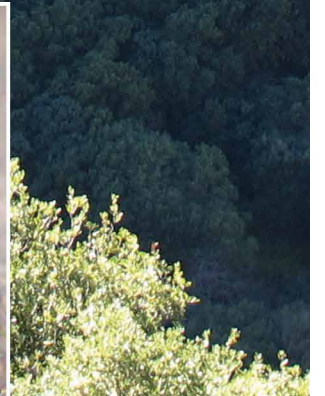
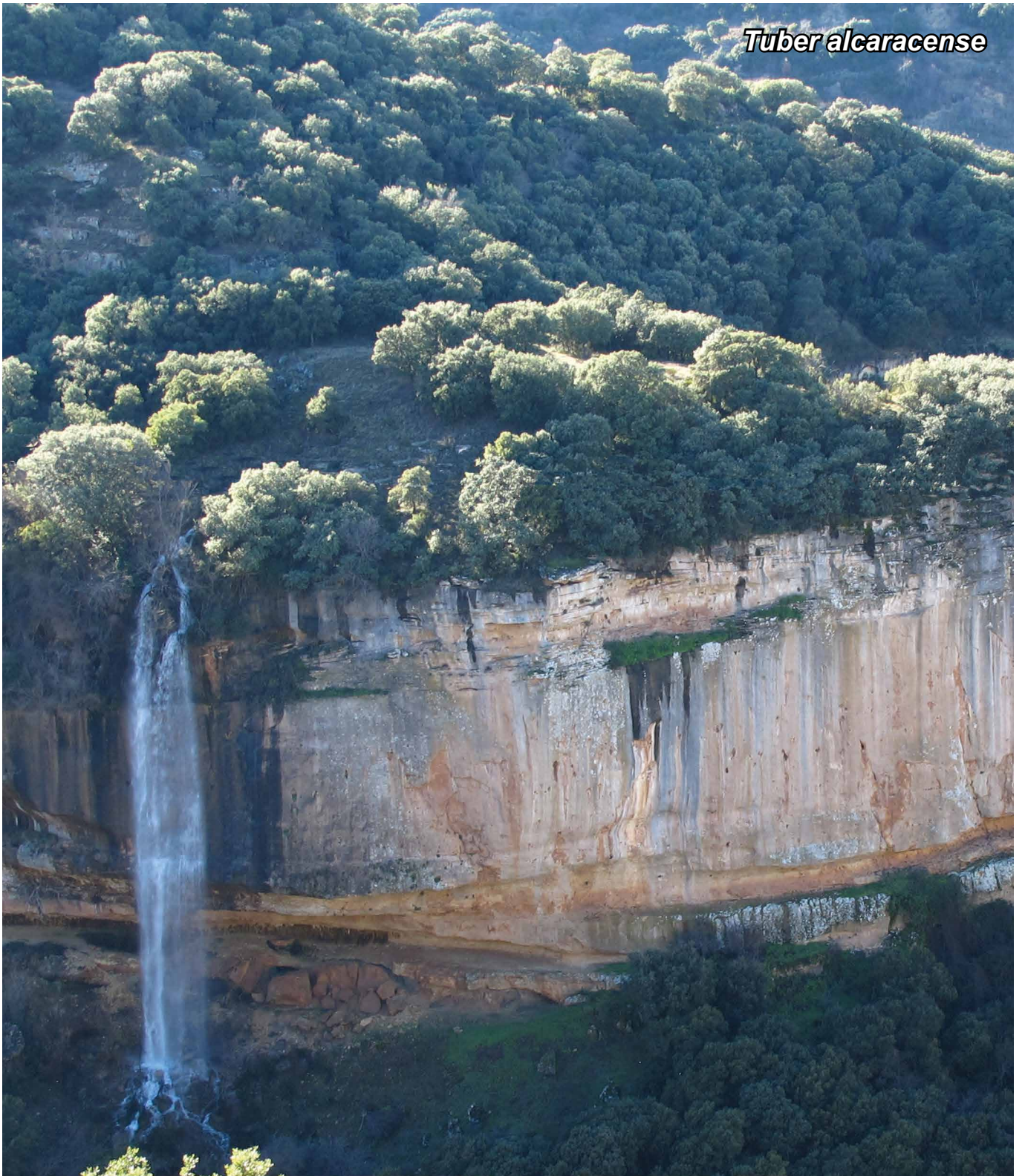


*Tuber alcaracense*



Fungal Planet 1107 – 29 June 2020

***Tuber alcaracense* Ant. Rodr. & Morte, sp. nov.**

*Etymology.* Referring to Alcaraz mountain range, where the type specimen was collected.

*Classification* — *Tuberaceae*, *Pezizales*, *Pezizomycetes*.

