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***Pyrenogaster pityophilus* (Geastraceae), a new record from Sicily (S-Italy)**

Abstract

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Pyrenogaster pityophilus, a rare gasteromycetes, is reported for the first time from Sicily (southern Italy). The new locality reported here is the third in all Europe. The status of rare species of this peculiar gasteromycetes is confirmed.

Introduction

Pyrenogaster pityophilus G. Malençon et L. Rioussset (Fig. 1), is a rare gasteromycetes, occurring in spring, strictly related to the Mediterranean environment.

The first record of *P. pityophilus* was carried out by Malençon & Rioussset (1977), in a *Pinus pinea* L. wood, on a sandy littoral near Gard, in the territory of Aigues-Mortes (France). The description of morphological characters reported by Malençon & Rioussset (1977) pointed out a gleba divided in numerous, black and tough, peridioles and basidia tightly cylindrical, developed at the apex in a tubular epibasidium. The authors also showed the morphological affinities of *P. pityophilus* with *Radiigera atrogleba* Zeller.

Afterwards *P. pityophilus* was reported for the first time from Italy by Montecchi & Sarasini (2000) in a mixed wood of *Pinus pinaster* Sol. and *P. pinea*, on sandy soil, near Oristano (Sardinia, Italy).

In the framework of a research project with the main object of take a census of macromycetes from Sicily (southern Italy), a research team with trained dogs recently located a new locality of *P. pityophilus*.

Pyrenogaster pityophilus G. Malençon et L. Rioussset in Bull. Soc. Myc. Fr., t. 93, fasc. 3: 289-309. 1977.

Sicily: Palermo, Mandria Zarcati, mixed wood of *Pinus halepensis* Mill., *P. pinea*, *Cupressus sempervirens* L., *Eucalyptus camaldulensis* Dehn., 14 Apr 2004, 594113, Morara & Saitta (PAL).



Fig. 1. Ripe basidiomata of *Pyrenogaster pityophilus* with black peridioles.

