

Mycena quercophila, a new species of *Mycena* section *Polyadelphia* growing on *Quercus ilex* leaves

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Abstract: *Mycena quercophila*, a member of *Mycena* section *Polyadelphia*, is proposed as new. It is characterized by brownish yellow colours of the fruitbodies and smooth to sparsely diverticulate cheilocystidia. Most species of this section show profusely diverticulate cheilocystidia, except the related *M. terena*, with completely smooth cheilocystidia and with different colours and habitat. A colour figure and microscopical drawings of the new species are added.

Zusammenfassung: *Mycena quercophila* aus der Sektion *Polyadelphia* wird als neue Art vorgeschlagen. Sie ist charakterisiert durch bräunlichgelbe Farben der Fruchtkörper und glatte bis spärlich divertikularte Cheilozystiden. Die meisten Arten dieser Sektion haben stark divertikularte Cheilozystiden, außer der verwandten *M. terena* mit gänzlich glatten Cheilozystiden sowie mit anderen Farben und anderem Habitat. Ein Farbfoto und mikroskopische Zeichnungen der neuen Art werden gezeigt.

During the last years, a new species of *Mycena* growing on dead *Quercus ilex* L. leaves, has been frequently found, late in the season. As we have often observed, *Mycena quercophila* grows mixed with other foliicolous *Mycena* species, like *M. adscendens* (LASCH) MAAS GEEST., *M. mucor* (BATSCH: FR.) GILLET, *M. quercus-ilicis* KÜHNER and *M. smithiana* KÜHNER. It seems incredible that this new species has not been described before, which demonstrates that there are still many new taxa to be discovered in the Mediterranean forests.

The five collections studied were gathered from three different Spanish provinces (Guadalajara, Madrid and Alicante). The samples have been deposited at AH (Herbarium of Alcalá University, Alcalá de Henares, Spain).

***Mycena quercophila* ESTEVE-RAVENTÓS & VILLARREAL, spec. nova** (Colour fig. V, Figs. 1-10)

Diagnosis latina: Basidiomata dispersa. Pileus 1,5-4 mm latus, parabolicus vel hemisphaericus, umbone obtuso instructus, leviter sulcatus, translucente-striatus, e pruinoso glabrescente, luteo-olivaceus vel olivaceobrunneus. Lamellae adscendentes, adnatae, dente decurrentes, flavo-albae vel pallide olivaceae. Stipes 15-30 x 0,2-0,6(-1)

mm, cylindraceus, flexuosus, sursum pruinosis, pileo concolor, basi fibrillis luteis longis dense instructus. Caro tenuis, lutea. Odore saporeque nullis. Sporae (basidiorum 4-sp.) 6,5-7,68-9,18(-10) x 4-4,47-5 µm vel (basidiorum 2-sp.) (9,4-)10,24-11,82-12,7 x 4,5-4,86-5,6(-6) µm, laeves, amyloideae, ellipsoideae vel elongato-ellipsoideae. Basidia 17-24 x 5-8 µm, clavata, 4-spores fibulatae (vel 2-spores efibulatae). Cheilocystidia 15-33 x 7-12(-15) µm, diversiformia, clavata, subutriformia vel sublageniformia, laeves vel leviter diverticulata. Pleurocystidia nulla. Trama lamellarum iode ope leviter vivescens vel brunneovivescens. Hyphae pileipellis ad 20 µm latae, diverticulatae. Hyphae stipitis corticalis diverticulatae.

Habitat: ad *Quercus ilex* subsp. *ballota* (DESF.) SAMP. (= *Q. rotundifolia* LAM.) folia decisa.

Holotypus: Spain, province of Madrid, Casa de Campo, 12. 1. 1997, leg. M. VILLARREAL & M. A. JIMÉNEZ, AH 21544.

Characters:

Pileus: 1.5-4 mm in diam., parabolical, conico-campanulate to hemispherical, sometimes slightly umbonate, more or less flattening with age, slightly sulcate, translucently striate, pruinose-glabrescent, dry, hygrophanous, at first pale olive-yellow (MUNSELL 1988: 2.5 Y 7/6, 6/6), becoming light yellowish brown to light olive brown (6/4, 5/4) with evident olivaceous tints, dark grey-olivaceous when dry.

Lamellae: L = 7-13(-20), l = 0-3, ascending, adnate with a small decurrent tooth, first pale yellow (2.5 Y 8/4), becoming concolorous with the pileus, with subhorizontal to somewhat convex, concolorous lamellar edge.

Stipe: 15-30 x 0.2-0.6(-1) mm, cylindrical, flexuose, smooth, only pruinose at the apex, at first pale yellow (2.5 Y 7/4), becoming concolorous with the pileus, paler at the apex, attached to the substratum by a whorl of numerous, radiating, white-yellowish fibrils.

