

A new record of *Entoloma occultipigmentatum* var. *cystidiatum* from Italy

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Abstract. *Entoloma occultipigmentatum* var. *cystidiatum*, a very rare taxon known only from two, Austrian localities, is reported as new for Italy and the Mediterranean region and compared with similar taxa.

Key words *Entoloma*, *Entoloma occultipigmentatum* var. *cystidiatum*, Mediterranean region, taxonomy

Introduction

Our interest in the *Entolomataceae* leads us to take field trips especially to the hills and mountains of northeastern Italy, not far from the Adriatic Sea. Recently we picked up *Entoloma occultipigmentatum* var. *cystidiatum* Hauskn. & Noordel., a fungus we had never studied before.

Materials and Methods

The fungus was photographed in its natural habitat; Dr. A. Hausknecht (pers. comm.) kindly told us: ‘The colour photo in Noordeloos’ monograph is from somewhat dried out fruitbodies, so yours is the best of the taxon known up to now’.

Fragments of fresh material for microscopical analysis were stained with Congo Red (Titolchimica, Rovigo – Italy) or mounted directly in water, while dried material was stained in the same way after hydration by a dilute solution of 5 % KOH.

We have followed M.E. Noordeloos’ taxonomic arrangement (1992, 2004) and, accordingly, measured the length and breadth of 37 spores by LM and calculated their parameters by the Microsoft Excel 97 spreadsheet (Table 1).

A new record

Entoloma occultipigmentatum Arnolds & Noordel. var. *cystidiatum* Hauskn. & Noordel. in Noordeloos, *Entoloma* s.l. suppl.: 953, 2004. Figs 1-2

Pileus 15-35 mm across, at first conico-convex, later convex to plane, hygrophanous, gray-brown, pale brownish on drying, silky-shining, margin translucently striate almost up to centre; surface smooth and glabrous (lens). **Lamellae** moderately crowded, large up to 4 mm, at first whitish, later pale pink with concolourous edge. **Stipe** 25-50 × 2-3 mm, cylindrical, pale brown grayish, silvery striate lengthwise, base with white tomentum. **Context** concolorous to the cap. **Smell** indistinct or very weakly farinaceous. **Taste** mild. **Spore print** sordid pink. **Spores** (6.7–) 8.4-10 (–11.7) × (6–) 6.7-7.5 (–8.4) µm, 5-7 angled in side-view. **Basidia** 27-33 × 8.4-11 µm, 4-spored, clamped. **Cheilocystidia** 34-50 × 5-9 µm, cylindrical, scattered, not abundant, some protruding, others hidden among basidia and difficult to observe. **Pileitrama** and **hymenophoral trama** made up of cylindrical to fusoid hyphae, 100-350 µm long and 5-20 µm wide on average. **Clamp-connections** present in all tissues. **Pileipellis** a cutis made up of hyphae 4-6 µm wide; pigment brown intracellular.

Specimen examined: ITALY: Brogliano, Quargnenta, in grasslands near *Betula pendula* L. and *Corylus avellana* L.

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Fig. 1. Basidiomata of *Entoloma occultripigmentatum* var. *cystidiatum* in situ. Scale bar = 15 mm

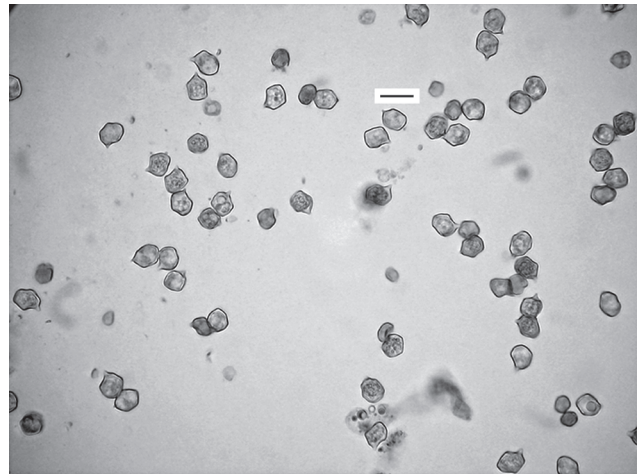


Fig. 2. Basidiospores of *Entoloma occultripigmentatum* var. *cystidiatum*. Scale bar = 12 μ m

Table 1. Parameters of the spores*

	min	max	Mean	SD	median	moda
Length	6.7	11.7	8.8	0.9	8.4	8.4
Width	6.7	8.4	7.0	0.5	6.7	6.7
Q (L/l)	1.0	1.5	1.3	0.1	1.3	1.3

*n=37

on a hill at about 600 m alt., June 2007, Eliseo Battistin & Norberto Righetto (MCVE, 22055).

Distribution: Central and South Europe (two sites in Austria and one in Italy).

At first sight and before microscopical analysis, it might be confused with *E. conferendum* (Britzelm.) Noordel. which shares similar colours and identical habitat, however its cruciform-stellate spores are a very distinctive character. *E. sericeum* (Bull.) Quél. grows in grasslands too, but it differs from *E. occultripigmentatum* var. *cystidiatum* especially in having an incrusting pigment, a strong farinaceous smell and darker colours.

E. testaceum (Bres.) Noordel. looks much like the species under study, however it shows evident brown yellowish tinges.

Another double is *E. cryptocystidiatum* Arnolds & Noordel. which differs especially for its smaller and narrower cheilocystidia.

According to our data the Q value of the majority of the spores ranges from 1.20 to 1.29, just beyond the border between subsodiametrical and heterodiametrical spores, while the original description reports a Q range of 1.0-1.15.

The revision of a second collection from the Alps made by Hausknecht (in litt.) revealed spores size similar to ours; the Austrian specialist states: 'I think that the variety has not strictly isodiametrical spores... As we know only three collections, we have no good ideas about the variability of the spores of this taxon and I think we should wait to get more material before making a new conclusion'. We fully agree with his point of view.

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References

- Noordeloos, M.E. 1992. *Entoloma* s.l. Vol. 5. Editrice Giovanna Biella, Saronno.
 Noordeloos, M.E. 2004. *Entoloma* s.l. supplemento. Vol. 5A. Edizioni Candusso, Alassio.