



## Two new species of *Calanthe* (Orchidaceae: Epidendroideae) from Korea

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### Abstract

Two new species, *Calanthe insularis* S.H.Oh, H.J.Suh & C.-W.Park and *Calanthe rubra* S.H.Oh, H.J.Suh & C.-W.Park, are described, illustrated, and compared with closely related species. *Calanthe insularis*, distributed in the southwestern region of Korea and Tsushima Island in Japan, is morphologically similar to *C. aristulifera* and *C. striata*, but it is distinguished from the last two species in its creamy yellow and pale orange-yellow flowers, arcuate spur as long as the lip, pale orange-yellow pedicels, and green ovary with pale green ridges. *Calanthe rubra*, from Gageodo Island, Korea, is similar to *C. striata* and *C. insularis*, but differs from them in its much smaller flowers with purplish red sepals and petals and the white spur.

**Key words:** *Calanthe*, new species, conservation, island, endemic, taxonomy

### Introduction

*Calanthe* Brown (1821: t. 573), with approximately 150 species, is widely distributed in tropical and subtropical Asia, the Pacific and Indian Ocean islands, Madagascar, tropical Africa and South Africa, and Central and northern South America and the Caribbean, with the highest diversity in Southeast Asia (Clayton & Cribb 2013; Yukawa & Cribb 2014). *Calanthe* is characterized by plicate leaves, persistent floral bracts, and lip adnate to the column forming a tube with the spurred base (Clayton & Cribb 2013). It has been narrowly circumscribed based on molecular phylogenetic analyses, but relationships within *Calanthe* are not yet clearly understood (Yukawa & Cribb 2014; Zhai *et al.* 2014). Many species of *Calanthe* are cultivated as ornamentals, particularly in China, Korea and Japan, because of their showy flowers (Purver in Clayton & Cribb 2013).

In Korea, five species, *C. aristulifera* Reichenbach (1878: 74), *C. bicolor* Lindley (1838: sub t. 9), *C. discolor* Lindley (1838: sub t. 9), *C. puberula* Lindley (1833: 250), and *C. striata* Brown ex Sprengel (1826: 743), are distributed in the southern region including off-shore islands, Jeju Island and Ulleungdo Island (Lee 2011; Clayton & Cribb 2013). Natural populations of *Calanthe* species currently face threats of extinction due to the rapid destruction of habitats and over-collection for horticulture.

During the course of a comprehensive systematic study of *Calanthe* in Korea, two new species were discovered from remote islands of the southwestern region. We describe these new species here to make their names available for the forthcoming paper on morphological and genetic diversity of the genus *Calanthe*.

### Taxonomy

1. *Calanthe insularis* S.H.Oh, H.J.Suh & C.-W.Park, *sp. nov.* (Figs. 1, 2)

**Type:**—KOREA. Jeollanam-do: Sinan-gun, Heuksan-myeon, Gageodo Island, 386 m, 18 May 2013, *Suh 5580* (holotype, KBI; isotypes, BHI, TUT!).

**Diagnosis:** This species is similar to *C. striata* and *C. aristulifera*, but differs by its creamy yellow and pale orange-yellow flowers, arcuate spur as long as the lip, pale orange-yellow pedicels, and green ovary with pale green ridges.