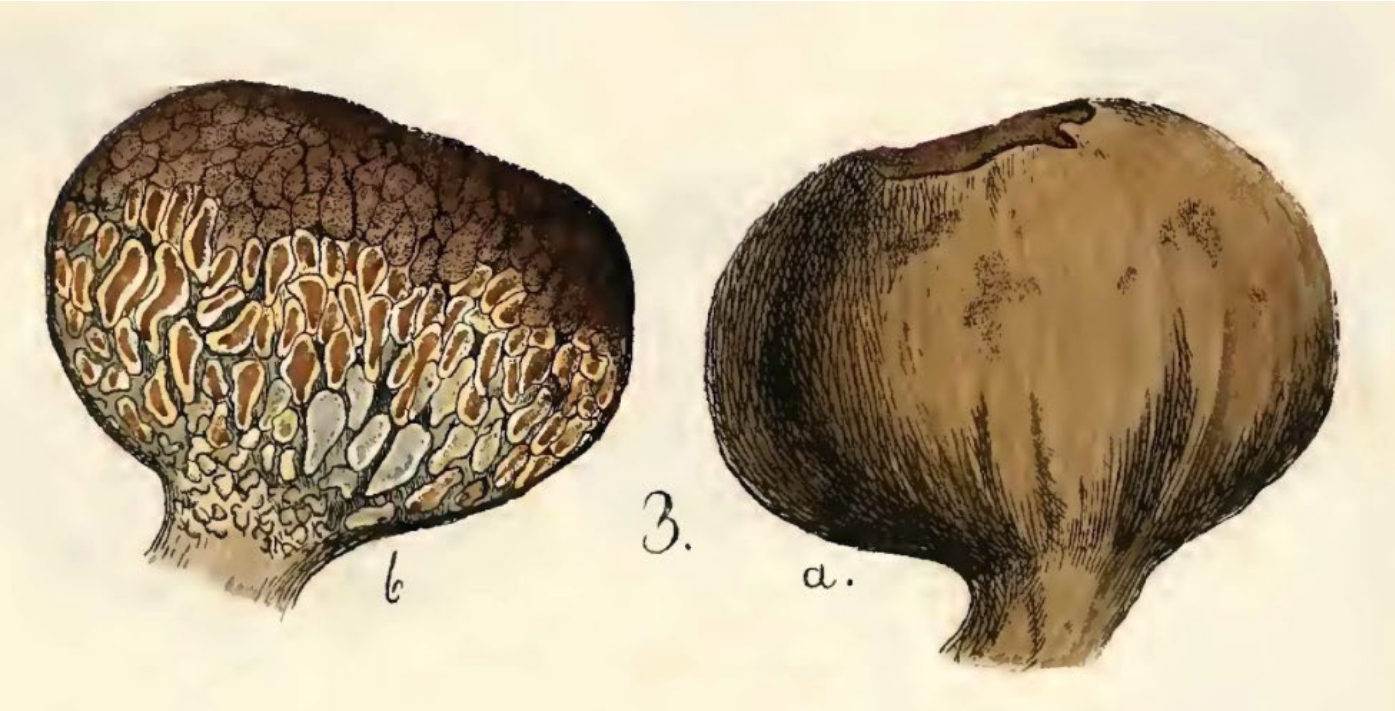
Pisolithus arenarius Alb. & Schwein.



Albertini & Schweiniz (1805) Conspectus fungorum in Lusatiae Superioris agro Niskiensi crescentium. Leipzig.

Pisolithus arenarius is a medium to large-sized species, with a brittle, smooth, pale yellowish to brown peridium, short pseudostipe with yellowish rhizomorphs, peridioles covered by a layer of yellowish hyphae, and spores that are brown-rust coloured. When not fully mature, it often exhibits dark, tar-like patches all throughout the outer side of the peridium, as well as in the pseudostipe surface. It has been found in Africa, America, Asia and Europe, but not in Oceania (UNITE SH0820236.10FU). It is most often associated with *Pinus* and *Quercus*.

Original description:
Scleroderma arrhizum Synops. I. p. 162??
The description does not appear sufficiently adequate: it is indeed excessively succinct, to such a degree that, having vainly attempted to grasp the inventor's illustration and explanation, we are unable to judge whether our species is one and the same as the Scopolian one, or not. Be that as it may, we are confident that no one will easily refuse our fungus its own genus, to which—besides the cited synonym—*Scleroderma tinctorium* Synops. I. cit. will perhaps also have to be added; from it we have taken the name, as the ruptured common peridium immediately recalls the well-known stone that grows near the Carlsbad hot springs and is commonly called *Pisolithus*. The stipe is ½–1 inch long, ¼–¾ inch thick, tapering slightly toward the base, firmly embedded in the soil, with a bitten-off base, emitting few scattered thin yellowish rootlets, sometimes scarcely any; internally filled with a substance more dilute in colour than the common one, bearing immature fungal bodies in upward cellular cavities—expanding into an almost spherical common peridium, more rarely somewhat ovoid, 1½–4 inches in diameter, with a surface of nearly equal texture, only lightly pitted here and there; its cortex is smooth, dull, relatively thin, rigid, brittle, dirtily ferruginous, then becoming paler. The substance is corky-fibrous, evidently woven from somewhat long filaments, when fresh brownish-green, moist, imbued with an aqueous latex as if squeezed from a sponge, when dried becoming blackish and compacted into a fairly firm mass, then exhibiting lamellar walls everywhere between neighbouring cells. The entire structure undoubtedly bristles with countless cells of varying sizes and shapes; each of which loosely harbours a single peridiole, such that these can easily be stripped out, and the cells themselves then observed empty. These peridioles are at first minute, very soft, pulpy, uniformly bright yellow externally and internally; gradually thereafter they grow into a mostly ovate-oblong form, variously compressed due

to their tight position, with a short-piled thin whitish or yellowish-sulphurous cortex (seemingly from glued substance filaments), which retains its colour even when dried—with a fleshy succulent whitish medulla that soon becomes brownish, and at the same time quickly dries out and disintegrates into a clayey-ferruginous powder mixed with few filaments. All these features succeed one another so rapidly that, upon vertically sectioning the fungus, one often finds the uppermost peridioles full of powder, the middle ones still succulent, and the lowermost and lateral ones small and purely pulpy, allowing the entire species history to be surveyed in a single glance. The central fungal bodies moreover are larger, 3–4 lines long, 1–2 lines wide; toward the margin gradually smaller; yet not to be called minute, provided they are mature. Finally, with the common cortex variously cracked and the peridioles lying against the wound simultaneously injured, the powder is freed from its prison and widely dispersed. It grows along roadsides, field margins etc., here and there in sunny sandy places, not uncommonly, from June until November.

Key requirements:
Ideally, the reference specimen for *Pisolithus arenarius* should be collected around the town of Niesky, the district of Görlitz, or the Saxony Region (Upper Lusatia); however, collections from the nearby areas will be very well received. We need a well documented collection, with pictures of the outside of the specimen as well as the longitudinally cut basidiome, and a good habitat description with at least potential hosts identified (*Quercus*, *Pinus*, others) and coordinates.

Mauro Rivas-Ferreiro

Specimen MRF678, collected and photographed by O. Requejo and identified by M. Rivas-Ferreiro; GenBank Accession Number OR045868 (as P. tinctorius)