



## A new species of *Primulina* (Gesneriaceae) from Guangdong, China

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### Abstract

A new species of Gesneriaceae, *Primulina yangchunensis*, is described and illustrated from China. The species is related to *P. orthandra*, but it can be easily distinguished by its leaf blade base cuneate, margin entire and rugose, both surfaces hispid, longer bracts broadly lanceolate, 1–2 cm long, and the length of the abaxial lip obviously longer than that of the adaxial one. The conservation status of this new species was assessed as “Critically Endangered” (CR) according to IUCN Red List Category and Criteria.

**Key words:** China, *Chirita*, *Chiritopsis*, IUCN, limestone, *Primulina yangchunensis*

### Introduction

In the traditional sense, the genus *Chirita* Buch.-Ham. ex Don (1822: 89) used to be a large genus in the subfamily Cyrtandroideae Burnett (1835: 963) of Gesneriaceae Richard & Jussieu in Candolle (1816: 182) (Wang *et al.* 1990, Li 1996). It was recognized as one of the most diverse genera of the family with about 160 species distributed in subtropical and tropical Asia ranging from Sri Lanka, India eastward to eastern China and southward to southern Indonesia (Wood 1974, Wang 1985a, 1985b, Wang *et al.* 1990, 1998, Li 1996, Nguyen & Kiew 2000, Burt 2002, Li & Wang 2004, Webber 2004). The genus has wide distribution, but most species are narrow endemics with small population size at each locality (Wen & Zhong 1998, Li & Wang 2004, 2007, Wei *et al.* 2004). It has high diverse in the limestone regions of northern Vietnam and southern China.

Clarke (1883) was the first to establish the classification system in *Chirita* in which the genus was divided into five sections: sect. *Euchirita* Clarke (1883: 111), sect. *Liebigia* (Endlicher 1841: 1407) Clarke (1883: 122), sect. *Bilabium* (Miquel 1858: 730) Clarke (1883: 126), sect. *Microchirita* Clarke (1883: 127) and sect. *Gibbosaccus* Clarke (1883: 130). The most comprehensive revision of the genus *Chirita* was done by Wood (1974). He divided the genus into three sections (sect. *Chirita*, sect. *Gibbosaccus* and sect. *Microchirita*) while merging sect. *Liebigia* and sect. *Bilabium* with sect. *Chirita*. Wood's system was adopted by latter authors (Wang 1985a, 1985b, Wang *et al.* 1990, Li & Wang 2004, Wei *et al.* 2010). Wang (1985a, 1985b) further divided sect. *Gibbosaccus* and sect. *Chirita* into three and two subsections, respectively. This classification was supported by palynological studies by Yan & Li (2003). Hilliard (2004) reinstated sect. *Liebigia* from sect. *Chirita* to accommodate *asperifolia* (Blume 1826: 767) Burt (1962: 41) and its allies.

Weber (2004) indicated that a great morphological heterogeneity of *Chirita* implies the problems in delimitation of the genus and the subdivisions within it. The polyphyly of *Chirita* was demonstrated by recent molecular phylogenetic analysis (Li & Wang 2007, Möller *et al.* 2009, 2011, Wang *et al.* 2011, Weber *et al.* 2011). Based on the molecular phylogenetic analysis, the new classifications for *Chirita* and its allied genera were proposed by Wang *et al.* (2011) and Möller *et al.* (2011). Five genera are currently recognized by them: (1) *Henckelia* Sprengel (1817: 402), including *Chirita* sect. *Chirita* (excluding the species placed in *Damrongia*), (2) *Damrongia* Kerr ex Craib (1918: 364), including presently six species previously placed in *Chirita* sect. *Chirita*, (3) *Microchirita* (C.B. Clarke) Y. Z. Wang in Wang *et al.* (2011: 59), including the species of *Chirita* sect. *Microchirita*, (4) *Liebigia* Endlicher (1841: 1407), including the species of *Chirita* sect. *Liebigia*, (5) *Primulina* Hance (1883: 169), including the species of *Chirita* sect. *Gibbosaccus*, *Chiritopsis* Wang (1981: 21), *Primulina*, *Deltocheilos* Wang (1981: 39) and *Wentsaiboea* Fang & Qin (2004: 534).

**TABLE 1.** Morphological comparison of *Primula yangchunensis* and *P. orthandra*.

Characters	<i>Primulia yangchunensis</i>	<i>Primulina orthandra</i>
Leaf		
shape	narrowly ovate to narrowly elliptic	broadly elliptic
base	cuneate	oblique cuneate
margin	entire and rugose	densely crenulate to dentate or serrulate
trichome	hispid on both surfaces	densely puberulent on both surfaces
Cymes	2–8-flowered	5–15-flowered
Bracts	broadly lanceolate, 0.8–2 cm long	ovate, ca. 5 mm
Corolla		
trichome	outside puberulent	glabrous
adaxial lip	2–3 mm long	ca. 3.5 mm long
abaxial lip	5–7 mm long	ca. 5 mm long

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