

MYCENA USTALIS, A NEW SPECIES FROM SOUTHERN NORWAY

A. ARONSEN

Tønsberg, Norway*

R.A. MAAS GEESTERANUS

clo Rijksherbarium, Leiden

Mycena ustalis, a member of section *Fragilipedes* and collected in southern Norway, is proposed as a new species. It is compared with some other members of the section.

Searching for agarics in unusual or little frequented types of habitat in southern Norway appears to have its rewards. One such terrain is a tract of land near the sea in the province of Vestfold which is covered with scrub of *Juniperus communis*, *Prunus spinosa*, and *Rosa* sp. In an area of limited extent, the junipers had been cut down and it was among the needles covering the ground that one of us (A.A.) found a very dark *Mycena* which turns out to belong to section *Fragilipedes* (Fr.) Quél. The species does not match any of those thus far described in this section and is here proposed as follows.

Mycena ustalis Aronsen & Maas G., *spec. nov.*** — Figs. 1–13

Basidiomata gregaria vel cespitosa. Pileus usque ad 28 mm latus, conicus vel campanulatus, haud sulcatus, margine translucente striatus, udus centro niger vel atrobrunneus, margine brunneus. Caro tenuis, odore alcalino. Lamellae 16–22 stipitem attingentes, e albido obscure griseae. Stipes –45 × 4–5 mm, initio ardesiacus, pallescens, basi fibrillis albis munitus.

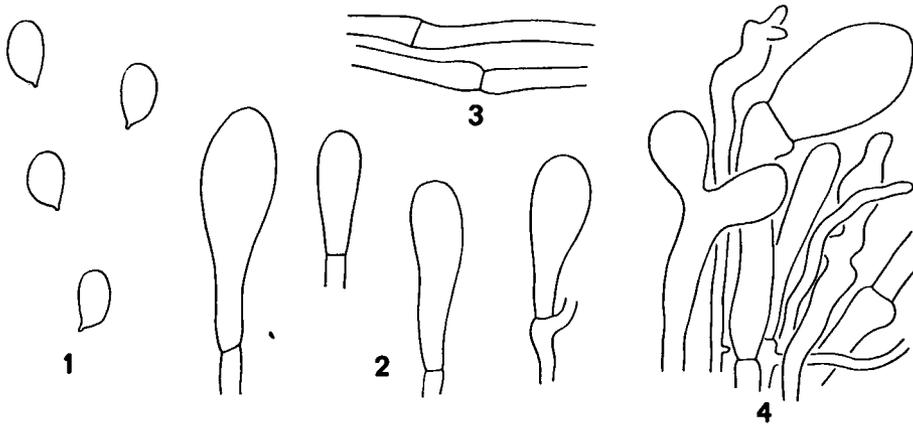
Basidia 25–35 × 6.5–8 µm, anguste clavata, 2-spora efibulataque vel 30–45 × 8–9 µm, 4-spora fibulataque. Sporae (basidiorum 2-sp.) (7.6–)9.0–11.8 × (5.0–)6.0–7.2(–8.1) µm vel (basidiorum 4-sp.) 7.6–9.0 × 5.4–5.6 µm, amyloideae. Cheilocystidia 20–60 × 7–15 µm, clavata vel fusiformia, efibulata vel fibulata, levia. Pleurocystidia similia, haud numerosa. Trama lamellarum iodi ope brunneovinescens.

Holotypus: 'Fungi norvegici / *Mycena ustalis* Aronsen & Maas G. / 2-sp. / A. Aronsen A 73/88 / 8 Oct. 1988 / Vestfold: Tjøme, Moutmarka / On *Juniper* needles' (L, no. 987.340-225).

Basidiomata gregarious to cespitose, less frequently solitary. Pileus up to 28 mm across, parabolical to conical or campanulate, not sulcate, very finely fibrillose (somewhat reminiscent of the pileus surface of some species of *Inocybe*), especially at the centre, translucent-striate, dry, slightly lubricous when moist (with dirt sticking to the surface), shiny, very dark sepia brown to black or even bluish black at the centre, sepia brown farther outwards, fading to grey-brown with age, margin straight to somewhat flaring with age, at first almost white, turning brownish. Flesh thin, very dark under the upper surface, paler farther below. Odour distinctive, alkaline (also experienced as nitrous), taste not recorded. Lamellae 16–22 reaching the stipe, tender, ascending, c. 2 mm broad, ventricose, narrowly adnate, sometimes un-

* Address: Solveien 40B, 3100 Tønsberg, Norway.

