

A NEW LOCALITY FOR *COLCHICUM SOBOLIFERUM* (COLCHICACEAE) FROM MACEDONIA, GREECE

Antonios Karidas¹, Thomas Giannakis² & Zissis Antonopoulos³

¹ euripidis_1999@hotmail.com

² thomgianna@hotmail.com

³ zissisant@gmail.com

Published online: November 21, 2017

Abstract

A new population of *Colchicum soboliferum* was recently recorded in Mt Chortiatis, near Thessaloniki, Greece. The habitat of the new population is an upland wet meadow and its locality may have the highest altitude of all known populations of the species in the Balkan Peninsula. The extent of occurrence and the number of mature plants within the new population are relatively stable, since there is only moderate pressure exerted by grazing.

Introduction

Colchicum soboliferum (Fisch. & C.A. Mey.) Stef. (syn.: *Merendera sobolifera* Fisch. & C.A. Mey., *Bulbocodium soboliferum* (Fisch. & C.A. Mey.) Heynh.), a member of *Colchicaceae* family, has a wide distribution area, stretching from the Balkan Peninsula to Afganistan (Persson 2007). The species westernmost limits are Greece and FYROM. In Greece, it has a very restricted distribution, and has been reported in E Sterea Ellas (Asopos river mouth), Macedonia (Petron and Vegoritis lakes, Nea Redestos near Thessaloniki) and the E Aegean island of Lesvos, close to Plomari (Polymenakos et al. 2011, Alexiou 2013, Fig.1). The species is included into the Red Data Book of Rare and Threatened Plants of Greece, characterized as Vulnerable (VU). According to Persson (2009) it is underreported because of its early flowering period, starting already from January, and should be investigated more thoroughly at additional localities, especially at river mouths of N Greece.

New locality and threats

Colchicum soboliferum: Macedonia, Nomos Thessalonikis, Mt Chortiatis (40.587227° N, 23.107352° E), stream and wet meadow along the road from Panorama to Chortiatis, alt. c. 820 m., 20 Feb 2015, Giannakis s.n. (ATHU, Figs. 2,4).

The new population reported in the present study was observed by two of the authors (Th.G. and Z.A.), during regular fieldwork on Mt Chortiatis. It consists of at least 300 mature plants and extends at around 820 m, the highest altitude known so far in Greece. Interestingly, Apostolova & Petrova

New locality for *Colchicum soboliferum* from Greece

(1997) reported 10 Bulgarian populations of *C. soboliferum* and noted that all are found below 650 m of altitude. Hence, the Chortiatis population has one of the highest, if not the highest, altitude of all known populations of the species in the Balkan Peninsula (compare also information provided by Polymenakos et al., 2011). The habitat is a temporary wet meadow with a moderate inclination (Fig. 3). It is dominated by herbaceous vegetation and some scattered *Rubus* plants and *Juniperus oxycedrus* shrubs, and is grazed mostly by cows and goats, an element which does not seem to create any problem for this mostly vegetatively propagated species.



Fig. 1. Geographical distribution of *Colchicum soboliferum* in Greece (● literature records, ● new record)

This new locality is recorded not far away from the documented population in the area of Thessaloniki, i.e., the one from Nea Redestos, a flat area of low altitude. Nea Redestos has a predominantly agricultural character, with annual crops such as wheat, cotton, corn and lettuce. Occasionally there are some scattered houses and small scale industrial compounds among cultivations. The soil in the area is clay with considerable depth. Soil disturbance due to ploughing and grazing/trampling would constitute the greatest threats to the population in this habitat. However, one may argue that since ploughing is practiced in the region during early autumn or mid-late spring, when the species is either dormant or has already completed its annual cycle, disturbance may be

minimum. Still, ploughing may uproot corms and expose them to the dazzling sun and drought, thus killing a few plants. Alternatively, ploughing may be detrimental to the vegetative propagation of the species, as the vegetative propagules may be ploughed deep into the soil, and consequently may be unable to emerge above ground. Occasional grazing and trampling during the flowering period, although appearing to diminish in frequency over the past years, may be a potential threat to the sexual propagation of the species.



Fig. 2. *Colchicum soboliferum*, flowering plant, 20 Feb 2015, Mt. Chortiatis (photo Th. Giannakis)



Fig. 3. The habitat of *Colchicum soboliferum*, Mt. Chortiatis, 20 Feb. 2015 (photo Th. Giannakis)



In this relatively hostile environment, the *Colchicum soboliferum* population of Nea Redestos is concentrated primarily on a fenced plot of land of about 4 hectares. The vegetation on this plot is semi natural, mainly covered by native herbaceous plants, which are trimmed sporadically in late spring and the summer months. In addition, some horticultural trees and shrub species are planted. There is a lack of disturbance of any kind in this habitat, as no cultivation is practiced and no access to grazing animals is allowed. We counted approximately 300 mature individuals in this area and the population seems to have an increasing tendency over the past 6 years.

Fig. 4. Herbarium material of *Colchicum soboliferum* from Mt. Chortiatis, (*Giannakis s.n.*, ATHU).

Acknowledgements

The authors wish to express their thanks to Sotiris Alexiou and an anonymous reviewer for communicating useful comments to an early version of the manuscript.

Literature

- Alexiou, S. 2013. The genus *Colchicum* (Colchicaceae) in Greece. - Parnassiana Archives 1: 59-73.
- Apostolova, I. & Petrova, A. 1997. New data on *Merendera sobolifera* C.A. May. - Flora Mediterranea 7: 185-196.
- Persson, K. 2007. Nomenclatural synopsis of the genus *Colchicum* (Colchicaceae), with some new species and combinations. - Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie 127 (4): 165-242.
- Persson, K. 2009. *Colchicum soboliferum* pp. 299-301. In: Phitos D., Constantinidis Th. & Kamari, G. (eds.), The Red Data Book of Rare and Threatened Plants of Greece. - Hellenic Botanical Society, Patras (in Greek).
- Polymenakos, K., Bonetti A., Fakas G. & Kit Tan 2011. Reports 74-83. In: Vladimirov V., Dane, F., Matevski V., Stevanović V. & Kit Tan (eds.): New floristic records in the Balkans: 15. - Phytologia Balcanica 17(1): 145-148.