Context: thin, yellowish. Odour and taste indistinctive.

Spores: ellipsoid to elongated ellipsoid, smooth, amyloid; size: Tetrasporic form: 6.5-7.68-9.18(-10) x 4-4.47-5 µm; Q = 1.44-1.27-2 (n = 21). Bisporic form: (9.4-)10.24-11.82-12.7 x 4.5-4.86-5.6(-6) µm; Q = (2-)2.03-2.44-2.77 (n = 21).

Basidia: 17-24 x 5-8 µm, broadly claviform, 4-spored, with clamp connections (sometimes 2-spored and clampless).

Cheilocystidia: 15-33 x 7-12(-15) µm, very variable in shape, broadly claviform, cylindrical, subutriform to sublageniform, smooth or sparsely diverticulate by warts or short cylindrical excrescences, sometimes apically covered by a hyaline resinous matter.

Pleurocystidia: not observed.

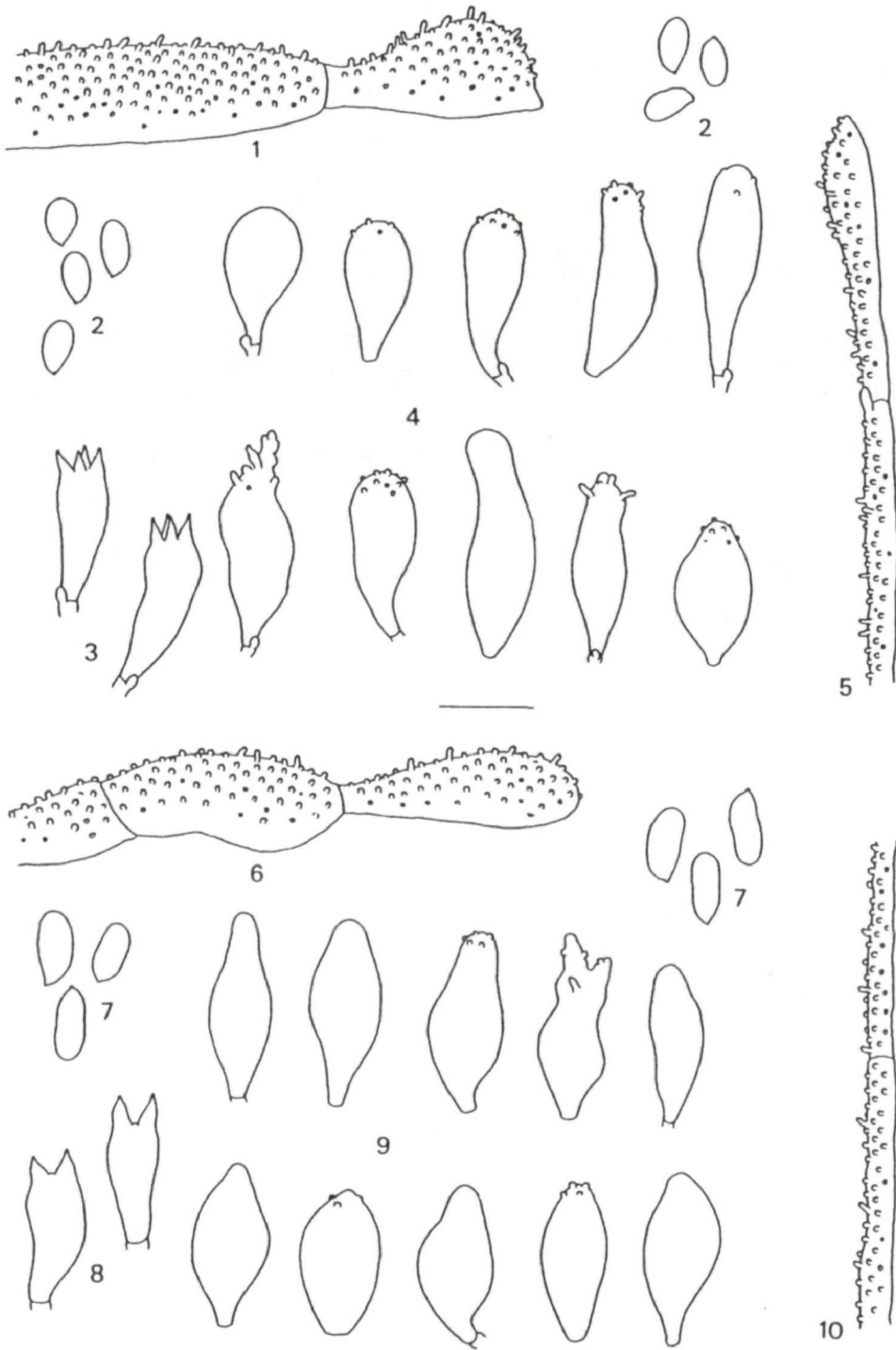
Subhymenium: formed by short cells, more or less isodiametrical.

