

MYCENA OLIGOPHYLLA, ANOTHER NEW SPECIES FROM
SOUTHERN NORWAY

A. ARONSEN

*Torød, Norway**

R. A. MAAS GEESTERANUS

Rijksherbarium, Leiden

Mycena oligophylla is proposed as a new species and indicated as the type of the new section *Rarifoliatae*. The species is compared with similar-looking *Mycena paucilamellata*, as well as with *Delicatula cuspidata* which had been suggested as possibly identical.

Mycena oligophylla is another new species (cf. Aronsen & Maas Geesteranus, 1989), recently discovered in southern Norway by the first author. On account of the striking scarcity or even absence of lamellae in the specimens found, at first the name *Mycena paucilamellata* from the United States came to mind. The latter is a species described by Smith (1947: 97) who stated that 'the fruiting bodies make very poor herbarium specimens when dried.' This remark seemed likely to spell difficulties for the reexamination of the type material. Fortunately, however, investigation of the stipe, the least vulnerable part of any dried *Mycena*, yielded ample proof that *M. paucilamellata* differs from *M. oligophylla*.

Grateful acknowledgement is made to the authorities of the herbarium at Ann Arbor (MICH) for the loan of the type of *Mycena paucilamellata*.

Mycena oligophylla Aronsen & Maas G., *spec. nov.*¹—Figs. 1–17

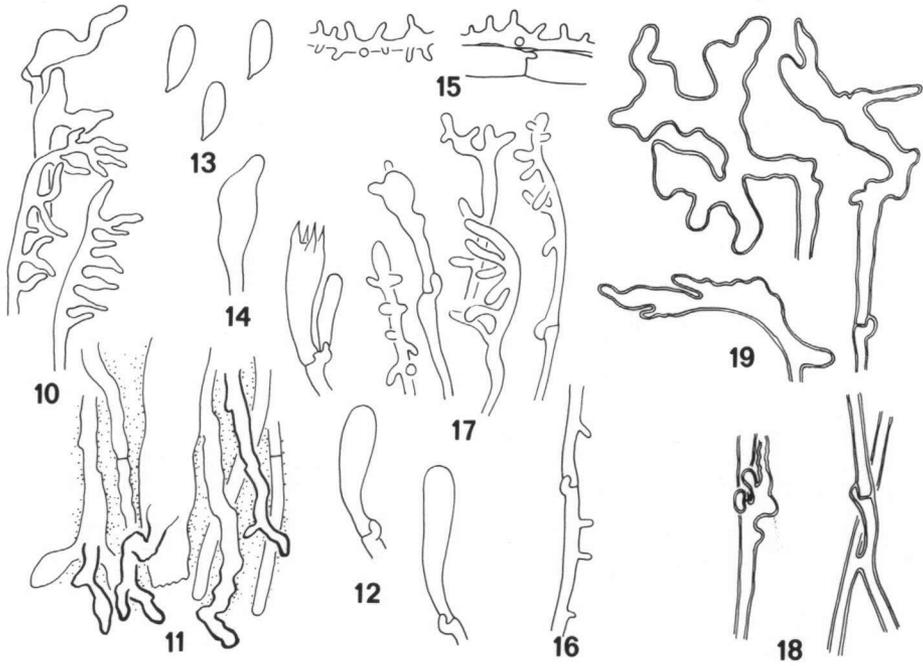
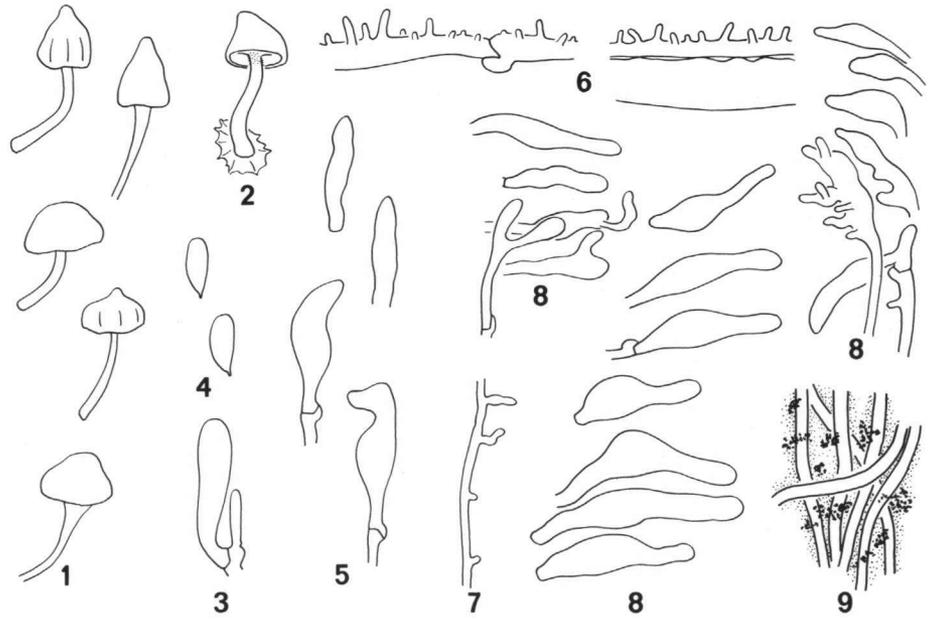
Basidiomata solitaria vel sparsa. Pileus 0.7–2.3 mm latus, apice obtusus vel papillatus, aetate interdum depressus, haud translucente striatus, minute pruinosis, glabrescens, udus haud lubricus, materia gelatinosa haud obtectus, albus. Caro tenuis, alba, odore nullo. Lamellae 0–5(–6) stipitem attingentes, late adnatae vel subdecurrentes, albae. Stipes 1–3(–4) × 0.1–0.3 mm, fragilis, totus pruinosis, albus, orbiculo basali instructus.

