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THE GENUS *MYCENELLA* (AGARICALES, TRICHOLOMATACEAE) IN POLAND

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Abstract. Four species of *Mycenella* (Agaricales) recorded from Poland are described, illustrated and discussed. All available specimens of *Mycenella* from Polish herbaria were reexamined to verify their identity. *Mycenella rubropunctata* Boekhout and *M. salicina* (Velen.) Singer are reported for the first time in Poland. Maps of the localities of the examined material and a key to European species are provided.

Key words: Basidiomycetes, Tricholomataceae, *Mycenella*, morphology, ecology, distribution, Poland

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INTRODUCTION

Mycenella was erected by Lange (1914) as a subgenus of *Mycena* S. F. Gray – one of the largest genera within Agaricales – containing a small group of rough-spored species. Singer raised it to generic level, and then enclosed species with smooth spores but still inamyloid (Singer 1951). Romagnesi (1940) suggested that this genus was congeneric with *Xerula* Maire, and for years *Mycenella* was located in tribus Marasmieae near the genera *Oudemansiella* (subgenus *Xerula*), *Strobilurus* and *Marasmius* (see Singer 1975, 1986; Hansen & Knudsen 1992). This opinion has been rejected, and this genus is presently situated among *Tricholomataceae* near *Mycena*, as formerly, not among *Marasmiaceae* (Kirk *et al*. 2001).

Enumerating the members of the genus *Mycenella* from Europe is difficult. Singer (1975) included species with smooth spores: *M. salicina* (Velen.) Singer, *M. eriopus* (‘*eriopoda*’) (Sacc. & Sydow) Singer and *M. subtropicalis* Singer. He also listed species with ornamented (verruculose or spinulose) spores: *M. margaritispora* (J. E. Lange) Singer, *M. lasiosperma* (Bres.) Singer, *M. bryophila* (Vogl.) Singer, *M. cyatheae* (Singer) Singer, *M. fuliginosa* Singer, *M. minima* Singer, *M. cooliana* (Oort) Singer (*Mycena trachyspora* Rea sensu A. H. Smith; sensu Rea = *M. olida* according to Orton). Singer suggested including *Mycena nodulosa* Smith in *Mycenella*. In the last *Modern Taxonomy* (Singer 1986), the only smooth-spored species he included was *M. salicina*, while he kept all the species with ornamented spores as in his previous work. He omitted a new smooth-spored species of *Mycenella* published by Maas Geesteranus (1981), a new combination from *Mycena*: *Mycenella margaritifera* (Maire) Maas Geest. (based on material from France). He also eliminated *M. incommiscibilis* (Berk.) Maas Geest. (from Sikkim) and *M. radicata* (Thiers) Maas Geest. (from South America, Maas Geesteranus 1982b, 1983).

Still new species and varieties have been described. Boekhout (1985) described *M. bryophila* var. *caesia*. Horak (1986) described *Mycenella favreana* Horak based on Jules Favre’s alpine zone material, with verrucose spores. Kühner (1989) presented *M. salicina* (2-, 4-spored) and *M. favreana* (2-, 4-spored) as normal and apogamic basidiocarps. Robich (1998) described *Mycenella variispora* from Italy with heterogeneous spores (see key).

Mycologists have treated some species differently. Maas Geesteranus (1982a) reduced *M. cooliana* (Oort) Singer to a synonym of *M. bryophila*

(Vogl.) Singer, but Singer (1986) still treated these species as separate. *M. trachyspora* (Rea) Bon – Boekhout's fungus (1985) – was called *M. cooliana* by Watling and Turnbull (1998). *M. lasiosperma* (Bres.) Sing and *M. margaritispora* (J. E. Lange) Singer were treated as the same species. Kühner (1938) uses the former name because of its priority, and other mycologists followed this opinion. Singer (1962, 1975, 1986) separated these species later, but Maas Geesteranus (1982a) maintained that they require further comparison. *M. lasiosperma* has not been published in the new European floras *Flora Agaricina Neerlandica* or *British Fungus Flora*. There is no critical monograph of the European species up to now.

Material and methods

Available herbarium materials of *Mycenella* from Polish herbaria (KRAM-F, KRA, LBLM, LOD, POZM, WA, TRN) were revised to verify their identity. Observations and measurements of microscopic elements were made from slide preparations stained with a solution of phloxine in 5% KOH and in Melzer's reagent. All species are illustrated by line drawings of microscopic characters based on Polish collections. Based on the examined material, a map of recorded localities is provided for each. The key to European species is based on the keys from Maas Geesteranus (1982b) and Boekhout (1999). Names of plant associations follow Matuszkiewicz (2001).

Results

Mycenella (J. E. Lange) Singer

Notul. Syst. Sect. Cryptog. Inst. Bot. Acad. Sc. URSS **10–12**: 9. 1938.

