



Changnienia malipoensis, a new species from China (Orchidaceae; Epidendroideae; Calypsoeae)

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Introduction

Changnienia Chien (1935: 89) is a monotypic genus of tribe Calypsoeae endemic to eastern and central China (Chen *et al.* 1999, 2009, Freudenstein 2005), previously with only the species *C. amoena* Chien (1935: 90), which was listed in the *Chinese Redbook* in 1992 (Fu 1992). Yang & Zhu (1984) reported a chromosome number for it of $2n=46$. Sun *et al.* (2006) observed pollination and found that *Bombus trifasciatus* was its pollinator. Zhai *et al.* (2013) confirmed the phylogenetic placement of this species as a member of tribe Calypsoeae (sensu Pridgeon *et al.* 2005). A new species of *Changnienia* is described and illustrated here based on molecular and morphological evidence. It is discovered in Malipo, Yunnan Province, China.

Changnienia malipoensis D.H.Peng, Z.J.Liu & J.W.Zhai, *sp. nov.* (Fig. 1)

This new species is similar to *Changnienia amoena*, from which it differs by its adaxially purple-spotted leaves (versus leaves not purple-spotted); petals obovate-oblong, 1.6–1.7 cm wide (versus narrowly obovate-lanceolate, 1.2–1.4 cm wide); midlobe of its lip nearly reniform or oblong, 1.2–1.7 × 2.3–2.5 cm (versus broadly obovate, 0.8 × 1.2 cm), apex slightly bilobed (versus minutely acute or 1-toothed); labellum with 3 lamellae and small crested basal appendages on disc (versus with 5 lamellae, without appendage); spur cylindrical-funnel-shaped, 1.6–1.8 cm long (versus 2.5–3 cm long), apex 5 mm wide, inflated on both sides (versus narrowly long horn-shaped, apex 1.5 mm wide, not inflated on both sides).

Type:—CHINA. Yunnan: Malipo, in evergreen broad-leaved forest on slope along valley, elevation 350 m, 20 Jan 2011, Liu 5228 (NOCC!).

Terrestrial herbs. Pseudobulbs nearly ovoid, 1.6–2.3 × 1.0–1.8 cm, 2-noded, with a membranous sheath. Leaf 1, broadly elliptic, 7.0–11.0 × 6.5–9.5 cm, acute at apex, base subtruncate, adaxially green with large purple spots, abaxially purple-red; petiole 4.0–8.5 cm long. Scape 3–4 cm long, with three membranous sheaths, the uppermost broadly ovate, 3.5–4.0 × 2.0–2.2 cm; floral bract broadly ovate, 3 × 4 mm; pedicel and ovary 8–9 mm long. Flowers fragrant; sepals and petals pale purple-red, lip white purple-spotted and midlobe tinged with pale purple; spur purple-spotted, inside yellow; column white, tinged with pale purple; dorsal sepal oblong-oblongate, 3.2–3.5 × 1.1–1.3 cm, obtuse at apex; lateral sepals narrowly elliptic, 3.2–3.5 × 0.9–1.0 cm, obtuse at apex; petals obovate-oblong, 3.0–3.1 × 1.6–1.7 cm, obtuse at apex; lip trilobed; side lobes obliquely ovate-triangular, 1.7–1.9 × 1.3–1.5 cm, erect, slightly obtuse at apex; midlobe nearly reniform or transversely suboblong, 1.2–1.4 × 2.3–2.5 cm, apex slightly bilobed, base with a short claw 3 mm long, upper margins slightly crisped; labellum with 3 lamellae and small crested basal appendages on disc; spur