Hymenophoral trama: formed by short and broad cells up to 35 µm wide, slightly to strongly dextrinoid.

Hyphae of the pileipellis: up to 20 µm wide, densely diverticulate, with short ex-crescences 1-3 x 0.7-1 µm.

Stipitipellis: densely diverticulate, with scarce, clavate to subcylindrical terminal cells, only observed at the apex, difficult to find.

Habitat: growing on fallen, decaying leaves of *Quercus ilex* subsp. *ballota*.



Figs. 1-10. *Mycena quercophila*. - Figs. 1-5. Holotype, AH 21544. - 1. Hypha of the pileipellis. - 2. Spores. - 3. Basidia. - 4. Cheilocystidia. - 5. Hypha of the stipitipellis with terminal cell. Figs. 6-10. AH 15719. - 6. Hypha of the pileipellis. - 7. Spores. - 8. Basidia. - 9. Cheilocystidia. - 10. Hypha of the stipitipellis. Bar: 15 μ m.

Material studied: Spain, prov. Guadalajara, Baides, 22. 10. 1994, leg. F. ESTEVE-RAVENTÓS, AH 15719; prov. Guadalajara, Tamajón, 12. 12. 1995, leg. F. ESTEVE-RAVENTÓS, G. MORENO, M. LIZÁR-RAGA & E. HORAK, AH 19416, AH 19422; prov. Alicante, Alcoy, 2. 1. 1996, leg. M. OLTRA, AH 18861; prov. Madrid, Casa de Campo, 12. 1. 1997, leg. M. VILLARREAL & M. A. JIMÉNEZ, AH 21544 (Holotype).

M. quercophila is a new member of *Mycena* sect. *Polyadelphia* SINGER ex MAAS GEEST. and shares all the characters of this section (MAAS GEESTERANUS 1986: 160); however, the presence of smooth to scarcely diverticulate cheilocystidia is not a typical feature of this section, except for *Mycena terena* ARONSEN & MAAS GEEST. Depending on the collections studied, the ratio smooth/diverticulate cheilocystidia is variable; our species seems to occupy an intermediate position between *M. terena* (with cheilocystidia completely smooth) and the other members of this section (with clearly diverticulate cheilocystidia).

In sect. *Polyadelphia*, *M. gaultheri* A. H. SMITH shows similar colours but differs, according to SMITH (1947), by the absence of olivaceous tints, the presence of a pseudocollarium, cheilocystidia densely covered by cylindrical excrescences and habitat among *Gaultheria shallon* PURSH remains; this last species has been recently rediscovered and described from Oregon (USA) by REDHEAD & NORVELL (1993) and has been placed in the new section *Testudini* REDHEAD & NORVELL owing to the characteristic, strongly gelatinized and hymeniform pileipellis.

Among the European taxa, *M. quercus-ilicis* var. *citrina* KÜHNER shares the same habitat and the presence of yellowish colours, but is a completely sulphur-yellow agaric with densely diverticulate cheilocystidia (KÜHNER 1938: 262). Microscopically *M. terena* is closest to *M. quercophila*; nevertheless, it always shows smooth cheilocystidia, though similar in shape and size, and differs macroscopically by the beige to dark grey pileus, the blackish to dark grey stipe and growth on *Salix* leaves (ARONSEN & MAAS GEESTERANUS 1992).

One of the collections studied of *M. quercophila* (AH 15719) had 2-spored basidia and longer spores; this character is not uncommon in many species of this section.

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References

- ARONSEN, A., MAAS GEESTERANUS, R. A., 1992: *Mycena terena*, a new member of section *Polyadelphia* from Southern Norway. - *Persoonia* **15**: 105-107.
- KÜHNER, R., 1938: Le genre *Mycena*. - *Encycl. Mycol.* **10**. - Paris: Lechevalier.
- MAAS GEESTERANUS, R. A., 1986: Conspectus of the *Mycenas* of the Northern Hemisphere - 6. Sections *Polyadelphia* and *Saetulipedes*. - *Proc. Kon. Nederl. Akad. Wet. (Ser. C)* **89**: 159-182.
- MUNSELL, 1988: Soil color charts. - Baltimore, Maryland: Kollmorgen Instruments Corporation.
- REDHEAD, S. A., NORVELL, L. L., 1993: *Mycena gaultheri* rediscovered after 50 years. - *Mycotaxon* **46**: 97-104.
- SMITH, A. H., 1947: The North American species of *Mycena*. - *Biblioth. Mycol.* **31** (Reprint 1971).



Colour Fig. V. *Mycena quercophila*, holotype (AH 21544).



Farbige Abb. VI. *Hydropus fraterniger*, WU 12885. - Phot. A. HAUSKNECHT.

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