



Valeriana hsuii (Valerianaceae), a new species from Taiwan

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Abstract

In this paper *Valeriana hsuii* (Valerianaceae) from northern Taiwan is newly described and illustrated. Comparison to similar species in Taiwan and neighboring regions is made, and an artificial taxonomic key to species of *Valeriana* in Taiwan is provided.

Key words: Conical cell, Taiwan, Epidermis, *Valeriana flaccidissima*

Introduction

Valeriana Linnaeus (1753: 31) (Valerianaceae) contains ca. 300 species, that are broadly distributed in temperate regions, including 21 species in China (13 endemics), 3 species in Taiwan (1 endemic) and 2 species in Japan (without endemics) (Merrill 1926, Yamazaki 1993, Kao & Devol 1998, Hong *et al.* 2011). In Taiwan, *V. flaccidissima* Maximowicz (1868: 228), which is distributed in China, Japan and Taiwan (Yamazaki 1993, Kao & Devol 1998, Hong *et al.* 2011), grows in sunny to semi-shaded areas at 1300–2800 m alt., while *V. officinalis* Linnaeus (1753: 31), distributed in Eurasia, and *V. kawakamii* Hayata (1915: 82), endemic to Taiwan, are found in sunny areas at 2000–3700 m alt. (Kao & Devol 1998). During recent botanical surveys in northern Taiwan the author found a species of *Valeriana* growing in shaded areas at middle elevations. In plant outline, this species is similar to *V. flaccidissima* but has several diagnostic stem and leaf characters. After revising herbarium specimens and literature (Wallich 1820, Yamazaki 1993, Kao & Devol 1998, Hong *et al.* 2011), the author confirmed this was an undescribed endemic taxon that is sparsely distributed at middle elevations of northern, north-eastern and eastern Taiwan, and is described below.

Valeriana hsuii M.J. Jung *sp. nov.* Figs 1 & 2

Valeriana hsuii is similar to *V. flaccidissima* in outline, but has hairy stems (cf. glabrous), basal and cauline leaf blades that are dark-greenish adaxially (cf. pale-greenish), basal leaf blades with whitish spots on intercostal regions on adaxial surfaces (cf. absent), and undulate to sinuate leaflet margin (cf. irregularly dentate to serrate).

Type:—TAIWAN. Hsinchu Hsien, Jien-Sher Hsiang, Syakaro National Trail, 1,600–1,700 m, 29 January 2005, M. -J. Jung x012906! (holotype TAIF).

Perennials, rhizome short, rather stout. Stolons many, to 50 cm long or longer, internodes to 5 cm long, to 0.8 cm in diameter, with opposite leaves; stolon leaves with petiole to 1 cm long, blade narrowly ovate, base cordate, apex obtuse, margin crenate. Stem erect, to 0.8 cm thick, puberulous. Basal leaves in rosette or nearly so; petiole to 7 cm long, puberulous; blade narrowly ovate, base cordate, apex obtuse, chartaceous, margin undulate to sinuate, palmate-veined, adaxial surface dark-greenish, sparsely hairy, densely papillate, intercostal regions of adaxial surface tinged with pale greenish to whitish spots, epidermal cells conical-