

Butyriboletus parachinarenensis



Fungal Planet 1229 – 13 July 2021

Butyriboletus parachinarensis Naseer, Davoodian & Khalid, *sp. nov.*

Etymology. Named for its type locality, Parachinar (Pakistan).

Classification — *Boletaceae*, *Boletales*, *Agaricomycetes*.

Pileus 9.7–10.5 cm broad, convex to plano-convex, pale brown with small dark brown patches, surface dry and glabrous, margin entire. *Context* pale yellow, firm. *Hymenophore* pale to bright yellow, dark yellow at maturity, pore surface more or less concolorous with the tubes, turning dark blue quickly when bruised. *Stipe* about 7.5 cm in length, 3.5 cm at base, tapering upward to 2.2 cm thick at apex, subclavate to clavate, creamy yellow, reticulated, reticulation brown over most of the upper half, reticulated areas around base and apex with red or yellow colouration. *Basidiospores* 10.3–13.9 × 4.7–5.5(–5.9) μm, av. = 11.9 × 5.1 μm, Q = 1.7–2.8, Qav = 2.4, fusoid, thin-walled, smooth, pale brown or yellowish in 5 % KOH, dark olive brown in mass. *Basidia* 24.9–39.4 × 10.3–13.8 μm, av. = 32.8 × 11.8 μm, clavate to broadly clavate, thick-walled, four-spored, densely guttulate, hyaline in 5 % KOH. *Cheilocystidia* 10.9–60.3 × 5.9–11.3 μm, av. = 31.1 × 7.7 μm, lageniform, thin-walled, hyaline in 5 % KOH. *Pileipellis* an interwoven trichodermium, elements 2.5–4.6 μm diam, av. = 3.4 μm, septate, branched, thin-walled, hyaline in 5 % KOH. *Clamp connections* absent.

Habitat & Distribution — Currently known only from the type locality, in association with *Quercus baloot* (*Fagaceae*).

Typus. PAKISTAN, Khyber Pakhtunkhwa Province, Kurram District, Parachinar, 22 Aug. 2019, A. Naseer AS-PC43 (holotype LAH 36760, partial LSU and ITS sequences GenBank MT825244 and MT825245, MycoBank MB 839366).

Notes — *Butyriboletus parachinarensis* is distinguished based on morphology and the distinctness of partial ITS and LSU sequences. *Butyriboletus sanicibus* from China is similar based on BLAST comparison of our partial ITS sequence (97.04 % identity) but is known to have a larger pileus with an incurved margin and a pore surface that is slightly greenish with age (Arora & Frank 2014). Furthermore, *B. sanicibus* has subfusoid basidiospores with an average Q value of 2.8 while *B. parachinarensis* has fusoid basidiospores with an average Q value of 2.4. *Butyriboletus yicibus* from China is similar based on BLAST comparison of our partial LSU sequence (97.24 % identity) but can be distinguished from *B. parachinarensis* by its more gracile stature and tendency to stain blue-grey rather than blue when bruised (Arora & Frank 2014). *Butyriboletus yicibus* can have a longer stipe (up to 15 cm) than *B. parachinarensis*.

Colour illustrations. Stands of *Quercus baloot* around Parachinar. Holotype (AS-PC43); basidiome, top view; basidiome, side view showing hymenophore bruising blue; basidium; spore. Scale bars = 1 cm (basidiomes), 5.2 μm (basidium), 1.65 μm (spore).

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