

moderately strong reaction on gallic and moderately strong to strong reaction on tannic agars in 7 days.

*Hyphal characteristics.* All hyphae staining in phloxiine, 1.5–4.6  $\mu$  in diam, with many clamps (FIG. 5), thin-walled, simple branching, frequently lightly incrustated with small crystals, yellow-brown to reddish-brown in Melzer's solution; mycelial cystidia 43–73  $\times$  3–3.5  $\mu$  in diam, always present, ranging from infrequent to abundant, occur as aerial hyphae, staining heavily in phloxine and quite conspicuous in the mounts, nearly cylindric to narrowly fusiform with granular contents (FIGS. 4–5), occasionally with short lateral branches.

*Cultures examined:* O. K. Miller 2130 (TYPE), 2282, 2286, 2287, 2300; R. L. Gilbertson 4569, 4577, 4580.

**Lentinus ponderosus** O. K. Miller, sp. nov.

FIGS. 2, 14

Pileus 5–15 cm latus, convexus, badio-squamulosus; caro albidā; tenax; lamellae confertae, grosse serratae, adnatae, albidae vel pallidae; stipes 2.5–10.0 cm longus, 3–5 cm crassus, sursum pallidus, deorsum "avellaneous" fulvo-punctatus, ad basim badius; vellum nullum; spores 8–10.5  $\times$  3.5–4.0  $\mu$ , subfusoidae vel ellipsoideae, albidae in cumulo. Typus legit A. H. Smith 58507, McCall, Idaho, July 3, 1958, in Herbarium Univ. Michigan Conservatum.

Pileus 5–15 cm broad, convex, often slightly inrolled at margin, small squamules becoming larger in age, cinnamon to cinnamon brown ("cinnamon" to "caco brown," "cinnamon drab") in age, flesh in between squamules buff to pinkish-buff ("light buff," "warm buff," "avellaneous," to "vinaceous-buff"), squamules usually flat, not thickening and not usually becoming recurved in age. Context: tough, white to pallid, lamellae close, coarsely serrate, adnate or broadly adnate alternating with lamellulae which extend up to two-thirds of the way to the stipe, bright white to pallid, light buff to light orange in age. Stipe 2.5–10 cm long, 3–5 cm thick, *no annulus present*, pallid at apex, then "avellaneous" with small reddish-brown dots ("vinaceous-rufous") which coalesce over lower half of the stipe, darkening at maturity to reddish-brown ("deep brownish-vinaceous," "deep vinaceous-brown" or "seal brown"), mostly smooth with scattered tufts of projecting fibrils but without recurved squamules. Veil absent.

Spores 8.0–10.5  $\times$  3.5–3.8  $\mu$ , thin-walled, subfusiform in profile, elliptical in face view, hyaline in KOH and Melzer's solution. White in deposit. Hymenium: Basidia 26–33  $\times$  6.2–8.8  $\mu$ , clavate, four-spored, hyaline in KOH and Melzer's solution. Cystidia: Cheilocystidia 35–64  $\times$  4.4–6.2  $\mu$ , narrowly clavate to hyphal-like, thin-walled, hyaline in

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FIGS. 11–14. 11–12. *Lentinus montanus*. 11. Pleurocystidia from lamellae on sporophores. 12. Cystidia from culture. 13. *Panus fragilis*, thick-walled pleurocystidia. 14. *Lentinus ponderosus*, pleurocystidia. ( $\times$  1250).

KOH and Melzer's solution, usually abundant and protruding up to about one-half of their length above hymenium. Pleurocystidia 21–30  $\times$  3.5–4.4  $\mu$  clavate, fusiform, often irregular, thin-walled, protruding only slightly or not at all, frequent. Tissues: Cuticle of innate fibrillose, thin-walled hyphal cells 31–63  $\mu$  long  $\times$  4.4–8.0  $\mu$  in diam; some slightly enlarged at the apex and appear somewhat cystidioid, hyaline in KOH; in Melzer's solution a few cells have yellow-brown contents; the rest hyaline.

Trama of pileus of interwoven hyphae 2.6–5.2  $\mu$  in diam, thin-walled, clamps regularly present at septa, hyaline in KOH, in Melzer's solution yellow-brown as well as hyaline but yellow-brown as seen in mass. Trama of lamellae of loosely parallel hyphae 1.8–4.4  $\mu$ , thin-walled, clamps regularly present at septa, hyaline in KOH, yellow-brown or hyaline in Melzer's solution.

HABIT AND HABITAT: On conifer logs and stumps, particularly ponderosa pine (*Pinus ponderosa*). Fruiting in July in Idaho, most often found in open areas that receive direct sunlight.

