



Habenaria luquanensis (Orchidaceae), a new species from Yunnan, China

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Abstract

Habenaria luquanensis from Yunnan Province is described and illustrated. This new species most closely resembles *H. delavayi* in having a basal leaf rosette, flowers with a concave and abaxially keeled dorsal sepal and linear petals. It is distinguished by herbaceous, loosely arranged rosette leaves (versus tightly adpressed to each other), a lip which is 3-lobed only to 1/3–1/4 from the base and has narrowly oblong lateral lobes (versus deeply 3-lobed nearly to the base with linear-cuneate lateral lobes). Another similar species is *H. finetiana*, but this species can be distinguished by its cauline leaves, longer floral bracts, petals forming a hood with the dorsal sepal, a lip which is 3-lobed only in the upper half and rhombic, serrate lateral lobes, a spur which is nearly as long as the ovary, and central rostellum lobe not clearly visible.

Key words: *Habenaria delavayi*, *Habenaria finetiana*, IUCN Red List, Ochid, Yunnan Province

Introduction

Habenaria Willdenow (1805:5,44) (Orchidaceae, Orchidinae) comprises 600–881 species (Pridgeon *et al.* 2001; Chen & Cribb 2009; Batista *et al.* 2013; Govaerts *et al.* 2013; Zhang *et al.* 2015). *Habenaria* is distributed in tropical, subtropical and warm-temperate regions of the Old and New World (Pridgeon *et al.* 2001; Batista *et al.* 2011; Jin *et al.* 2014). Its main centres of diversity are found in central and southern Africa, eastern Asia and Brazil (Kurzweil & Weber 1992). *Habenaria* comprises 54 species in China of which 19 are endemic (Chen & Cribb 2009), with its distribution ranging from the South and North China except Xinjiang. The largest species number is found in southwestern China, especially in the Hengduan Mountains (Chen & Ji 1998; Lang 1999).

In 2009, a plant of *Habenaria* was first found by Dr. G. W. Hu during fieldwork in a hot and dry valley in Luquan County, northern Yunnan. At first glance, its white flowers looked like those of *H. finetiana* Schlechter (1919:126), but the plant differs from this species in several characters, most notably the arrangement of the leaves, the linear spreading petals and lip shape. We revisited the locality where the new species was discovered and the neighbouring areas in 2011. During this field investigation, we found this species distributed in two populations in Luquan. Two more herbarium specimens were collected and some flowers were preserved in formalin-acetic-alcohol (FAA) solution for further study. Further careful morphological comparison with closely related species and literature studies (Chen & Ji 1998; Chen & Cribb 2009) confirmed that it was a new species and most closely related to *H. delavayi* Finet (1901:527).

Taxonomy

Habenaria luquanensis G.W.Hu, *sp. nov.* (See Figure 1 and Figure 2)

Diagnosis:—The new species is similar to *H. delavayi*, but can be distinguished by its herbaceous, loosely arranged rosette leaves and the lip which is 3-lobed only to 1/3–1/4 from its base and has narrowly oblong lateral lobes.

Type:—CHINA. Yunnan Province: Wumeng Township, Luquan County, on the east slope of Pudu River valley, 25°55'N, 102°46'E, 2200 m, 23 July 2011, G.W. Hu HGW-00780 (holotype, HIB!; isotype, HIB!).