talvolta non sono ben definibili, con il risultato che troppo spesso dobbiamo assistere alla creazione di *taxa* superflui.

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69. *GIGASPERMUM MOURETII* CORB. (*GIGASPERMACEAE*, MUSCI), A NEW SPECIES FROM ITALY

Alfredo CARRATELLO & Michele ALEFFI

Gigaspermum mouretii Corb. (Gigaspermaceae, Musci), una nueva especie para Italia

Key words. Musci, *Gigaspermum*, Italy.

Palabras clave. Musci, *Gigaspermum*, Italia.

During a series of studies conducted in north-western Sicily in October 1996, *Gigaspermum mouretii* Corb. was gathered by A. Carratello in the periphery of the inhabited center of the municipality of Capaci (Palermo) (38°10'93" N, 13°14'28"E). The species was found on a small piece of land (about 200m^2) once used for pasture, at about 50 m from the sea and at 5 m a.s.l., with N-NW exposure.

Its leaves are evenly spaced or crowded, almost orbicular, apiculate, concave and 0.7 mm long (without the apiculus) (fig. 1). Its margin is flat, smooth and somewhat crenulate in the upper part. Nerves are absent. Cells in the basal part of the leaf are rectangular with smooth walls; in the median and upper part they are often partly hyaline, irregular to rhombic. The perichaetial leaves are hyaline, green at the base, extending 2.5 mm long; they are elongate-triangular, longly acuminate and strongly concave, enclosing the whole capsule. The margin is flat, smooth in the lower half and slightly denticulate in the upper half. Its capsule is sessile, gymnostomous, with a wide, slightly

