



Sisymbrium isatidifolium (Brassicaceae): a new species from southern Spain, and the identity of *S. hispanicum* Jacq.

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Abstract

A new species of the genus *Sisymbrium* is described, illustrated, and compared with the most closely related ones of the genus, *S. chrysanthum*, *S. hispanicum*, *S. crassifolium*, and *S. assoanum*, and the identity of *S. hispanicum* is discussed. The new species occurs on gypsiferous marls, forming part of the esparto grasslands and cultivated fields in the provinces of Albacete, Jaén, Granada, and Almería (southern Spain). In addition, a distribution map, illustrations, and a description of the habitat of the new species are presented.

Key words: Cruciferae, Iberian Peninsula, taxonomy

Introduction

The genus *Sisymbrium* Linnaeus (1753: 657), in its more classic conception, includes between 77 and 100 species (Schulz 1924, Romanczuk 1982, Warwick *et al.* 2002), distributed in the Old World (c. 40 spp.) and the New World (c. 50 spp.). More recently, based on molecular (Warwick *et al.* 2002, 2006) and morphological (Warwick & Al-Shehbaz 2003, Al-Shehbaz 2006) phylogenetic studies, *Sisymbrium* consists of only 41 species, all native of the Old World, except *S. linifolium* Nutt. (1834: 12) of North America (Al-Shehbaz 2006, 2012), plus one more recently described from Turkey (Mutlu & Karakuş 2015). The rest of the New World species have been separated into other independent genera (Al-Shehbaz 2006).

The genus *Sisymbrium* (tribe Sisymbrieae De Candolle 1821a: 237) includes annual, biennial to perennial herbs, with simple or no trichomes, more rarely with branched trichomes (only in South African *Sisymbrium burchellii* De Candolle 1821b: 472); leaves entire to pinnatisect, the cauline ones never auriculate or amplexicaul at the base; flowers arranged in ebracteate racemes or sometimes foliose; sepals erect to erecto-patent, oblong, the lateral ones slightly gibbose at the base; petals yellow, with blade obovate and attenuated into a claw; lateral nectaries annular, confluent with the middle ones in a ring; androecium tetradynamous; style short and strongly 2-lobed stigmas; fruits linear siliques, valves with 3 veins visible at maturity; seeds uniseriate, with incumbent cotyledons.

In the Iberian Peninsula, the genus *Sisymbrium* is represented by 11–12 species (Ball 1964, Pujadas Salvá 1993). More specifically, the Sect. *Irio* De Candolle (1821a: 238), includes 4 species: *S. irio* Linnaeus (1753: 659), *S. assoanum* Loscos & Pardo (1863: 6), *S. austriacum* Jacquin (1775: 35), and *S. crassifolium* Cavanilles (1802: 437), the last two highly variable and polymorphic. *S. irio* is one of the species that can be easily distinguished from the others by having flowers with very small petals overreached by the young fruits.

Three Iberian Peninsula species are often treated as subspecies of *S. austriacum*: *S. hispanicum* Jacquin (1784: 12, tab. 124), which is also found in North Africa (Quézel & Santa 1962, Maire 1977), *S. contortum* Cavanilles (1802: 436) and *S. chrysanthum* Jordan (1861: 141), which have been distinguished by the size of the silique (shorter, wider in *S. chrysanthum*) and by the indumentums at the base of the stem, glabrous in *S. hispanicum* and hirsute in *S. contortum* (Pujadas Salvá 1993).