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Boletellus ripariellus, a hitherto misidentified species in Finland

HARRI HARMAJA

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Boletellus ripariellus (Redeuilh) Redeuilh is reported to be the correct name for the small red bolete which has been called *Xerocomus rubellus* (Krombh.) Quél. in Finland. It is uncertain whether the true *X. rubellus* occurs in the country.

Key words: *Boletellus*, Finland, taxonomy, *Xerocomus*

Harri Harmaja, Botanical Museum, Finnish Museum of Natural History, P.O. Box 47, FIN-00014 University of Helsinki, Finland

Boletellus ripariellus (Redeuilh) Redeuilh

Xerocomus ripariellus Redeuilh, Documents Mycologiques 27(104):30. 1997. – *Boletellus ripariellus* (Redeuilh) Redeuilh, Documents Mycologiques 27(106):54. 1997. – Type (PC) from near Paris, France.

Coloured illustrations: M. Korhonen 1992: Sienilehti 44(4):cover. – This paper: Fig. 1.

Pileus 1–7 cm broad, convex to plane, at first bright red, the colour changing (first in the centre) to brown in age, but red areas often persisting, especially towards margin; surface dry, very slightly tomentose, usually soon distinctly cracking with the centre mostly remaining unbroken. *Stipe* ca. 2–5 × 0.5–1.5 cm, red as pileus (the apex may be paler or even yellowish), in age often getting ± brown but the red may persist even in the dried condition, ± cylindric, solid, without annulus; surface dry, smooth and glabrous. *Hymenophore* not decurrent, fairly bright yellow, strongly blueing on touch. *Context* yellowish white, strongly blueing on touch. *Odour* not distinct. *Taste* mild. *Spores* (Figs. 2–4) 10.0–15.0 × 4.0–6.0 µm, ± boletoid in shape, medium brown in Melzer's reagent; surface faintly striate longitudinally, with very low partly ramose ridges; distal apex specialized perhaps in all spores (though to a variable degree): inner thick coloured wall layer being ± truncate with the thin hyaline outer layer forming a tiny apiculus.

Ecology. Occurs in ± rich forests (mixed deciduous and coniferous, or deciduous, including alder thickets on lake shores and seashores), pastures, parks, yards, and meadows; when in forest the site may be in natural condition but human influence is preferred (pathsides, tracksides etc.); apparently favouring nitrogen-rich soils (e.g., *Alnus glutinosa* or *A. incana* often and *Urtica dioeca* sometimes present); *Betula* (esp. *pendula*) probably always present nearby (the host tree of an ectotrophic mycorrhiza?). Fruiting period narrow, from mid-July to mid-September (mainly in August).

Distribution. Uncommon in southern Finland; hemiboreal and southern boreal zones.

Selected specimens examined (H): **Finland**. Varsinais-Suomi: Lohja, 1961 *Harmaja* (2 places). Uusimaa: Espoo, 1984 *Korhonen 5945*; Hanko, 1966 *I. & H. Luther*; Helsinki, 1948 *Tuomikoski*, 1958 *Malmström*, 1970 *Manninen*, 1977 *Skytén 1310*, 1978 *Saarenoksa 15178*; Kauniainen, 1953 *Nyberg*; Nurmijärvi, 1982 *Askola 1073*; Orimattila, 1985 *Haikonen 6072*; Porvoo rural commune, 1927 *Nyberg*; Tammisaari, 1957 *v. Schulmann*; Tuusula, 1981 *Olanen & Harmaja*; Vantaa, 1986 *Saarenoksa 14486*. Etelä-Häme: Hollola, 1967 *Harmaja & Kärki*; Hämeenkoski, 1986 *Niini*; Lahti, 1960 *v. Bonsdorff*; Lammi, 1968 & 1986 *Harmaja*;

Fig. 1. *Boletellus riparielus in situ* (Finland, Uusimaa, Espoo, Tapiola, 29.VII.1984 *Korhonen 5945*; H). Photo: Mauri Korhonen.

Fig. 2. *Boletellus riparielus*, spores under SEM × 5000 (Finland, Etelä-Häme, Lammi, Biological Station, 9.IX.1968 *Harmaja*; H). Photo: Tuuli Timonen. – Bar = 5 µm.

