

Psathyrella carinthiaca*, a molecular revision**Pietro Voto¹¹Via Garibaldi 173, I-45010 Villadose (RO), Italy; ORCID 0000-0003-1922-1324 - pietrovoto@libero.it**Key words:Agaricales**Psathyrellaceae*

Slovenia

Abstract: A *tef1* sequence of *P. carinthiaca* was finally obtained from a newly found collection which adds a strong phylogenetic support to its autonomy versus the close *P. piluliformis*. Pictures of the new finding supplement this report.**INTRODUCTION**

P. carinthiaca was described in 2011 on a morphological basis only. Voto, Dovana & Garbelotto (2019) obtained an ITS sequence demonstrating its proximity to *P. piluliformis* but, having failed a second locus, a possible margin of uncertainty was left on the true distance between the two species. The new, recent find from Slovenia yielded ITS and *tef1* sequences which allow confirming both the identification of the new material and adding another phylogenetic evidence of the taxonomical separateness between the two taxa.

Pictures of spores, cystidia and hyphae show the peculiar character of this species of having pinkish to reddish or purplish tints all over the carpophore with exclusion of the stipe and the context. These tints are weak (orangish, salmon colour, purplish) on the single hyphal element but distinct in mass.

MATERIALS AND METHODS

The material examined was found in Slovenia, province Ljubno ob Savinji, locality Radmirje, in mixed forest, at approximately 450 m a.s.l., in October 2022. It was found in various spots of the forest, growing gregarious to caespitose on stumps, rotting trunks and debris of *Picea abies*.

Pictures of basidiomes were taken in habitat from different cameras by G. Maraia and C. Cingarlini. All micro characters were observed and photographed in ammonia on dried material by P. Voto.

As morphological data fully match those in previously published descriptions (Voto 2011; Voto, Setti, Maraia, *et al.* 2020), they are omitted.

The new material is deposited in VER fu19.

ITS and *tef1* sequences were obtained in the first half of December 2022 by N. Forin at the University of Padua. GenBank: ITS - OQ296568, *tef1* - submission in progress.

NOTES

The new ITS sequence, obtained from VER fu19, has a 99.85% identity with that of the type (MCVE25611). It also is identical (99.71% to 99.85%) with some vouchers found in Genbank (accession numbers OM212838, OP749821 and OL601998) relating to collections from USA correctly identified as *P. carinthiaca*.

The best *tef1* identity with vouchers in GenBank identified as *P. piluliformis* is 96.88% to 96.92% [vouchers SZMC-NL-3923 (FN396235), LO162-02 (KJ732808) and HMJAU37922 (MW411001)]. The only strong identity, 99.59%, found in GenBank is with the voucher SZMC-NL-2350 (FM897259) identified as *P. pertinax*. As it was registered in GenBank in 2008, it evidently represents a misidentification of the then still undescribed *P. carinthiaca*.

This species is characterized by a general pervasion of dark, reddish to brick-red or purplish tints on pilei, pinkish-purplish tints on young gills, pinkish to reddish tints on spores, purplish tints on cystidia walls, pinkish-ochraceous (salmon pink) tints on pileipellis cells and hymenial hyphae, by scarce fibrillose veil remains on the pileus margin, and by the growth in conifer woods.

P. piluliformis (Bull.: Fr.) P. D. Orton differs in having brown to yellowish brown tints and in the habitat of deciduous woods.