Type species: *Mycena* (subg. *Mycenella*) *margaritispora* J. E. Lange, Dansk Bot. Ark. **1**(5): 37. 1914.

Basidiocarp mycenoid, dull colored, grey or brown. Pileus glabrous or finely pruinose, convex to campanulate. Stipe central, frequently rooting, pubescent. Gills whitish, subfree to adnate. Spores smooth or with obtuse warts, thin-walled, colorless, non-amyloid. Hyphae of cap cuticle radially arranged with diverticulate excrescences or clavate, irregularly branched elements intermixed with cystidiform cells giving cap a pruinose surface. Clamp connections present or not. Marginal cystidia lageniform or fusiform, hyaline, thin-walled; apex simple or with short branches, more or less covered with a granulose substance, especially when fresh. Facial cystidia are similar. Caulocystidia present, stipitetrama sarcodimitic (made up of large fusiform elements and slender, branched generative hyphae).

The representatives of the genus are saprobic, terrestrial, or growing on decaying moss-covered wood (Kühner 1938; Boekhout 1985, 1999; Singer 1986).

In Europe the genus *Mycenella* is known on the whole continent but is found rarely, generally only a few species in each country. For example, Boekhout (1999) presents five species from the Netherlands, Watling and Turnbull (1998) report four species from England, and Krieglsteiner (1991) gives six species from Germany.

The species from the rough-spored group occur in temperate regions only, but smooth-spored forms can be found also in the American tropics and subtropics (Singer 1986).

Key to European species

1. Spores smooth 2
1*. Spores verrucose or heterogeneous – smooth and verrucose 3
2. Pileus pure white . . . . . *M. margaritifera*
2*. Pileus grey-brown, dark brown, or ochraceous . . . . . *M. salicina*
3. Spores verrucose 4
3*. Spores heterogeneous – smooth and verrucose . . . . . *M. variispora*
4. Apex of cystidia with simple or branched, coralloid excrescences . . . . . *M. margaritispora*
4*. Apex of cystidia without projections 5
5. Pleuro- and cheilocystidia lageniform with obtuse apex; basidia 2-spored: . . . . . *M. bryophila*
5*. Pleuro-and cheilocystidia fusiform or narrowly lageniform with acute or mucronate apex, basidia mostly 4-spored 6
6. Lamellae and upper part of stipe without reddish brown spots; pleuro- and cheilocystidia with acute apex: . . . . . *M. trachyspora*
6*. Lamellae and upper part of stipe with small reddish brown spots; pleuro- and cheilocystidia mucronate: . . . . . *M. rubropunctata*

Mycenella bryophila (Vogl.) Singer (Figs 1 & 2)

Lilloa **22**: 291. 1951(1949).

Mycena bryophila Vogl., Atti Ist. veneto Sci., ser. VI, **4**: 617. 1886.

Mycena meulenhoffiana Oort, Meded. Ned. mycol. Vereen. **16–17**: 247. 1928.

Mycena lasiosperma sensu J. E. Lange, Dansk bot. Ark. **1**(5): 36. 1914.

Basidiocarp small, pileus 0.8–32 mm, conical to applanate, usually with prominent umbo, margin straight, thin-fleshed, center dark brown, margin pale brown, translucently striate. When dry, pileus with acute papilla, margin often reflexed and sometime undulate. Lamellae ventricose, moderately crowded, adnate to nearly adnexed, whitish to very pale grey-brown, densely pruinose under the lens, yellowish in exsiccates, margin concolorous.

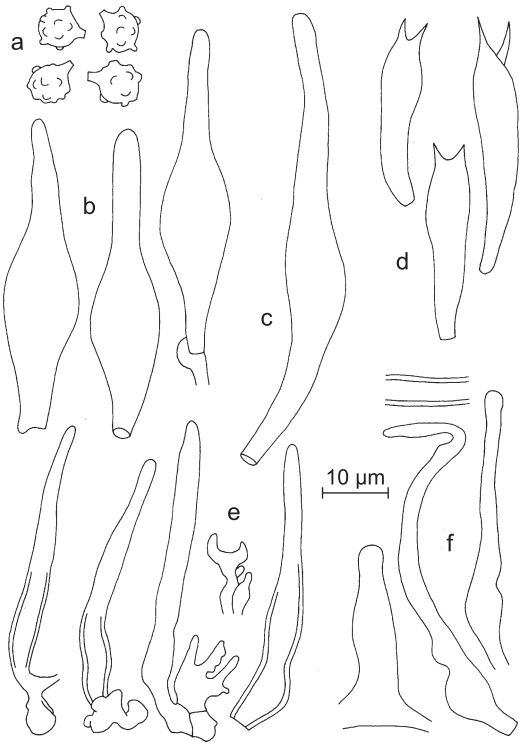

Fig. 1. *Mycenella bryophila* (Vogl.) Singer (POZM *sine num.*, Dziewicza Góra hill near Poznań, 12 Sept. 1990, *leg. M. Borek*): a – spores, b – cheilocystidia, c – pleurocystidium, d – basidia, e – pileocystidia, f – hypha of cortical layer of stipe and caulocystidia.

