

Centaurea saccensis (Asteraceae), a new species from SW-Sicily

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Abstract

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Centaurea saccensis, a new species endemic to Sicily is described and illustrated here. It belongs to the *Centaurea cineraria* group and is confined to the Tardara Gorges, near Sciacca town (SW-Sicily). The differences with the related taxa are discussed.

Introduction

In the frame of the collateral activities to the third Iter Mediterraneum, in early June 1990 additional collections aimed at providing study material of critical or interesting taxa were carried out in some biotopes not included in the planned itinerary. Among the surveyed localities there were the “Tardara” gorges, located along the lower course of the Carboj river in the territory of Sciacca town (Agrigento Province), where a conspicuous and peculiar population belonging to the *Centaurea cineraria* group has been found. This population is quite distinct within its group and rather isolated from the geographical point of view. Therefore it is here described as a new species named *Centaurea saccensis*.

Centaurea saccensis Raimondo, Bancheva & Ilardi, **sp. nova**

TYPUS – *Holotypus*: Sicily, Tardara Gorge (near Sciacca town), crevices of limestone rocks, 100 m a.s.l., 37° 37' 01" N, 13° 03' 17" E, 02. 06. 1990, *Raimondo & al. 0861* (PAL). – *Isotypi* in PAL, G, SIV, B, RNG, CAT, SOM.

ICONOGRAPHY – Fig. 1.

DIAGNOSIS – *Planta perennis, rosulata, ad 70 cm alta. Caulis erectus, incanus, tomentosus. Folia rosularum 1-2 pinnatipartita, incana, tomentosa vel arachnoidea, 18-35 cm longa; folia caulina 1-2 pinnatipartita, incana, tomentosa, 4-7 mm longa; folia ramealia integra, 5-10 × 3-6 mm. Corymbus 2-7 capitulis vel (raro) simplex; pedunculorum 1-2 mm lati, sparse foliosi; involucri ovata, 12-15 × 14-16 mm. Bractee lanceolatae,*

