

Fig. 98. *Marasmiellus primulae*

18. *Marasmiellus omphaliformis* (Kühner) Noordel.

Pl. 98, Fig. 99

Marasmius omphaliformis Kühner, Bull. Soc. Nat. Oyonnax 8: 111. 1954; *Marasmiellus omphaliformis* (Kühner) Noordeloos, Persoonia 12: 35. 1983; *Hydropus omphaliformis* (Kühner) Honrubia, Cryptog. Mycol. 5: 58. 1984. – *Marasmius omphaliformis* f. *bispورا* Duchemin, Bull. Soc. linn. Normandie 107: 34. 1979.

Type specimen. not preserved. Type locality: France.

Selected icons. Antonín & Noordeloos, Libri Botan. 17: 167. 1997 (wrong legende); Bon, Doc. mycol. Mém. hors Sér. 5: pl. 2B. 1999; Bon & Heriveau, Doc. mycol. 24(93): pl. 1F. 1994; Contu, Micol. Veget. Mediter. 19(1): 11. 2004; Courtecuisse, Mushrooms of Britain and Europe: 95. 1999; Courtecuisse & Duhem, Guide Champ. France Europe: 507. 1994; Hausknecht & Zuccherelli, Boll. Gruppo micol. Bres. 41(2): 118. 1998; Ludwig, Pilzkompendium 1: 46.4. 2000; Malençon & Bertault, Fl. Champ. super. Maroc 2: 374, fig. 79. 1975; Roux, Mille et un champignons: 513. 2006; Zuccherelli, Funghi Pinete 2: pl. 616. 2006.

Selected literature. Antonín & Noordeloos, Libri botanici 9: 167-169, fig. 57. 1993; Antonín & Noordeloos, Libri Botan. 17: 165-166. 1997; Bon, Doc. mycol. Mém. hors Sér. 5: 48. 1999; Bon & Heriveau, Doc. mycol. 24(93): 75. 1994; Contu, Micol. Veget. Mediter. 19(1): 11-12. 2004; Courtecuisse, Mushrooms of Britain and Europe: 629-630. 1999; Hausknecht & Zuccherelli, Czech Mycol. 48: 257-260. 1996; Hausknecht & Zuccherelli, Boll. Gruppo micol. Bres. 41(2): 118-119. 1998; Kühner, Bull. Soc. Nat. Oyonnax 8: 75. 1954; Noordeloos, Persoonia 12: 35-36. 1983; Malençon & Bertault, Fl. Champ. super. Maroc 2: 373-377. 1975.

Description: **Pileus** 3–13 mm, hemispherical at first, but soon expanding to plano-convex with (deep) umbilicus or concave, with involute then deflexed finally sometimes reflexed margin, not or only slightly hygrophanous, not or slightly translucently striate, distinctly radially grooved at margin, when moist very pale brownish-ochre (cream-coloured to sordid cream-coloured; 'café-au-lait'), slightly pallescent at margin on drying, finely granulose, granulose-hairy to hairy-felted all over or with very minute appressed squamules. **Lamellae** distant about 14–18, l = 0–3, arcuate-decurrent, sometimes forked or anastomosing, white to creamy-white with concolorous, finely pruinose to

fimbriate edge. **Stipe** 4–14 × 0.7–1.3 mm, cylindrical, sometimes broadened towards apex and/or base, creamy-white at apex, pale brown or yellow-brown below towards dark grey-brown base, finely pruinose-hairy, with remarkable, white-ochraceous to reddish brown tomentose-strigose basal tomentum. **Context** pallid. **Smell and taste** indistinct.



Pl. 98. *Marasmiellus omphaliformis* (photo A. Hausknecht)

Spores 7.0–10 (12) × 4.0–5.0 (5.5) μm, E = 1.6–2.5, Q = 2.3, ellipsoid to lacrimoid, smooth, in-amyloid, non-dextrinoid. **Basidia** 22–35 × 3.5–7.0 μm, 4-spored. **Basidioles** 15–34 × 3.5–8.0 μm, clavate or cylindrical. **Cheilocystidia** rarely entirely absent, often sparse, occasionally abundant and rendering the edge sterile, 20–60 × 7–20 μm, irregularly clavate to lageniform or mucronate with up to 35 μm long, tapering neck. **Pleurocystidia** absent. **Pileipellis** a cutis with transitions to a trichoderm composed of long, fusiform to lageniform terminal elements, similar to cheilocystidia; subpellis made up of inflated elements, up to 30 μm wide. Pigment minutely encrusting the hyphae of subpellis and upper pileitrama. **Pileitrama** subregular, made up of inflated hyphae, up to 35 μm wide. **Stipitipellis** a trichoderm-like structure of abundant caulocystidia. **Caulocystidia** 18–35 × 5.0–7.0 μm, fusiform to flabelliform with long, tapering neck. **Clamps** abundant in all tissues.