Basidia 23–27 × 7 µm, clavata, 4-spora, fibulata, sterigmata c. 3.5 µm longa. Sporae 9.4–10.8 × 3.6–4.5 µm, amyloideae. Cheilocystidia 20–27 × 4.5–7 µm, sparsa, subcylindratae vel subfusiformia, fibulata. Pleurocystidia nulla. Trama lamellarum iodi ope vivescens. Hyphae pileipellis 3.5–6 µm latae, fibulatae, diverticulatae. Hyphae stipitis corticales 2–2.7 µm latae, fibulatae, laeves vel sparse diverticulatae, cellulae terminales (caulocystidia) varieformes ramosaeque, sursum tamen cystidiis similes, 22.5–35 × 6.5–9 × 3.5–4.5 µm. Hyphae orbiculi basalis 2–3.5 µm latae.

Ad Junci conglomerati vaginas vulgo invenitur, etiam ad Caricis sp. caules.

* Address: Torødveien 54, N-3135 Torød, Norway.

¹ Etymology: *oligophylla*, having few lamellae.



Holotypus: 'Fungi norvegici / *Mycena oligophylla* Aronsen & Maas G. / leg. A. Aronsen, no. A. 34/89 / 4 Oct. 1989 / Vestfold: Tjøme, Moutmarka / on the leaf sheaths of *Juncus conglomeratus*' (L, no. 986.126-085).

Basidiomata solitary to scattered. Pileus 0.7–2.3 mm across, conical to parabolical or convex, with or without a small papilla, more rarely hemispherical with the centre somewhat depressed, finally sometimes almost plane and the centre shallowly depressed, shallowly sulcate in some specimens, not in others, not translucent-striate, minutely pruinose, glabrescent, not lubricous when wet, white, the margin involute at first, straightening with age. Flesh very thin, white. Odour none, taste not recorded. Lamellae 0–5(–6) reaching the stipe, rarely fully developed (and then fairly broad), often only showing as low ridges and evanescent before reaching the margin of the pileus, tender, not ascending, broadly adnate to somewhat decurrent, smooth, white, the edge almost straight to concave, white. Stipe 1–3(–4) × 0.1–0.3 mm, fistulose (?), fragile, equal or widened just below the lamellae, sometimes also broadened near the base, terete, curved, smooth, delicately pruinose all over at first, glabrescent except at the apex, white, sometimes seemingly institious but actually attached to the substratum by radiating, fine, whitish fibrils which are united by a very thin film of gelatinous matter to form an irregularly shaped plaque (neither the plaque nor the fibrils being visible in dried material if the substratum has a rough surface).

