



A taxonomic revision of *Silene nocturna* species complex (Caryophyllaceae) in Italy

LORENZO PERUZZI* & ANGELINO CARTA¹

¹ Dipartimento di Biologia, Unità di Botanica, Università di Pisa, Via Luca Ghini 13, 56126, Pisa, Italy;

e-mail lperuzzi@biologia.unipi.it

* author for correspondence

Abstract

The taxonomy of the closely related *Silene capraria*, *S. neglecta* and *S. nocturna* in Italy is investigated, by means of morphometric and karyological analyses. The chromosome numbers of *S. capraria* and *S. neglecta* (both diploid with $2n = 24$) are here reported for the first time. On the basis of the morphological results, we propose the species rank for *S. neglecta*, and to consider *S. capraria* as a vicariant narrow endemic subspecies of the widespread *S. nocturna*. The name *S. neglecta* is lectotypified on a specimen preserved in the Herbarium Tenore at NAP. With the aim to distinguish these taxa, the useful qualitative and quantitative morphological characters are highlighted.

Key words: diagnostic key, Italian flora, Mediterranean, *Silene* sect. *Scorpioideae*

Introduction

Silene Linnaeus (1753: 416) is one of the largest genera in Caryophyllaceae, including about 450 species (Chowdari 1957), despite recently several genera were segregated from it (Oxelman *et al.* 2001). This genus is of particular interest in evolutionary and ecological studies, as highlighted by Bernasconi *et al.* (2009). The Mediterranean region hosts the majority of the species (Talavera & Muñoz Garmendia 1989) and includes the sect. *Scorpioideae* (Rohrbach 1868: 96) Chowdari (1957: 247). *Silene nocturna* Linnaeus (1753: 416) species complex is included in this section.

In *Flora Europaea*, two taxa are recognized within this complex (Chater *et al.* 1993): *S. nocturna* subsp. *nocturna* and *S. nocturna* subsp. *neglecta* (Tenore 1826: 13) Arcangeli (1882: 88). The same taxa were treated at specific level for Italy by Pignatti (1982), but more recently, Conti *et al.* (2005) followed the taxonomic treatment by Chater *et al.* (1993), also adding *S. capraria* Sommier (1898: 113), on the basis of Foggi *et al.* (2001) (this latter taxon was previously synonymized with *S. nocturna*). *S. nocturna* was typified by Ghafoor (1978) on a Linnaean specimen in LINN! and the same choice was done later by Talavera & Muñoz Garmendia (1989: 421). This specimen was collected in Pennsylvania (United States), where the plant was introduced by Pursh (Rohrbach 1868). *S. capraria* was typified by Foggi *et al.* (2001) on a specimen in FI!, while *S. neglecta* is yet untypified, as far as we are aware.

The characters usually used to distinguish *S. neglecta* from *S. nocturna* are (Pignatti 1982, Chater *et al.* 1993): a) basal portion of the stem, hirsute vs. glabrous/pubescent, b) position of the lower leaves, patent to deflexed vs. erect, c) lower pedicels patent to pendulous vs. erect, d) shape of calyx teeth linear vs. triangular-lanceolate, e) filament with hairs at base vs. glabrous, f) seed diameter, 0.8–0.9 vs. 0.5–0.7 mm. Concerning the seed colour, there is no agreement among the authors: blackish in *S. nocturna* and reddish-brown in *S. neglecta* (Chater *et al.* 1993), or the reverse according to Tenore (1830: 217) and Fiori (1923). *S. capraria* was described as a dwarf cleistogamous variant of *S. nocturna* (Sommier 1896, Foggi *et al.* 2001), but the study of available specimens collected from Capraia and observed in a field survey in April 2012 reveals a higher variability. Besides morphometric studies (Stuessy 2009), chromosome analyses are important and widely used