

**HYGROCYPBE COMOSA,
A REMARKABLE NEW AGARIC FROM THE FRENCH JURA**

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A small brown *Hygrocybe* with a papillate pileus, growing among mosses in a peat bog in the Jura, is described as *Hygrocybe comosa*, spec. nov.

During a foray of the Netherlands Mycological Society in 1992 to the Fagne de Reculfoz, 22 km E of Champagnole, a small dark brown waxcap was collected among mosses in a peat bog. The collection was remarkable for the papillate pileus at the centre decorated by conical squamules in all basidiocarps. The exsiccata remained at the National Herbarium of the Netherlands, Leiden University branch (L) under the provisional name *Hygrocybe comosa*. Recent examination of the material convinced us that it represents an undescribed species indeed. In this paper we provide a Latin diagnosis and a full description.

Hygrocybe comosa Bas & Arnolds, *spec. nov.* — Plate 1, Figs. 1–3

Pileus 9–19 mm latus, conico-convexus, dein plano-convexus vel depressus, papilla centralis munitus, subhygrophanus, obscure purpureo-griseo-brunneus vel brunneus, dein violaceo-griseo-brunneus, substriatus, in sicco pallide brunneo-griseus, superficie sicca, subfibrillosa, centro squamulis conicis ornata. Lamellae (L = 15–17, l = (0–)1–3) subdecurrentes, distantes, crassae, lilacino-griseo-brunnae, margine pallido. Stipes 28–50 × 0.8–2.2 mm, subaequalis, fistulosus, albidus, apice pallide griseo-roseo-brunneus, siccus, glaber. Caro concolor, sine odore vel sapore.

Sporae (6.5–)7.0–9.0(–10.0) × (4.0–)4.5–6.0 μm, Q = 1.35–1.7(–1.75), Qav. = 1.5–1.55, ellipsoideae, ovoideae vel sublacrymiformes, raro subphaseoliformes, inamyloideae. Basidia 36–56 × (5.0–)6.0–7.0 μm, Q = 5.6–8.2, clavata, (2–)4-sporigera. Lamellarum acies fertilis, trama irregularis, hyphis subcylindricis, elementis 28–85 × 3.0–12 μm. Pileipellis cutiformis, hyphis 4–11 μm latis, ad centrum trichodermiformis, elementis 40–150 × 5.0–11 μm, pigmento intracellulari. Stipitipellis cutiformis, hyphis 2.0–5.0 μm latis. Fibulae frequentes. Inter muscis (Sphagna et Aulacomnium palustre) in paludis.

Holotypus: 'France, Jura, Mouthe, 'Fagne de Reculfoz', 22 km E of Champagnol, 3 Oct. 1992, M. Nauta & L. Jalink s.n.' (L 992.177.369).

Pileus 9–19 mm in diameter, first conico-convex, then plano-convex, always with small central papilla, finally slightly depressed around papilla, weakly hygrophanous, when moist dark greyish brown to sepia-brown with slight purplish tinge (Mu. 5 YR 2.5–3/2, 7.5 YR 3/2), in age slightly paler grey-brown with weak violaceous tinge (10 YR 4/3); at first not striate, then weakly translucent-striate up to 1/3 of the radius, on drying becoming pale brownish grey (10 YR 5/3) along radial streaks; surface dry, under lens subfibrillose, at centre with erect, conical squamules, concolorous with background. Lamellae, L = 15–17, l = (0–)1–3, short decurrent with straight or concave

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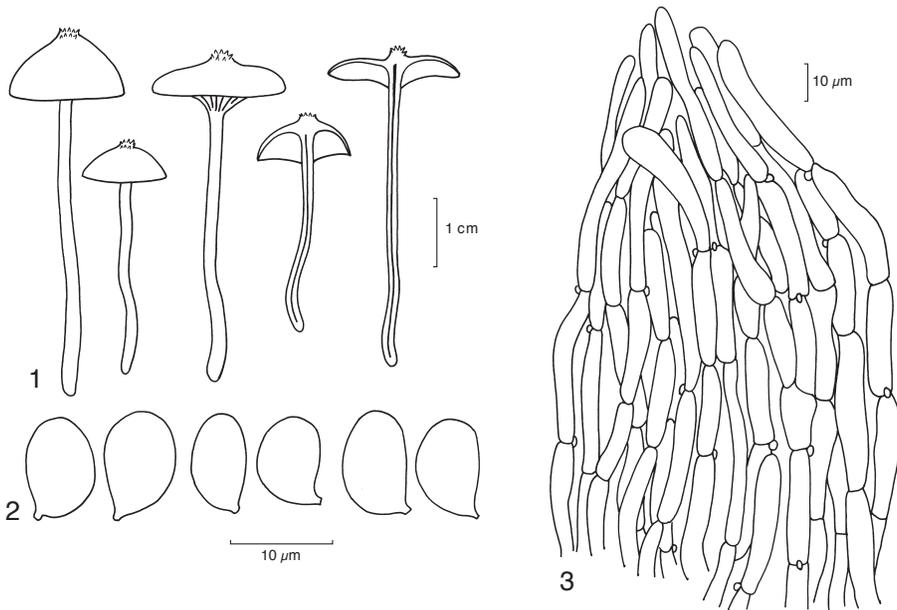
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Plate 1. *Hygrocybe comosa*. Holotype.