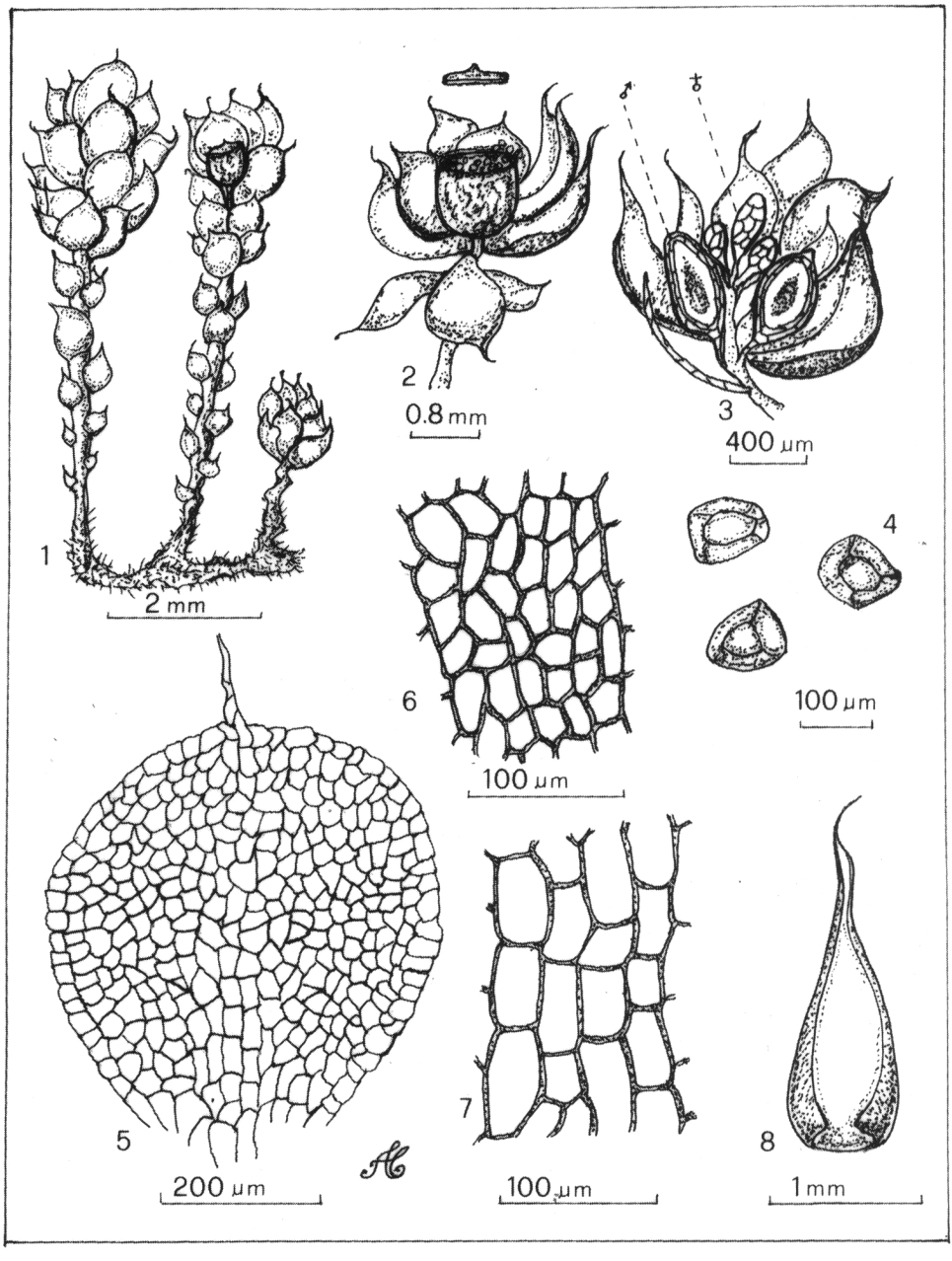

Figure 1. *Gigaspermum mouretii* Corb. 1: mature plant (a), mature plant with sporophyte (b), sterile plant (c); 2: gametophyte with capsule; 3: stem showing young archegonia (at apex) and antheridia (below); 4: spores; 5: mature leaf; 6: median cells of mature leaf; 7: basal cells of mature leaf; 8: perichaetial leaf. (Des. by A. Carratello).

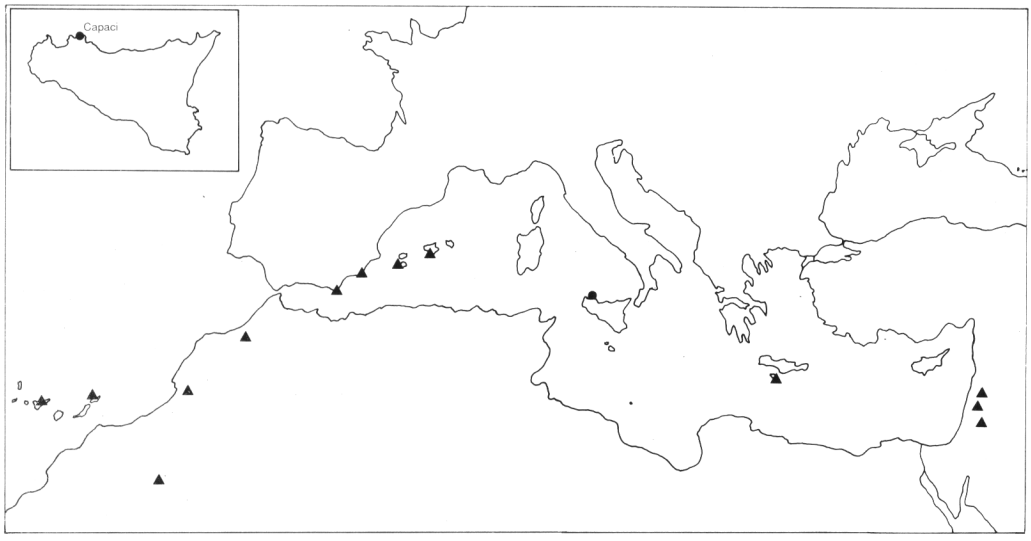

Figure 2. Distribution of *Gigaspermum mouretii*. The dot represents the new sitings for Italy.

convex operculum and a minute calyptra, on a short seta shimmering through the semitransparent perichaetial leaves. The spores are polyhedric, very large (ca. 130 µm), brownish, almost smooth.

All the plants were fertile and the sporophytes were found in abundance. The arrangement of the gametangia was paroicous (antheridia in leaf axils, just beneath the archegonia). This species is distinguished by its thick, hyaline, subterranean, rhizomatous, fragile stems and short gametophores resembling buds.

In the Capaci area *Gigaspermum mouretii* grows on a shallow argillaceous-calcareous substratum with rocky outcroppings, where it forms dense gray-green tufts. The species is associated with *Bryum caespiticium* Hedw., *Didymodon vinealis* (Brid.) R.H. Zander, *Fissidens viridulus* (Sw.) Wahlenb., *Funaria muhlenbergii* Turner, *Pottia starckeana* (Hedw.) Müll. Hal., *Tortella nitida* (Lindb.) Broth., *Trichostomum crispulum* Bruch, *Fossombronia caespitiformis* De Not. ex Rabenh., *F. husnotii* Corb. and *F. wondraczekii* (Corda) Dumort. ex Lindb. All the specimens are deposited in the herbaria of the Universities of Palermo [PAL] and Camerino [CAME].