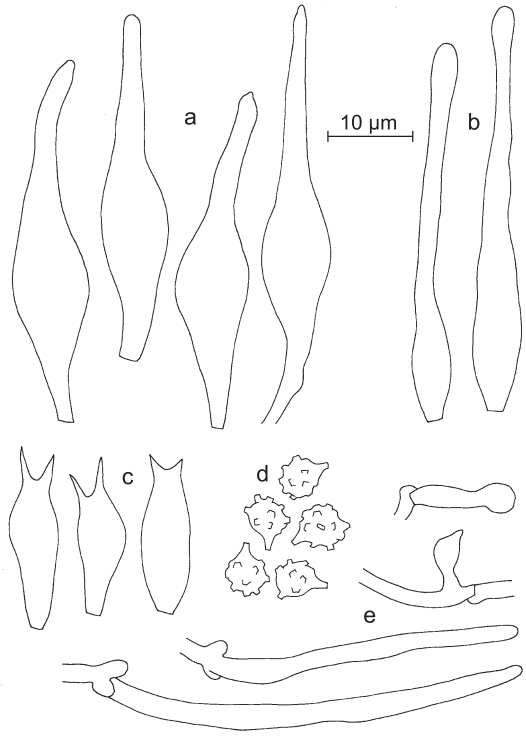

Fig. 2. *Mycenella bryophila* (Vogl.) Singer (KRAM-F 53949): a – cheilocystidia, b – pleurocystidia, c – basidia, d – spores, e – hyphae of pileipellis and two long pileocystidia.

Stipe 20–40 × 1–3 mm, equal, tough and cartilaginous, cylindrical, often with rooting base, whitish to pale gray-brown at apex, becoming darker at base, white- pubescent. Smell and taste indistinct. Spore-print white.

Spores 6.3–8.0 × 6.3–8.5 µm, subglobose, broadly ellipsoid with low obtuse warts, hyaline, non-amyloid. Hilar appendage conspicuously large. Basidia 2-spored, 27.7–31.6 × 3.1–7.9 µm. Cheilo- and pleurocystidia abundant, similar, 43.5–75.1 × 8.7–12.6 µm, fusoid-lageniform to nearly cylindrical with long neck and acute or narrowly obtuse apex, usually incrusted, soluble in 5% KOH. Hyphae of the pileipellis somewhat gelatinized, repent, with short, cylindrical to irregularly branched ascending excrescences. Pileocystidia 38.4–42.2 × 3.1–5.4 µm, some with partly thickened walls. Hyphae of cortical layer of stipe 3.1–5.3 µm wide, part with thick walls,

caulocystidia 42.0–53.8 × 3.1–4.6 μm. Clamp connections present.

SPECIMENS EXAMINED. POLAND. POJEZIERZE WIELKOPOLSKO-KUJAWSKIE LAKELAND, Pojezierze Poznańskie lakeland: near Kolno Międzychodzke Reserve, *ca* 40 km SE of Gorzów Wielkopolski, deciduous forest (*Acer* sp., *Aesculus* sp., *Alnus incana*, *Populus tremula*, *Tilia* sp., *Ulmus* sp.), on ground, 3 Oct. 2002, *leg. H. Komorowska* (KRAM-F 53949, Fig. 7, left); Pojezierze Międzychodzko-Pniewskie lakeland: Buki Lutomskie Reserve, *ca* 56 km SE of Gorzów Wielkopolski, *Fraxino-Alnetum*, on bark of fallen twigs, 16 Aug. 1976, *leg. E. Drózd* (POZM); Pojezierze Gnieźnieńskie lakeland: Puszcza Zielonka Landscape Park near Poznań, Dziewicza Góra hill, *Astrantio-Fraxinetum*, on soil, 12 Sept. 1990, *leg. M. Borak* (POZM); Pojezierze Kujawskie lakeland: Bieniszew, 8 km NW of Konin, *Ficario-Ulmetum minoris* (formerly *Ficario-Ulmetum campestris typicum*), on soil, 29 Aug. 1986, *leg. D. Gemzicka* (POZM).

HABITAT AND DISTRIBUTION. Single to scattered, terrestrial, in deciduous forest, especially in riparian alder or elm forest. August–October; rare, known only from the Pojezierze Wielkopolsko-Kujawskie lakeland in NW Poland. All localities hitherto unpublished (Fig. 3).

NOTES. *Mycenella lasiosperma* (Bres.) Singer reported by Gumińska (1962). There is only a drawing preserved in KRA, with carpofore habit (similar to *M. bryophila*), rough spores and smooth cystidium. Without the material to examine we cannot state whether these species are *M. bryophila* or *M. rubropunctata*.