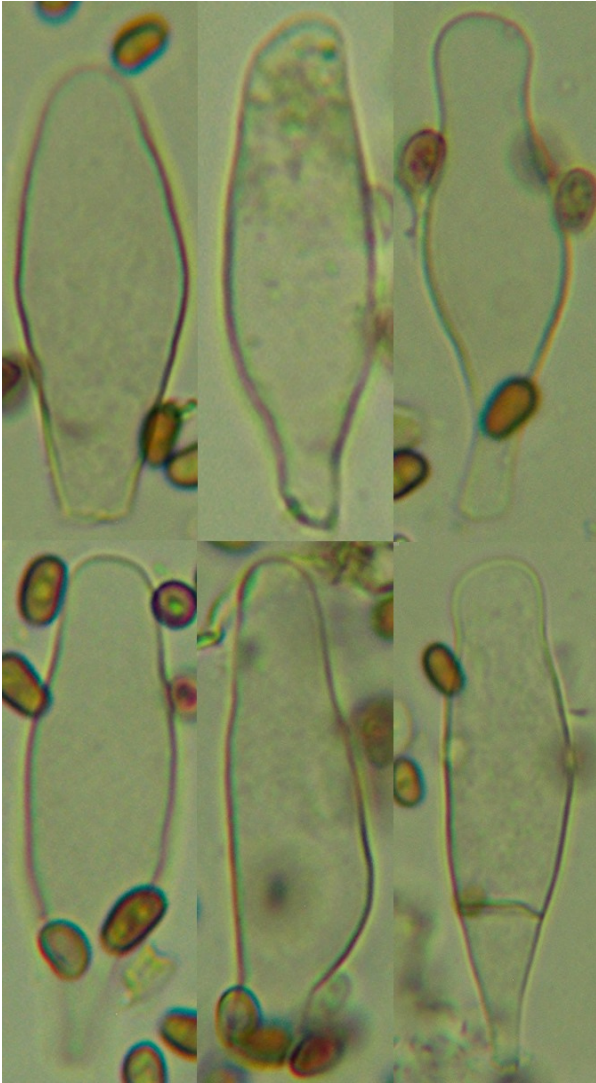
photographs by G. Maraia



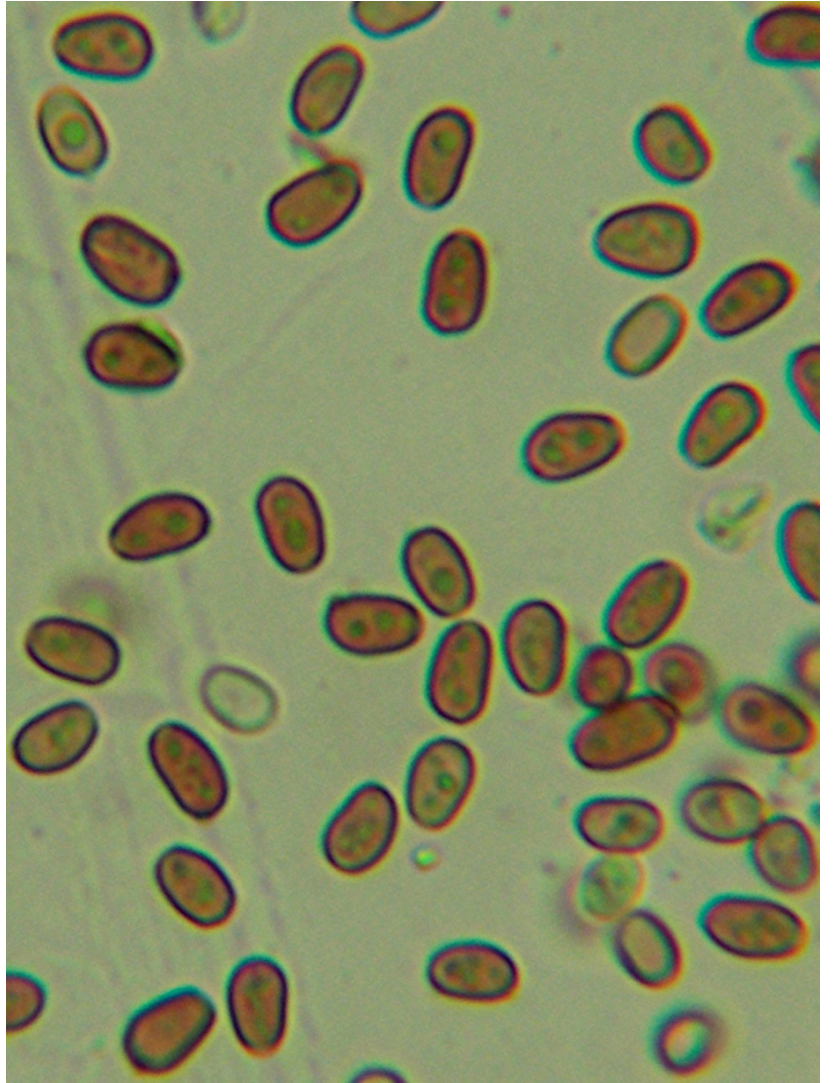
photographs by G. Maraia



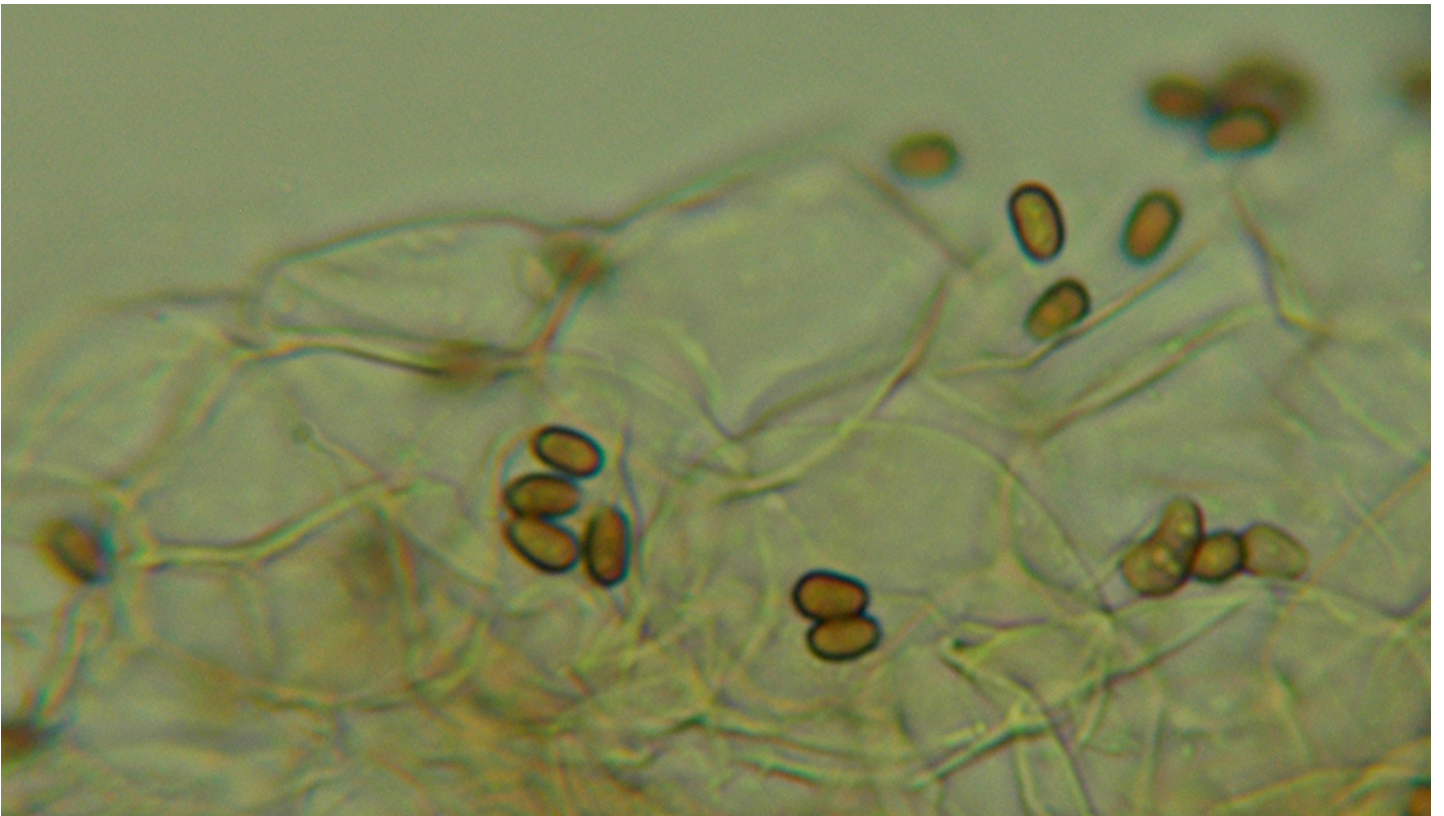
photographs by C. Cingarlini



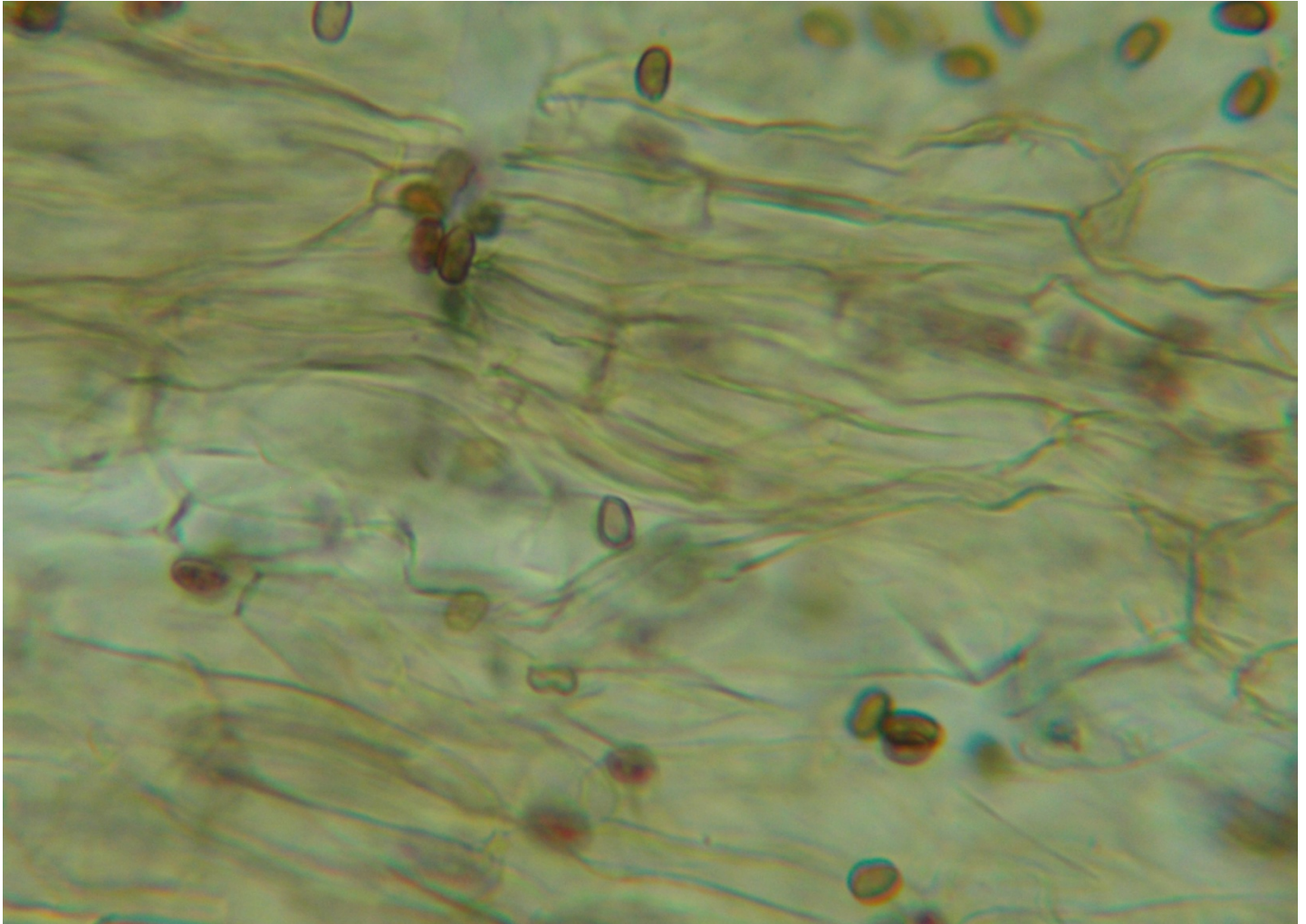
Pleurocystidia



Spores



Pileipellis



Hymenial trama

tef1 sequence (anticipated here before its availability in GenBank)

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ACCTCCCAGGGCCGATTGTGCCATTCTCATCATTGCTGCTGGAAGCTGGTGAATTCGAAGCTGGTATCTCCAAGGATGGAC
AGACCCGTGAACACGCTTTGCTCGCCTTTACCCTCGGTGTGCGTCAGCTCATCGTTGCCGTCAACAAGATGGACACCACC
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AATCGTCAAGGAGACCTCCAACCTTCATCAAGAAGGTTGGTTACAACCCCAAGGCTGTCGCCTTTGTCCCCATCTCAGGAT
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AGTATGACATTATTATACTGACTGGGTTCTGCAGTGTGTCGAGTCTTACAACGAGTACCCTCCTCTCGGTCGT
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- Voto P, Setti L, Maraia G, Tacconi A, Milanese V (2020) Some rare or interesting species of fungi. *RMR, Boll. Amer* **110**(2):73-80