

L. Peruzzi, N. G. Passalacqua & G. Cesca

On the presence of *Doronicum plantagineum* (Asteraceae) in Italy

Abstract

Peruzzi, L., Passalacqua, N. G. & Cesca, G.: On the presence of *Doronicum plantagineum* (Asteraceae) in Italy. — *Bocconea* 21: 207-212. 2007. — ISSN 1120-4060.

Doronicum plantagineum is confirmed as a member of the Italian flora. Former reports of this species, or of *D. hungaricum*, from the Sila Massif (C Calabria) have been verified and are all referred to *D. plantagineum*. In addition to its confirmed presence in Sila, this species occurs in several localities of N Calabria (Pollino Massif and Verbicaro-Orsomarso mountains). *D. plantagineum* is a W Mediterranean species. Its S Italian stands are separated by more than 1000 km from its main area of distribution, the nearest localities being in SE France and NE Algeria. The presence of *D. plantagineum* in S Italy is therefore of particular phytogeographical interest. A map showing all known Italian localities of this species is provided.

Introduction

In a recent systematic revision of *Doronicum* L. (Fernández 2003) the report in Italy of plants referred in the past to the W Mediterranean *D. plantagineum* L., or to its close Balkan relative *D. hungaricum* Rchb. f, is completely ignored. Tenore (1835-1838, 1842) first recorded such plants from Italy (C Calabria) on the basis of samples collected seven years before (Tenore 1835, as “*D. pardalianches*”), now regarding them as a new variety of *D. plantagineum*: *D. plantagineum* var. *lobelii*. Subsequently, Fiori (1927) synonymised *D. plantagineum* var. *lobelii* with *D. hungaricum*, an opinion shared by Sarfatti (1965) and Pignatti (1982), although Gentile & Martini (1974) and Gentile (1979) had already reported Calabrian plants as representing *D. plantagineum*.

This note is to clarify the identity of these plants, to re-emphasise their presence in Italy (Calabria), and to add also three new localities that extend the Italian range of this taxon by c.100 km toward the north.

Material and Methods

The identity of Calabrian plants was established by using the analytical key and the descriptions in Fernández (2003).

To prepare an updated distributional map, literature data (for both *D. plantagineum* or *D. hungaricum*) and label data for the revised specimens in CLU were used. UTM coordinates of all localities were established by using topographical maps 1 : 25.000 (Ânonymous 1996).

Specimens seen

ITALY, CALABRIA, SILA: Serra Colamauci (Sila Grande, CS), 1200 m, margine querceto, 12/V/1997, *Bernardo* (CLU, UTM 33 S XD 29.62); Camigliati, presso Camigliatello Silano (Sila Grande, CS), 1200 m, pineta, 28/V/1989, *Bernardo* (CLU, UTM 33 S XD 26.55); Sila Piccola, regione Ciriçilla, ambiente paludoso, 31/V/2002, *Peruzzi et Passalacqua* (CLU, UTM 33 S XD 35.34); POLLINO MASSIF: Massiccio del Pollino: versante settentrionale di Timpa del Principe, 1200 m s.l.m., pascoli ai margini di faggeta, substrato calcareo, 20/V/2004, *Peruzzi, Passalacqua et Aquaro* (CLU, UTM 33 S XE 08.14); VERBICARO-ORSOMARSO MOUNTAINS: Piana di Campotenese, lungo la strada che porta a c.da Masistri, ca. 1000 m s.l.m., coltivi ed incolti, 19/V/2004, *Peruzzi et Passalacqua* (CLU, UTM 33 S WE 90.14); Complesso montuoso di Verbicaro-Orsomarso: Montagna di Masistro, ca. 1350 m s.l.m., impluvi, su suolo fortemente nitrificato, susbtrato calcareo, 19/V/2004, *Peruzzi et Passalacqua* (CLU, UTM 33 S WE 90.10).

Literature data

ITALY, CALABRIA, SILA: Sarfatti (1965) quotes the following localities: Bivio Giamberga (UTM 33 S XD 27.67); Camigliatello (UTM 33 S XD 25.55); Germano (UTM 33 S XD 42.54); Santa Barbara (UTM 33 S XD 39.61); Sorgenti del Tacina (UTM 33 S XD 37.34); Timpone Morello (UTM 33 S XD 36.33); Gentile & Martini (1974) add San Nicola (UTM 33 S XD 33.52) and Quarto di Monteoliveto (UTM 33 S XD 37.52); and Gentile (1979) adds Silvana Mânsio (UTM 33 S XD 32.52).

