

STUDIES ON SOME LIGNICOLOUS CLITOCYBES

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The majority of agarics described and discussed in this contribution belong to section *Candicantes* (Quelét) Konrad & Maublanc of genus *Clitocybe* (Fries) Kummer. They appear to be closely related to each other by a number of characteristics of the basidiocarp, but especially by their growth upon woody substrata—usually the logs and stumps of hardwoods. Most of the *Candicantes* are terricolous species, but the lignicolous ones seem properly placed in this section due to the existence of parallel species which are separated mainly by a difference of substratum. For example, *Clitocybe truncicola* from hardwood logs strongly resembles *C. candicans* which fruits on decayed leaves of hardwoods; *C. americana* also on hardwood logs recalls *C. diatreta*—usually found on needle litter but sometimes on hardwood leaves. Despite the similarities in such pairs, a difference in nutrient requirement is judged to be critical for separating taxa as this reflects a complex difference of enzyme systems.

Within *Clitocybe*, the lignicolous species of section *Candicantes* seem to be part of an evolutionary series leading to section *Lignatiles* (Konrad & Maublanc) Singer and then to section *Aberrantissimae* Singer. Possibly there is also further connection to *Hypsizygus* and pleurotoid genera.

The color notations in quotation marks are taken from Ridgway (1912) and the herbarium abbreviations are from Holmgren and Keuken (1974).

***Clitocybe salmonilamella* Bigelow, sp. nov.**

Pileus 1.5–4.5 cm latus, convexus mox planus, margine demum arcuatus, haud striatus, glaber, aquosus, hygrophanus, alutaceus demum albidus. Lamellae decurrentes, confertae vel subdistantes, angustae vel sublatae, subsalmonaeae. Stipes 2–4.5 cm longus, 3–7 mm crassus, equalis vel deorsum attenuatus, fartus mox cavus, interdum eccentricus, glaber et aquosus, demum plus minusve fibrilloso-striatus, albidus super stramineus. Sporae (6.5–)7–8 × 4–5 μm , in cumulo albiae.

Holotypus: legit H. E. Bigelow, n. 16995, Muir Woods, Marin Co., California, 7 December 1971 (MASS, MICH).

Pileus 1.5–4.5 cm broad, convex at first but soon plane, very slightly depressed at times, very rarely deeply depressed in age, margin usually uplifted or arched in age, not striate, surface glabrous and watery, smooth, hygrophanous, pale butterscotch color, whitish when faded, sometimes with small reddish spots (?bacteria); context thin, brittle, concolorous with surface. Odor pleasant but not distinctive. Taste mild.

Lamellae decurrent throughout development, close to subdistant, narrow to moderately broad (up to 4 mm), arched, salmon tinged when fresh ("Pale Ochraceous Salmon"), fading to whitish but drying with salmon or pinkish tinge.

Stipe 2–4.5 cm long, apex 3–7 mm thick, equal or base tapering, base sometimes with white mycelium and curved, stuffed but soon hollow, eccentric

at times, surface glabrous and watery when fresh, becoming \pm longitudinally fibrillose striate, fibrils whitish over a yellowish ("Cream Buff") ground color.

Spores (6.5–)7–8 \times 4–5 μm , elliptic to elliptic-oblong, smooth, not amyloid, deposit white. Basidia 23–30 \times 5–8 μm , 4-spored. Pileus surface with very thin layer of subgelatinizing hyphae (easily sloughed in sections), cutis hyphae cylindric, 1.5–4 μm diam, at times short-celled and contorted near surface; context hyphae cylindric or somewhat inflated, 5–13 μm diam, walls slightly thickened at times. Hymenophoral trama of undulate-subparallel hyphae or the hyphae nearly parallel, cylindric or slightly inflated, 3–7 μm diam. Clamp connections present.

Scattered, gregarious, or subcespitosae. On wood debris (probably of *Umbellularia* or *Quercus*.) December. UNITED STATES. California: Muir Woods, Marin Co., *Bigelow 16995* (holotype, MASS, MICH), *16996*, *16997* (MASS).

This species is distinctive by the salmon tint of the lamellae in combination with the relatively large spores which are white in deposit. Two other lignicolous and hygrophanous clitocybes, *C. americana* Bigelow and *C. subleptoloma* Singer have a number of field characters similar to *C. salmonilamella*, but the spores are smaller. The deposit is also colored in *C. americana*, but not reported in the case of *C. subleptoloma*. *Clitocybe leptoloma* (Peck) Peck does have spores which are close in size and shape to those of *C. salmonilamella*, but differs significantly by white crowded lamellae and an umbilicate pileus.

***Clitocybe americana* Bigelow, sp. nov.**

Pileus 1–4(–6) cm latus, convexus tum planus, depressus sed plerumque non striatus, tandem subinfundibuliformis, interdum undulatus vel lobatus vel sinuatus, glaber, hygrophanus, primo vinaceo-brunneus tum vinaceo-bubalinus vel incarnato-bubalinus, discus fuscatus et decolorus lente, tandem albidus vel pallido-alutaceus. Lamellae adnatae mox decurrentes, confertae vel confertissimae, angustae, pallido-bubalinae vel stramineae. Stipes 1–5(–7) cm longus, 1–5(–10) mm crassus, basi tomentosus, farctus tum cavus, glaber vel striatus, aquoso-bubalinus. Sporae 4–6 \times 2.5–3.5(–4) μm , in cumulo incarnato-cremeae.

Holotypus: legit H. E. Bigelow, *n. 2531*, Colonial Point, Burt Lake, Cheboygan Co., Michigan, 5 Aug 1955 (MICH).

Pileus 1–4(–6) cm broad, convex at first with the margin inrolled and slightly incurved, becoming broadly convex to plane, disc somewhat depressed, in age becoming subinfundibuliform, margin elevated and/or arched at times, occasionally undulate or lobed or sinuate but often discoid and regular, not striate except rarely in age, surface glabrous, moist and hygrophanous, greasy appearing but not viscid, watery brownish young ("Mikado Brown," "Soyal Brown," "Cinnamon"), somewhat paler and more pinkish when expanded ("Pinkish Buff," "Light Pinkish Cinnamon," "Light Vinaceous Cinnamon," "Pinkish Cinnamon," "Cinnamon Buff"), disc sometimes darker and usually last to fade, old specimens a dingy buff or yellowish before fading (more toward "Warm Buff" or "Ochraceous Buff"), fading to whitish or pale buff (near "Pale Pinkish Buff," "Pale Pinkish Cinnamon," "Cartridge Buff"); context thin, watery buff fresh then whitish, brittle. Odor and taste not distinctive.

Lamellae adnate at first then decurrent, usually even on stipe and forming a collar, close or crowded, narrow (1–4 mm), forked and intervenose usually, sometimes anastomosed, pale buff or yellowish ("Cartridge Buff," "Pale Pinkish Buff," "Pale Pinkish Cinnamon," "Cream Buff," "Pale Vinaceous Buff," sometimes as dark as "Pinkish Buff").

Stipe 1–5(–7) cm long, apex 1–5(–10) mm thick, equal or either end enlarged, base usually with watery buff tomentum, sometimes also with a few