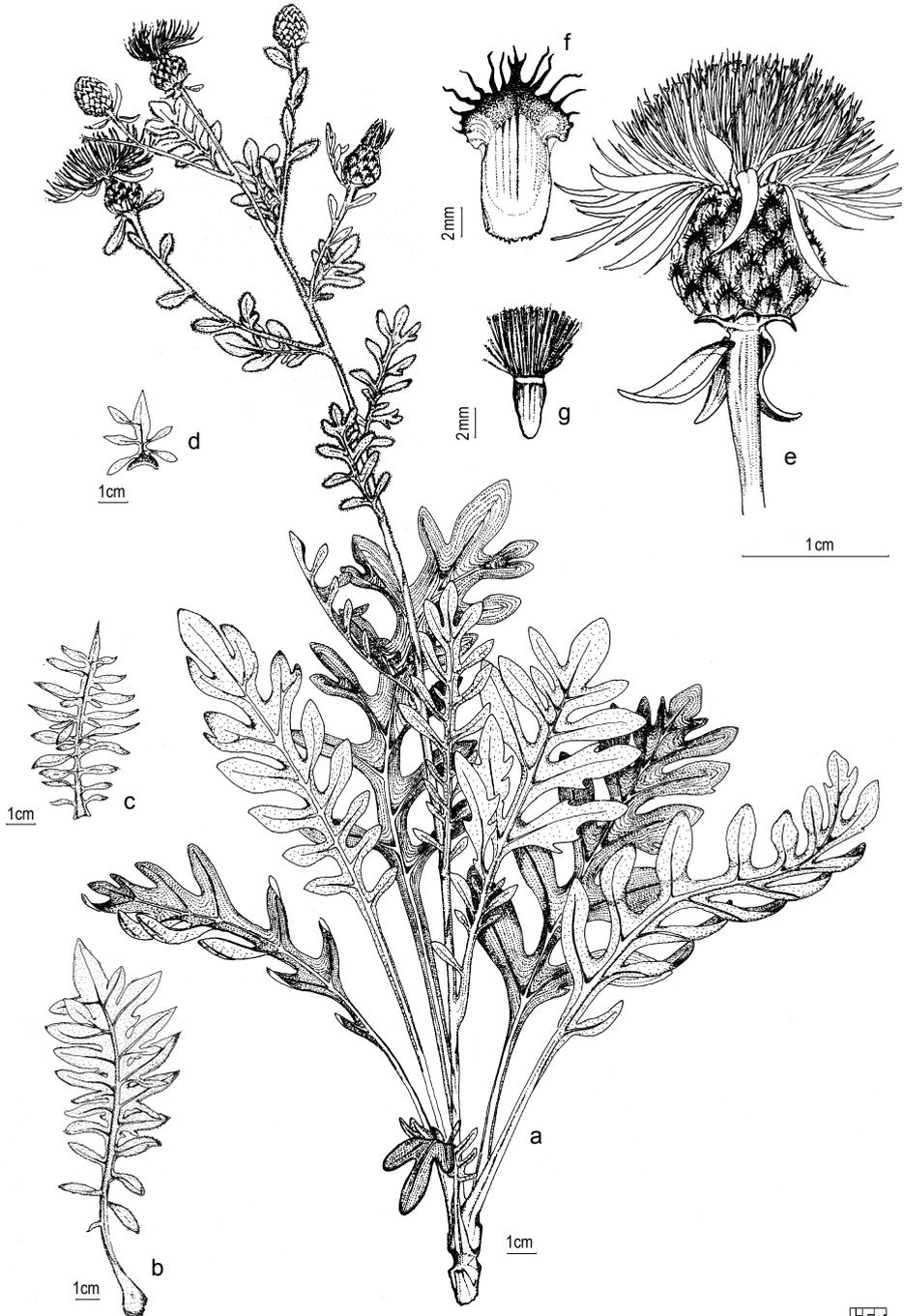


Fig. 1. *Centaurea saccensis*: a) habit; b) rosette leaves; c) cauline leaves; d) branch leaves; e) capitula; f) bracts; g) achene. Drawn by L. C. Raimondo.

glabrescentes vel tomentosae pilis arachnoideis, 7-9 nervatae postice; appendices fuscae vel nigrae, breviter decurrentes, fimbriato-ciliatae; 1-2 mm marginatae sub fimbriis; fimbriae 6-9 utroque latere, 2-3 mm longae. Flosculi roseo-lilacini; achenia grisea 4-5 × 2 mm; pappus 5-6 mm longus.

ETYMOLOGY – The specific epithet refers to “Xacca”, the ancient name of the present Sciacca town.

DESCRIPTION – Perennial up to 70 cm, rosette-forming. Stem erect, white tomentose, with few branches above. Rosette leaves 1-2 pinnatisect, white tomentose to arachnoid-hairy, 18-35 cm long. Cauline leaves 1-2 pinnatisect, white tomentose, 4-7 mm long. Branch leaves entire, 5-10 mm × 3-6 mm. Capitula in clusters of 2-7, or rarely solitary. Peduncles 1-2 mm wide, with sparse leaves. Involucre ovoid, 12-15 × 14-16 mm. Bracts lanceolate, glabrescent to arachnoid-hairy, with 7-9 nerves on the back. Appendages dark brown to black, shortly decurrent at the base, fimbriate. The appendages below the fimbria, with a 1-2 mm wide margin. Fimbriae 6-9 on each side, 2-3 mm long. Florets pink-violet. Achenes gray, 4-5 mm long, 2 mm wide. Pappus 5-6 mm long.

BIOLOGICAL FORM – Chamaephyte rosulate with chasmophyte habit.

PHENOLOGY – Flowering May. Fruiting May-June.

