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Contribution to the knowledge of the genus *Tuber* (*Tuberaceae*) in Sicily

Abstract

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Within the census programme of the macrofungi in Sicily, attention has been devoted to hypogeous species and to genus *Tuber* P. Micheli ex Wigger in particular. This work reports the finding of *Tuber rufum* Pico and *T. panniferum* Tul., the latter new for Sicily. For each taxon found, the distribution on the Italian territory and the ecological data of the finding areas are presented. The record of the two species allows to define the southern limit of their area of distribution in Italy.

Introduction

In 1991, the Working Group for Mycology of the Italian Botanical Society proposed the project of census and mapping of macrofungi in Italy. For mapping, a list of 25 very common species was drawn up in order to facilitate the data collection by amateur mycologists as well. Later on, similar initiatives were proposed in some Italian regions. Particularly in Sicily (Venturella 1992), a project of census and mapping of macrofungi was proposed in order to: a) reduce the gap of knowledge on fungi in the island, since the last investigations date back to the beginning of this century; b) verify the field investigations of the ancient authors; c) increase the Herbarium Mediterraneum collections; d) widen the knowledge on the ecology of each species; e) edit a map of distribution of each species in Sicily.

Unlike the national project, the Sicilian programme drew attention also to the hypogeous species. In fact, despite a number of field investigations carried out in the second half of the last century (Taranto & Gerbino 1845, Inzenga 1869, Mattiolo 1900, Scalia 1900), the genus *Tuber* P. Micheli ex Wiggers is today one of the least known in the Sicilian mycological flora. The project produced its first meaningful results with the finding in eastern Sicily of new sites for *Tuber aestivum* Vitt. (Venturella 1995). Afterwards, the increase of the mycological activity in Sicily resulted in collections of *Tuber rufum* Pico and *T. panniferum* Tul.; the latter a new record for Sicily.

Data on *T. rufum* and *T. panniferum*

T. rufum Pico (Fig. 1), a very common species in Italy, and first recorded for Sicily by



Fig. 1. *Tuber rufum* Pico.



Fig. 2. *Tuber panniferum* Tul.

Mattiolo (1900) on the Madonie Mts, was collected in the vicinity of Niscemi Wood within Favorita Park (Palermo). In this area, the vegetation is mainly characterized by *Quercus ilex* L., *Phillyrea latifolia* L., *Viburnum tinus* L. and *Arbutus unedo* L., growing at the sea level on a Mediterranean red soil which developed on calcarenite. This area has a thermomediterranean climate characterized by a mean annual temperature of 18°C and by a mean annual rainfall of 644 mm distributed in 74 rainy days.

T. rufum is characterized by a very small ascoma of 0.5-3 cm in diameter with the peridium having small granulosity and colour variable from reddish yellow to brownish red. The gleba is compact, reddish-yellow coloured with discontinuous white venation, smelling of sour dough. Asci clavate, pedunculate. Ascospores 1-4, elliptical, brown-yellow, sub-opaque, 24-30 × 16-24 µm and covered with thin spines, 4 µm long.

T. panniferum Tul. (Fig. 2) is a rare taxon previously recorded for C.-S. Italy by Mattiolo (1933) and recently for Sardinia by Montecchi & Lazzari (1993). Its station of finding is placed in the territory of Palazzolo Acreide (Syracuse, E. Sicily) within a mixed wood of *Quercus pubescens* Willd. and *Q. ilex* L. at about 700 m a.s.l. For this area, only the total annual values of rainfall are available; referred to the period 1966-1995, they range from a minimum of 261 mm to a maximum of 1,084 mm. The soil is calcareous and ascribed to the typical association of the Syracusan high plain "Lithosols, Rock outcrop, Protorendzinas" according to the Soil Map of Sicily by Fierotti & al. (1988).

T. panniferum is characterized by a small ascoma of 1-5 cm with a dark rusty-red-coloured peridium covered with rust coloured mycelium tomentum. The colour of the gleba varies from greyish-white to light brown and has white venation. Asci with 8 ascospores elliptical-rounded, 20-25 × 15-20 µm, covered with thin and short spines.

Conclusion

Within the project of census and mapping of macrofungi in Italy, mainly the epigeous species have been taken into consideration, while less attention has been drawn to hypogeous species. This has happened mainly because these taxa are difficult to be found and identified, and consequently the area of distribution of each species can not be defined due to the absence of ecological and distributional data.

The attention devoted towards the hypogeous species growing in Sicily acquires some importance if we think that the taxa reported occur at the southernmost limit of their area of distribution in Italy (Fig. 3). The recording of *T. rufum* and *T. panniferum* confirms the

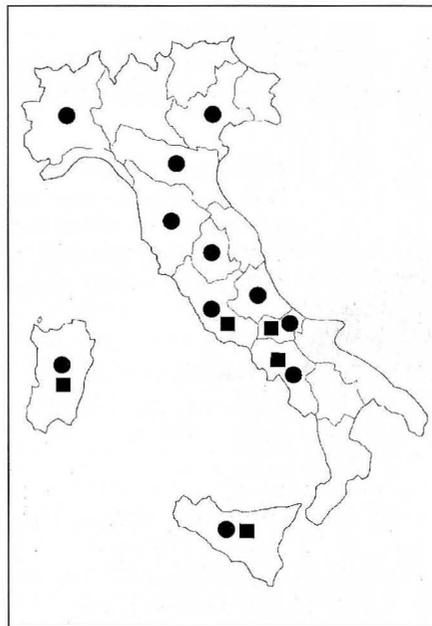


Fig. 3. Distribution of *T. rufum* (●) and *T. panniferum* (■) in Italy.

potential for the production of truffles in nature in Sicily (Cavara 1934) and encourages the searching in other areas in the region.

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References

- Cavara, F. 1934: Funghi e tartufi. Descrizione, coltivazione, conservazione (industriale e domestica). — Milano.
- Fierotti, G., Dazzi, C., Raimondi, S. 1988: Commento alla Carta dei suoli della Sicilia. In: Fierotti, G. 1988: Carta dei Suoli della Sicilia. — Palermo.
- Inzenga, G. 1869: Funghi siciliani. Centuria II. — Palermo.
- Mattirolo, O. 1900: Gli ipogei di Sardegna e di Sicilia. — *Malpighia* **14**: 39-110.
- Mattirolo, O. 1933: I funghi ipogei della Campania, Lazio e Molise raccolti dal compianto Prof. Campbell. — *Nuovo Giorn. Bot. Ital.*, **40(3)**: 313-326.
- Montecchi, A. & Lazzari, G. 1993: Atlante fotografico dei funghi ipogei. — Associazione Micologica Bresadola, Trento.
- Scalia, G. 1900: I funghi della Sicilia orientale e principalmente della regione etnea. I. — *Atti Accad. Gioenia Sci. Nat. Catania*, s. 4, **13(20)**: 1-55.
- Taranto, E. & Gerbino, X. 1845 – *Catalogus plantarum in agro Calata-Hieronensis collectarum*. — Catania.
- Venturella, G. 1992: Progetto per una banca dati sulla micoflora siciliana. — *Quad. Bot. Ambientale Appl.* **2(1991)**: 107-110.
- , 1995: Stato attuale delle conoscenze sul genere *Tuber* P. Micheli ex Wiggers in Sicilia. — *Atti Convegno "Funghi, Tartufi ed Erbe mangerecce"*, L'Aquila.

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