edge, intervenose, occasionally forked, distant, rather thick, 2.5–4 mm wide, lilacinous-brownish grey (5 YR 4–5/2), finally fading to lilaceous beige (7.5 YR 6/2 to 7/4) with paler margin (5 YR 6/2) and entire, concolorous edge. Stipe 28–50 × 0.8–2.2 mm, cylindrical or slightly tapering upwards or downwards, somewhat undulating, narrowly fistulose, at apex very pale greyish pinkish brown (slightly paler than 7.5 YR 6/4), downwards sordid whitish sometimes pale cream-coloured at base, dry, at apex subpruinose or almost glabrous. Context in pileus concolorous with surface, in stipe pale brown to pale pinkish brown. Smell not distinctive, taste mild. Spore print not obtained.

Spores [40/4] (6.5–)7.0–9.0(–10.0) × (4.0–)4.5–6.0 μm, Q = 1.35–1.7(–1.75), Qav. = 1.5–1.55, mainly ellipsoid to ovoid or sublacrymoid, some oblong, rarely slightly phaseoliform, with fairly small, blunt apiculus, colourless, inamyloid. Basidia [13/2] 36–56 × (5.0–)6.0–7.0 μm, Q = 5.6–8.2, slenderly clavate, mainly 4-spored, some 2-spored. Lamella edge fertile; hymenophoral cystidia absent. Hymenophoral trama irregular, made up of strongly interwoven, colourless, smooth hyphae with chains of rather short, often curved elements, 28–85 × 3.0–12 μm. Pileipellis near margin a cutis of repent hyphae, at centre with broad, conical, trichodermial tufts up to 2000 μm high, made up of erect hyphae, 4.0–11 μm wide, constricted at septa, with subcylindrical or slightly tapering terminal elements 40–150 × 5.0–11 μm, with smooth walls and pale brown intracellular pigment. Stipitipellis a cutis, made up of cylindrical hyphae, 2.0–5.0 μm wide, colourless and smooth, with some erect tips projecting up to 25 μm. Stipititrama subregular, made up of hyphae with short, cylindrical elements, 3.0–12 μm wide. Clamp-connections numerous in all parts of basidiocarp.



Figs. 1–3. *Hygrocybe comosa* (holotype). 1. Basidiocarps; 2. spores; 3. pileipellis at centre of pileus (scale).

Habitat & distribution — So far only known from the type locality in France (Jura). Apparently very rare.

Collection examined: France, Jura, Mouthe, Fagne de Reculfoz, 22 km E of Champagnol, 3 Oct. 1992, M. Nauta & L. Jalink s.n. (L 992.177.369).

Hygrocybe comosa is a characteristic member of the subgenus *Cuphophyllus* in view of the dull colours, decurrent lamellae and irregular hymenophoral trama. It seems to be closest related to *Hygrocybe cinerella* (Kühner) Arnolds, a species with basidiocarps of approximately the same size and similar dark colours. The size and shape of the spores are similar too. Moreover, *H. cinerella* is found in related habitats, viz. peat bogs and heathlands in arctic and boreal-alpine areas (Kühner, 1977; Boertmann, 1995). However, *H. comosa* differs markedly in 1) the pileus with a central papilla; 2) the pileus centre with large, conical squamules, a unique feature in *Cuphophyllus*, and the pileipellis being a trichodermium at the pileus centre; and 3) the strongly interwoven hymenophoral trama instead of an almost subregular trama in *H. cinerella* (Boertmann, 1995). The ratio between stipe and pileus may be an additional character. In our collection of *H. comosa* the stipe is 2.5–3 times as long as the pileus diameter, whereas in *H. cinerella* the stipe length is approximately equal to the pileus width (Boertmann, 1995). However, this difference may be accidental and caused by ecological conditions.

Hygrocybe radiata Arnolds is another related species. It differs also in the lack of a papilla and squamules in the pileus centre. In addition, the moist pileus is deeply translucent-striate and has a broad, paler marginal zone (Arnolds, 1989; Boertmann, 1995).

The slender habit of *H. comosa* may suggest affinity with the genus *Omphalina*. However, species of *Omphalina* differ, among other things, in thinner lamellae, less slender basidia and the presence of incrusting pigments in most species (Kuyper, 1995).

Hygrocybe comosa is probably a very rare species. The genus *Hygrocybe* has recently received much attention in Europe (e.g. Bon, 1988; Arnolds, 1990; Boertmann, 1995; Candusso, 1997), but apparently these authors did not know our species. In spite of its rather striking characters it was neither noticed by Favre (1948) during his extensive mycological explorations of peat bogs in the Swiss Jura. In view of its habitat it might have been more widespread in the past when peat bogs in that region were more numerous and in better condition. The station of this fungus, if still existing, deserves strict protection and *H. comosa* is, in our opinion, a good candidate for the forthcoming Red List of macrofungi in Europe.

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