Basidia 23–27 × 7 µm, clavate, 4-spored, clamped, with sterigmata c. 3.5 µm long. Spores 9.4–10.8 × 3.6–4.5 µm, somewhat narrowly pip-shaped, smooth, amyloid. Cheilocystidia 20–27 × 4.5–7 µm, rather scarce, occurring mixed with basidia, subcylindrical, subfusiform, clamped, smooth, apically gradually narrowed. Pleurocystidia absent. Lamellar trama weakly brownish vinescent in Melzer's reagent. Hyphae of the pileipellis 3.5–6 µm wide, clamped, covered with cylindrical, simple excrescences 2.5–5.5 × 1–2 µm which do not become gelatinized. Hyphae of the cortical layer of the stipe 2–2.7 µm wide, clamped, not gelatinizing, smooth or sparsely covered with cylindrical, simple excrescences 1.5–7 × 1–2 µm, terminal cells (caulocystidia) variously shaped, 20–40 × 2.5–9 µm, much branched, becoming less branched or even simple and subcylindrical farther upwards, then (just below the lamellae) gradually passing into cystidia-like, lageniform elements 22.5–35 × 6.5–9 × 3.5–4.5 µm. Hyphae of the basal plaque 2–3.5 µm wide, apparently not clamped, firm-walled, straight near the base of the stipe, embedded in a very thin film of gelatinous matter and with adhering clumps of dirt, more flexuous to kinked and thick-walled terminally, moreover mixed with some much inflated hyphae up to 13.5 µm wide.

Figs. 1–9. *Mycena oligophylla* (holotype, Aronsen A 34/89). — 1. Habit sketches (drawn by A. Aronsen after fresh material). — 2. Basidiome with basal plaque (drawn by M.G. after dried specimen). — 3. Immature basidia. — 4. Spores. — 5. Cheilocystidia. — 6. Hyphae of the pileipellis; one of the hyphae overlying a hypodermal hypha. — 7. Hypha of the cortical layer of the stipe. — 8. Caulocystidia. — 9. Hyphae of the basal plaque embedded in a film of gelatinous matter and encrusted with dirt.

Fig. 10. *Mycena oligophylla* (Aronsens A 34c/89; L). Caulocystidia.

Fig. 11. *Mycena oligophylla* (Aronsens A 34d/89; L). Hyphae of the basal plaque embedded in a film of gelatinous matter; one hypha much inflated.

Figs. 12–17. *Mycena oligophylla* (P. Marstad 133-88; L). — 12. Basidia. — 13. Spores. — 14. Cheilocystidium. — 15. Hyphae of the pileipellis. — 16. Hypha of the cortical layer of the stipe. — 17. Caulocystidia.

Figs. 18–19. *Mycena paucilamellata* (holotype; MICH). — 18. Thick-walled hyphae of the cortical layer of the stipe. — 19. Thick-walled caulocystidia. (Fig. 1, × c. 20; fig. 2, × 20; all others, × 700.)

Growing on the leaf sheaths deep down in clumps of *Juncus conglomeratus*, often found together with *Mycena bulbosa* (Cejp) Kühner, more occasionally also together with *Hemimycena delectabilis* (Peck) Sing. on culms of *Carex* sp.

COLLECTIONS EXAMINED.—NORWAY, Vestfold, Tjøme, Moutmarka: 16 Oct. 1988, P. Marstad 133-88 (L, no. 986.126-094); 16 Oct. 1988, A. Aronsen M 45/88 (L, no. 988.051-005); 4 Oct. 1989, A. Aronsen A 34/89 (holotype; L, no. 986.126-085); 4 Oct. 1989, A. Aronsen A 34b/89 (L, no. 988.051-074); 4 Oct. 1989, A. Aronsen A 34c-e/89 (L, no. 988.051-194).

The macroscopic description of the species has been made by the first author, complemented by the second author's observations on the dried material, while the microscopic details are based on reexamination of the collections cited above.

