

the distinctive reactions of subcutis, context, and especially subgleba in KOH. The lateral stipe attachment is novel for *Gastroboletus* or the Boletaceae. For this very reason, more collections are needed to confirm the constancy of this feature.

6. ***Gastroboletus amyloideus* Thiers, sp. nov.**

Pileus 40–80 mm latus; peridium siccum, glabrum vel subtomentosum, luteum vel rubellum; gleba tubulosa, lutea; sporae $13.5\text{--}18 \times 6\text{--}7 \mu$, amyloideae in cumulo; cuticula innexa.

Gastrocarp 4–8 cm broad at maturity; convex to broadly convex when young, becoming flattened to depressed to plano-convex at maturity.

Peridium: Surface dry, dull, glabrous to subtomentose during all stages of development; colored yellow (“colonial buff” to “old gold”) (R) to reddish (“ochraceous buff” to “ochraceous tawny”) (R), or at least with reddish areas scattered throughout. No gastrocarps were entirely red.

Context: 1–2 cm thick, colored pale yellow, unchanging when exposed. Taste and odor not distinctive.

Gleba: Tubulose, tubes 1–2.5 cm long, highly disoriented and appearing to radiate at various angles from the peridium; characteristically colored near “colonial buff” to “chamois” (R) during all stages of development, unchanging when bruised or exposed; pores small, less than 1 mm broad, concolorous with the tubes occasionally reddish.

Stipe-columella: Very reduced and sometimes apparently lacking, 10–20 mm long, 5–15 mm broad; surface dry, dull, glabrous, colored near “chamois” to “old gold” to as pale as “warm buff” (R) during all stages of development; with a characteristic red band at the apex; solid; context yellow, unchanging upon exposure.

Spores: $6\text{--}7 \times 13.5\text{--}18.8 \mu$, brown in KOH, strongly amyloid when seen in mass in Melzer’s; fusoid to subcylindric, thick walled, smooth, sterigmata terminal.

Hymenium: Basidia $7\text{--}10 \times 26\text{--}32 \mu$; hyaline, clavate, 4-spored; cystidia apparently not present; brachybasidioles hyaline, clavate, similar to basidia but smaller.

Tissue: Clamp connections absent. Epicutis of upper peridium interwoven to tangled, pale ochraceous to dark yellow in KOH and Melzer’s, hyphae $5\text{--}7 \mu$ broad; peridial trama homogeneous to interwoven, up to 15μ broad, septations in Melzer’s highly differentially stained, becoming conspicuous and giving either a dextrinoid or amyloid reaction. Tube trama hyaline, more or less homogeneous, weakly divergent, at least in young gastrocarps.

Hypogeous under *Pinus murrayana* and *Abies magnifica* in higher elevations in Sierra Nevada in California. Known only from the type collection. Collected only in late summer.

TYPE: CALIFORNIA: Sierra County: Yuba Pass, *Thiers 21117* (HOLOTYPE: SFSC).

As the name indicates, the most striking characteristic of this fungus is the conspicuous amyloid reaction of the spores and the interesting feature of the differential staining of the septations. Mounts were made from all carpophores in the collection, and all showed similar reactions. Both reactions were typically strong enough to be seen clearly with the low-power objective. In most other features this fungus is somewhat suggestive of *G. turbinatus*, although the exposed flesh did not immediately change to blue.

7. *GASTROBOLETUS TURBINATUS* (Snell) Smith & Singer var. *turbinatus*. *Brittonia* **11**: 208, 1959.

In studying collections of this species from Oregon and Idaho, Trappe noted that the spores fit the description by Smith & Singer (1959) but not their illustration of