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***Riella notarisii* (Mont.) Mont. (*Hepaticae*, *Riellaceae*), rediscovered in Italy**

**Abstract**

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The occurrence of *Riella notarisii* in Sicily is reported. Some brief notes on its ecology, taxonomy, chorology are presented.

The genus *Riella* Mont. (*Riellaceae*) is represented in Europe and Macaronesia by *Riella helicophylla* (Bory & Mont.) Mont., *R. notarisii* (Mont.) Mont., *R. parisii* Gott. in Gott. & Rabenh., *R. cossoniana* Trabut, this last also occurring in some Northern Africa regions (Cirjuano & al. 1988). At present the only Italian representative of the genus is *R. notarisii*. Recently, this species has been considered endangered in Europe (Schumacker & Martiny 1996) and to have disappeared in Italy (Aleffi & Schumacker 1995), where it was previously known only from Sardinia. During fieldwork in the spring 1996, we found a little population of *R. notarisii* at Gela (S. Sicily), submerged in marshes near the sea at the Gulf of Gela.

**Nomenclatural notes**

*Riella notarisii* was described by Montagne as *Sphaerocarpus notarisii* and named after the Italian bryologist De Notaris who had found it for the first time in Sardinia (Nees 1838). Later the species was transferred to the genus *Duriaea* Bory et Mont. and then to *Riella* Mont., where it actually belongs.

Trabut (1911) affirms that *R. notarisii* and *Riella reuteri* Mont. are very similar to each other and that *R. reuteri* includes the species *R. gallica* Balansa and *R. battandieri* Trab., which correspond to different ecological forms. Afterwards, Allorge (1932) and Zodda (1934) identified this species with *R. notarisii*. In reality, all these taxa, including *R. sersuensis* described by Trabut (1934), should be regarded as local or ecological forms of a single species: the submerged form with developed wing and short leafy scales (*R.*

*sersuensis*, *R. gallica*, *R. battandieri*), the emerged form with reduced wing and large leafy scales (*R. reuteri*).

### Description of the Sicilian specimens

*Riella notarisii* (Mont.) Mont. (= *Sphaerocarpus notarisii* Mont., *Duriaea notarisii* Bory et Mont., *Riella reuteri* Mont., *R. battandieri* Trabut, *R. gallica* Balansa, *R. sersuensis* Trabut.).

Loc.: Piana del Signore (Gela, S. Sicily), 10 m, 37°03'35"N, 1°50'30" E, 23 Apr 1995.

Plants 1-1.5 cm, green, prostrate; rhizoids hyaline; wing well developed, undulating, 1-2 mm wide; wing cells near the nerve rectangular,  $40 \times (120-) 170-200 \mu\text{m}$ , becoming irregularly rhomboidal,  $48-56 \times 64-80 (-88) \mu\text{m}$  or  $\pm$  quadrate, 1 or more marginal rows narrowly rectangular,  $12-14 \times 48-80 \mu\text{m}$ ; leafy scales few, spaced along the axis, variable in shape and size, mostly ovate-lanceolate to lanceolate, with short rectangular cells,  $(24-) 32-40 \times 40-48 \mu\text{m}$ ; female involucre occurring at the summit, flask-like, papillose above, strongly so at the mouth, with long papillae; capsules (2-)4-8(-9), globose, indehiscent, with abbreviated seta remaining enclosed within the involucre until maturity; elaters absent; spores brown, ornamented with truncate spines,  $60-80(-90) \mu\text{m}$  wide with spines; proximal face of spores with spines 2-4  $\mu\text{m}$  long, distal face with spines 4-8  $\mu\text{m}$  long.

All the specimens bear sporophytes.

### Ecological remarks

*Riella notarisii* was found growing in a pure population on muddy-clay soil in marshes winter-flooded by brackish water. It occurs in clearings of the halophyte vegetation referred to the phytosociological class *Sarcocornietea fruticosae* (Br.-Bl. & R. Tx. 1943) Castroviejo & Cirujano 1980. The surveyed area is characterized by an annual precipitation of 409 mm and an annual mean temperature of  $\pm 19^\circ\text{C}$ , corresponding to a climate of the inferior thermomediterranean superior dry type (Brullo & al. 1996).

*Riella notarisii* is a terricolous, hydrophilous, alophilous species.