The way the stipe is attached to the substratum may be difficult to discern, especially in fresh material, probably because both the hyphae and the substance of the basal plaque do not stand out clearly against the background when wet. Moistening of this basal part of the dried stipe, however, causes the gelatinous matter of the basal plaque to swell, whereupon the whole is easily lifted from the substratum by means of a tiny scalpel.

The possession of two very differently shaped kinds of caulocystidia is a most unusual character, but it is apparently rare to find them both well-developed on the same stipe.

From the beginning, the name *Mycena paucilamellata* suggested itself since, going by Smith's description, several of its features were found to correspond with those of the Norwegian material, such as small size, white colour, little-developed, somewhat decurrent lamellae and narrow, amyloid spores. Disturbing elements, however, proved to be the description of the stipe as having its base 'inserted' on the substratum and the occurrence of the basidiomes on fallen twigs of *Sequoia sempervirens*. Subsequent reexamination of the type material of *M. paucilamellata* demonstrated that this species is fundamentally different from *M. oligophylla* on account of the thick-walled, smooth hyphae of the cortical layer of its stipe (Fig. 18) and their strangely shaped, much entwined terminal cells (Fig. 19). Extreme scantiness of the type prohibited further investigation.

Another species, kindly pointed out by Dr. Th. W. Kuyper (Wijster) as being possibly the same as the Norwegian find is *Delicatula cuspidata* (Quél.) Cejp. The description by Quélet (1881: 662, pl. 8, fig. 3, as '*Omphalia*') records such features like 'Chapeau ... festonnée, ... finement floconneux. Lamelles ... très décurrentes, ramifiées. Stipe ... avec la base bulbilieuse et hérissée de soies.' These characters clearly do not apply to *M. oligophylla*. In passing, it may be remarked that Moser (1955: 93 till 1983: 67) accepted *Delicatula cuspidata* as a species with amyloid spores. This amyloidity, however, is an unproved assumption, while it is not clear whether the species actually belongs to *Delicatula*. Kühner (1980: 771) emphatically stated that the genus *Delicatula* in his opinion consists of only a single species — *D. integrella* (Pers.: Fr.) Pat.

Mycena oligophylla could easily be mistaken for some small species of *Hemimycena* on account of its white colour, shape of the pileus, poorly developed lamellae, rather narrow spores, and unobtrusiveness of the scanty cheilocystidia. This may add to the conviction of those who argue that (non-)amyloidity of the spores alone is insufficient as a character to separate *Mycena* and *Hemimycena*, but the issue cannot be pursued in the present paper.

Attempts at determining the pertinent section of *Mycena oligophylla* lead to the first half of couplet 20 of the key published in 1980 (Maas Geesteranus, 1980: 95), indicating section

Pudicae. Although the characters mentioned for this section are precisely those of *M. oligophylla*, this species is not a member of the *Pudicae*, a section which was subsequently abolished (Maas Geesteranus, 1986b: 285) as it was no longer considered to be a subdivision of *Mycena*. However, the abandonment of section *Pudicae* does not nullify the position it originally occupied in the key. In fact, by slightly emending the text of the couplet under discussion (e.g. by adding 'Stipe arising from a basal plaque'), some of the more important features are given that characterize the following new section.

Mycena section *Rarifoliatae* Aronsen & Maas G., *sect. nov.*

Basidiomata minuta. Pileus pruinosis, udus haud lubricus, materia gelatinosa haud obtectus, albus. Caro tenuis, alba, odore nullo. Lamellae perpaucae, molles, late adnatae vel subdecurrentes, albae. Stipes fragilis, totus pruinosis, albus, orbiculo basali instructus.

Basidia clavata, 4-spora, fibulata. Sporae inaequilateraliter ellipsoideae, laeves, amyloideae. Cheilocystidia sparsa, subcylindracea vel subfusiformia, fibulata. Pleurocystidia nulla. Trama lamellarum iodi ope vivescens. Hyphae pileipellis fibulatae, diverticulatae. Hyphae stipitis corticales fibulatae, laeves vel sparse diverticulatae, cellulae terminales (caulocystidia) varieformes ramosaeque, sursum cystidiis similes.

Herbicola.

Species typica: *Mycena oligophylla*.

