

CORTINARIUS LANIGER Fr.—Gregarious under fir, Lake Crescent, Washington, Oct. 13 (3128), Oct. 14, 1935 (3141); near Crescent City, California, Nov. 9 (8571); and near the Oregon-California state line, Nov. 20, 1937 (8950). This is apparently a widely distributed species, but one which I have never collected abundantly. It has been reported for Washington and Oregon.

CORTINARIUS LUCORUM (Fr.) Kauff.—Scattered under spruce, Lake Tahkenitch, Oregon, Nov. 11, 1935 (3427). Kauffman (8) raised *C. impennis* var. *lucorum* Fr. to specific rank and placed *C. umidicola* Kauff. in synonymy with it.

SUBGENUS HYDROCYBE

Cortinarius californicus sp. nov. (Pl. XII).—Pileus 3–8.5 cm. latus, obtuse conicus, late campanulatus, demum obtuse umbonatus, margine rectus, glaber, hygrophanus, rufus vel rubiginosus, expallens pallide ferrugineus; caro rubiginosa; lamellae aurantio-ferrugineae; stipes 8–15 cm. longus, 5–15 mm. crassus; cylindricus, pallide ferrugineus, aurantio-fibrillosus; sporae 7–9×4–4.5 μ . Specimen typicum legit A. H. Smith n. 8957 prope Crescent City, California, Nov. 29, 1937, in Herb. Univ. of Michigan conservatum.

Pileus 3–8.5 cm. broad, obtusely conic, becoming broadly umbonate with a decurved margin, glabrous, hygrophanous, evenly "Hay's russet" when moist, fading to "cinnamon-rufous," margin appressed against the stipe and faintly silky at first; flesh watery, moderately thick on the disk, concolorous with the surface in both moist and faded pilei, odor and taste not distinctive; lamellae "Mars orange" when young, "burnt sienna" in age, adnate, becoming slightly adnexed, narrow to moderately broad, subdistant, edges slightly serrate or only fimbriate; stipe 8–15 (20) cm. long, 5–15 mm. thick, equal, sometimes the base slightly enlarged and sometimes narrowed, becoming hollow, at first sparsely fibrillose below with orange fibrils from the remains of the cortina, dull orange over all (paler than the lamellae); mycelium orange-red; spores 7–9×4–4.5 μ , ellipsoid to subovoid, distinctly roughened, dark rusty brown under the microscope; sterile cells not differentiated.

Scattered under fir and spruce, Blue River, Oregon, Oct. 17 (7898); Oct. 22 (8081); Belknap Springs, Oregon, Oct. 23 (8132); Siskiyou National Forest, California, Nov. 1 (8316); Nov. 6 (8487), Nov. 20 (8957-type), and Nov. 29, 1937 (9201).

This species belongs in the section *Tenuiores* of the subgenus *Hydrocybe* although its colors are apparently similar to those of *C. balaustinus* Fr. of the section *Firmiores*. Careful attention was given to the manner in which the margin of the pileus developed. The straight margin and conic pilei of young fruiting bodies were constant characters in my material. The pilei were not virgate and lacked innate fibrils. In Ricken's description of *Hydrocybe balaustina* the spores are given as globose. The spore size of the material Lange referred to the latter species is practically the same as in mine, but his plate can hardly represent *C. balaustinus* Fr. Fries (2) described its color as "rufo-ferrugineo (fulvo-testaceo nitido)."

CORTINARIUS COLUS Fr.—Pileus 2–3.5 cm. broad, convex becoming plane, hygrophanous, "chestnut-brown" or "bay" when moist, becoming "Rood's brown" to "pecan brown" and then faintly striatulate, hygrophanous, fading to a dull "onion-skin pink," glabrous or the margin with faint fibrillose patches, margin incurved at first; flesh "bay" or dark reddish brown, thin and firm, odor and taste not distinctive; lamellae "bay" with tawny edges when young, becoming "hazel" in age and if bruised changing to dark reddish brown ("carob brown"), narrow, adnate, close, edges even; stipe 5–9 cm. long, 3–6 mm. thick, slightly enlarged below, silky over all, with purplish red or vinaceous mycelium covering the base, apex violet at first, flesh within "dark indian red" in upper portion, "chestnut" in lower half, in age with a vinaceous sheen owing to a thin appressed fibrillose covering, no sheath or annular remains of a universal veil present; spores $6-7 \times 4-5 \mu$, ovoid, distinctly roughened, dark rusty brown under the microscope.

Gregarious under fir, Crescent City, California, Nov. 3 (8361) and Nov. 4, 1937 (8400).

Distinguished by the dark reddish brown pilei which are pale testaceous when faded, the dark reddish brown gills which be-



Cortinarius californicus sp. nov. $\times 1$.