Results and Discussion

Following the taxonomic criteria of Fernández (2003), our plants match *Doronicum plantagineum* in all features of the basal leaves and the rhizome, and in the size of disk flower corollas, while resembling *D. hungaricum* in overall plant size and in the relative length of capitula vs. phyllaries (Tab. 1). However, the very lectotype of *D. plantagineum* (designated by Jarvis & Turland 1998, picture displayed in Jarvis & al. 2004) shows capitula that are longer than the phyllaries, as Calabrian plants do, so this character does not seem reliable. The eventual absence of leaves at the base of flowering stems, in our material, is explained by ecological factors, viz., the presence of tall herbs.

The name *D. plantagineum* var. *lobelii* was proposed for Calabrian plants (Sila Piccola) by Tenore (1835-1838: 231, “*foliis angustioribus subintegerrimis*”. 1842), who quoted a plate of Lobelius (1581, Fig. 1). By studying this plate, it is evident that it does not depict Calabrian *D. plantagineum*, but most probably *D. hungaricum*. For this reason, Lobelius’s plate is not formally here selected as the lectotype of *D. plantagineum* var. *lobelii*, a name explicitly created for Calabrian plants, despite of its eponimy. The typification of this name needs further investigations in the Herbarium Tenore (NAP), not carried out in this paper.



Fig. 1. *Doronicum minus officinarum* (Lobelius 1581), the name *D. plantagineum* var. *lobelii* is partly based on this plate.

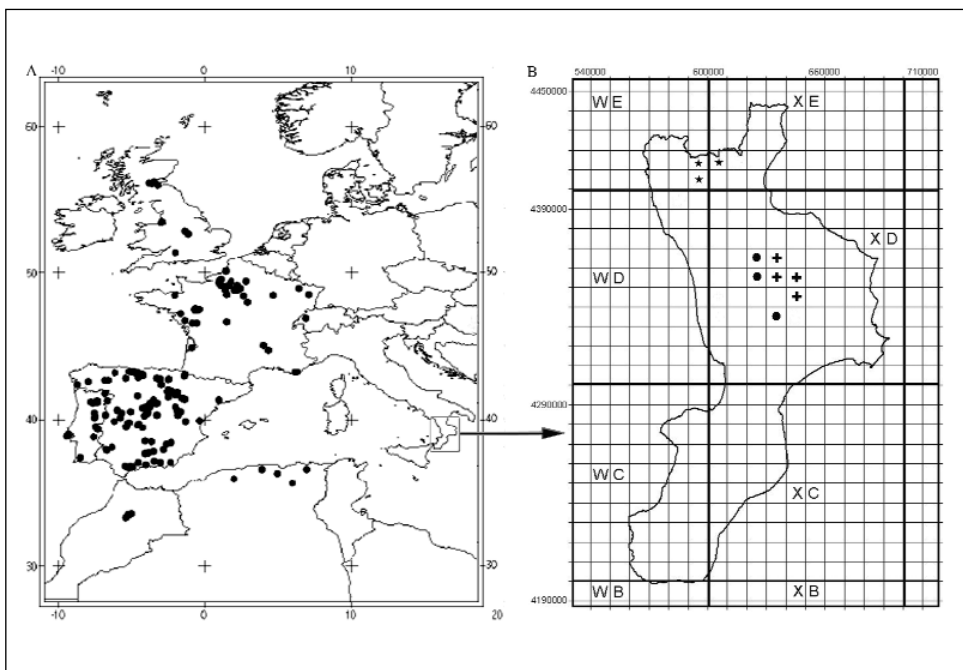


Fig. 2. *Doronicum plantagineum*: A - range modified from Fernández 2003, B - particular of Calabrian distribution, + - literature data, circles - confirmed localities, stars - new localities.

The Calabrian distribution of *D. plantagineum* is shown in Figure 2. S Italian stands are at a distance of more than 1000 km far from the main range, the nearest localities outside of Italy being in SE France and NE Algeria.

Conclusions

As far as we can tell, there is no basis for a taxonomic distinction between Calabrian plants and *Doronicum plantagineum*. This species occurs in Italy only in central and northern Calabria, where it grows in open beech and pine woods, on pastures and along field margins, from 1000 to 1500 m asl.

The presence of *Doronicum plantagineum* in S Italy is of particular biogeographical interest and represents an eastern extension of its geographical range. The distributional pattern of this species is similar to that of the *Genista anglica* L. aggregate (Brullo & al. 2001), *Adenocarpus* DC. (Brullo & al. 2001a), *Lomelosia cretica* (L.) Greuter (Verlaque & al. 1991) and several other taxa whose present distribution is presumably linked to Late Oligocene/Early Miocene palaeogeography (Peruzzi 2003). Indeed, a recent phylogenetic analysis of the genus *Doronicum* (Fernández & al. 2001) places *D. plantagineum* in a clade basal to the genus (together with *D. hungaricum*, *D. columnae* Ten. and *D. orientale* Hoffm.), supporting the assumption of a relatively old origin of this species group.