DISTRIBUTION AND ECOLOGY – *Centaurea saccensis* occurs on the carbonate cliffs (Fig. 2), Northern of Sciacca, along the “Tardara” gorges furrowed by the Carboj river down of the Arancio dam (Figs 3-4) at 9-10 km from the coastline. This species is confined in an area characterized by marked arid conditions caused by the southwards general exposure. Climatic data concerning this area refer to the pluviometric station of the Arancio dam, where 548 mm annual mean rainfall is recorded. The arid period lasts between May and September, while the most rainy period falls around October. Annual average temperature is 18 °C. Therefore, according to Rivas-Martinez (1981), *C. saccensis* ranges within the lower Thermo-Mediterranean bioclimatic stage, lower dry ombrotype. It is rather frequent in the more or less shady places together with *Silene fruticosa* L., *Matthiola fruticulosa* (L.) Maire, *Brassica rupestris* Raf., *Rhamnus oleoides* L., *Antirrhinum siculum* Miller, *Sedum sediforme* (Jacq.) Pau, *Phagnalon rupestre* (L.) DC., *Capparis spinosa* subsp. *rupestris* (Sm.) Nyman, *Euphorbia dendroides* L., *E. bivonae* Steud., *Dianthus rupicola* Biv., *Chamaerops humilis* L., *Lomelosia cretica* (L.) Greuter & Burdet, *Galium lucidum* All., *Coronilla valentina* L., *Athamanta sicula* L., *Hyparrhenia hirta* (L.) Stapf, *Ruta chalepensis* L., *Satureja graeca* L. subsp. *graeca*, etc.

This community is comparable with the chasmophytic ones established on the coastal limestone cliffs in NW-Sicily, from which it is easily distinguished because many markedly mesophilous taxa there lack.

STATUS – *Centaurea saccensis* should be considered as “Critically Endangered” according to the IUCN (2001) – CR B1ab(iii)+2ab(iii).



Fig. 2. Blooming specimen of *Centaurea saccensis* in its *locus classicus*.

AFFINITIES – *Centaurea saccensis* belongs to the *C. cineraria* group which comprises 7 vicarious endemic taxa occurring on limestone cliffs in the western and southwestern Italian seaside, Salento and Toscana archipelago, Ischia, Capri, Sicily, Eolie islands, Egadi islands, etc. (Cela Renzoni & Viegi 1982; Pignatti 1982). The new species exhibits the most morphological similarity to *C. cineraria* L. which occurs in Latium and Campania. Both the species possess capitula with lanceolate bracts, ending with dark brown to black appendages; 2-3 mm long fimbriae and the same features as the achenes. They could be distinguished from each other by shape and position of the rosette and cauline leaves. The ecological conditions are different too: *C. cineraria* inhabits rocks on the seaside in central and southern Italy, while *C. saccensis* grows in the crevices of the rocks in the gorges of the Carboj river in southwestern Sicily (9-10 km off the sea coast). The respective populations are situated in such distant areas from each other that there is no genetic contact between them. The new taxon is also morphologically close to *C. ucraiae* Lacaita subsp. *ucraiae* and *C. busambarensis* Guss. It differs from the former by the appendages and achenes features, while the differences from the latter concern size and shape of the capitula and rosette as well as cauline leaves.

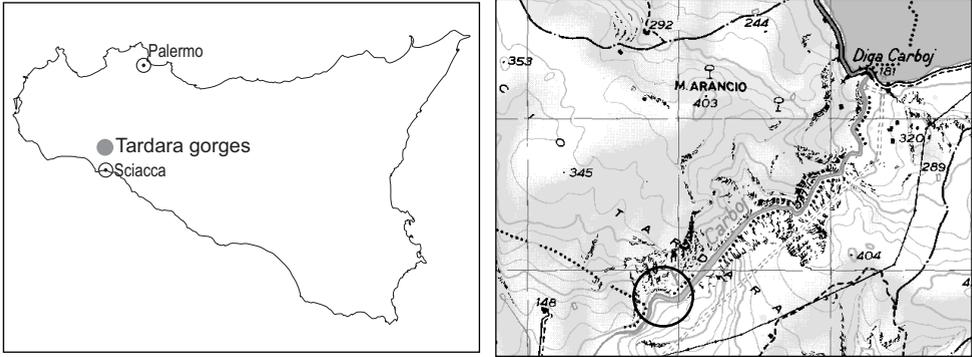


Fig. 3. The location of the *Centaurea saccensis* locus classicus (○).



Fig. 4. “Tardara” gorges: the *Locus classicus* of *Centaurea saccensis*.

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