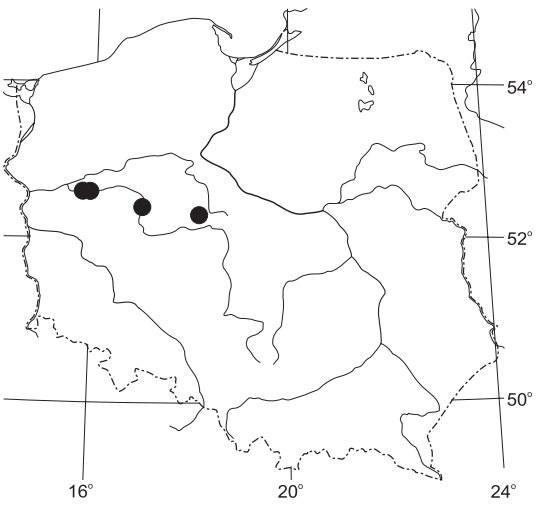

Fig. 3. Localities of *Mycenella bryophila* (Vogl.) Singer in Poland.

Mycenella margaritispora (J. E. Lange) Singer (Figs 4 & 5)

Sydowia **15**: 59. 1962(1961)

Mycena margaritispora J. E. Lange, Dansk. Bot. Arkiv. **1**(5): 37. 1914.

Mycena lasiosperma Bres. *sensu* Kühner, Genre *Mycena*: 612. 1938.

Basidiocarp small, solitary. Pileus 3–8 mm, broadly conical to campanulate, with minute umbo, striate, hygrophanous, surface dry, pruinose, then glabrous, brownish to dirty ochraceous with darker umbo and bright margin. Pallid when old, with ocher tint. Lamellae almost distant, narrow, adnate to free, whitish to whitish with yellowish tinge. Stipe 20–35 × 0.4–1 mm, almost filiform, base slightly rooting, minutely pubescent, pale brown, apex bright. Spores 5.4–7.7(–8.8) × 5.4–6.2 μm, globose to subglobose with low obtuse warts, thin-walled, hyaline, non-amyloid. Basidia 2-spored, 21.5–25.1 × 6.2–8.0 μm. Cheilo- and pleurocystidia abundant, 30.8–46.5 × 6.2–11.2 μm, lageniform or fusiform (sometimes with slightly thickened walls) with long neck, coralloid-branched at apices, rarely smooth, covered with granulose substance soluble in 5% KOH. Hyphae of pileipellis with short rod-like projections and numerous pileocystidia 21.5–45.0 × 3.1–6.2 μm, hyaline, cylindrical, with more or less branched (coralloid) or often smooth narrow apex. Hyphae of stiptipellis 4.6–6.2 μm wide, thin- and thick-walled. Caulocystidia small, 23.1–34.6 × 3.1–3.8 μm, straight or flexuous (Fig. 3) or longer (Fig. 4). Apparently the long and more projecting caulocystidia with incrusted apices were damaged while stored in a paper bag for years. Clamp connections present.

SPECIMENS EXAMINED. POLAND. POJEZIERZE LUBUSKIE LAKELAND, Bruzda Zbąszyńska furrow: Kręcki Łęg Reserve, *ca* 17 km E of Świebodzin, *Fraxino-Alnetum*, on base of alder (*Alnus incana*),

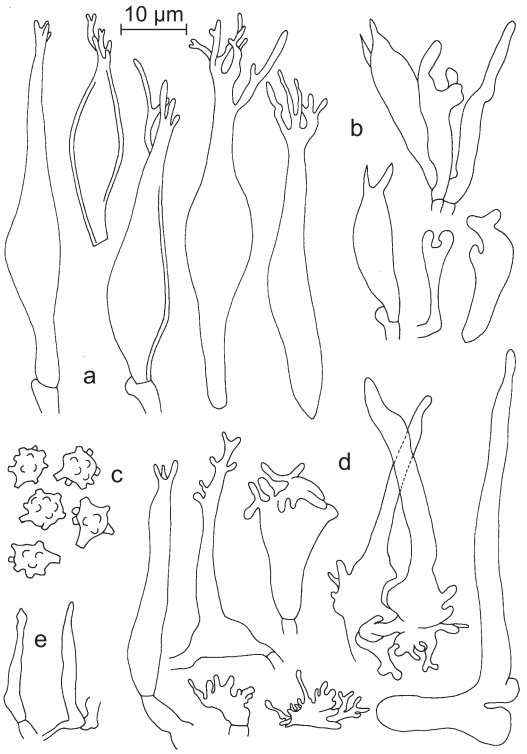

Fig. 4. *Mycenella margaritispora* (J. E. Lange) Singer (POZM *sine num.*, Dziewicza Góra hill, near Poznań, 15 July 1991, *leg. M. Borek*): a – cheilocystidia, b – basidia with basidiole or paraphyse, c – spores, d – pileocystidia and hyphae of pileipellis with excrescences, e – caulocystidia.

