



## *Puccinia melitenensis* (Pucciniaceae), a new rust species on *Campanula stevenii* subsp. *beauverdiana* from Malatya in Turkey

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### Abstract

The rust fungus *Puccinia melitenensis* sp. nov. on *Campanula stevenii* subsp. *beauverdiana* is described from Turkey. It is compared to other *Puccinia* species on *Campanula* and illustrated in detail.

**Key words:** Campanulaceae, Pucciniales, SEM, taxonomy

### Introduction

*Campanula* (Campanulaceae) contains about 420 species and is distributed from the high northern latitudes to the Mediterranean region (Akcin 2009, Yıldırım 2013). The highest diversity in the genus is in the mountain ranges of the eastern Mediterranean and the Caucasus area (Fedorov & Kovanda 1978). The genus in Turkey consists of six subgenera (*Campanula*, *Megalocalyx*, *Roucela*, *Brachycodonia* (*Sicyodon* and *Rapunculus*) and 133 taxa (7 subspecies and 3 varieties), of which 66 are endemic (Damboldt 1978, İkinci 2012).

Rust species so far known on *Campanula* belong to the genera *Aecidium* Pers., *Coleosporium* Lév., and *Puccinia* Pers. Two species, *Coleosporium tussilaginis* (Pers.) Lév. on six *Campanula* species and *Puccinia campanulae* Carmich. on *Campanula tridentata* Schreb. have been reported from Turkey (Bahçecioğlu & Kabaktepe 2012).

In the following, a new *Puccinia* species is described on *Campanula stevenii* subsp. *beauverdiana* (Fomin) Rech. f. & Schiman-Czeika from Turkey.

### Materials and methods

For light microscopy (LM) spores were scraped from dried host specimens and mounted in lactophenol and examined with an Olympus CX31 light microscope. Micrographs were taken with an Olympus E-330 camera. Analysis LS Starterwas software was used to measure spores.

For scanning electron microscopy (SEM) spores were fixed on stubs using double-sided adhesive tape, coated with gold, and examined using an EVO 40XVP (LEO Ltd., Cambridge, UK) scanning electron microscope at an accelerating voltage of 20 kV.

Flora of Turkey (Damboldt 1978) was used for identification of the host plants. Names of fungi were checked from Index Fungorum (www.indexfungorum.org).

### Taxonomy

*Puccinia melitenensis* Kabakt., Mutlu & Karakuş, sp. nov. (Fig. 1–2) MycoBank MB 810819

The new species differs from *Puccinia campanulae*, *P. campanulae-scheuchzeri*, *P. rytzii*, *P. campanulae-herminii* and *P.*