Gigaspermum mouretii is a rare oceanic-mediterranean species (Schumacker & Martiny, 1995). Its first description, by Corbière (1913), was for a specimen from Morocco. Later Heim gathered it in 1934 and Jelenc reported it in 1955 in two other localities of Morocco. The first report for the European continent was by Allorge & Casas (1958) in the Sierra del Cabo de Gata (Spain). It was later found in other sites in Spain by Acuña *et al.* (1974), by Ros (1984), Ros & Guerra (1987) and by Roselló in the Balearic islands of Mallorca and Formentera (Casas *et al.*, 1985). More recent finding were by Malme (1988) in the Canary islands, by Dirkse & Bouman (1990) in Lanzerote and in Tenerife and by Urmi in Crete (Gávdhos Island, near Kastri, Nomos Khanion, *leg.* E. Urmi 1983, Z). The species is known in several sites in Israel

(Herrnstadt *et al.*, 1980, 1991). The report of *Gigaspermum mouretii* for Capaci is the first for Italy and extends the species' areal of distribution in the Mediterranean basin (fig. 2).

In most of these locations the species was always found sterile, a condition which should be related to the fierce aridity of the collection sites. It is known that in certain regions with dry climates, the moss flora mainly consists of sterile plants. In 1980, sporophytes of *Gigaspermum mouretii* were found in abundance in one locality of Israel where collections made in previous years had no sporophytes. The unusual winter of 1970-80 had a long and continuous moist period and probably allowed unusual sporophyte development (Hernnstadt *et al.*, 1980).

In the Capaci site *Gigaspermum mouretii* was gathered with sporophytes in September-October with the first autumnal rains. The area's climate, though it has typically mediterranean characteristics, presents an average annual rainfall of about 700 mm, with average monthly temperatures above 10°C which, in the period from May to September, exceed 20°C. A series of mountainous reliefs immediately inland greatly attenuates the impact of the hot African winds and in fact blocks the establishment of a decidedly arid climate. Only the presence of a not particularly arid climate, characterized by a moderate gradient of humidity seems to be the basis for this species' sporification.

Gigaspermum mouretii is also of interest from the phytogeographic point of view.

All the species of this genus are distributed in the Southern Hemisphere (southern Africa, Madagascar, Australia, Tasmania and New Zealand); *Gigaspermum mouretii*, on the other hand, has a mediterranean distribution and thus represents a very important boreo-austral disjunction (Allorge, 1931; Casas *et al.*, 1981).

Some hypotheses can be advanced to explain the finding of *Gigaspermum mouretii* in the Capaci area.

First, the spores could have been carried by the hot African winds full of sand which periodically blow over the zone and stop near the mountainous reliefs which surround the Capaci basin.

Second, the spores may have been dispersed by the air traffic and tourism which arrives in the zone through the nearby Palermo airport, from Spain, the Canary Islands and from the nearby African countries.

Further research to identify new *Gigaspermum mouretii* sites has so far failed and seems to confirm for the moment these hypotheses.

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70. ADICIONES A LA FLORA VASCULAR DE MURCIA.

Pedro SÁNCHEZ GÓMEZ, Ernesto COY, Antonio Félix CARRILLO, Antonio HERNÁNDEZ y Miguel Angel CARRIÓN.

New records for the Vascular Flora of Murcia

Palabras claves: flora vascular, corología, Murcia (España).

Key words: vascular flora, corology, Murcia (Spain).

Como resultado de las prospeciones realizadas en los últimos meses, se han detectado diversas especies de interés que pasan a engrosar o matizar el catálogo incluido en *Flora de Murcia* (cf. Sánchez Gómez *et al*, 1998).

Mentha pulegium L.

Hs, *MURCIA: Mula, Puerto del Agüica, 30SXH2713, 450 m, prados temporalmente inundados, 12-VI-1998, P. Sánchez Gómez, A.F. Carrillo & M.A. Carrión. MGC 46818.

Aunque con anterioridad ya había sido citada en diversas partes de Murcia (cf. Alcaraz *et al.*, 1989)

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