



## *Brassica trichocarpa* (Brassicaceae), a new species from Sicily

CRISTIAN BRULLO<sup>1</sup>, SALVATORE BRULLO<sup>1</sup>, GIANPIETRO GIUSSO DEL GALDO<sup>1</sup> & VINCENZO ILARDI<sup>2</sup>

<sup>1</sup>Dipartimento di Scienze Biologiche, Geologiche e Ambientali, Università di Catania, Via A. Longo 19, I 95125 Catania, Italy, e-mail: salvo.brullo@gmail.com (corresponding author)

<sup>2</sup>Dipartimento di Biologia ambientale e Biodiversità, Università degli Studi di Palermo, Via Archirafi 38, I 90123 Palermo, Italy

### Abstract

A new species of *Brassica* from Sicily, namely *B. trichocarpa*, is described and illustrated. This suffrutex was found on a calcareous peak of a mount near Palermo, where it is represented by a single population occupying a really small surface. It is well differentiated from the other perennial species belonging to *B. sect. Brassica* mainly in having hairy ovary and very short, thickened, hairy, not torulose fruits. Its relationships and taxonomical position within this group are examined too. An analytical key of the current taxa belonging to the genus *Brassica* sect. *Brassica* is also provided.

**Keywords:** *Brassica*, Brassicaceae, endemic species, Palermo mountains, Sicily

### Introduction

*Brassica* Linnaeus (1753: 666) is an important genus of Brassicaceae represented by many annual and perennial species (38 species according to Al-Shehbaz 2012). Many wild plants provide very relevant genetic resources for the improvement of *Brassica* crops. In particular, the perennial species are included in the *Brassica oleracea* Linnaeus (1753: 667) group, which is chiefly distributed in the Mediterranean area, with many taxa differentiated at specific or subspecific level, while only two are occurring in the Atlantic coasts: *B. oleracea* L. subsp. *oleracea* from NW Europe, and *B. bourgeauii* (Webb in Christ 1888: 89) O. Kuntze (1891: 20), from Canary Islands.

As already highlighted by Tatout *et al.* (1999), the complex of *Brassica oleracea* may be considered as an example of a process of gradual speciation following geographic isolation. Besides, the interspecific fertility, the lower genetic diversity and the close phylogenetic relationships suggest that all the members of the *Brassica oleracea* group constitute a cytodeme with  $2n = 18$  (Harberd 1972, 1976, Gustafsson *et al.* 1976, Kianian & Quiros 1992, Bothmer *et al.* 1995, Lannér *et al.* 1997, Gustafsson & Lannér-Herrera 1997, Lázaro & Aguinalalde 1998, Tatout *et al.* 1999, Geraci *et al.* 2001, 2004).

A number of species, subspecies and varieties have been formerly described within the *Brassica oleracea* group by Rafinesque Schmaltz (1810), Tenore (1811–1815), Bivona-Bernardi (1816), Gussone (1825, 1828), Moris (1837), Visiani (1850–1852), Schlosser & Vukotinović (1869), Lojaco-Pojero (1889), Caruel (1891), Schulz (1919), Ginzberger (1921), Onno (1933), Gustafsson & Snogerup (1983), Trinajstić & Dubravec (1986), Mazzola & Raimondo (1988), Snogerup *et al.* (1990), Rac & Lović (1991), Raimondo *et al.* (1991), Raimondo & Mazzola (1997), Gladis & Hammer (2001), Giotta *et al.* (2002), and Raimondo & Geraci (2002). Most of them are currently recognized in recent taxonomical treatments (cf. Trinajstić & Dubravec 1986, Snogerup *et al.* 1990, Raimondo *et al.* 1991, Heywood & Akeroyd 1993, Raimondo & Mazzola 1997, Gustafsson & Lannér-Herrera 1997, Gómez-Campo 1999, Gladis & Hammer 2001). Only few taxa still need further in-depth investigations in order to clarify their taxonomic position within the group at issue. In particular, phylogenetic studies using nuclear and chloroplast DNA sequences or isoenzyme approaches may