

Thiers (8) reported on four species of boletes belonging to the section *Luridi* of the genus *Boletus* which occur in this state. Since that time one additional species belonging to this section has been discovered. It was transmitted by Dr. Donald Kowalski of Chico State College, Chico, California.

Boletus orovillus Thiers & Kowalski, sp. nov.

Pileus 10–15 cm latus, udus vel viscidus, subtomentosus vel fibrillosus, luteus; caro flava; sapor mitis; tubuli flavi, immutabiles; pori rubri, 1–2 per mm; stipes ventricosus, siccus, glaber, apice ruber, basi flavus; sporae 5.5–6.4 × 3–4 μ, ellipsoideae vel ovoideae; cystidia numerosa, clavata vel mucronata, 35–47 × 9–14 μ; cuticula innexa.

Typus: in herb. San Francisco State College, lectum Oroville, Butte Co., California, 8 Nov. 1964, Kowalski 895.

Pileus 10–15 cm broad at maturity, convex to broadly convex to plano-convex at maturity; surface moist becoming distinctly viscid when wet; subtomentose to velutinous to appressed fibrillose, with age becoming rimose-areolate, particularly on the disc; colored during all stages of development a very intense yellow (“picric yellow” to “strontian yellow” to “empire yellow”), slightly darker and duller on the disc with age; margin strongly incurved becoming decurved, entire.

Flesh up to 2 cm thick, yellow, changing to pale blue when exposed; taste and odor mild.

Tubes adnate becoming depressed at maturity, 0.5–1.5 cm long, yellow, unchanging when exposed; pores very small, 1–2 per mm, bright red when fresh and with red exudate, angular, unchanging.

Stipe 7.5–12.5 cm long, 2–5 cm broad at the apex, ventricose to clavate, sometimes bulbous at the base; surface dry, smooth, not reticulate, glabrous to appressed fibrillose to more or less granulose at the apex; concolorous with the pores in apical portion becoming yellow toward the base; yellow mycelium at the base; solid, flesh yellow, changing to pale blue when exposed.

Spores 5.5–6.4 × 3–4 μ, pale ochraceous in Melzer's reagent, nearly hyaline in KOH, ellipsoid to subvoid to occasionally narrowed in median portion and somewhat enlarged at the ends (FIG. 5), smooth, thin-walled; basidia hyaline, clavate, 4-spored, 30–39 × 8–10 μ; cystidia scattered to numerous, abundant on the pores, subclavate to mucronate to somewhat contorted (FIG. 6), thin-walled, “ochraceous tawny” to “cinnamon brown” in KOH, 35–47 × 9–14 μ; tube trama divergent from a distinct mediostratum which stains pale ochraceous in KOH; pileus trama amyloid, interwoven, homogeneous, hyaline in KOH; cuti-

cle differentiated as a layer of tangled, more or less interwoven, narrow hyphae which appear subgelatinous in KOH; cuticle of stipe differentiated as a layer of interwoven hyphae.

Spore deposit: color unknown.

Chemical reactions. KOH—cuticle red; HCl—cuticle red at first then blackening; HNO₃—cuticle red then blackening; Sulfoformol—cuticle red then blackening.

Material studied. Butte County: Kowalski 895, Type. The sporocarps were growing in soil in a lawn near digger pine (*Pinus sabiniana* Dougl.) in Oroville, California. It is not known from any other locality.

Discussion. Even though only one collection of this fungus is available, it is sufficient to indicate conclusively the distinctness of this species. The chief distinguishing features are the intense yellow pileus, red and lactating pores, non-reticulate stipe and very small spores.

ACKNOWLEDGMENTS

This study has been supported in part by Grant No. GB 2760 from the National Science Foundation for which grateful acknowledgment is made. Sincere appreciation is expressed to Mr. J. E. Sindel for making available facilities of Jackson State Forest, California, and to Mr. Burgess Heacox for granting permission to collect in some of the California State Parks.

DEPARTMENT OF BIOLOGY
SAN FRANCISCO STATE COLLEGE
SAN FRANCISCO, CALIFORNIA 94132

LITERATURE CITED

1. **Dick, E. A., and W. H. Snell.** 1960. Notes on Boletes. XIII. *Mycologia* **52**: 444-454.
2. **Ridgway, R.** 1912. Color standards and color nomenclature. Washington, D. C.
3. **Singer, R.** 1945. The Boletineae of Florida with notes on extralimital species. I. The Strobilomycetaceae. *Farlowia* **2**: 97-141.
4. ——. 1947. The Boletoidae of Florida. The Boletineae of Florida with notes on extralimital species. III. *Amer. Midl. Nat.* **37**: 1-136.
5. ——. 1962. The Agaricales in modern taxonomy. 2nd ed. J. Cramer, Weinheim. 915 p.
6. **Smith, A. H.** 1949. Mushrooms in their natural habitat. I. Sawyer's Inc., Portland, Oregon. 626 p.
7. **Snell, W. H., and E. A. Dick.** 1956. Notes on Boletes. IX. *Mycologia* **48**: 302-310.
8. **Thiers, H. D.** 1965. California boletes. I. *Mycologia* **57**: 524-534.