5 Oct. 2002, *leg. H. Komorowska* (KRAM-F 53950); POJEZIERZE WIELKOPOLSKO-KUJAWSKIE LAKELAND, Pojezierze Międzychodzko-Pniewskie lakeland: Buki Lutomskie Reserve *ca* 56 km SE of Gorzów Wielkopolski, *Fraxino-Alnetum* (formerly *Circaeo-Alnetum*), on fallen twigs of *Alnus glutinosa,* 14 July 1977, *leg. E. Drózd* (POZM); Poznański Przełom Warty gorge: Poznań, Dębina forest, *Galio sylvatici-Carpinetum betuli* (formerly *Galio-Carpinetum*), on rotten bark, 27 Oct. 1980, *leg. H. Płoskoń* (POZM); Pojezierze Gnieźnieńskie lakeland: Puszcza Zielonka Landscape Park near Poznań, Dziewicza Góra hill, *Astrantio-Fraxinetum*, on old mossy trunk, 15 July 1991, *leg. M. Borak* (POZM); Pojezierze Kujawskie lakeland: Izabelin, 6.5 km NE of Konin, transitional deciduous forest *Carici elongatae-Alnetum/Fraxino-Alnetum* (formerly *Carici elongatae-Alnetum/Circaeo-Alnetum*, first association now is divided into 2 parts), on piece of bark; on rotten leaves, 10 July 1985, on mossy stump of *Alnus*; on soil; on decayed leaves of herbs, 29 Aug. 1986, *leg. A. Zawadzka* (POZM); BRAMA KRAKOWSKA GATE: Kraków, room in building in Lubicz St., on wood leavings in a flower pot, 13 June 2002, *leg. U. Bielczyk* (KRAM-F 52263); KOTLINA SANDOMIERSKA BASIN, Nizina Nadwiślańska lowland: Puszcza Niepołomice forest, *ca* 25 km E of Kraków city, Chobot, forest tract no. 431, *Tilio cordatae-Carpinetum betuli* (formerly *Tilio-Carpinetum*), 27 Sept. 1982, *leg. H. Komorowska* (KRAM-F 26092, Komorowska 1991, without locality).

HABITAT AND DISTRIBUTION. Solitary, on rotten mossy stump, on litter, in riparian and hornbeam forest at natural sites; June–October; rare but more frequent than other species of *Mycenella*, few localities in Pojezierze Wielkopolsko-Kujawskie lakeland and Pojezierze Lubuskie lakeland, and two localities in S Poland. All localities hitherto unpublished (Fig. 6).

NOTES. Specimen KRAM-F 53950 (Fig. 7, right) differs from other specimens of *M. margaritispora* in having a larger basidiocarp, blue-green cap (10 mm) when fresh, pale, light grey when dry, stipe 45 mm long, entire with delicate yellowish hairs, especially distinct at apex (also in dried material). Cheilocystidia and pleurocystidia as the above-described specimens, but the caulocystidia, 30.6–61.2 × 6.1–9.2(–10.2) µm, which

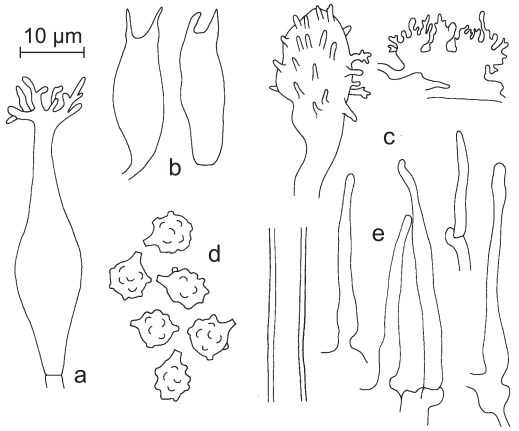

Fig. 5. *Mycenella margaritispora* (J. E. Lange) Singer (POZM *sine num.*, Pojezierze Poznańskie lakeland, Buki Lutomskie reserve, 14 July 1977, *leg. E. Drózd*): a – cheilocystidium, b – basidia, c – hyphae of pileipellis with excrescences, d – spores, e – hypha of cortical layer of stipe and caulocystidia.

