

Ignazio Camarda

***Dipsacus valsecchii* (Dipsacaceae) a new species from Sardinia**

Abstract

Camarda, I.: *Dipsacus valsecchii* (Dipsacaceae) a new species from Sardinia. — *Bocconea* 19: 113-117. 2006. — ISSN 1120-4060.

A new species, *Dipsacus valsecchii*, endemic to Sardinia is described. It is close to *D. ferox* Loisel. and *D. fullonum* L., the two other species occurring in the Island. Some critical remarks on their distribution and ecology are also given.

Introduction

The genus *Dipsacus* L. in Sardinia has so far been represented by *Dipsacus fullonum* L. (= *D. sylvester* Huds.) an euri-mediterranean species frequent especially in the NW of the Island and by *D. ferox* Loisel., endemic to Sardinia and Corsica, more widespread than the former from the sea level to 1400 m altitude. Specimens collected in the Ogliastra region (Central-Eastern Sardinia) have been recognized to belong to a new species here described and called *Dipsacus valsecchii*.

Material and methods

***Dipsacus valsecchii* Camarda sp. nova**

Diagnosis – Planta herbacea biennis, caule erecto, rigido, 60-180 cm elato, cavo, aculeatissimo. Folia basalia oblongo-lanceolata vel spatulata, integra, sessilia, 6-25 × 3-8 cm, caulinia opposita, connata, indivisa, crispato-bullata, margine crenulato-dentata, rariter inciso-lobata, rigidula etiam in sicco. Capitula hemiglobosa, 3-5 cm diametro, squamis involucrantibus, rigidis, arcuatis ad basim; receptaculi paleis aristato-cuspidatis, flores coronantibus, vel lineari-subulatis, quam corolla longioribus vel subequalibus. Calyx breviter pappiformis; corolla alba, 8-12 mm longa, tubulosa, zygomorpha, pilosa extus intusque, tetralobata, lobo superiore 2.5 × 1.6-1, mm, lobis inferioribus 1.0-1.2 mm; stamina filamentis 7-8 mm longis, inter lobos insertis, et antherae 1 mm longae; ovarius 1 mm a calyce coronatus, stigma clavato-lobatum, 1 mm longum; fructus indeiscens, 5-6 × 1.2-1.5 mm, tetragonus, costatus, pilosiusculus.

Differt a *Dipsaco feroci* Loisel. capitulis hemisphaericis, caule minus elato sed robustiore, foliis cauliniibus integris non digitato-lobatis. Differt a *D. fullonum* L., caule minus elato, capitulis laciniis retro-recurvatis.

Etymologia – Nomen clarissimae Franciscae Valsecchiae, magistrae botanicorum in Atheneo Sacerensi, dicatum est.

Typus – Ulassai. Pendici di Bruncu Matzeu-Monte Lumburau, 800 m s.l.m., luoghi umidi e cunette della strada per Perdasdefogu. Legit I. Camarda, 27 Luglio 2002. (Holotype in SS; Isotypes in SS, FI and PAL).

Description – Biennial herbaceous plant 60-180 cm high, glaucous, robust and rigid densely covered with stout prickles, 3-8 mm long and several branches opposite, ridged, equalling the main stem. Basal leaves rosulate, entire, sessile, spatulate or lanceolate not opposite, spreading, crisped, spinulose, entire or slightly lobed, with irregularly crenulate margin and prickles above and beneath. Capitula hemispherical, 3-5 cm in diameter, with basal involucre bracts linear-lanceolate, unequal, spiny, more or less recurved upside down, 2-5 cm long. Apical bracts erect exceeding 10-25 mm from capitula. Receptacle with involucre scales of flowers linear-cuspidate, 12-16 mm long, hairy, with a long and rigid awn, shortly exceeding the corolla. Involucre 4-angled; calix ciliate; corolla white with shortly appressed hairs to the tube, 8-12 mm long, zygomorphic with the upper lobe 2.5-3 mm and the lower ones 1.0-1.2 mm long. Stamens 4 with filaments 7-8 mm long inserted at the top of the tube between the lobes. Anthers white, 1.5-2.5 mm long; style 3-4 mm and stigma clavate-bilobe, 1 mm long. Achenes 5-7 mm long with a short pappus, 4 angled with appressed hairs.

