

Rosa Lo Giudice

A new record for the Sicilian bryoflora: *Tortula papillosa* (Pottiaceae)

Abstract

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Tortula papillosa is recorded for the first time from Sicily; and a new locality for *Tortula pagorum* is given. Brief chorological and ecological remarks on the species are provided.

During floristic and ecological studies of the urban bryoflora of Enna (C Sicily) a very small *Tortula* was found on *Cedrus libani* A. Rich. in February 1993. This moss has been identified as *Tortula papillosa* Wilson, a bryophyte previously unknown from Sicily and southern Italy.

The specimens collected were few and depauperate, but a complementary search in November and December 1993 revealed other stations, where *Tortula papillosa* grew and formed small communities with *Orthotrichum* spp. and *Tortula* spp. Among these, *Tortula pagorum* (Milde) De Not., first recorded for Sicily by Dia (1992) in the botanical garden of Palermo, is of note.

Voucher specimens are kept in the herbarium of Botanical Department of Catania (CAT).

Morphology (Fig. 1)

Plants small, 2-3 (-8) mm high, scattered, tufted, dark-green or brownish. Leaves incurved, loosely and irregularly appressed when dry; erect or spreading when moist, obovate-spathulate and broadly rounded at the apex (Fig. 1: 2), piliferous (or sometimes merely apiculate); margin inflexed distally; nerve broad, strongly papillose abaxially and distally (Fig. 1: 3), excurrent into a smooth hyaline hair-point, 1/8 - 1/2 as long as the whole lamina. Clusters of ovoid, multicellular gemmae (Fig. 1: 5) present adaxially on the nerves, in young leaves. Gametangia and sporophytes known only from Australia, Tasmania and New Zealand.

The Sicilian specimens (up to 3 mm) have leaves that are prevalently oblong-obovate, with the margin loosely or not inflexed distally. The hair point measures 1/8 to at most 1/6 of the length of the lamina. The plants collected possessed very numerous gemmae.

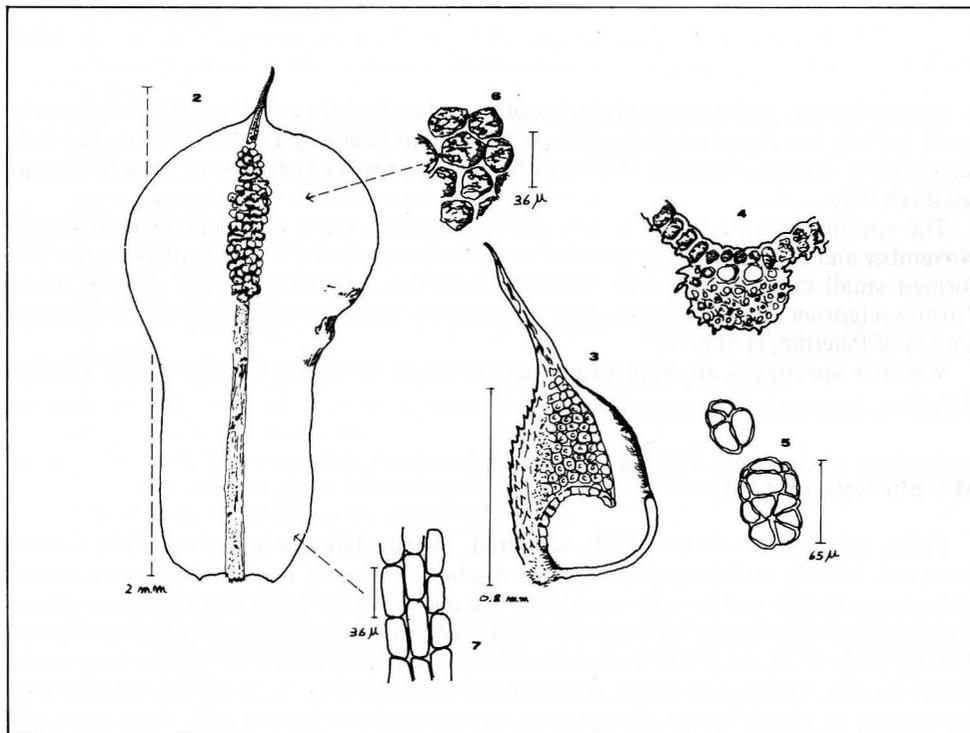


Fig. 1. *Tortula papillosa* Wilson. **1a**, general habit; **1b**, particular of the general habit; **2**, entire leaf; **3**, upper part of leaf, at back; **4**, transverse section of nerve; **5**, gemmae; **6**, cells above; **7**, cells in the lower part.

Chorological and ecological remarks

This species, widely distributed in Europe, having been recorded from Austria, Belgium, Great Britain, Bulgaria, Corsica, Czechia, Slovakia, Denmark, France, Germany, Greece, Ireland, Switzerland, the Netherlands, Spain, Hungary, Italy, Yugoslavia, Portugal, Norway, Poland, Romania, Russia, and Sweden, is also known from N and S Africa, the Azores and Macaronesia, and C and SW Asia, and N, C, NW and S South America, and Australia, New Zealand, Antarctica (Düll 1984-1985). In Italy, it is widespread in the northern and central parts of the peninsula (Cortini Pedrotti 1992). The report for Sardinia by Düll (1984-1985), has been rejected by Cortini Pedrotti (1992) since in the literature there is no mention of a precise locality. The present report therefore extends southwardly the known distribution of this species in Italy.

With regard to ecology, *Tortula papillosa* is a corticolous or very rarely saxicolous moss which grows on mature deciduous trees, mostly on the trunk base of roadside maples and elms. It is absent or occasional in areas subject to atmospheric pollution (Smith 1980, Crum & Anderson 1981).

In Sicily it has been collected in the "Torre di Federico II di Svevia" public garden and on roadside trees facing NNE, in Enna (900-1050 m above sea-level), in particular on the bark of *Aesculus hippocastanum* L., *Robinia pseudacacia* L., *Ulmus minor* Mill., and *Cedrus libani* A. Rich. Some plants of *T. papillosa* have been found on *Cupressus sempervirens* L. at the "Parco Ronza" (836 m above sea-level) near Piazza armerina (Enna province).

The collecting localities are characterized by high atmospheric humidity, with fogs stagnating for several months each year.

As for the species of bryophytes growing in association with *Tortula papillosa*, *T. pagorum* (Milde) De Not., *T. latifolia* Bruch ex C. Hartm., *T. laevipila* (Brid.) Schwaegr., *Orthotrichum lyellii* Hook. & Taylor, *O. diaphanum* Brid., *O. stramineum* Hornsch ex Brid., and *O. striatum* Hedw., also found on the bark of *Aesculus hippocastanum*, *Ulmus minor*, and *Robinia pseudacacia*, can be reported.

From the phytosociological point of view, the species is to be included in *Tortulion laevipilae* Ochsner 1928 of the order *Leucodontetalia* Hübschmann 1952.

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Address of the author:

Dr. Rosa Lo Giudice, Istituto di Biologia ed Ecologia Vegetale, via Etna, 440, I
- 95128 Catania, Italy.