



Allium occultum, a new species of *A. sect. Codonoprasum* (Amaryllidaceae) from Skiros Island (W Aegean, Greece)

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Abstract

Allium occultum Tzanoudakis & Trigas *sp. nov.* (Amaryllidaceae) from Skiros Island (W Aegean, Greece) is described and illustrated. It belongs to *A. sect. Codonoprasum* and more precisely to *A. paniculatum* group. Its closest relatives seem to be *A. apergii* and *A. dirphianum*, both endemic to Euboea Island (W Aegean). The new species is currently known from two neighbouring localities of Mt. Kochilas. The tetraploid chromosome number ($2n = 32$) was found in plants from both localities and according to the karyotype structure, the new species seems functionally diploid.

Key words: Aegean flora, Alliioideae, Greek flora, plant taxonomy, polyploidy

Introduction

The genus *Allium* Linnaeus (1753: 300) is especially diverse in the eastern Mediterranean. According to Dimopoulos *et al.* (2013) the genus is represented in Greece by 97 species and several of them have been described as new to science during the last decade (e.g. Biel *et al.* 2006; Tzanoudakis & Kypriotakis 2008; Brullo *et al.* 2008, 2010; Trigas *et al.* 2010; Bogdanović *et al.* 2011; Greuter 2012; Kalpoutzakis *et al.* 2012). *A. sect. Codonoprasum* Reichenbach (1830: 114) counts 41 species in Greece with an endemism rate of c. 70%. The members of this section show a remarkable diversity regarding their morphology, ploidy level, habitat specificity and flowering period.

During a field trip in the western Aegean Islands that was planned in order to collect crop wild relatives for the Greek Gene Bank, an *Allium* species was found by the authors on Mt Kochilas of Skiros Island in June 1996. Only few individuals with superficially clustered bulbs were collected that flowered one month later at the experimental botanic garden of the University of Patras. A preliminary morphological and cytological investigation revealed that this taxon belongs to *A. sect. Codonoprasum* and it presents a unique combination of morphological characters as well as a tetraploid karyotype ($2n = 4x = 32$). The species was recollected in July 2014 from a second locality of the same mountain and after a detailed morphological and cytological investigation became apparent that Skiros' populations belong to a species morphologically and karyologically well differentiated from all other members of *A. sect. Codonoprasum* distributed in Greece and the adjacent countries. This species is described here as a species new to science.

Material and methods

Living plants of *Allium occultum* were examined in the field and both living material and herbarium specimens have been collected for taxonomic studies and comparative purposes. The morphological analysis of *A. occultum* was based on 19 individuals. Live plants were maintained under cultivation at the experimental botanic garden of the University of Patras, in order to examine morphological stability, to check chromosome number and to describe chromosome morphology. For morphological comparisons we consulted dry herbarium material kept in UPA and ACA (acronyms

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