Chemical reactions. No part of basidiocarps amyloid or dextrinoid.

Ecology. On bark of a dead deciduous trees (e.g. *Quercus*, also on cupulae) in mixed forest.

Distribution. Southern parts of Europe and North America, probably thermophilous.

Phenology. July to October.

Collections examined. Italy, USA. Details on CD.

Notes. Although *Marasmiellus omphaliformis* takes a somewhat isolated position within sect. *Dealbati* on account of the long, attenuated elements of the pileipellis, we do not follow the suggestion made by BON & HERIVEAU (1994) to place this species in section *Stenophylloides* Singer. The reason is, that, to our opinion, the elements of the pileipellis are thin-walled, not setiform, i.e. do not have a thickened wall, typical for the members of that section.

Recently several new localities have been discovered of this remarkable species. BON & HERIVEAU (1994, l.c.) describe a collection from France, which fully agrees with the description by us (ANTONÍN & NOORDELOOS 1993). They reported the occurrence of scattered cheilocystidia. HAUSKNECHT & ZUCCHERELLI (1996) reported on some rich collections of *Marasmiellus omphaliformis* from the Ravenna area in Italy. In this area, this species is fructifying in several places during subsequent years. The material fits well with our description in volume 1 (ANTONÍN & NOORDELOOS 1993), with the exception of the lamella edge, which is rich in well differentiated

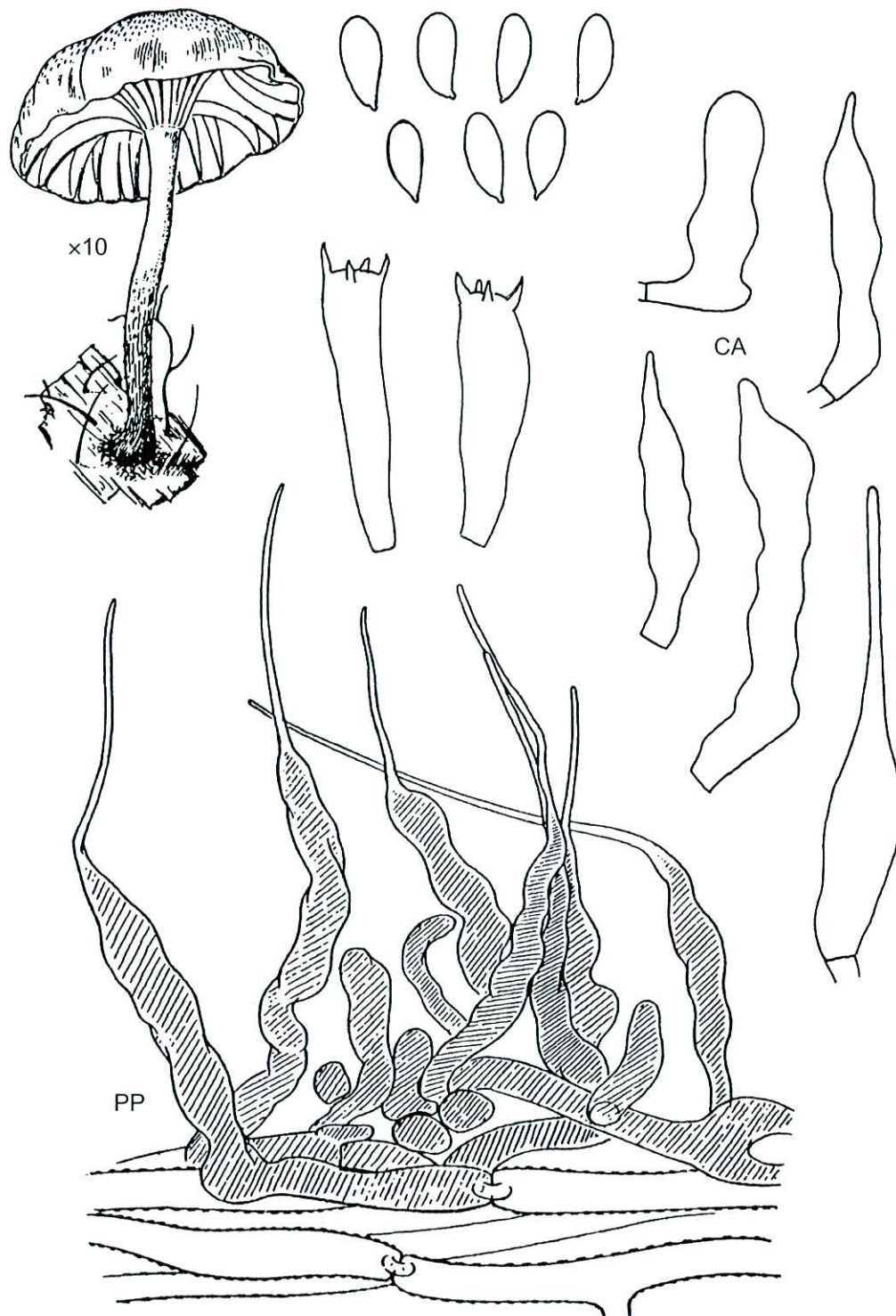


Fig. 99. *Marasmiellus omphaliformis* (Habit and pileipellis del. Malençon & Bertault)