### Distribution

In Italy, *Riella notarisii* was previously known only for two localities in Sardinia: Pula and Cagliari; these records are reported by Bischler & Jovet-Ast (1971-72) and are based on the herbarium specimens of De Notaris for Pula (PC), Müller for Cagliari (PC). Moreover, there is a report by Gennari (RO) but lacking a precise location.

In Europe it was reported from Switzerland but it seems that the stations have now disappeared (Jelenc 1957). At present, it is known in Europe for France, Greece, Crete, Former Yugoslavia, Portugal, and Spain (Schumacker & Martiny 1996). A detailed distribution for Spanish territories has recently been reported in Cirujano & al. (1988) and Cirujano & al. (1992). It is also known from N. Africa (Morocco, Algeria, Tunisia). Phytogeographically, *Riella notarisii* is a strictly Mediterranean species.

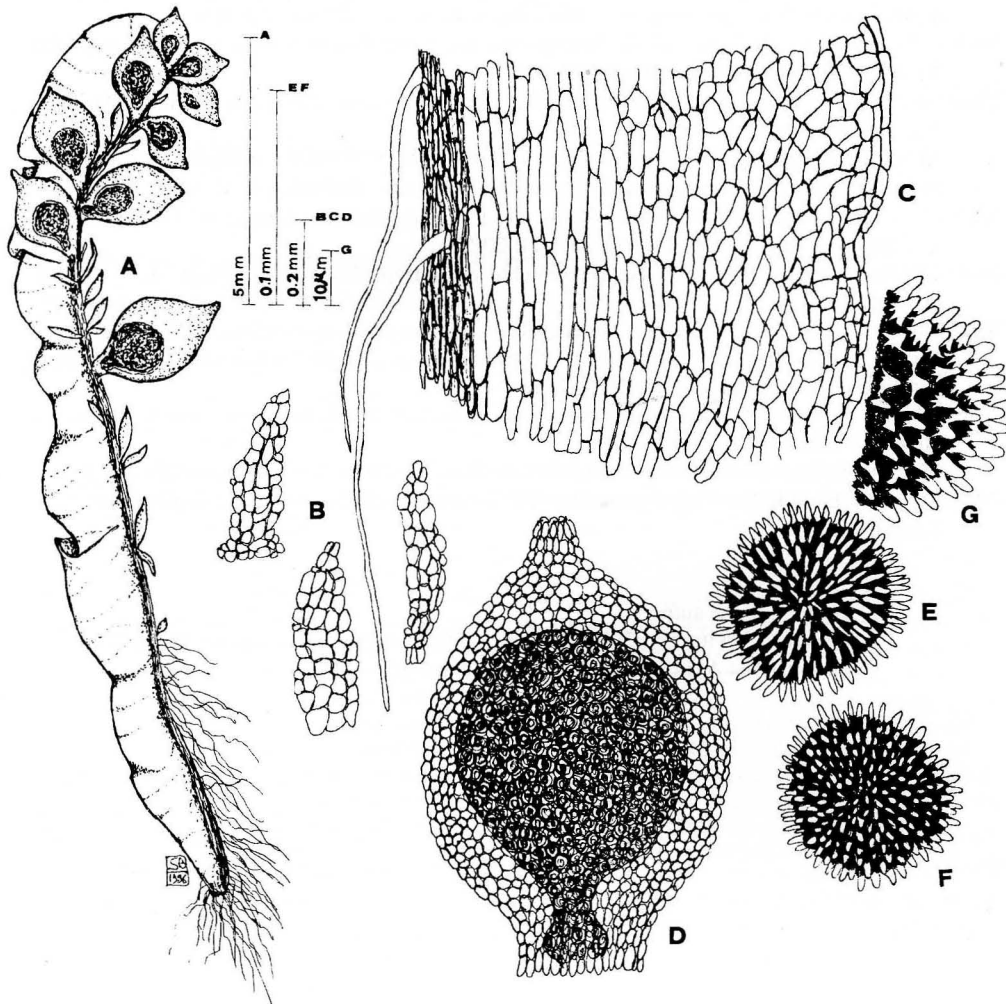


Fig. 1. *Riella notarisii* from Gela: **A**, habit; **B**, leafy scales; **C**, portion of the wing; **D**, female involucre with capsule; **F**, proximal face of the spore; **E**, **G**, distal face of the spore.

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