

Leptonia carnea

11. Leptonia carnea Largent, sp. nov.

Pileus 30-50 mm latus, convexus demum planus, dense appresso-fibrillosus, non hygrophanus, subcaeruleo-niger vel caeruleo-griseus interdum iridescens, margine non pellucidus; contextus in disco usque ad 4 mm crassus, flavidus; sapor odorque distincte farinacei. Lamellae subcaeruleo-griseae postea subroseae. Stipes apice 6-18 mm, basi 9-18 mm crassus, 60-90 mm longus, dense fibrillosus vel squamulosus, pileo concolor. Sporae 9-13 x 6.5-10.4 μ m, 5-6 angulatae. Cheilo-et pleurocystidia nulla. Hyphae pileipellis in disco implicatae, inflatae, marginem versus periclinatae, fibulatae, cellulis terminalibus 33-124 x 7.5-12.5 μ m, clavatis vel cylindrico-clavatis. Hyphae stipitipellis fasciculatae, rectae vel simirectae, abundantes, cellulis terminalibus 47.5-87.5 x 10.0-17.5 μ m, clavatis vel cylindrico-clavatis, saepe acuminatis. Basidiocarpia solitaria in humo sub filicibus proper Sequoia sempervirens.

Holotypus (L 4094) proper "Trinidad, Humboldt County, California, 1 November 1969" lectus, in HSC conservatus.

Pileus: 30-50 mm broad, convex becoming plane with an upturned margin, at times broadly umbonate; surface densely appressed-fibrillose, dry, dull, not hygrophanous, bluish black to dark bluish gray ("blue-violet-black" to "deep varleys gray"), some iridescent; margin decurved becoming plane, even to irregular, entire to rimose, not translucent; context up to 4 mm thick on the disc, thinner on the margin, yellowish ("colonial-buff" to "primose-yellow") at times silvery white. Taste and Odor: Decidedly farinaceous. Lamellae: Adnate to emarginate, subdistant to distant, broad, ventricose, at first colored bluish gray ("light-violet-gray") becoming pinkish (near to "light vinaceous cinnamon") with maturity; margin even to irregular, "blue-violet-black" marginate; lamellulae distinct in 2-3 tiers. Stipe: 6-18 mm broad at the apex, 9-18 mm wide at base. 60-90 mm long, equal to clavate, terete; surface densely fibrillose to squamulose, dry, dull, not hygrophanous, concolorous with the pileus; context flesh-fibrous, concolorous with the context of the pileus; base becoming orangish-yellow with age and/or rubbing.

Spores: 9-13 x 6.5-10.4 μ m, average length 10.9 μ m, average width 7.9 μ m, elongate-angular, L-D 2-4 μ m, uniguttulate, 5-6-sided. Basidia: 31-40 x 7-11 μ m, L-D 2.8-5.6, 4-spored, clavate, often filled with numerous refractive granules. Cheilocystidia and Pleurocystidia: Absent. Subhymenium: Not distinctive, not gelatinized, slight granular. Hyphae at the gill trama sub-parallel, up to 20 μ m wide. Pileipellis: Two-layered; Suprapellis on the disc an entangled layer of inflated hyphae, on the margin a periclinally oriented layer, terminal cells clav-

ate to cylindro-clavate, hardly differentiated from penultimate cells, 33-124 x 7.5-12.5µm, Lt/Dt 5.0-9.2, D1/Dt 0.8-1.8, D2/Dt 1.0-1.9, D3/Dt 1.0-1.9; Suprapellis a tightly entangled layer of hyphae. Hyphae of the pileal trama up to 16µm wide. Stipitipellis: At the apex two-layered; Suprapellis of abundant, clusters of entangled, erect to semi-erect hyphae; terminal cells similar to the terminal cells of the pileipellis, clavate to cylindro-clavate, often acuminate, 47.5-87.5 x 10.0-17.5µm, average length 55.6µm, average width 10.5µm, L/D 3.5-7.5 (average 5.6). Tramal hyphae up to 25µm wide. Lactifers: Scattered in the trama of the stipe and pileus. Pigmentation: Vacuolar and soluble in 3% KOH. Clamps: Small; absent in the gill trama, abundant to scattered in the suprapellis (pileipellis and stipitipellis), at the base of the basidia and on the hyphae of the basal tomentum.

Habit, Habitat and Distribution: Scattered in the leaf-needle humus of a dense, mixed coniferous-hardwood forest; California, early November to early December.

Material studied: CALIFORNIA. Humboldt Co. L 4094 (Demonstration Forest, north of Trinidad), Mendocino Co. L 252 (Jackson State Forest).

TYPE: Solitary in needle humus beneath ferns and near Sequoia sempervirens, Demonstration Forest north of Trinidad, Humboldt Co., California; 1 Nov. 1969; L 4094 (HOLOTYPE: HSC).

Macrochemical reactions: None taken.

Chemotaxonomic data: Urea concentration, +2; positive spots: 3, 11, 19, 30, 44, 49, 50, 68, 70. Material studied: L 252

This blue black Leptonia is one of the most distinctive and rare species collected in California. Its fibrillose to squamulose stipe and pileus surface, blue-gray lamellae, fleshy stipe and farinaceous odor are the distinguishing characters.

Two forms exist in northern California. One appears to be associated with Tan-Oak and Douglas Fir and is characterized by a yellowish pileal context and a stipe base which does not change color on bruising. The other form is associated with Redwoods and is characterized by a white flesh and a stipe base that becomes orange-yellow on bruising or with age. I decided not to separate the two collections into different taxa since observations were made from only two collections, one of two carpophores and the other only of one.

The large size of the carpophores, the unusually thick flesh, the small clamp connections and the farinaceous odor are features which are rare in Leptonia. In fact, these characters are encountered more frequently in Entoloma. However, the pileus and stipe surfaces, the pileipellis, the stipitipellis, a urea concentration (+2), and a subhymenium which is not gelatinized but rather has numerous refractive

granules are characteristics which influenced my decision to place Leptonia carnea with other species of Leptonia.

Entoloma madidum and E. nitidum are two closely related species; the former differs by having a viscid pileus surface and an ixotrichodermium, the latter by its repent pileipellis and different pileus surface.