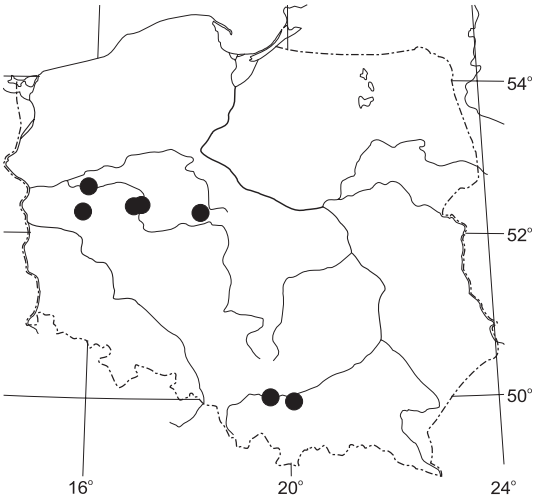

Fig. 6. Localities of *Mycenella margaritispora* (J. E. Lange) Singer in Poland.

have a branched apex with granular substance, are similar to the cheilocystidia. Basidia 4-spored (sometimes ?2-spored in the same specimen). It is probably *M. lasiosperma* (Bres.) Singer (see Courtecuisse 1985; Maas Geesteranus 1982a; Antonín & Vágner 1998), but as this taxon is not clear, further study of fresh collections or detailed analyses of many different herbarium collections are needed. Branched caulocystidia and glaucous (glaucous gray) pileus were described also by Smith (1947) in a description of *Mycena margaritispora*, but they were 2-spored.

Mycenella rubropunctata Boekhout (Fig. 8)

Persoonia **12**: 433. 1985.

Mycena bryophila Vogl. (4-spored) sensu Kühner, Genre *Mycena*: 614. 1938.

Pileus 5–25 mm, conical to convex, becoming expanded, with recurved margin, dark brown, paler towards margin, hygrophanous, translucently striate, finely pruinose, grey-brown on drying. Lamellae moderately close, ventricose, whitish to greyish yellow, with reddish spots when dried. Stipe 25–55 × 0.5–2 mm, cylindrical, somewhat flexuous, rooting, whitish at apex, brownish towards base, with reddish spots on upper part when dried. Spore print color unnoted. Spores 6.9–8.5 × 6.2–8.5 μm, subglobose to broadly ellipsoid, with low, obtuse warts, thin-walled, hyaline, non-amyloid. Basidia 4-spored, occasionally 2-spored,

Fig. 7. Dry specimens of *Mycenella bryophila* (KRAM-F 53949, left) and *Mycenella* ?*margaritispora* (KRAM-F 53950, right). Scale bar = 13 mm.

29.2–30.8 × 8.5 µm. Cheilocystidia 61.5–73.1 × 9.2–12.3 µm, fusiform with broad tapering neck with mucronate apex and incrustations soluble in 5% KOH, hyaline, sometimes slightly thick-walled, pleurocystidia similar. Hyphae of pileipellis with simple or branched coralloid excrescences, pileocystidia 52.3–61.5(–76.9) × 4.6–6.2 µm, cylindrical to narrowly conical. Hyphae of stiptipellis 3.1–5.4 µm wide, thin- and thick-walled with wart-like excrescences, caulocystidia 38.5–65.4 × 5.4–7.8 µm, cylindrical, sometimes thick-walled, and apices similar to those of cheilocystidia. Clamp connections present.

SPECIMENS EXAMINED. POLAND. POJEZIERZE LUBUSKIE LAKELAND, Lubuski Przełom Odry gorge: Owczary, *ca* 13.5 km S of Kostrzyn, *Violo odoratae-Ulmetum minoris* (formerly *Fraxino-Ulmetum*), on soil, 24 Aug. 1977, *leg. J. Hojka* (POZM); POJEZIERZE WIELKOPOLSKO-KUJAWSKIE LAKELAND, Pojezierze Gnieźnieńskie lakeland: Puszcza Zielonka Landscape Park, near Poznań, Dziewicza Góra hill, *Astrantio-Fraxinetum,* on twig, 23 June 1989, on soil, 24 Aug. 1990, *leg. M. Borak* (POZM); PRADOLINA TORUŃSKO-EBERSWALDZKA VALLEY, Kotlina Toruńska Basin: Toruń, grassy square near J. Sienkiewicz St., under *Betula* sp., 15 Oct. 1958, *leg. I. Hołownia* (TRN, Hołownia 1960, as *Mycena bryophila* Voglino).

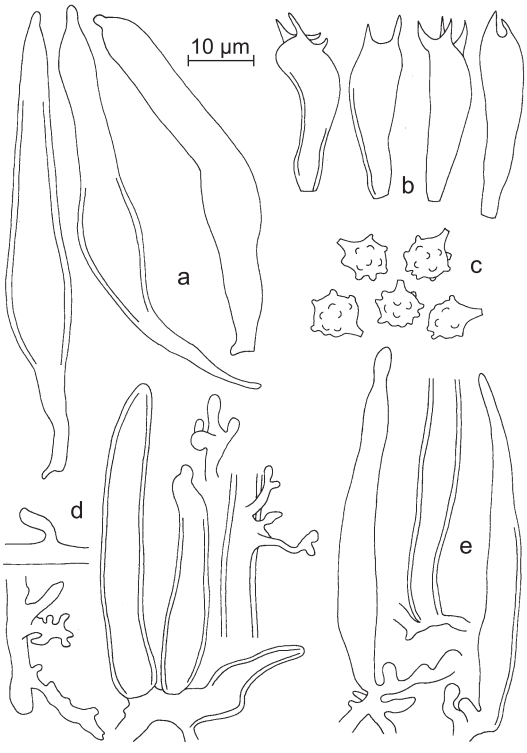

Fig. 8. *Mycenella rubropunctata* Boekhout (Toruń, 15 Oct. 1958, *leg. I. Hołownia*, TRN): a – cheilocystidia, b – basidia, c – spores, d – hyphae of cortical layer of stipe with excrescences and caulocystidia (three), e – pileocystidia.