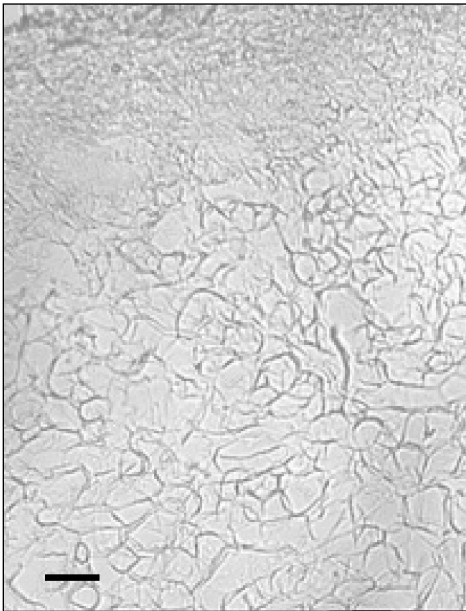


Fig. 2. Exoperidium of *Pyrenogaster pityophilus*.
Scale bar = 20 μ m

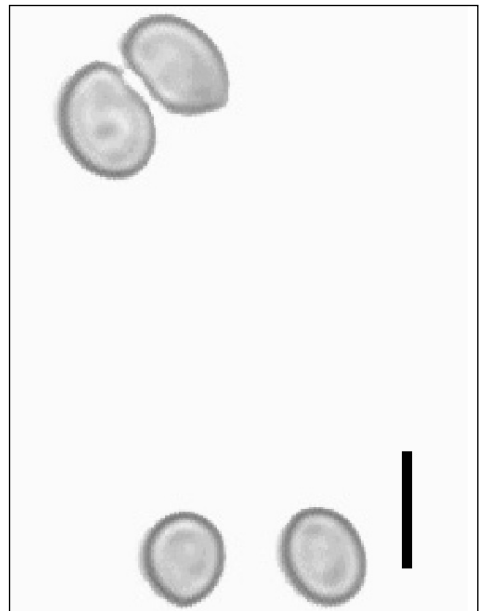


Fig. 3. Spores of *Pyrenogaster pityophilus*.
Scale bar = 10 μ m

Hypogeous basidioma, spherical to ellipsoidal, firm-elastic, 18-25 mm in diameter, whitish, turning pink. Surface dry, cottony to felty. Mycelial sheath membranous and soft with whitish to yellowish rhizomorphes. The two-layers ripe exoperidium is irregularly star-shaped, the inner one predominant with pseudoparenchymatic structure (Fig. 2), white to pink, 1.2-1.5 mm thick. Endoperidium soft, membranous, light brown, appressed or easily detachable. Basal pseudocolumella, tenacious, white, more or less spherical, vanished in ripe basidiomata. Gleba divided in 150-200 peridioles, firm, black, conical or pyramidal, not joined (3 x 1.5 mm), branching like rays from the tip of pseudocolumella and retained by endoperidium after the disintegration of columella. Capillitium separated in each peridiole, not divided, brown, smooth, wall 1 μm thick, up to 2 mm long and 2.5-6 μm wide, without septa but frequently with stretched and aculeate protuberances. Hyphae of peridiols with clamp-connexions. Basidia tightly cylindrical, with a basal clamp-connection, 35-40 x 3-4 μm , developed at the apex in a tubular epibasidium, thin, 1-1.5 μm , tip widened up to 3-4 μm , lengthened up to 150 μm or more. Sterigmata 2-8, usually 3-5, finger-shaped, 3-5 x 0.5-0.6 μm . Spores light brown, smooth, spherical to ellipsoidal, wall thick, 6-9 x 5-7 μm (Figs. 3, 4). According to Malençon & Rioussset (1977), the ripe spores are coated by not joined, rounded or flattened, verrucae.

In Sicily *P. pityophilus* was collected in spring in a mixed wood of *P. halepensis*, *P. pinea*, *C. sempervirens* and *E. camaldulensis*, on lithosols, in the neighbourhood of Palermo, at 500 m a.s.l. This is the third record of *P. pityophilus* in all Europe and the first one reported in habitats different from sandy soils and from localities not located at the sea level.

The voucher specimens are kept in the Herbarium Mediterraneum of Palermo (PAL) and in the herbarium of the Center of Mycology of the University of Bologna (CMI. UNIBO n.2433).

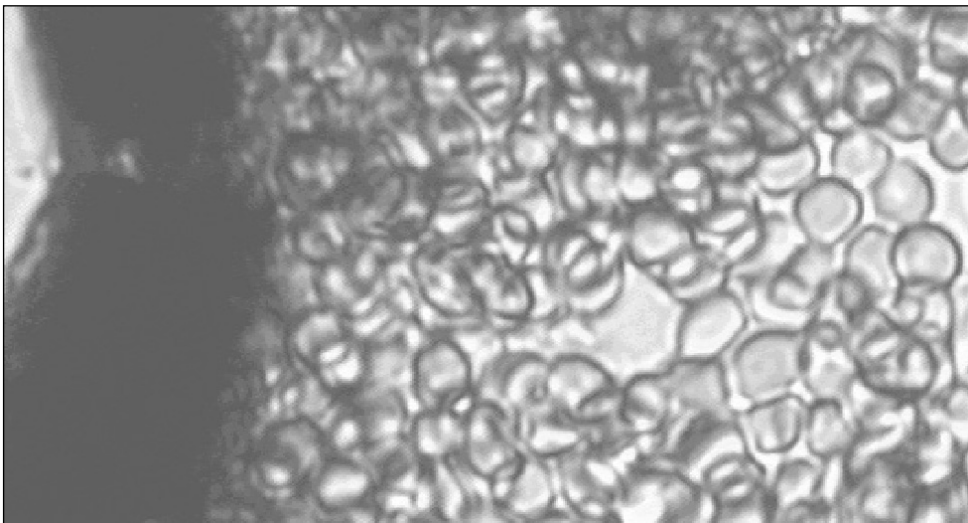


Fig. 4. Section of peridiole of *Pyrenogaster pityophilus*.

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