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## First record of *Carex vesicaria* (Cyperaceae) in Sicily

### Abstract

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The first record of *Carex vesicaria* from Sicily is reported. This circumboreal species, so far known from the peninsular regions of Italy and from Corsica, has been found in a marshy meadow within the *Fagus sylvatica* and *Acer pseudoplatanus* woody belt of the Nebrodi mountains (N-E Sicily). The phytocoenosis established in this locality is characterized by *C. vesicaria* itself together with a few other hygrophytes such as *Galium elongatum*, *Mentha aquatica* and *Juncus effusus*. This plant community belongs to a context of hygro-hydrophilous vegetation where marshy features characterized by *Juncus striatus* and *Calliergonella cuspidata* alternate with the lacustrine ones characterized by *Potamogeton natans*, *Groenlandia densa* and *Apium inundatum*.

### Introduction

A list of the infrageneric taxa of *Carex* recorded in the last decades from Sicily is reported in a recent paper concerning the first record of *Carex stellulata* Good from that area (Raimondo & Spadaro 2002).

Such list mainly includes hygrophylous taxa occurring in mountainous moist places, mostly of the Madonie Mountains (N-W Sicily).

In the course of more recent surveys and collections carried out in the Nebrodi mountains, east of the Madonie, some other interesting *Carex* taxa have been found, among which *Carex paniculata* subsp. *paniculata* is new to such mountains (Raimondo & al. 2004). In addition, *C. vesicaria* L., a circumboreal species so far known from the peninsular regions of Italy and from Corsica (Pignatti 1982) but new to Sicily, is reported here from the same area.

According to Schultze-Motel (1968), *Carex vesicaria* (Fig. 1), together with *C. rostrata* Stock and *C. rhynchophysa* C. A. Mey., is included in the Sect *Vesicarieae* within the subg. *Carex*. According to Chater (1980), the Sect. *Vesicarieae* (O. F. Lang) Christ also includes *C. saxatilis* L., *C. rotundata* Wahlenb., *C. stenolepis* Less. and *C. mollissima* Christ. Like all the species of the subg. *Carex*, *C. vesicaria* is monoecious. It is a helophyte coespitose 30-120 cm high, with almost terete stem and linear leaves 2-3 mm wide. Female



Fig. 1. *Carex vesicaria* from Heß & al. (1967), modified.

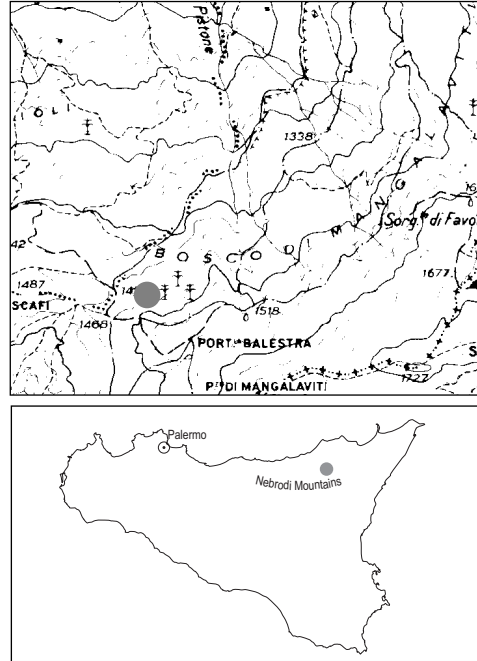


Fig. 2. The locality (●) of *Carex vesicaria* on the Nebrodi Mountains.

inflorescence 1-3 flowered, 20-40 × 9-12 mm long and wide, the lower one with a up to 4 cm patent or rather pendent peduncle. Utricles 2.5 × 6-8 mm, ovoid, narrowed at the apex.

This calcifuge species frequently occurs in the mountainous marshes and shallow water.

Its general range includes Europe, Asia and N. America. In Europe it occurs in most of the countries, including Spain, Bulgaria and Italy (Chater 1980). According to Pignatti (1982) it belongs to the circumboreal geographical element and in Italy it is more frequent in the northern (Liguria, Piemonte, Valle d'Aosta, Lombardia, Trentino Alto Adige, Veneto, Friuli, Emilia, Toscana, Marche) and southern (Basilicata e Calabria) regions. Recently it has also been recorded from the Abruzzo (Conti 1998).

The Sicilian locality (Fig. 2) is to be considered the southernmost in the Italian range of *C. vesicaria*. Here a single, densely homogeneous population is located, on the border of a moist site where both marshy and lacustrine features can be found (Fig. 3-4). In the phytocoenosis established there, *C. vesicaria* is dominant. Other significant hygrophilous elements are: *Galium elongatum* C. Presl subsp. *elongatum*, *Juncus effusus* L., *Glyceria plicata* (Fries) Fries, *Mentha aquatica* L., *Alopecurus geniculatus* L., *Eleocharis palustris* L., *Potentilla reptans* L., *Peplis portula* L., *Salix purpurea* L., *Ranunculus ophioglossifolius* Vill. and *Sparganium* sp. The lacustrine environment is characterized by *Potamogeton natans* L. subsp. *natans*, *Groenlandia densa* (L.) Fourr., *Apium inundatum* Rchb. f., *Glyceria fluitans* (L.) R. Br., *Ranunculus trichophyllus* Chaix in Vill., *Callitriche*



Fig. 3. Moist area in a clearing of the Mangalavite Wood (Nebrodi, Sicily). In evidence the *Carex vesicaria* population.



Fig. 4. *Carex vesicaria* in detail.

*stagnalis* Scop. and *Chara globularis* Thuill. or by *Juncus striatus* Schousb., *J. articulatus* L., *Dactylorhiza saccifera* (Brongn.) Soó, *Orchis laxiflora* Lam., *Epilobium parviflorum* Schreber, *Holcus lanatus* L., *Poa trivialis* L., *Hypericum tetrapterum* Fries, *Ajuga reptans* L., *Teucrium scordium* subsp. *scordioides* (Schreber) Maire & Petitmengin *Lysimachia nemorum* L., *Cirsium creticum* subsp. *triumfetti* (Lacaita) Werner, *Isolepis cernua* (Vahl) Roem. & Schult., *Ranunculus bulbosus* subsp. *aleae* (Willk.) Rouy & Fouc., *R. repens* L., *Carex remota* L., *C. punctata* Gaudin., *C. distans* L., *Barbarea bracteosa* Guss., *Equisetum* sp., *Calliergonella cuspidata* (Hedw.) Loeske and *Philonotis fontana* (Hedw.) Brid.

After the new Sicilian record, the Italian distribution of *Carex vesicaria* is significantly expanded. In addition, the Sicilian population is at the southernmost limit of the European and Mediterranean distribution range.

Voucher specimens of the new record are housed in the Herbarium Mediterraneum (PAL) [Raimondo, Scafidi & Schimmenti, Nebrodi, in un acquitrino all'interno del Bosco di Mangalaviti nei pressi di Portella Scafì, ca. m 1400 s.l.m., 5 luglio 2003].

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