

BOLETUS ABIETICOLA *sp. nov.*

Pileus 9–13 cm latus, siccus, appresso-fibrillosus demum fibrilloso-squamosus, subroseus, maculis alutaceis vel flavis. Contextus albus vel subflavus, immutabilis vel raro caerulescens. Sapor et odor mitis. Tubuli 1–2 cm longi, flavi tactu caerulei; pori 1 mm lati, concolores, tactu caerulei. Stipes 9–13 cm longus, 4–5 cm crassus, clavatus vel subbulbosus, siccus, reticulatus, apice flavus, basi rubicosus. Sporae 14–17.5 X 4.5–5.5 μm , ellipsoideae vel subfusioideae vel subcylindricae. Cystidia 40–50 X 4–7 μm , cylindrica vel lageniformia vel subclavata vel subfusioidea. Cuticula intertexta. Holotypus (no. 38653) a Wm. Bridge Cooke lectus prope Mt. Shasta, Siskiyou County, August 8, 1967; in Herbarium San Francisco State University conservatus.

Pileus 9–13 cm broad when mature, convex when young, becoming plano-convex to plane at maturity; surface dry, appressed fibrillose, forming more or less imbricated fibrillose scales that remain readily apparent even when dried, occasionally almost white; color light rose with tan-colored spots interspersed and appearing yellow under the scales; margin incurved, entire. *Context* up to 2 cm thick, white to pale yellow, usually unchanging, occasionally slowly changing to blue in irregular areas when exposed. Taste mild, sweet; odor mild.

Tubes 1–2 cm in length, adnate to adnexed, shallowly depressed with age; yellow (“lemon yellow”) when young, darkening and with greenish tints when mature, changing to blue when bruised or exposed; *pores* up to 1 mm broad, angular, concolorous, changing to blue when bruised.

Stipe 9–12 cm long, 4–5 cm thick at the apex, 5–6 cm thick at widest point, clavate to subbulbous, solid; surface dry, strongly reticulate over all except basal portion; color yellow, reddish at base, reticulum yellow; *context* white except reddish at the base, unchanging when exposed.

Spore print color unknown. *Spores* 14–17.5 X 4.5–5.5 μm , pale ochraceous in KOH, ochraceous in Melzer’s, ellipsoid to subfusoid to subcylindric in face view, inequilateral and ventricose in profile, walls thin, smooth.

Basidia 22–27 X 8–10 μm , one-, two-, and four-spored, guttulate in KOH, clavate, hyaline; hymenium bright rust-red color in Melzer’s, hyaline with scattered yellow areas in KOH. *Hymenial cystidia* 40–50 X 4–7 μm , scattered to rare, inconspicuous, cylindric to pyriform to subclavate to subfusoid, hyaline in KOH and Melzer’s, thin-walled.

Tube trama strongly divergent, hyaline and gelatinous in KOH, hyphae 7–8 μm wide. *Pileus trama* interwoven, homogeneous, hyaline in KOH. *Pileus cuticle* a tangled trichodermium of hyphae with occasional erect hyphal tips, hyaline spiral incrustations on most hyphae, contents staining bright red to tawny in Melzer’s, hyphae 8–10 μm wide. *Stipe cuticle* composed largely of fertile basidia. *Clamp connections* absent.

Chemical reactions unknown.

Habit, habitat, and distribution Known only from the coniferous forests of higher elevations.

Material studied Siskiyou County: Cooke 38609, 38610, 38611, 38653 type.

Observations This species obviously belongs to the *Boletus appendiculatus*—*B. fechtneri* complex and has been alternately called one or the other of these for several years. The association with firs (*Abies*) has not been noted for either of the above species. The colors of the pileus, and especially the imbricated, fibrillose scales on the surface of *B. abieticola*, are distinctive; the spores are slightly larger than either *B. appendiculatus* or *B. fechtneri*, and the cystidia are differently shaped. The general arrangement of the spirally incrustated hyphae of the cuticle is also distinctive.

Edibility unknown.