** Etymology: *ustalis*, the colour of half-burnt wood, dark brown, blackish brown.



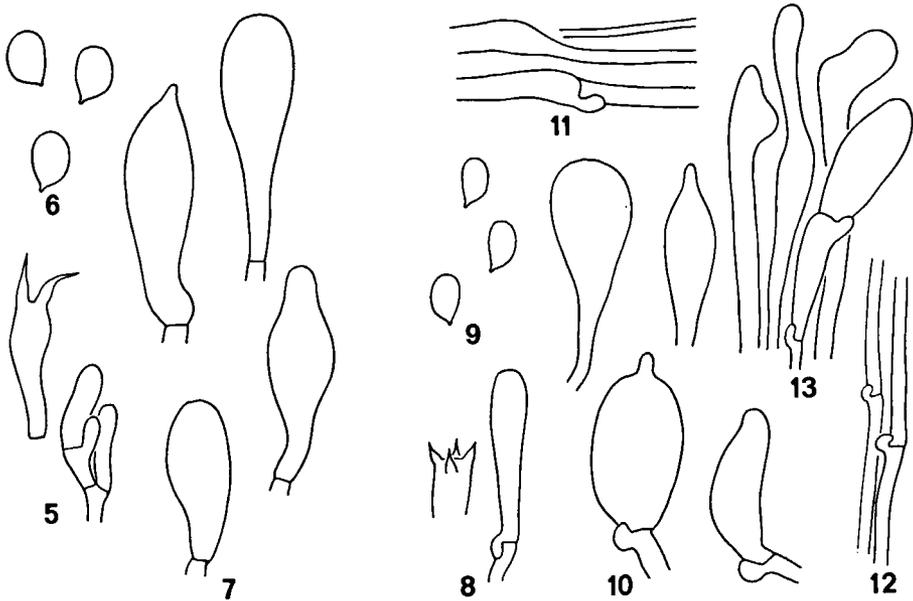
Figs. 1–4. *Mycena ustalis*, 2-spored (holotype). — 1. Spores. — 2. Cheilocystidia. — 3. Hyphae of the pileipellis. — 4. Caulocystidia. (All figs., $\times 700$.)

cinate, thin and smooth when young, much thickened, strongly veined or rugose, and inter-venose with age, at first white, then dark grey; the edge convex, white to pale grey. Stipe up to $45 \times 4\text{--}5$ mm, stocky, hollow, terete or somewhat compressed and fissured lengthwise, straight or somewhat curved, smooth, at first conspicuously white-puberulous all over, glabrescent for the greater part (except at the apex), slate-coloured, dark bluish grey, particularly at the apex, gradually becoming paler and turning somewhat more brownish, the base densely covered with long, fairly coarse, somewhat woolly, white fibrils.

Basidia either $25\text{--}35 \times 6.5\text{--}8$ μm , slender-clavate, 2-spored and clampless with plump sterigmata up to c. 8 μm long, or $30\text{--}45 \times 8\text{--}9$ μm , 4-spored and clamped. Spores (basidia 2-sp.) $(7.6\text{--})9.0\text{--}11.8 \times (5.0\text{--})6.0\text{--}7.2\text{--}(8.1)$ μm or (basidia 4-sp.) $7.6\text{--}9.0 \times 5.4\text{--}5.6$ μm , pip-shaped (those which are shorter and fairly broadly pip-shaped probably being immature), smooth, amyloid. Cheilocystidia $20\text{--}60 \times 7\text{--}15$ μm , originally forming a sterile band (lamellar edge homogeneous) but soon crowded out by vigorously developing younger generations of basidia, clavate to fusiform, clampless (basidia 2-sp.) or clamped (basidia 4-sp.), smooth, apically broadly rounded or mucronate, more rarely with a longer, slender neck. Pleurocystidia similar, scanty, unobtrusive. Lamellar trama brownish vinescent in Melzer's reagent. Hyphae of the pileipellis $2.5\text{--}6.5$ μm wide, clampless or clamped, smooth. Hyphae of the cortical layer of the stipe $1.5\text{--}4.5$ μm wide, clampless or clamped, smooth, the terminal cells (caulocystidia) $25\text{--}90 \times 2\text{--}22.5$ μm , cylindrical, narrowly to broadly clavate, ellipsoid to more or less irregularly shaped, simple or, more rarely, furcate, smooth.