Table 1. Comparative morphological features of *Doronicum hungaricum*, *D. plantagineum* (data source: Fernández 2003) and Calabrian plants.

	<i>D. hungaricum</i>	Calabrian plants	<i>D. plantagineum</i>
size of plants	up to 80 cm	up to 80 cm	up to 150 cm
basal leaves size	4-9×1-3 cm	4-11×3-6 cm	4-8×2.5-6 cm
presence at flowering	yes	no/yes	no/yes
shape	oblong-elliptic	ovate to elliptic	ovate to ovate elliptic
hairs (upper surface)	short glandular and long eglandular	all glandular	all glandular
rhizome	glabrous to scarcely pubescent	pubescent to strongly pubescent	pubescent to strongly pubescent
disk flower corolla	up to 4 mm	4-5 mm	4-5.5 mm
capitula	≥ phyllaries	≥ phyllaries	≤ phyllaries
2n	60	?	120

Acknowledgements

Many thanks are due to Dr. I. A. Fernández, specialist in *Doronicum*, for sending us reprints of her papers and confirming the correct identification of our plants.

References

- Anonymous [Istituto Geografico Militare] 1996: Carta topografica d'Italia, serie 25. – Firenze.
- Brullo, S., Gangale, C. & Spampinato, G. 2001: Note tassonomiche su *Genista anglica* L., species complex. – Inform. Bot. Ital. **33**: 493-499.
- , De Marco, G. & Siracusa, G. 2001a: Taxonomical notes on the genus *Adenocarpus* DC. (*Leguminosae*) in Italy. – Boccone **13**: 425-436.
- Fernández, I. A. 2003: Systematics of Eurasian and North African *Doronicum* (*Asteraceae*, *Senecioneae*). – Ann. Missouri Bot. Gard. **90**: 319-389.
- , Aguilar, J. F., Panero, J. L. & Nieto Feliner, G. 2001: A phylogenetic analysis of *Doronicum* (*Asteraceae*, *Senecioneae*) based on morphological, nuclear ribosomal (ITS), and chloroplast (*trnL-F*) evidence. – Molec. Phylogen. Evol. **20**: 41-64.
- Fiori, A. 1927: *Doronicum* L. – Pp. 602-605 in: Fiori, A., Nuova flora analitica d'Italia, **2**. – Firenze.
- Gentile, S. 1979: Ricerche sugli aggruppamenti a *Genista anglica* L. della Calabria (Italia meridionale). – Notiz. Soc. Ital. Fitosociol. **14**: 61-85.
- & Martini, E. 1974: Novità della flora silana. – Webbia **29**: 113-122.
- Jarvis, C. E. & Turland, N. 1998: Typification of Linnaean specific and varietal names in the *Compositae* (*Asteraceae*). – Taxon **47**: 347-370.
- , Cafferty, S., Huxley, R. & Hume, A. 2004: The George Clifford Herbarium. – <http://www.nhm.ac.uk/botany/databases/clifford/index.html>.
- Lobelius, M. 1581: Plantarum seu stirpium icones. – Antwerpen.
- Peruzzi, L. 2003: Biosistemática e fitogeografía di specie critiche della flora calabra. Ph.D. Thesis in Plant Biology, University of Calabria, XV Cycle. – Rende (Cosenza).

- Pignatti, S. 1982: Flora d'Italia, **3**. – Bologna.
- Sarfatti, G. 1965: Prodromo della flora della Sila (Calabria) (continuazione e fine). – *Webbia* **20**: 355-425.
- Tenore, M. 1835: Sylloge plantarum vascularium florum neapolitanae hucusque detectarum. Appendix quarta. – Napoli.
- 1835-1838: Flora Napolitana **5**. – Napoli.
- 1842: Sylloge plantarum vascularium florum neapolitanae hucusque detectarum. Appendix quinta. – Napoli.
- Verlaque, R., Aboucaya, A., Cardona, M. A. & Contandriopoulos, J. 1991: Quelques exemples de spéciation insulaire en Méditerranée occidentale. – *Bot. Chron.* **10**: 137-153.

Address of the authors:

Lorenzo Peruzzi, Nicodemo Giuseppe Passalacqua, Giuliano Cesca, Museo di Storia Naturale della Calabria ed Orto Botanico, I-87036 Università della Calabria, Arcavacata di Rende (CS), Italy.