

cuticle differentiated as a layer of radially arranged hyphae, colored pale vinaceous, unchanging in KOH, not gelatinous in KOH, hyphae 3–5  $\mu$  in diam; clamp connections present, abundant in the veil tissue.

Scattered in soil under conifers. Huntington Lake, Fresno Co., California. October 6, 1965. Thiers 13414 type (SFSC). Additional collections made in vicinity of Pinecrest, Stanislaus Co., California.

*Observations.*—The two most distinctive features of this species are the definitely purple to lavender color of the pileus and the spores that have punctuations which are very poorly developed. They often can be detected only when viewed under an oil immersion lens.

So far this has been the only species exhibiting any strong pigment development. Such a feature is not surprising, however, when one recalls that many Cortinarii are highly pigmented. As a matter of fact, these lavender or purple colors are commonly observed in many more "normal" appearing species. An indication of the range of spore ornamentation in the group can be gained when *C. velatus* having only obscurely roughened spores is compared with *C. verrucisporus* in which the spores are strongly warty or verrucose.

### **Cortinarius verrucisporus** Thiers & Smith, sp. nov.

Pileus 3–6 cm latus, convexus demum planus vel depressus, albus demum flavus, siccus, fibrillosus; lamellae subdecurrentes, confertae vel subdistantes, brunneae; stipes 1–1.5 cm longus, 1–1.5 cm crassus apice, aequalis vel bulbosus, siccus, obsitus cum veli elementis, flavus; sporae crassae verrucosae, ovoideae, 10.5–13.0  $\times$  6.5–8.0  $\mu$ . Typum legit prope Silver Lake, Amador Co., California. 9 Juni, 1966. H. D. Thiers 16919. In herbarium San Francisco State College conservatum.

Pileus 3–6 cm broad at maturity; convex when young, becoming plane to plano-convex to plane to shallowly depressed with age, frequently highly irregular and undulating in outline; surface dry to moist, innately fibrillose to subtomentose when young, unchanging or becoming glabrous to obscurely fibrillose with age; when very young white to "light buff" (tan), very soon becoming "ochraceous tawny" (rusty brown) with some areas colored near "sulfur yellow" to "chamois" to "clay color"; margin strongly incurved, attached to the stipe by a tenacious permanent veil during all stages of development.

Flesh up to 1 cm thick, yellow, unchanging when exposed, firm; taste and odor not distinctive.

Lamellae subdecurrent to adnate, close to subdistant, pallid to "pale olive buff" when young becoming "amber brown" as spores mature, thin, becoming noticeably crisped when dry, fragile; several tiers of lamellulae present; somewhat ventricose; margin entire, concolorous.

Stipe poorly developed and somewhat obscure, 1–1.5 cm long, 1–1.5 cm broad at the apex, equal to slightly bulbous; concolorous with the pileus; covered with partial veil during all stages of development; solid, flesh yellow, unchanging when exposed; partial veil permanent, tough, fibrous, concolorous with the surface of the pileus.

Spores ovoid, noticeably thick-walled, conspicuously verrucose-roughened with large, coarse warts which often unite to form short reticulations,  $10.5\text{--}13.0 \times 6.5\text{--}8.0 \mu$ ; basidia hyaline in KOH, clavate, 4-spored,  $27\text{--}30 \times 7\text{--}9 \mu$ ; pleurocystidia and cheilocystidia apparently absent; gill trama subregular, hyaline, hyphae  $3\text{--}5 \mu$  in diam; pileus trama homogeneous, interwoven, hyaline in KOH; cuticle differentiated as a layer of appressed hyphae which stain vinaceous in KOH, walls subgelatinous in KOH; clamp connections present throughout, abundant in the veil tissue.

Solitary in humus under conifers, Silver Lake (7,000 ft elevation), Amador Co., California. June 9, 1966. Thiers 16919 type (SFSC). Known only from the type collection.

*Observations.*—There are two major characteristics of this *Cortinarius* which readily distinguish it from other hypogeous species. The presence of the bright yellow stains on the pileus has not been observed on any of the others. The most distinctive feature, however, is the very strong development of the warts on the spores. These ornamentations are, by far, more conspicuous in this species than in any of the others described here. Another feature pertinent to the evolution of the group as a whole is the relatively poorly developed stipe which is usually enveloped by the veil.

***Cortinarius magnivelatus*** (Morse) Thiers & Smith, comb. nov. FIG. 2

*Pholiota magnivelatus* Morse. Mycologia 33: 368. 1941.

(Basionym.)

Pileus 3–6 cm broad at maturity; convex to broadly convex when young, with age typically becoming undulating and irregular in outline, sometimes remaining plano-convex or becoming shallowly depressed to umbonate; surface moist to dry; usually appearing glabrous when young, occasionally silky-appressed fibrillose, when older innately fibrillose to somewhat tomentose; when young white, when older or when bruised typically darkening to “warm buff” to “antimony yellow” to as dark as “ochraceous tawny”; margin incurved to strongly decurved during all stages of development; typically remaining attached to the stipe by a tenacious veil during all stages of development.