

Cortinarius ulkhagarhiensis



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Cortinarius ulkhagarhiensis Dima, Semwal, V. Papp, Brandrud & V.K. Bhatt, *sp. nov.*

Etymology. The epithet refers to the type locality at Ulkhagarhi which is named after the temple of the goddess Ulkeshwari in Uttarakhand, India.

Classification — *Cortinariaceae*, *Agaricales*, *Agaricomycetes*.

Pileus up to 110 mm diam, plano-convex to applanate, slightly inflated at centre, surface glabrous, slimy when young, slightly bluish greyish when young, but soon becoming reddish golden to light brown (6C8–6D8); margin smooth, fairly undulate. *Lamellae* emarginate, crowded, greyish when young, later greyish orange (6B4), brownish orange (6C5) when mature, lamellulae present, of various lengths. *Stipe* 60–90 × 10–22 mm, prominently clavate at the base, bulb up to 30 mm wide, pale brown, becoming brownish orange to reddish orange (6D5, 6B7–7B7) with greyish lilac (15B4-3) tinge throughout the stipe, especially at apex. *Context* greyish to bluish lilac. *Odour* and *taste* not recorded. *Spore print* brown (8E8). *Basidiospores* (10.2–)10.6–11.3(–11.7) × (5.7–)5.9–6.6(–6.8) μm, *av.* = 10.97 × 6.2 μm, *Q* = (1.63–)1.71–1.83(–1.94), *Q_{av}* = 1.77, *n* = 50, amygdaloid, verrucose. *Basidia* 4-spored, 25–30 × 5–7 μm, clavate. *Pileipellis* more or less simplex (1-layered); rather weakly coloured in KOH. *Epicutis* at surface of narrow, 2–5 μm diam, loosely erect-entangled, gelatinous, pale yellow hyphae; below a few layers of slightly wider, 3–8 μm diam hyphae with slightly thickened yellow walls, a few with pale, weakly encrusted wall pigment; the basal part of epicutis of hyphae up to approx. 10 μm diam, with distinctly thickened, yellow walls, forming tightly cemented bundles which in surface view forms a zig-pattern.

Habitat & Distribution — Caespitose, occurring among leaf litter of *Quercus leucotrichophora*, on humicolous soil, in temperate broadleaved forests dominated by mainly *Q. leucotrichophora*, *Rhododendron arboreum*, and *Myrica esculenta*.

Typus. INDIA, Uttarakhand, Pauri Garhwal, Ulkhagarhi, 2025 m asl, N30°09'36" E78°50'53", 31 Aug. 2015, K.C. Semwal (holotype, KCS 2490; ITS and LSU sequences GenBank MT137517 and MT241838, MycoBank MB834804).

Notes — *Cortinarius ulkhagarhiensis* belongs to sect. *Phlegmacioides* based on both morphological and molecular (nrDNA ITS and LSU regions) data. Within the section it belongs to the *Idaulnoyae* clade, where it forms a close sister species of the European *C. caesiocolor*. They differ by 5 nucleotide and indel positions, and in morphological characters. The spores of *C. ulkhagarhiensis* are significantly larger than those of *C. caesiocolor* (*av.* 10.97 × 6.2 μm vs 9.85 × 5.8 μm, respectively), and they are also longer (*Q_{av}* = 1.77 vs 1.70). Macromorphologically they are rather similar, with e.g., bluish context. Another closely related species is the European *C. daulnoyae* (*syn.*: *C. chromataphilus* and *C. sabuletorum*) which has a strong earth-like smell, yellowing, never bluish context, and phylogenetically is more distant. Morphologically, other species in sect. *Phlegmacioides* might also resemble *C. ulkhagarhiensis*, but the ecology and ITS sequence data will be helpful in identification.

Colour illustrations. India, Uttarakhand, Pauri Garhwal, Ulkhagarhi, type locality. Spores and basidiomata (from KCS 2490, holotype). Scale bar = 10 μm (spores).

For phylogenetic tree see FP1071.

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