 0.3 mm long; middle lobes 3-lobed, lobules dentate; column erect, 0.2 mm.

Distribution and Habitat:—This new species usually grows on rocks in humid alpine grassland with elevation of 4,000–4,200 m. It is one of a few orchids recorded in elevation more than 4,000 m in China. During our fieldwork in Eastern Himalayas in 2013, two additional populations of this species were discovered, one in Gongshan County, Yunnan Province, the other in Chayu County, Xizang Autonomous Region. Both populations are far from any direct threats. Hence, this new species should be considered as ‘Least Concern’ according to IUCN Red List Categories and Criteria (IUCN, 2001).



FIGURE 2. Habitat of *Neottia bicallosa* X.H. Jin (Photo by Jin, X.H.)

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