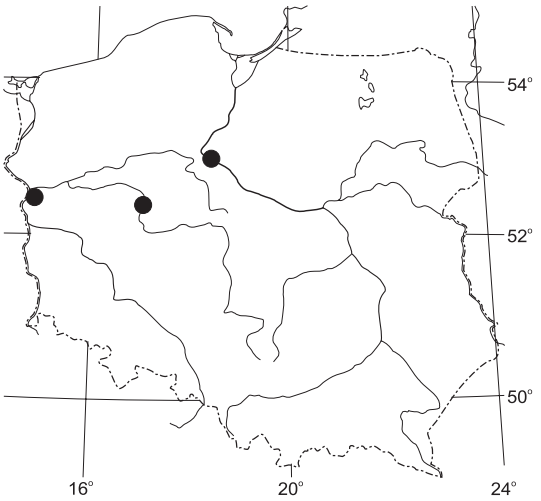

Fig. 9. Localities of *Mycenella rubropunctata* Boekhout in Poland.

HABITAT AND DISTRIBUTION. Solitary (once 2 basidiocarps fasciated), terrestrial, in riparian and hornbeam forest, once on grassy square under *Betula* sp.; June, August, October; rare, only on Pojezierze Lubuskie lakeland and Pojezierze Wielkopolskie lakeland in NW Poland. All localities hitherto unpublished (Fig. 9). Species new to Poland.

Mycenella salicina (Velen.) Singer
(Figs 10 & 11)

Lilloa **22**: 291. 1951(1949).

Mycena salicina Velen., České houby: 306. 1920, non *Mycena salicina* sensu J. Favre, Champ. Sup. Zone alpinie: 42. 1955 (= *Mycenella favreana* E. Horak).

Basidiocarps small, solitary. Pileus 12 mm in diameter, convex with papillate umbo, brown, umbo pale, margin greyish brown, translucently striate, as dray involute. Lamellae rather distant moderately ventricose, whitish, as dray yellowish

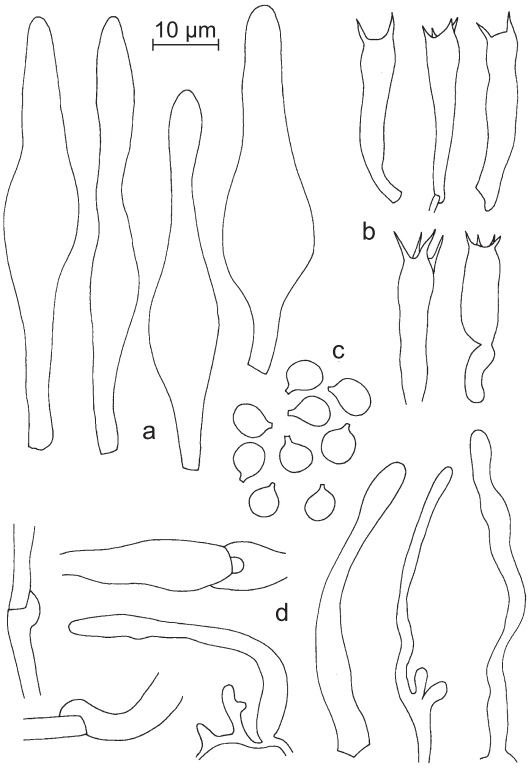

Fig. 10. *Mycenella salicina* (Velen.) Singer (KRAM-F 53948): a – cystidia, b – basidia, c – spores, d – hyphae of pileipellis and pileocystidia.

brown. Stipe 18 × 1 mm, cylindrical, base with pseudorrhiza, whitish, lower part pale brown, white pubescent throughout. Spore-print color not known. Spores 4.6–7.1 × 4.1–5.6 µm, globose with prominent apiculus, smooth, non-amyloid. Basidia 4-spored (occasionally ?2-spored in the same preparation) 23.7–32.6 × 3.1–5.1 µm. Cheilocystidia and pleurocystidia similar, long, slender, lageniform, ventricose-lageniform 50.2–78.6 × 8.6–15.6 µm, with 3–7 µm wide obtuse neck, rather thick-walled, apex with surrounding resinaceous substance, soluble in 5% KOH. Hyphae of cortical layer of pileus 2.6–4.2(–6) µm wide, repent, slightly gelatinized, some with coralloid excrescences, below with brown, olive-brown (in KOH) intracellular pigment. Scattered cylindrical pileocystidia, 45.5–55.2 × 3.5–5.2 µm, present. Hyphae of cortical layer of stipe 5.5–6.2 µm, hyphae of stipe context 12.6 µm wide, caulocystidia subcylindrical, often with coralloid excrescences at base, usually slightly longer and wider than pileocystidia.

