

## A NEW BRITISH BOLETE

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ABSTRACT. A new species of *Leccinum*, *L. salicola* Watling, is described from the north of Scotland.

During an examination in Sutherland of the higher fungi associated with the dwarf willow, *Salix repens*, an undescribed member of the genus *Leccinum* was found in several widely scattered localities. The specimens were collected in many different places within the Torrisdale Bay—Farr Bay system east of Strathnaver, on many dates between early August and late September. Examination of dried material in the herbarium at the Royal Botanic Garden showed that a collection of an unnamed bolete made by Henderson in a similar plant community on North Uist belonged to this taxon.

### *Leccinum salicola* Watling, sp. nov. Fig. 1.

*Pileus* 40–80 mm, e convexo leviter expansus, cinnamomeus lateritio-tinctus dein cinnamomeo-bulbalinus vel hinnuleus, aridus, minute tomentosus, interdum squamulis obscurioribus adpressis minutis fibrillosis, tessellatus vel rimosus; cuticulus poros impediens velum inaequale 4–5 mm longum formans. *Stipes* 50–80 × 15–20 mm (basi 25 mm) pallidus, ad basim leviter incrassatus et tomentosus vel floccoso-lanatus, asper, squamulis obscurioribus decoratus, ad apicem laevior et interdum pallidior; squamulosae primo aliquantum brunneae, dein umbrinae vel nigrae. *Tubuli* 3–11 mm longi, adnati vel paene liberi, albidii dein languide vino-bubalini, secti pallide atroviolacei vel umbrinei, ad apicem stipitis reticulum distinctum non fabricantes. *Pori* concolores, minuti, pallidi senectute leviter ochracei contusi obscuriores. *Caro* concolor, albida, interdum in pileo et in apicem stipitis fumoso-tincta vel vino-tincta, dein atroviolacea, in cortice ad basim stipitis vel in basim stipitis caesia-variegata vel aeruginosa; odor gratus et sapor subnullus. *Sporae* subfusoideae, laeves, 18–19.5 × 5.5–6.5  $\mu$ m. *Cellulae* pilei filamentoso-cylindricae, 7.5–11.5  $\mu$ m diametro, brevae, pigmento vacuolis sordido-mellinus. *Basidia* tetrasporigera.

Typus. Scotland, Sutherland, Glaisgeo, 22 ix 1970, Watling 7362 (holo E).

*Pileus* 40–80 mm convex then expanded, in some specimens almost plano-convex, dry, minutely tomentose (swede-like) then smooth, soon cracked and deeply grooved, cinnamon then pale brick but soon losing reddish brown shades with age and finally tan or cinnamon buff; margin overhanging as distinct and prominent, deep brick-coloured skirt, white-cream within. *Stipe* 50–80 × 15–20 mm (25 mm at base) clavate, tough and fibrous, furrowed, pale tan beneath longitudinally arranged scales, or at base blue-green or blue beneath scales, roughened at apex with brown scales which darken to become black or dark umber, woolly scaly about centre with red brown scales which become reddish to rusty tawny floccose scales downwards, interconnected at base with dense fluffy rusty tawny fibrils whose

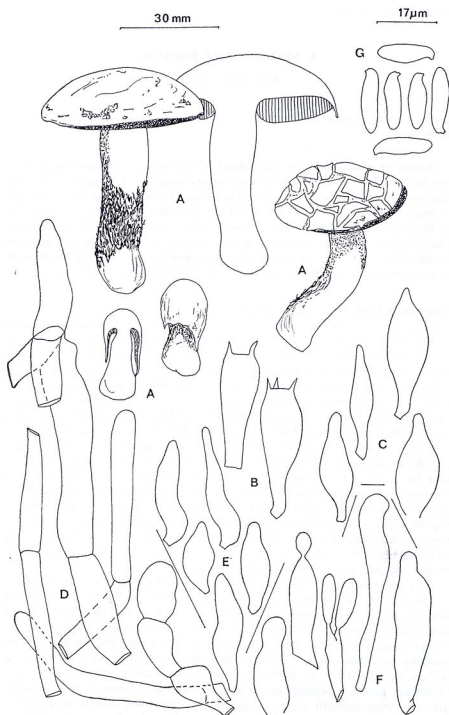


FIG. 1. Holotype of *Leccinum salicola*: A, habit sketch of mature and immature fruit-bodies, the latter with minutely and strongly cracked pilei; B, basidia; C, pleurocystidia; D, elements of pileal surface; E, cheilocystidia; F, caulocystidia, two forming aberrant 'spores'; G, basidiospores. Magnification as indicated.

colour is retained even into maturity. *Tubes* 3–11 mm, whitish or creamy then tinted vinaceous buff, finally brown; *pores* small, pallid or sepia then slightly ochreous, turning darker on handling. *Flesh* white, except for blue-green coloration at stipe-base, then darkening, slightly greyish or pale purplish or livid vinaceous at stipe-apex, finally blackish and/or flushed blue or bluish green about tube—pileus junction and at apex of stipe; *taste* and *smell* pleasant, not distinct. Melzer's reaction negative: KOH yellow in bluing areas, elsewhere brownish buff.

