



Orobanche apuana (Orobanchaceae) a new species endemic to Italy

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Abstract

Orobanche apuana, a new species belonging to *Orobanche* sect. *Orobanche*, is described and illustrated from the Apuan Alps, Central Italy. Its relationships with the other species of the group of *O. caryophyllacea* (*O. grex Galeatae*) and with other *Orobanche* that parasitize *Santolina* species are examined. The names *Boulardia latisquama*, *Orobanche lutea* and *O. teucris* are here lectotypified.

Key words: broomrape, *Santolina pinnata*, Mediterranean flora

Introduction

Orobanche Linnaeus (1752: 632), as unanimously accepted by all modern studies (Carlón *et al.* 2008, Crespo & Pujadas 2006, Domina 2009, Schneeweiss *et al.* 2004a, 2004b), in Europe and the Mediterranean area includes at least two well distinct groups from the morphological and karyological points of view. Despite this, researchers are divided with regard to the nomenclature to be used by grouping this taxon under a single genus with different sections (Crespo & Pujadas 2006, Domina 2009) or under different genera (Schneeweiss *et al.* 2004a, 2004b, Carlón *et al.* 2008). The taxonomic research on *Orobanche* s.l. in Europe is in full progress. In the last years, relationships between several taxa have been studied from the taxonomic and biological points of view (Jeanmonod 2007, Carlón *et al.* 2008, Piwowarczyk *et al.* 2014). These studies led to the discovery of new localities and to the description of new taxa (i.e. Pujadas-Salvà & Arguimbau 2008, Nobis *et al.* 2014a, 2014b).

In Europe and the Mediterranean area 124 species are known: 43 belonging to *Orobanche* sect. *Trionychon* Wallroth (1822: 314) and 81 to *Orobanche* L. sect. *Orobanche* (Domina & Raab-Straube 2010 onwards). In Italy 40 (9+31) species occurs (Domina 2015). Four of them are endemic to very restricted areas: *Orobanche australis* Bertoloni (1846: 440) and *O. denudata* Moris (1828: [1]) in Sardinia; *O. ebuli* Huter & Rigo in Huter (1907: 354) in Central Italy, *O. chironii* Lojacono-Pojero (1878: 12) and *O. thapsoides* Lojacono-Pojero (1882: 60) in Sicily.

During the revision of this genus in the Mediterranean, from the nomenclatural and taxonomic points of view (Domina *et al.* 2005, Domina & Arrigoni 2007, Domina & Mazzola 2007, 2009, Domina & Raimondo 2009, Domina & Stepanek 2009, Domina & Mazzola 2011, Domina *et al.* 2011, 2013, Domina & Danin 2014), we studied plants collected in the Apuan Alps in Central Italy. After meticulous field research and herbarium studies, we realized that this species belongs to the group of *Orobanche caryophyllacea* Smith (1798: 169) (*O. grex Galeatae* Beck 1930: 222) but we have not found in herbaria or in literature material referable to this taxon. So, we decided to describe it as a new species to science and to name it *Orobanche apuana*.

Material and Methods

This plant was first collected during a field trip to the Apuan Alps by Adriano Soldano in 1996. Although the place where this broomrape was found, along the Via Vandelli, on the western slope of Mt. Tambura, is one of the tracks that are mostly used by hikers and naturalists in the Apuan Alps, no records of broomrape referable to this species can be