NOTES ON HYGROPHORACEAE — XI
Observations on some species of Hygrocybe subgenus Cuphophyllus

Eef Arnolds

Biological Station, Wijster (Drente), Netherlands*

The nomenclature of the grey violaceous species of Hygrocybe subgenus Cuphophyllus and the taxonomic position of H. subradiata are discussed. One new species is described and one new combination is made, viz. Hygrocybe radiata and H. flavipes.

In Europe usually two species with a grey violaceous to lilac pileus are distinguished within Hygrocybe subgenus Cuphophyllus Donk (= Camarophyllus sensu auct.), named H. subviolacea (Peck) Orton & Watl. and H. lacmus (Schum.) Orton & Watl. The former species is characterized by an entirely white stipe and aromatic smell, whereas the latter species has a yellow base of stipe and no characteristic smell.

Recently, Raid & Boertmann (1988) demonstrated that the name Agaricus lacmus Schum. (1803: 333) has been currently misinterpreted since Schumacher did not mention a yellow base of stipe in the original description and an unpublished, authentic plate by that author shows an entirely white stipe. Consequently, Agaricus lacmus Schum. is an earlier synonym of Hygrophorus subviolaceus Peck (1900: 82) and H. lacmus sensu auct. (with a yellow stipe base) should have a new name.

According to Raid & Boertmann (1988) the oldest available name is Hygrophorus flavipes Britz. This epithet was not yet combined in Hygrocybe and therefore the following combination is proposed:

Hygrocybe flavipes (Britz.) Arnolds, comb. nov. — Basionym: Hygrophorus flavipes Britz., Hymenomyc. Südbayern 8: 10, fig. 69. 1891.

Some authors (Clémençon, 1982; Bon, 1984) distinguished two species with a yellow base of stipe, differing in spore size only: Camarophyllus lacmus sensu Clémençon with ellipsoid to lacrimiform spores of 6.5–8 × 4.5–6 μm, and C. flavipes sensu Clémençon with subglobose to broadly ellipsoid spores, 5–6 μm long. In my opinion this difference is too small to warrant a taxonomic distinction. Raid & Boertmann (l.c.) reported for Danish collections of H. flavipes an intermediate spore size: 6–6.5 × 5.5 μm.

The taxonomic status of a fourth taxon in this group, Hygrophorus alboviolaceus Arnolds ad int., was discussed in an earlier paper (Arnolds, 1986). It is a synonym of Hygrocybe lacmus.

* Comm. no. 368 of the Biological Station Dr. W. Beijerinck, Wijster, Netherlands.
Rald & Boertmann (1988) also showed that both the type description of Agaricus subradiatus Schumacher (1803) and Schumacher’s original, unpublished plate represent old basidiocarps of Hygrocybe virginia (= H. nivea). I agree with that view. Since the name was not sanctioned by Fries, it is reduced to a synonym of Hygrocybe virginia (Wulf.: Fr.) Orton & Watl.

Most other interpretations of H. subradiatus by European authors are identical with H. colemanianus Blox. in B. & Br. Clémençon (1982) united them into a single species, incorrectly named Camarophyllus subradiatus (Schum.) Wünsche.

However, in the Netherlands a fungus is known as Hygrocybe subradiata (Schum.) Orton & Watl., from only one locality, that is distinct from both H. colemaniana and another taxon with predominantly brown colours, H. virginia var. fuscescens (see notes following description). Since no name is available, it is necessary to describe it as a new species:

**Hygrocybe radiata** Arnolds, *spec. nov.* — Figs. 1–4


Pileus 15–25 mm, convex, then plano-convex to depressed, often umbonate, margin often crenulate, hygrophanous, when moist centre dark, slightly reddish brown (K. & W.* 6F7), rather sharply delimited, otherwise pale brown (6D5, 5C4), margin almost white, when moist dark brown translucently striate up to the centre, with dry, smooth or near centre slightly fibrillose surface, drying evenly pale greyish brown. Lamellae [L = 17–19, 1 = (0–1)–3] short-decurrent, very thick, distant, intervenose, pale brownish grey to whitish (6B2/C2). Stipe 27–40 × 2–5 mm, cylindrical, fistulose, whitish or pale brownish grey, sometimes with weak violaceous tinge (Methuen 5C2). Context rather firm, in the pileus up to 2 mm thick, brown; in the stipe concolorous with the surface. Smell and taste weak, not distinctive. Spore print ‘white’. Spores (6–)6.5–9 × 4.5–6 (–6.5) μm, Q = (1.2–)1.3–1.6, average Q = 1.4, ellipsoid, ovoid or tapering towards apiculus and ± lacrimiform, with large, obtuse apiculus, not constricted. Basidia 38–48 × 6–7.5 μm, Q = 5.5–8, slenderly clavate, 4-spored. Hymenial cystidia absent. Hymenophoral trama irregular, made up of cylindrical and slightly inflated elements, 60–130 × 7–15 μm. Pileipellis a poorly differentiated cutis, 15–20 μm thick, made up of repent, cylindrical hyphae, 2–4 μm wide, hyaline or with pale brown intracellular pigment; darker brown pigment situated in the upper layers of the pileitrama. Stipitipellis a poorly differentiated cutis, made up of repent hyphae, 2–5 μm wide. Clamps present.

**HABITAT & DISTRIBUTION.** — In the Netherlands very rare (Voorst) in an unfertilized grassland on dry, loamy, calcareous sand. October.


This species differs from *H. colemanniana* (Blox. in B. & Br.) Orton & Watl. in smaller basidiocarps (in *H. colemanniana* pileus (18–)25–65 mm wide, stipe (3–)5–10(–12) mm thick), pale pileus with striking dark brown striae (in *H. colemanniana* more evenly brown to reddish brown), the structure of the pileipellis (in *H. colemanniana* a thicker, gelatinized cutis to ixocutis, 30–110 μm thick), and possibly also in the presence of lacrimiform spores. Habit and colours are more similar to *H. virginea* var. *fuscescens* (Bres.) Arnolds, but in that taxon the pileus is predominantly whitish with a small, brownish dot at the centre, the spores are longer and predominantly ellipsoid-oblong, and the pileipellis is a gelatinized cutis to ixocutis.

REFERENCES


