



Impatiens lixianensis, a new species of Balsaminaceae from Sichuan, China

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Abstract

Impatiens lixianensis, a new species of Balsaminaceae from Zhegushan, Lixian, Sichuan province, China, is described and illustrated. This species is closely related to *I. apsotis* in having small white to greenish-white flowers, 2 lateral sepals, and 1–2-flowered short racemes, but differs by its non-crested dorsal petals, a short 2-lobed swollen spur, long-clawed lower petals, and small scale-shaped upper petals. Regarding palynological characters, the lumina of the reticulum in *I. lixianensis* are smaller and much more granulate than those in *I. apsotis*.

Key words: IUCN, pollen morphology, taxonomy

Introduction

The genus *Impatiens* Linnaeus (1753: 937) belongs to the family Balsaminaceae, which only contains two genera as currently recognized, the monotypic genus *Hydrocera* Wight & Arnott (1834: 140) and the prolific *Impatiens* containing about 900 species (Grey-Wilson 1980, Fischer 2004). Currently about 270 species of *Impatiens* are known from China (Chen *et al.* 2007, Yu 2012). Most species occur in South-West China (Yunnan, Sichuan and Xizang) (Chen 2001, Chen *et al.* 2007).

Sichuan is famous for its high plant diversity. According to “Species 2000: China Plant Catalogue” (CNPC 2010) there are about 12,000 species of higher plants recorded. Many new species are found every year, for example in Balsaminaceae (Bi *et al.* 2009, Yuan *et al.* 2011), Polygonaceae (Tang *et al.* 2010), Fumariaceae (Lidén & Su 2007, Gao *et al.* 2008) and Asteraceae (Liu & Yang 2010, 2011).

We carried out repeated botanical expeditions in Sichuan since 2006, and collected numerous *Impatiens* species. One of these is obviously new to science, based on morphology and pollen characters after careful comparison with the closely related *I. apsotis* Hooker (1911: pl. 2972).

Impatiens lixianensis S. X. Yu, *sp. nov.* (Fig. 1, 2 A–F)

This species is closely related to *I. apsotis* in having small flowers, white to greenish-white petals, 2 lateral sepals, and 1–2-flowered short raceme, but differs by its non-crested dorsal petals, short 2-lobed swollen spur, long-clawed lower petals, small scale-shaped upper petals, smaller lumina of the reticulum of pollen surface ornament and much more granulae in the lumina.

Type:—CHINA. Sichuan Province: Lixian county, Zhegushan Mountain, Shady places in forest, 31°51'28.4"N, 102°40'48.7"E, 2680–3000 m, 6 August 2006, S. X. Yu 3922 (holotype PE!, isotype IBK!).