



## *Dendrobium zhenyuanense* (Orchidaceae), a new Chinese species in section *Stachyobium*

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### Introduction

*Dendrobium* Swartz (1799: 82) comprises approximately 1500 species and is one of the largest genera of Orchidaceae. It is widespread in tropical and subtropical regions of Asia and Australia, from India to Japan, south to Malaysia and Indonesia, east to Australia, New Guinea and the Pacific islands (Cribb & Govaerts, 2005; Wood 2006; Zhu *et al.* 2009). Recently, there have been debates about the generic delimitation of *Dendrobium* (Kraenzlin 1910, Schlechter 1911–1914, Tang & Wang 1951, Brieger 1981, Seidenfaden 1985, Yukawa *et al.* 2000, Clements & Jones 2002, Clements 2003, Wood 2006, Burke *et al.* 2008, Adams 2011, Schuiteman 2011, Xiang *et al.* 2013). Here we follow the broad concept of *Dendrobium*. There are about 80 species in China, of which 14 species are endemic (Chen, 2009).

During a trip to Zhenyuan County, Yunnan, China, in 2006, we found a small, caespitose species of *Dendrobium*, which was also collected during another trip to Lincang County in 2010. Study of this species indicates that it is a new species of *Dendrobium*, which we here describe and illustrate.

*Dendrobium zhenyuanense* D.P.Ye ex J.W.Li, D.P.Ye & X.H.Jin., *sp. nov.* (Figs. 1, 2)

*Dendrobium zhenyuanense* D.P.Ye in Xu, Z. H. *et al.* (2010: 361), fig. 495a & 495b, *nom. nud.*

This species is similar to *Dendrobium mucronatum* Seidenfaden (1985: 139) but differs from the latter by having inflorescences not exceeding to the leaves and an acute lip with the base composed of two semi-rotund lamellae.

**Type:**—CHINA. Yunnan Province: Zhenyuan County, on tree in broad-leaved evergreen forest, 1900 m, 27 September 2012, *Li 2295* (HITBC!).

**Other specimen examined:**—CHINA. Yunnan Province: Lincang County, on tree, broad-leaved evergreen forest, 1900 m, 27 September 2012, *Li 2244* (HITBC!).

Epiphytic herbs with smooth roots. Stems fusiform, 1.0–1.8 cm long, 4–5 mm in diam., with 2–3 nodes, current stems enclosed in leaf sheaths, previous stems naked, dark purple. Leaves 2–3, distichous, lowermost smaller than upper, lanceolate, 1.5–2.0 × 0.4–0.6 cm, base dilated into sheaths, mouth of which is obliquely truncate and enclosing the stem, apex obtuse and unequally bilobed. Inflorescences 1–3, subterminal or lateral on upper part of current year's stem, erect, usually 1.0–1.7 cm, not exceeding leaves, several flowered; rachis slender, 2 cm long, ca. 0.5 mm in diam.; floral bracts lanceolate, ca. 1.0–2.0 × 0.5 mm, membranous, apex acute. Flowers green, pedicel and ovary 1–2 mm long; dorsal sepal narrowly ovate, ca. 3.5 × 1.0 mm, triveined, apex acute; lateral sepals ovate-triangular, ca. 3.5 × 1.5 mm, triveined, apex acute, tip with a distinct mucro; mentum oblong, 1.0–1.5 mm long. Petals lanceolate, 3 × 1 mm, triveined, apex acute. Lip elliptic, ca. 2.5 × 1.5 mm, apex acute; base with two semi-rotund lamellae, tip much thickened and fleshy; column ca. 2 mm long, base dilated; anther cap with apical margin slightly lacerate.

**Distribution and Habitat:**—*Dendrobium zhenyuanense* is restricted to broad-leaved evergreen forest in southern Yunnan, China. Only two populations were discovered in the wild, one in Zhenyuan County and the other in Lincang County.

**Conservation status:**—Our investigations indicate that the habitat has been destroyed due to local agriculture. Based on this, we consider the species as critically endangered (CR) under criterion D according to IUCN categories and criteria (IUCN 2010).

*Dendrobium zhenyuanense* is similar to *D. mucronatum* in having small and green flowers, lateral sepals with keel continuing into the mucro and an entire lip with two lamellae (Seidenfaden, 1985), but it differs from the latter by having inflorescences not exceeding leaves, a lip deflexed at one third its length, the lamellae semi-circular and not extending to the apex and an acute lip without callus in front of the lamellae. *Dendrobium zhenyuanense* is readily distinguished from other species of *Dendrobium* in China by its small stature, green flowers, mucronate lateral sepal and lip with two separate lamellae.



FIGURE 2. Habit of *Dendrobium zhenyuanense*. Photo by Jian-wu Li.

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