Dipsacus valsecchii differs from *D. ferox* by wider and shorter stems, hemispherical capitula and entire leaves; it differs from *D. fullonum* by shorter stems, capitula shape, involucre bracts down ward but not upside curved, colour of flowers and dense prickles.

Iconography – Fig. 1, original from a specimen collected in the *locus classicus*.

Chromosomic number – $2n=18$ (Villa, unpublished), as in *Dipsacus ferox* and *D. fullonum* (Colasante 1979).

Biological form and phenology – Hemicryptophyte, biennial, rosulate with robust erect and branched stems. The basal leaf rosette is formed in summer while the floral stem grows up in April-May of the next year. The flowering is progressive from July to August, starting from the apical capitula.

Specimina lecta – Aritzo. Foresta demaniale di Uatzo, fontanili dei tagli stradali. Legit I. Camarda, 10 luglio 1985 (SS); Villagrande. Strada per Talana, fontanile e cunette umide. Legit I. Camarda, 16 luglio 1985 (SS); Gairo, Vallata del Rio Pardu, fontana all'uscita dal paese verso Ulassai. Legit I. Camarda, 27 luglio 2003 (SS); Ulassai, Santuario campestre di S. Antonio, nei luoghi umidi e ai bordi strada, legit I. Camarda, 8 agosto 2005 (SS); Ulassai, strada per Perdasdefogu rigagnolo dopo il santuario di S. Antonio e garighe e macchie degradate, Legit I. Camarda, 8 agosto 2005 (SS).