DISTRIBUTION: Known from northern and central Idaho.

OBSERVATIONS: This large agaric is closely related to *Lentinus lepideus* Fr. from which it is differentiated by the complete absence of a veil (FIG. 2) during all stages of development. In addition, it is consistently a large species with a very thick stipe. There is also more pink in the cap than is found in *L. lepideus*. The stipe is smooth or with scattered tufts of fibrils, but only in extreme age are recurved squamules observed on the stipe in a few specimens. *L. lepideus* contains thickened recurved squamules in buttons even before the cap expands. The reddish-brown dots and coloration over the lower part of the stipe are also typical of *L. ponderosus*. *L. lepideus* is usually pallid to light tan with dingy brown coloration present only on the rootlike base which attaches to the substrate. *L. ponderosus*, as far as is known, is restricted in its distribution to the Pacific Northwest.

MATERIAL EXAMINED: Idaho: H. Burdsall 682 (BFDL), 683 (BFDL), MLR 8/18/64 (BFDL), SSR 8/18/64 (BFDL), R. Davidson 105765-S (BFDL); O. K. Miller 2144 (BFDL), 2361 (BFDL), 2420 (BFDL), 2426, 1740. A. H. Smith 58507 (TYPE).

#### DESCRIPTION OF CULTURES

*Key pattern.* A-O-M-1-2-11 and A-O-M-1-2-5-6-11.

*Growth characteristics.* Growth medium, forming a mat of 78–89 mm in 14 days. Mat downy to somewhat woolly, white, with thin white margin of decumbent hyphae radiating out from older mat; odor fruity