cheilocystidia. On account of this, we think that in *Marasmiellus omphaliformis*, this character is rather variable.

Marasmiellus omphaliformis takes a somewhat isolated position within the genus *Marasmiellus*. However, *M. vaillantii* and *M. candidus* are similar in many respects. HONRUBIA (1984) transferred it to the genus *Hydropus*, probably on account of the rather wide hyphae of the trama, mentioned in Kühner's description (KÜHNER 1954). Apparently it is a very rare species. We failed to locate the type and were unable to designate a neotype. One of us (V. A.) collected *Marasmiellus omphaliformis* in the southeastern U.S.A., on which the additional observations are based.

DUCHEMIN (1979) described a bisporous form with slightly larger spores ($8.5\text{--}11 \times 4.0\text{--}5.0 \mu\text{m}$). This taxon, however, needs to be studied more closely (DUCHEMIN 1981).

19. *Marasmiellus dealbatus* (Berk. & M.A. Curtis) Singer

Marasmius dealbatus Berk. & M.A. Curtis, J. Linn. Soc. Bot. 10: 296. 1869; *Collybia dealbata* (Berk. & M.A. Curtis) Dennis, Trans. Brit. mycol. Soc. 34: 445. 1951; *Marasmiellus dealbatus* (Berk. & M.A. Curtis) Singer, Sydowia 9: 391. 1955.

Type specimen. Cuba, Wright. 1857 (holotype, FH).

Selected icons. Contu & La Rocca, Fungi non del. 9: pl. 10. 1999.

Selected literature. Contu & La Rocca, Fungi non del. 9: 30–32. 1999; Desjardin, Mycotaxon 65: 257. 1997; Pegler, Kew Bull. Addit. Ser. 9: 149–150 and 155. 1983; Singer, Beih. Nova Hedwigia 44: 34–36. 1973.

Description. Pileus 2–12 mm broad, elastic, applanate with depressed centre, glabrous, smooth, slightly lubricous and translucently striate when moist, pure white with pale ochraceous-alutaceous centre. Lamellae rather close, $L = 14\text{--}16$, $l = 2$, uncinately-adnate, thin, white. Stipe 8–20 \times 0.5–1 mm, central, confluent, glabrous and white at apex, sericeous, otherwise milk-koffee brown and tomentose. Context fragile, pale ochraceous, without distinct smell and taste. Spore print white.

Spores 6.0–8.2 \times 3.0–3.7 μm , fusiform-elongate, hyaline, with one or more small guttula. **Basidia** 20–30 \times 6.0–7.5 μm , 4-spored, clavate. **Cheilocystidia** numerous, 20–50 \times 6.0–9.0 μm , coralloid-diverticulate, sometimes pluriseptate, thin-walled, not incrustated. **Pleurocystidia** absent. **Pileipellis** a cutis made up of cylindrical, interwoven, 4.5–10 μm wide hyphae with poorly developed or indistinct Rameales-structure. **Caulocystidia** frequent, coralloid-diverticulate, thick-walled. **Clamps** present in all tissues. (According to CONTU & LA ROCCA 1999.)

Chemical reactions. No part of basidiocarp dextrinoid or amyloid.

Ecology. Cespitose or gregarious on grass at a street margin.

Distribution. Known from North, Central and South Americas and Lesser Antiles (DESJARDIN 1997, PEGLER 1983, SINGER 1973). Only one European collection in Italy, Sardegna (prov. Sassari, Tempio P., S. Bachisio, 12 Oct. 1998, M. Contu; CONTU & LA ROCCA 1999).

Phenology. October (Europe).

Notes. *Marasmiellus dealbatus* is characterized by having small basidiocarps with a white, centrally pale ochraceous-alutaceous pileus, broadly adnate lamellae, coralloid-diverticulate cheilocystidia and small spores. It is similar to *M. vaillantii*, which differs by a darker pileus and larger spores.

The description from Italy, Sardegna, agrees with a detailed one by SINGER (1973). The description by PEGLER (1983) deviates by the simple, ventricose-cylindrical, and sometimes flexuose cheilocystidia and might represent another species.