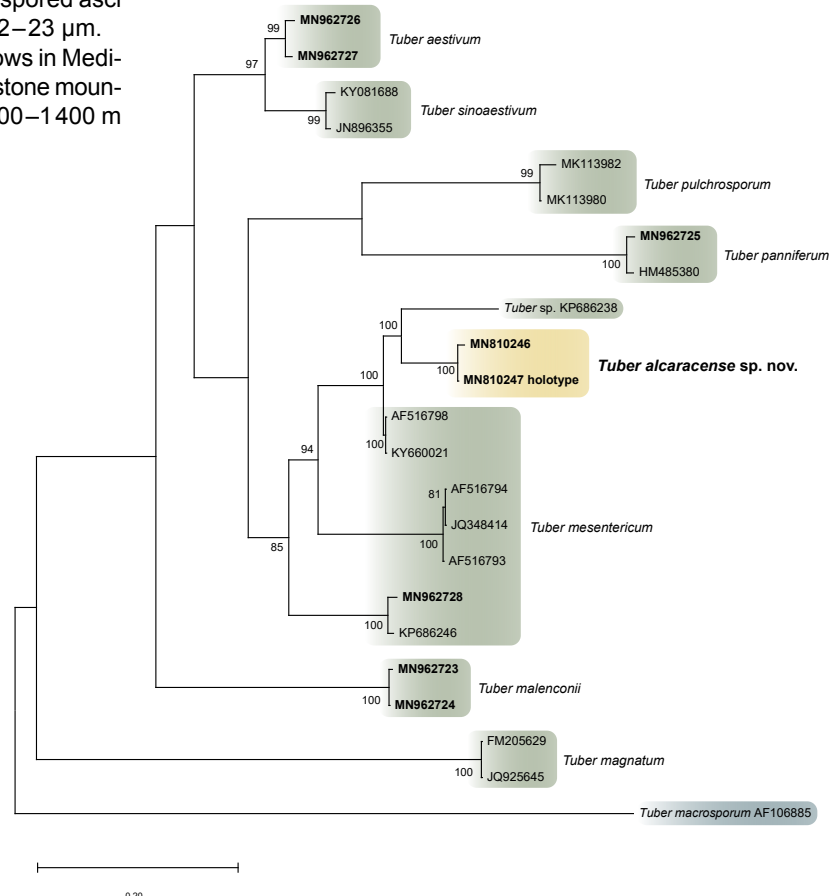
*Ascomata* hypogeous, 1–4 cm, subglobose, covered with brown-black pyramidal warts, 4–6-sided, 2–3(–4) mm across, 1–4 mm high, often depressed at the apex. *Peridium* 150–250 µm thick, pseudoparenchymatous, composed of subglobose, angular cells, 10–20 µm diam, pale yellow and thin-walled in the innermost layers, dark red-brown and with thicker walls in the outermost layers. *Gleba* firm, solid, white when immature, becoming dark brown at maturity, marbled with numerous, thin, white, meandering veins that do not change colour when exposed to the air. *Pleasant odour*. *Asci* inamyloid, 60–90 × 50–75 µm, walls thickened, 1–2 µm, ellipsoid to subglobose, with a short stalk, 10–35 × 5–7 µm, (1–)3–4(–5)-spored. *Ascospores* 26–47 × 22–37 µm, Q = 1.1–1.4, excluding ornamentation, yellowish, ellipsoid to subglobose, ornamented with a coarse irregular reticulum, 3–5 µm high, sometimes bending at the top. Meshes variable, usually 3–5 across width of spore and often with incomplete secondary crests inside. *Ascospores* from 1-spored asci 45–47 × 35–37 µm, 2-spored asci 38–41 × 30–35 µm, 3-spored asci 32–35 × 25–30 µm, 4-spored asci 28–33 × 23–27 µm and 5-spored asci 26–30 × 22–23 µm.

*Ecology & Distribution* — *Tuber alcaracense* grows in Mediterranean *Quercus ilex* subsp. *ballota* forest, in limestone mountains of the southeast of the Iberian Peninsula, 1 000–1 400 m alt., from December to February.

*Typus.* SPAIN, Albacete, Peñascosa, in calcareous soil, in *Quercus ilex* subsp. *ballota* (*Fagaceae*) forest, 15 Feb. 2017, A. Rodríguez (holotype MUB Fung-971; ITS and LSU sequences GenBank MN810047 and MN953777, MycoBank MB833685).

*Additional material examined.* SPAIN, Albacete, Vianos, in *Quercus ilex* subsp. *ballota* forest, 11 Jan. 2015, A. Rodríguez, MUB Fung-928; ITS sequence GenBank MN810046.

*Notes* — *Tuber alcaracense* is a black truffle of the aestivum clade characterised by its brown-black warty peridium, brown gleba marbled with thin white veins and reticulate-alveolate spores. It resembles *Tuber mesentericum*, but in addition to genetic differences it differs from *T. mesentericum* (Vittadini 1831) by having a pleasant odour and lacking a basal cavity.



*Colour illustrations.* Spain, Alcaraz mountain range (Albacete), Mediterranean *Quercus ilex* subsp. *ballota* forest. Ascocarps; mature ascospores. Scale bar = 20 µm.

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