Basidiomata minute. Pileus pruinose, glabrescent, not lubricous when wet, not covered with a separable, gelatinous pellicle, white. Flesh very thin, white. Odour none. Lamellae very few reaching the stipe, sometimes poorly developed, tender, broadly adnate or somewhat decurrent, white. Stipe fragile, pruinose all over, white, arising from a basal plaque.

Basidia clavate, 4-spored, clamped. Spores pip-shaped, smooth, amyloid. Cheilocystidia rather scarce, subcylindrical to subfusiform, clamped. Pleurocystidia absent. Lamellar trama brownish vivescent in Melzer's reagent. Hyphae of the pileipellis clamped, diverticulate. Hyphae of the cortical layer of the stipe smooth or sparsely diverticulate, terminal cells (caulocystidia) variously formed, branched, farther upwards more cystidia-like. Hyphae of the basidial plaque firm-walled.

Found on herbaceous culms.

Type species: *Mycena oligophylla*.

The specific epithet *oligophylla* is the plural form of a substantive, of which there exists no adjectival form suitable for the construction of a sectional name. Hence, an equivalent substitute had to be chosen. For euphonious reasons, however, the specific epithet is maintained.

The present section could be thought to be close to section *Basipedes* (Fr.) Quél. (Maas Geesteranus, 1983: 410) on account of its basal plaque. It differs, however, in the absence of a gelatinous pellicle covering the pileus and in the poorly developed, not ascending lamellae with concave edge.

Attachment of the stipe to the substratum by means of radiating fibrils is also known to occur in some species of section *Polyadelphia* Sing. ex Maas G. (Maas Geesteranus, 1986a: 159), more particularly in *M. culmigena* Maas G. and *M. juncicola* (Fr.) Gillet, two species which grow in a habitat similar to that of *M. oligophylla*. But members of this section are characterized by clavate cheilocystidia which are covered by numerous, usually evenly spaced cylindrical excrescences.

REFERENCES

- ARONSEN, A. & MAAS GEESTERANUS, R. A. (1989). *Mycena ustalis*, a new species from southern Norway. *In* *Persoonia* 14: 61–64.
- KÜHNER, R. (1980). Les Hyménomycètes agaricoïdes (Agaricales, Tricholomatales, Pluteales, Russulales). *In* *Bull. Soc. linn. Lyon, Numéro spéc.*
- MAAS GEESTERANUS, R. A. (1980). Studies in *Mycenas*—15. A tentative subdivision of the genus *Mycena* in the northern Hemisphere. *In* *Persoonia* 11: 93–120.
- (1983). Conspectus of the *Mycenas* of the Northern Hemisphere—1. Sections *Sacchariferae*, *Basipedes*, *Bulbosae*, *Clavulares*, *Exiguae*, and *Longisetae*. *In* *Proc. K. Ned. Akad. Wet. (Ser. C)* 86: 401–421.
- (1986a). Conspectus of the *Mycenas* of the Northern Hemisphere—6. Sections *Polyadelphia* and *Saetulipedes*. *In* *Proc. K. Ned. Akad. Wet. (Ser. C)* 89: 159–182.
- (1986b). Conspectus of the *Mycenas* of the Northern Hemisphere—8. Sections *Intermediae*, *Rubromarginatae*. *In* *Proc. K. Ned. Akad. Wet. (Ser. C)* 89: 279–310.
- MOSER, M. (1955). Röhrlinge, Blätter- und Bauchpilze (Agaricales und Gasteromycetales). *In* H. Gams, *Kleine Krypt.flora IIB Basidiomyceten* 2. Teil, 2nd ed.
- (1983). Die Röhrlinge und Blätterpilze (Polyporales, Boletales, Agaricales, Russulales). *In* H. Gams, *Kleine Krypt.flora IIB* 2(2), 5th ed. ('1981').
- QUÉLET, L. (1881). Quelques espèces critiques ou nouvelles de la Flore Mycologique de France. *In* *C.R. Ass. fr. Av. Sci.* (1880) 9: 661–675.
- SMITH, A. H. (1947). North American species of *Mycena*. *In* *Univ. Mich. Stud., Scient. ser.* 17.