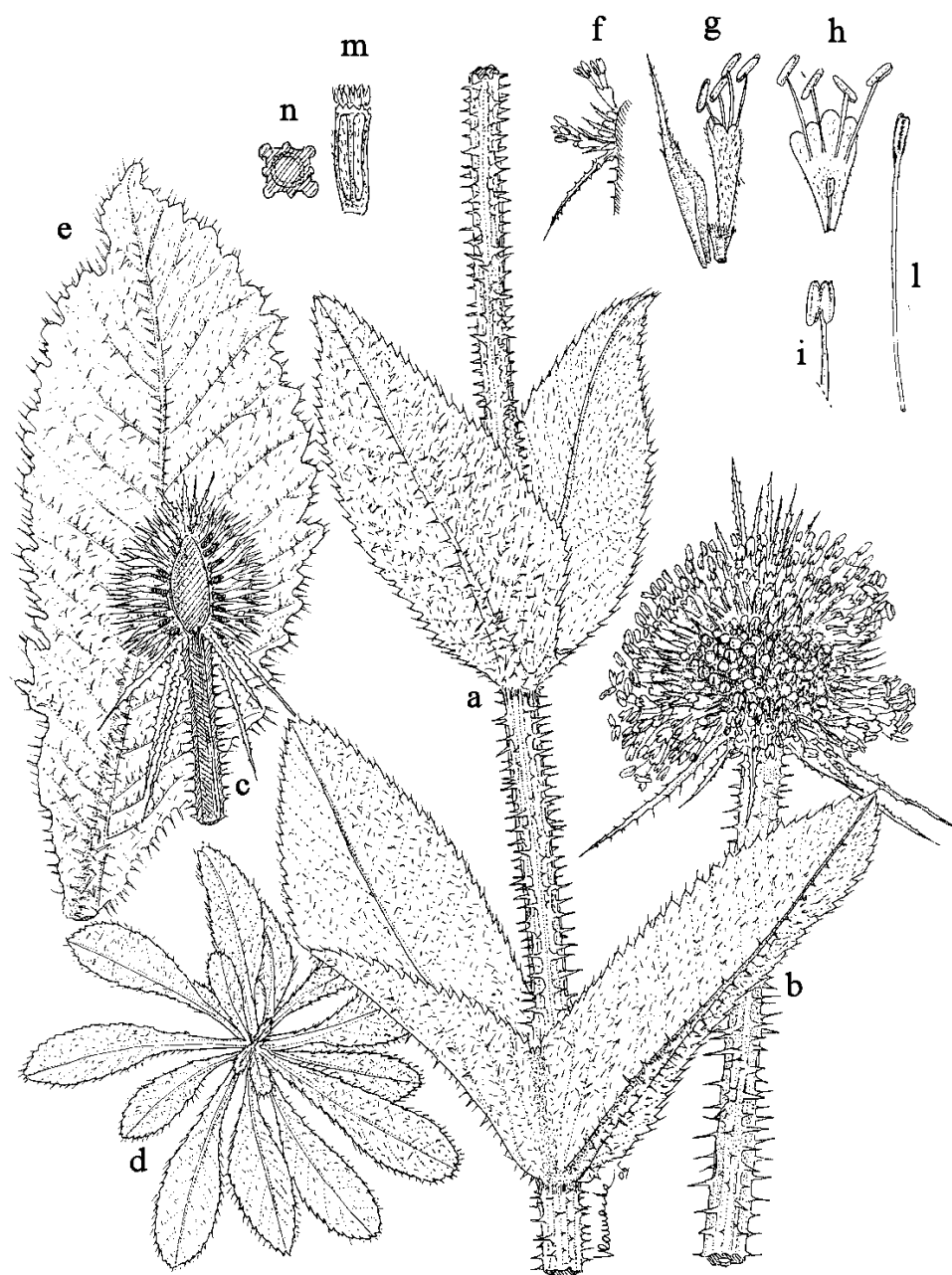


Fig. 1 – *Dipsacus valsecchii* – **a**: Stem with cauline leaves, 0.5×; **b**: capitula, 0.75×; **c**: capitula in longitudinal section, 0.5×; **d**: rosette of basal leaves, 0.25×; **e**: basal isolated leaf, 0.5×; **f**: flowers on the capitula, 0.5×; **g**: floral scales and flower, 2×; **h**: open flower with stamens, 5×; **i**: single stamen, 5×; **l**: stylus and stigma, 5×; **m**: achene, 2.5×; **n**: transverse section of the achene, 5×.

Distribution and ecology – *Dipsacus valsecchii* is confined in the region called Ogliastro in the central-eastern Sardinia (Fig. 2), and there it is vicarious of *D. ferox* Loisel., which is, however, the most common among the three species of Sardinia. *D. valsecchii* is heliophilous and its primary habitats are seasonal wet places. It also grows on waste places but there it disappear rapidly. It occurs between 600 and 1000 m altitude, irrespective of limestone or siliceous substrata and is likely a middle-montane species.