*Spore-print* ochraceous snuff-brown. *Basidiospores*  $18\text{--}19.5 \times 5.5\text{--}6.5 \mu\text{m}$ , narrowly subfusiform in side-view, elongate ellipsoid to fusoid in face-view, with a minute, pale area at apex, pale straw-colour in  $\text{NH}_4\text{OH}$ , dull honey in Melzer's reagent. *Pleurocystidia* scattered, fairly frequent towards mouth of tubes, absent at base of tubes, lageniform, obclavate to ventricose-rostrate, infrequently with subcapitate apex, neck  $2\text{--}3.5 \mu\text{m}$  broad, frequently less, body  $40\text{--}45 \times 9.5\text{--}11 \mu\text{m}$ , apex up to  $3.5 \mu\text{m}$  broad. *Cheilocystidia* variously shaped, some lageniform but more frequently elongate clavate to ventricose. *Pileal surface* an open tangled mass of smooth, slightly disarticulating, filamentous hyphae,  $7.5\text{--}15 \mu\text{m}$  broad, swollen particularly at septa and towards end-cells, filled in  $\text{NH}_4\text{OH}$  with fairly dull, yellow brown vacuolar sap,  $50\text{--}80 \mu\text{m}$  long, rarely less, clavate, rounded or drawn into a blunt apex in end-cells; this tangled mass seated on compacted layer of hyaline cells intermixed with coloured units, becoming loose and floccose towards the pileus-trama; in Melzer's reagent surface-hyphae orange-brown and compacted zone pale red-brown, darkening towards trama. *Stipe-surface* of parallel to subparallel, hyaline, filamentous hyphae  $6\text{--}7 \mu\text{m}$  broad, giving rise to bunches of hymenial elements, including functional basidia, intermixed with ampulliform, clavate, or lageniform caulocystidia ( $30\text{--}45 \times 5\text{--}10.5 \mu\text{m}$ ). *Pileus-trama* of hyaline, interwoven, floccose cells compacted towards the base of the hymenophoral tissue and lower pileal zone, and in the latter area individual hyphae dividing to form irregular short cells giving an isodiametric pattern; in Melzer's reagent entire zone red-brown. *Hymenophoral trama* of hyphae divergent from a darker, slightly gelatinised, floccose, central zone. *Clamp-connections* not seen.

Habitat with *Salix repens*. Northern Scotland and Ebudes.

Glaigseo, 22 ix 1970, Watling 7362 (type—E). Creagg Ruadh, Crask, Clerkhill & Glaigseo all near Bettyhill, Sutherland, viii–ix 1970, Watling 7363–7366 inclusive. N Uist, W of Hougharry, 7 viii 1969, D. M. Henderson.

Distinguished from all other members of the *L. aurantiacum* complex by the cinnamon to brick-coloured cap, coupled with the habitat, stature and pore colour when young. *L. salicola* is a small stocky bolete resembling *L. rotundifolia* (Singer) Smith, Thiers & Watling, more than the robust *L. versipellis* (Fr. & Hök.) Snell to which it is fairly closely related.

The pileus frequently cracks probably because of its development in exposed sites. The cracked pileus resembles that found in *Boletus edulis* (as *B. stellenbosiensis* v.d. Byl.—Pearson, 1950) from S Africa and *B. calopus* var. *frustosus* from NW America (Miller & Watling, 1960); such cracking is not considered taxonomically significant. With age the tangled hyphae of the pileal surface collapse and they adhere to each other forming the smooth surface typical of the mature specimens; the drying action of winds

induces the fracturing and separating of these outer hyphae exposing the lower compacted zone which gradually darkens. Because this bolete grows on cliff-tops protected only minimally by the surrounding low herbs and forbs fruit-bodies dry *in situ*; specimens were more frequently found dry and colonized by a member of the *Cladosporium herbarum* complex than located putrifying *in situ*.

## REFERENCES

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MILLER, O. K. & WATLING, R. (1968). The status of *Boletus calopus* Fr. in North America. *Notes R.B.G. Edinb.* 28: 317-325.