SPECIMENS EXAMINED. POLAND. WESTERN CARPATHIANS, Pieniny Mts: Niedzica castle, *ca* 0.5 km SW of Niedzica castle, *ca* 600 m a.s.l., on soil among mosses, mixed forest, 28 July 2001, *leg. H. Komorowska* (KRAM-F 53948).

HABITAT AND DISTRIBUTION. Solitary, terrestrial, mixed forest, on soil (? piece of decayed wood) among mosses; July; very rare, known from only one locality in the Pieniny Mts in S Poland. Locality hitherto unpublished (Fig. 12). It is a new species in Poland. It was also reported from the Puszcza Niepołomicka forest (Wojewoda *et al.* 1999) but this specimen was misidentified and in fact represents *Hydropus floccipes* (Fr.) Singer.

NOTES. *M. salicina* is mistaken for other species. Emmett (1993) and Moreau *et al.* (1999) noted that *Hydropus floccipes* (Fr.) Singer might be determined in error as *Mycenella salicina* (Velen.) Singer. Several collections in K identified as the latter species are in fact *H. floccipes* (Emmett 1993). Both authors compare diagnostic characters, drawing microscopic elements of these spe-

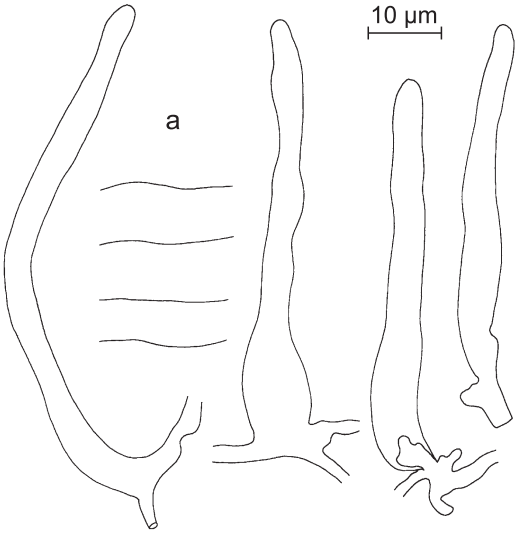

Fig. 11. *Mycenella salicina* (Velen.) Singer (KRAM-F 53948): a – caulocystidia and two hyphae of cortical layer of stipe.

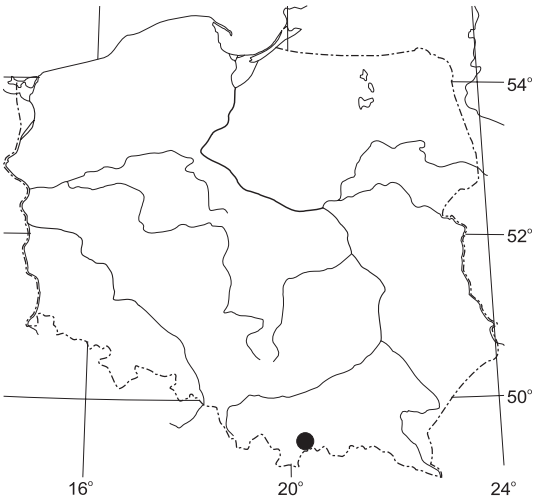

Fig. 12. Locality of *Mycenella salicina* (Velen.) Singer in Poland.

cies, and note that the error is understandable since the species have very similar inamyloid spores with a large apiculus and smooth cystidia.

Discussion

The examined material from Polish herbaria contains mostly unpublished collections. Several species of *Mycenella* reported from Poland in the regional list, without any information except the locality, have not survived or were not available as proper herbarium material and could not be examined: *Mycenella bryophila* (Vogl.) Singer – Bujakiewicz (1973); *Mycena margaritispora* J. E. Lange – Nespiak (1959); *Mycenella lasiosperma* (Bres.) Singer – Ławrynowicz (1973); and *Mycenella margaritispora* – Bujakiewicz (1979, 2001), Flisińska (1996), Nita and Bujakiewicz (2004). The stands for each species presented on the map of Poland are new and unpublished so far.

Four species of the genus *Mycenella* from Poland have been given here. Two of them, *M. rubropunctata* and *M. salicina*, are new to Poland. The situation in other European countries is similar; usually there are four to six species noted. All species are rare or very rare, reported from one or a few localities for each species. The majority of them are on European red lists.

We may presume that the genus *Mycenella* (J. E. Lange) Singer is represented by about eight species in Europe, but the type material of all species from Europe and America needs to be studied and compared. A modern European critical monograph of this genus is yet to be written.

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