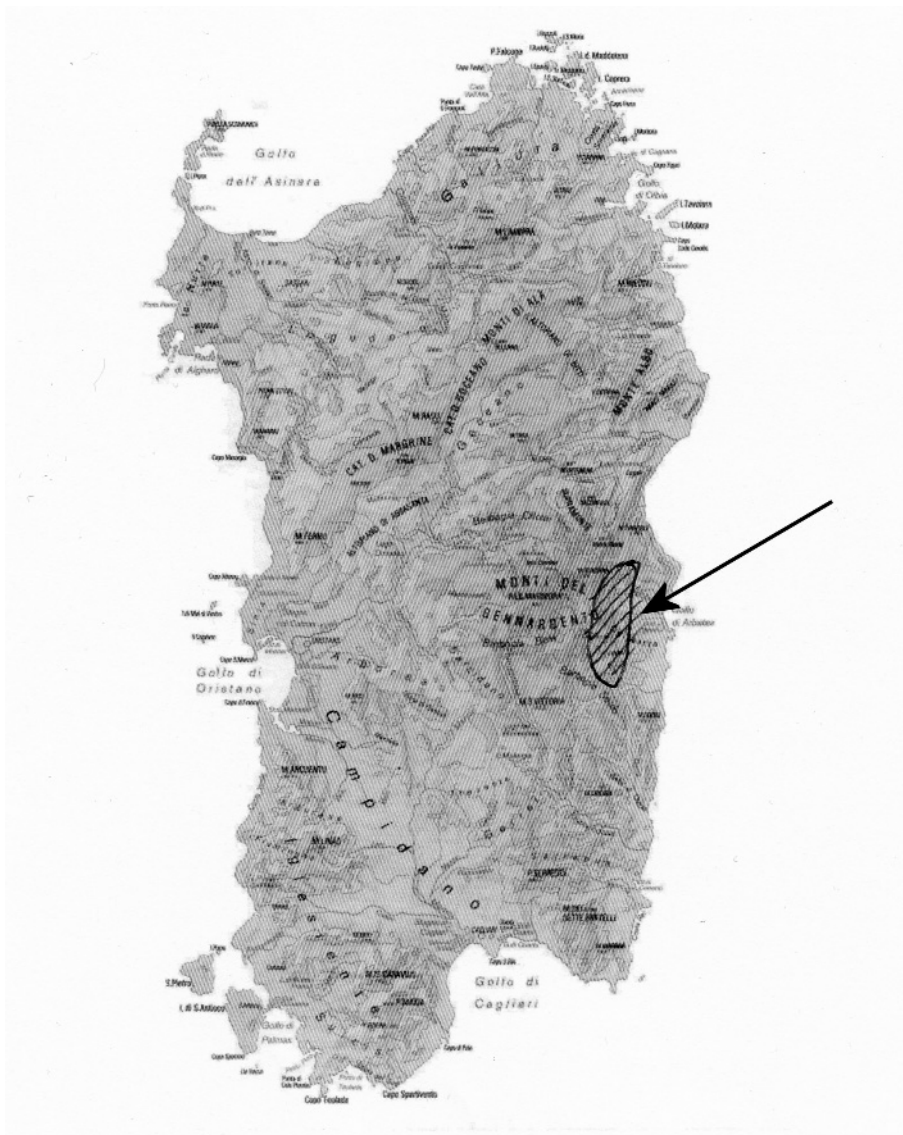


Fig. 2 – Distribution of *Dipsacus valsecchii*.

Discussion and remarks

The genus *Dipsacus* includes about 20 species, native to Europe, Northern Africa, Asia. Some of them are also naturalized in North and South America. *Dipsacus valsecchii* appears mainly close to *D. ferox*, endemic to Sardinia and Corsica, occurring widespread from the sea level to 1.200-1.300 m altitude. Indeed reports from Central Italy i.e. Marche, Abruzzi and Molise by Caruel (1887) and later by Fiori (1927), Pignatti (1982), Greuter & al. (1986) and Jeanmonod (1988) are not confirmed on the basis of the revision of the relevant specimens kept in the Herbarium of Florence (FI) as also confirmed by Gubellini and Lucchese (*in verbis*). *D. ferox* can be considered as a pioneer occurring in both hydromorphic and rather arid and more or less disturbed places, more frequently on siliceous substrate. On the other hand *D. valsecchii* occurs scattered and more frequent in wet localities and riverside, but only occasionally within more or less degraded macchia and garrigues. It shows some affinity with *D. fullonum* from which differs by stems longer, but weaker and by cylindrical capitula with upside recurved bracts, flowers white-lilac and leaves without prickless at the margin. Regarding distribution, *D. valsecchii* seems to be vicarious of *D. ferox*, but other investigation needs to precise its exact range.

Aknowlegments

I am grateful to Prof. Rosalba Villa, for her contribution in the analysis of chromosomic number.

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Address of the author:

Ignazio Camarda;

Dipartimento di Botanica ed Ecologia vegetale, Università di Sassari, Via Muroni, 25, 07100-Sassari. E-mail: camarda@uniss.it.