HABITAT & DISTRIBUTION. — On needles of *Juniperus* in coastal area with scrub of *J. communis*, *Prunus spinosa*, and *Rosa* sp.; southern Norway.

COLLECTIONS EXAMINED. — NORWAY, Vestfold, Tjøme, Moutmarka: 4 Oct. 1988, Aronsen A 71/88 (2-sp.; L, no. 987.340.229); 8 Oct. 1988, Aronsen A 73/88 (2-sp.; holotype; L, no. 987.340.225); 18 Oct. 1988, Aronsen M 47a/88 + 47b/88 (2-sp. and 4-sp.; L, no. 987.340.245; part of M 47a also in herb. Aronsen).



Figs. 5-7. *Mycena ustalis*, 2-spored (A. Aronsen M 47a/88; L). — 5. Basidia. — 6. Spores. — 7. Cheilocystidia.

Figs. 8-13. *Mycena ustalis*, 4-spored (A. Aronsen M 47b/88; L). — 8. Basidia. — 9. Spores. — 10. Cheilocystidia. — 11. Hyphae of the pileipellis. — 12. Hyphae of the cortical layer of the stipe. — 13. Caulocystidia. (All figs., $\times 700$.)

The macroscopic description of the species is adapted from the collector's notes, complemented by the second author's observations on colour slides (collection Aronsen) as well as the dried material. The microscopic details are based on examination by the second author of the collections cited above.

Collection M 47/88 has been split up into 47a and 47b, as the material of the latter represents the 4-spored form of the species, differing from the 2-spored form, among other characters, in the somewhat smaller spores. It should be noted that the date of collecting of this 4-spored form is 10 and 14 days later than respectively those of the 2-spored forms A 73/88 and A 70/88. This suggests a measure of similarity with a phenomenon published several years ago (Maas Geesteranus, 1977), showing that 2-spored basidiomata of *Mycena gale-riculata* in the Netherlands are predominant in the earlier months of the season, with the 4-spored basidiomata becoming more numerous towards the end of the year.

Since the identification of members of section *Fragilipedes* is hardly a trifle, it may not be out of place here to offer some guidance. The 2-spored form of *M. ustalis* keys out near (equally 2-spored) *Mycena niveipes* (Murrill) Murrill (Maas Geesteranus, 1988: 47), but

some important differences are the following. In *Mycena niveipes*, 25–30 lamellae reach the stipe; the stipe is pale bluish white or greyish white when young, gradually turning white; the spores are 11.6–14.8 μm long; the basidiomata are associated with deciduous, broad-leaved trees. In *Mycena ustalis*, 16–22 lamellae reach the stipe; the stipe is dark bluish grey when young, gradually becoming paler and more brownish; the spores are 9.0–11.8 μm long; the basidiomata grow on fallen *Juniperus* needles.

The 4-spored form of *M. ustalis* keys out near a small group of species consisting of *Mycena niveipes* (4-spored form), *M. semivestipes* (Peck) A.H. Smith, *M. tenuicula* (Murrill) Murrill, and *M. zephirus* (Fr.: Fr.) Kummer (Maas Geesteranus, 1988: 50). The two last named species can be ruled out on account of the different aspect of the hyphae of the cortical layer of the stipe and their diverticulate terminal cells. *Mycena semivestipes* is easily distinct as it has smaller spores (6.3–7.3 \times 3.7–4.0 μm) as well as narrower and (often) more irregularly shaped cheilocystidia. The 4-spored form of *M. niveipes*, finally, can be told apart by its larger spores (8.8–11.2 \times 6.1–6.7 μm).

Looking for a species in North American literature that would match the Norwegian material, *Mycena atrocyanea* as redescribed by Smith (1947: 255) seems to fit the above description. However, *M. atrocyanea* sensu Smith, later recognized to represent the new species *M. coracina* (Maas Geesteranus, 1988: 69), can be readily told from *M. ustalis* by the diverticulate hyphae of both the pileipellis and the cortical layer of the stipe.

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