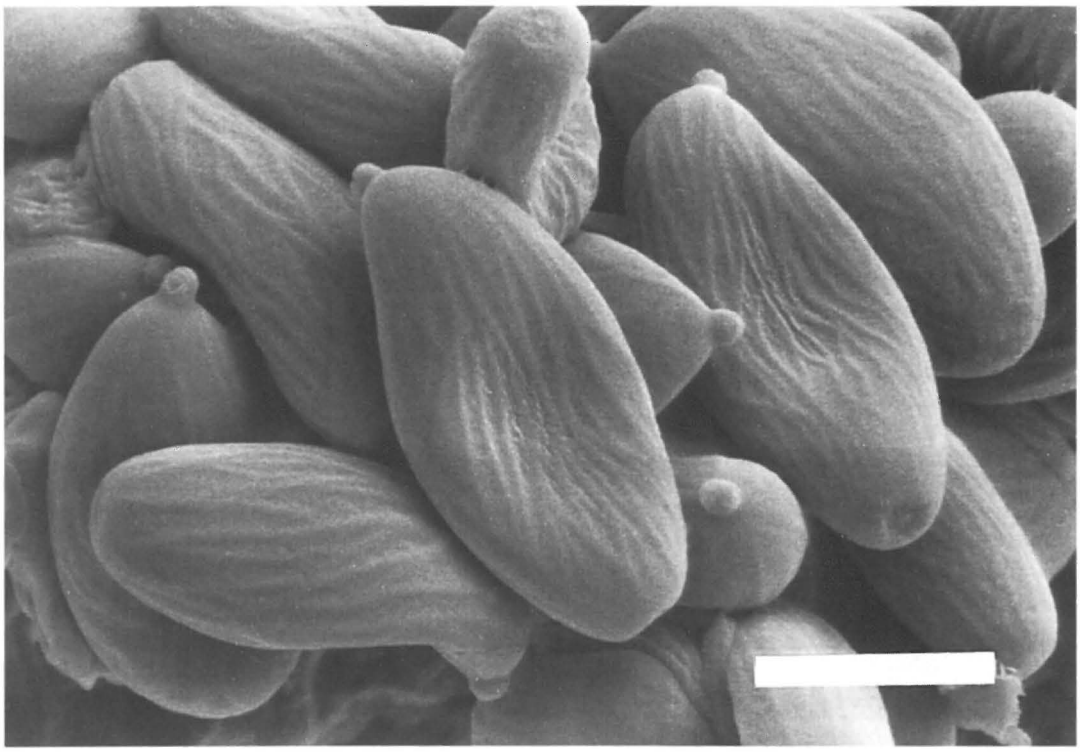

Fig. 3. *Boletellus ripariellus*, spores under SEM × 5000 (specimen as in Fig. 2). Photo: Tuuli Timonen. – Bar = 5 µm.

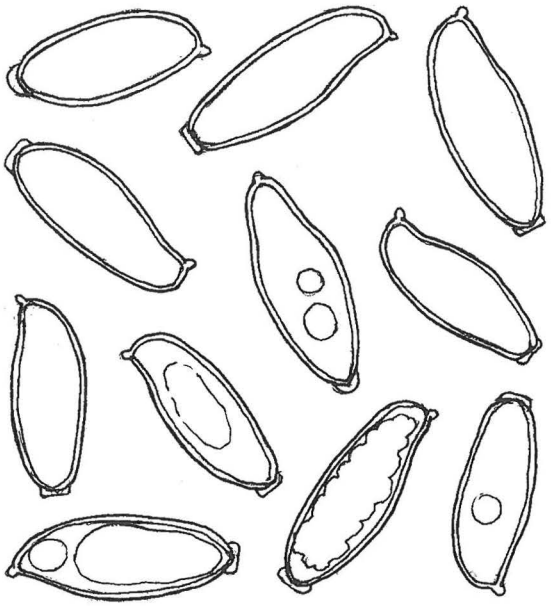

Fig. 4. *Boletellus ripariellus*, spores × 2000 (specimen as in Fig. 1).

Lempäälä, 1985 *Salo 31*; Pälkäne, 1993 *Kytövuori 93–290*. Etelä-Savo: Taipalsaari, 1971 *Vitikainen 7381*. Laatokan Karjala: Parikkala, 1955 *v. Schulmann*. Pohjois-Häme: Virrat, 1990 *L. & I. Kytövuori 90–104*. Pohjois-Karjala: Juankoski, 1985 *Kytövuori 85457*.

Discussion

In the 1970's I examined the spores of various basidiomycetes in heated cotton blue, which had proved to be very valuable in studying the spores and taxonomy of the Pezizales. The spores of what was considered *Xerocomus (Boletus) rubellus* (Krombh.) Quél. surprisingly turned out to possess a specialized ("truncate") apex and a very weakly striate surface. These features were only discernible on a very careful observation, both in cotton blue and Melzer mounts (the ripe spore wall is cyanophobic), under great magnification. *X. rubellus*, however, should have totally smooth spores with unspecialized obtuse distal apices. This was true as I

could confirm on checking some specimens of the true *X. rubellus* from Central Europe.

As there seemed to exist some macroscopic and ecological differences in addition, it appeared that this Finnish bolete is specifically different from the true *X. rubellus*, maybe even an undescribed species. However, I then left this problem unsolved. Later, Kosonen (1984, on macroscopic grounds) and Dr. Seppo Huhtinen (because of spores: personal communication) arrived at the same conclusion.

Until now this beautiful bolete has been taken as *X. rubellus* according to the most important literature concerning Finland (e.g., Kallio & Heikkilä 1978, Hansen & Knudsen 1992). A few herbarium specimens have been labelled as *X. chrysenteron* (Bull.) Quél. Engel et al. (1996) do not know this fungus but through Mr. Lasse Kosonen's communication on deviating Finnish *X. "rubellus"* (see above). Quite recently, the species at last got a name of its own when it was described as new: *Boletellus riparіellus* (Redeuilh) Redeuilh (Redeuilh 1997a and 1997b). However, it is not impossible that the species has already been named earlier, but type studies on old names have proved very difficult.

The main diagnostic characters of *B. riparіellus* are: 1) fruit body small and slender, 2) cap bright red at first, the pigment disintegrating totally or partly into brown in age, 3) the coloured cap surface cracking partly (at times throughout) in age, revealing the pale flesh, 4) hymenophore and flesh strongly blueing on tough, 5) the surface of the spores is very weakly but constantly striate and the distal spore end is specialized (at least in some proportion of spores markedly so; see above), 6) habitat ecology (see above).

B. riparіellus is known at present from a very few places in Central Europe (Redeuilh 1998), but from several localities in Finland. Otherwise its distribution is not yet known because of the confusion with *X. rubellus* stated above. The species is no doubt indigenous in woods with *Alnus* and *Betula* in shores of lakes, brooks and the Baltic Sea, but it has readily invaded human-influenced and even man-made habitats (such as yards and parks with well-cared lawns) as well. In the original description (Redeuilh 1997a) the species was found on shore (hence *"riparіellus"*) under *Quercus* and *Salix*. It is uncertain whether the true *X. rubellus* occurs in Finland. According to Dr. Seppo Huhtinen (pers. comm.) one specimen from SW part of the country might belong to that species.

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