



## *Gentianella viridiflora* (Gentianaceae), a new species from the Peruvian Andes

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### Abstract

*Gentianella viridiflora* (Gentianaceae, Gentianeae, Swertiinae), here described and illustrated, is a new species from the Cordillera Vilcabamba, southern Peru. Its yellowish-green corolla distinguishes it from other South American species of the genus that share a similar set of morphological features. The new species is known only from the type locality where it occurs in grazed areas next to *Polylepis* woodland.

### Resumen

*Gentianella viridiflora* (Gentianaceae, Gentianeae, Swertiinae), aquí descrita e ilustrada, es una nueva especie de la Cordillera Vilcabamba, del sur del Perú. Se distingue de otras especies congénéricas Sudamericanas morfológicamente similares, por el color verde-amarillento de la corola. La nueva especie es conocida solamente de la localidad típica, donde crece en áreas pastoreadas contiguas a bosques de *Polylepis*.

**Key words:** Central Andes, cleistogamy, Gentianeae, grazing adapted, puna grassland, Swertiinae

### Introduction

As currently circumscribed, *Gentianella* Moench (1794: 482) comprises ca. 250 species found mostly in alpine areas across the globe, with the exception of central and southern Africa (Struwe *et al.* 2002). The center of species diversity is found in the tropical Andes of South America, where the genus appears to have undergone a recent radiation (von Hagen & Kadereit 2001) with new species still being discovered (e.g. Pringle 2011, 2012a, 2014, Pringle & Grant 2012).

The systematics and taxonomy of South American *Gentianella* is far from settled. The difficulty in accessing high Andean areas, where the majority of species are found, has led to insufficient sampling which has confounded the study of this diverse genus. This, coupled with the often high degree of intraspecific morphological variability, may explain why there is no modern revision, despite almost a century passing since the publication of the last monographic treatment of South American *Gentianella* (Gilg 1916, then still treated as a subgenus of *Gentiana* Linnaeus (1753: 227)). For Peru, Macbride (1959) provided an English translation of Gilg's (1916) monograph, together with comments and a preliminary key. He listed 97 species from Peru, including a few newly described species (Reimers 1929, Briquet 1931). Pringle in Brako & Zarucchi (1993) published a checklist of Peruvian species, including additional new species (Fabris 1955, 1958, Pringle 1986) whilst reducing some taxa to synonymy, bringing the total of Peruvian *Gentianella*'s down to 82 species. Since then, several taxonomic studies (Pringle 2008, 2011, 2012a, 2012b, 2014, Pringle & Grant 2012) raised the number of species of *Gentianella* currently known from Peru to 95, with many being assigned IUCN conservation categories by Castillo *et al.* (2012).

The new species, *Gentianella viridiflora* (see below), was found during a recent botanical exploration in remote areas of the Cordillera Vilcabamba, southern Peru for an ecological study assessing the impact of anthropogenic disturbance on natural vegetation and soils of the high-elevation puna grasslands of southern Peru (Heitkamp *et al.*