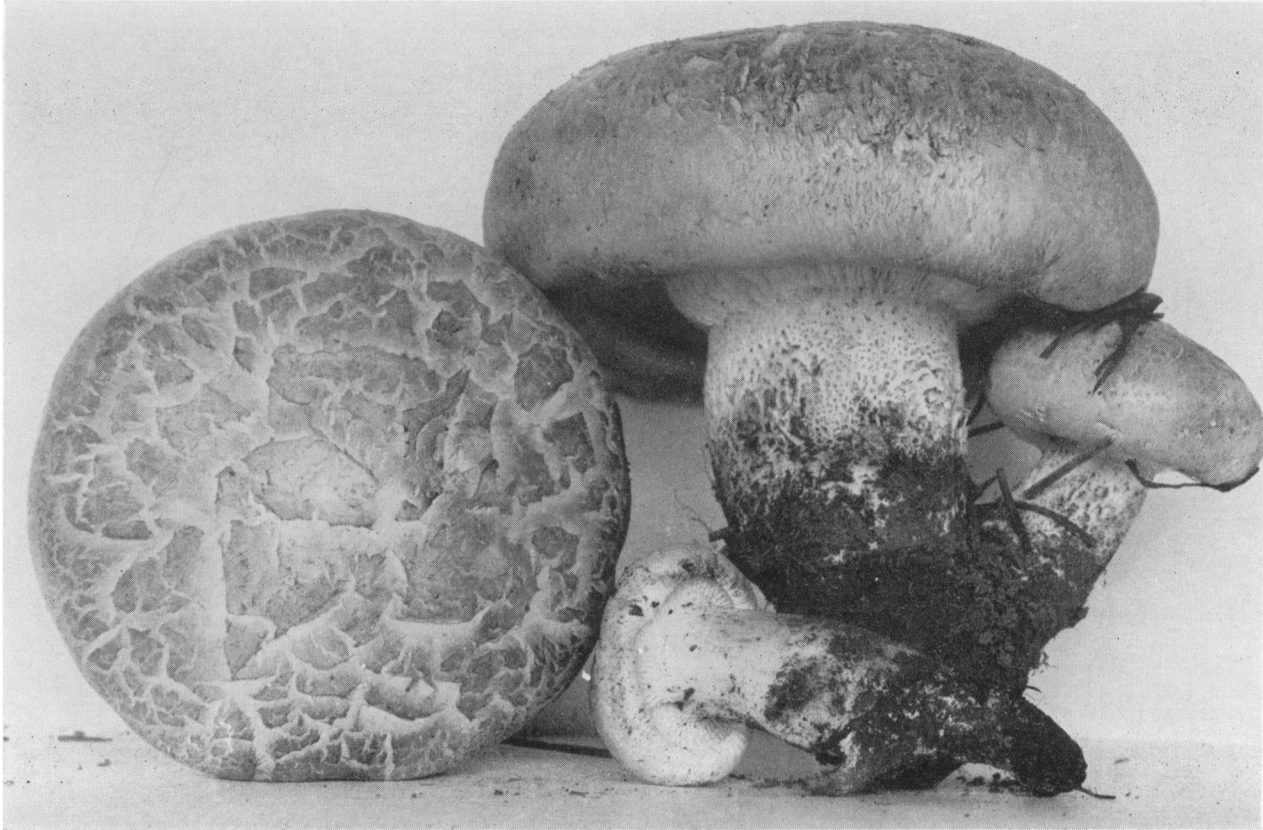
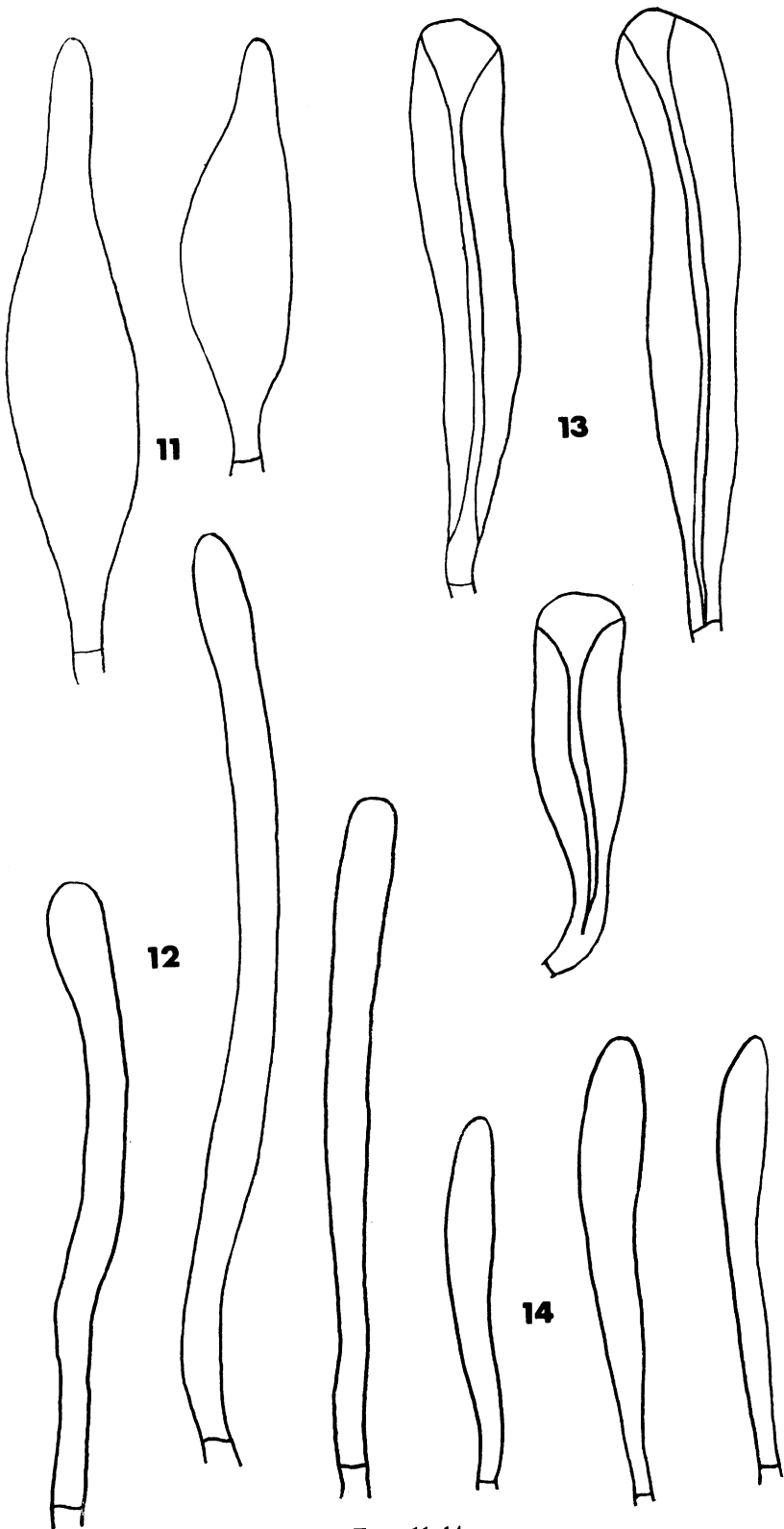


FIG. 2. *Lentinus ponderosus*  $\times 1$  (Smith 58507). Photo by A. H. Smith.



FIGS. 11-14.