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Clitocybe Notebook 2

L. R. Hesler

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29148

Clitocypha lacerata (Pollini) Métrod
~~CLITOCYBE~~

on soil, Hesler's woods, July 4, 1966

Pileus gray, deeply depressed, grayish, hygrophanous, ends of surface fibrils loosening to form "scales" over central portion. Context thin, whitish; odor and taste not distinctive.

Lamellae decurrent, ashy-white, subdistant, subventricose, slightly anastomosing between and at cap.

Stipe dingy pale-gray, equal, glabrous.

Spores in deposit: white, amyloid, ellipsoid, 5.5-7 x 4-5 μ , smooth.

Cf. ~~*Collybia lacerata*~~. Also No. 29181 (= same)

Key to Clitocybe Species of Southeastern United States

(Including Laccaria, Leucopaxillus, Lyophyllum, and Monadelphus)

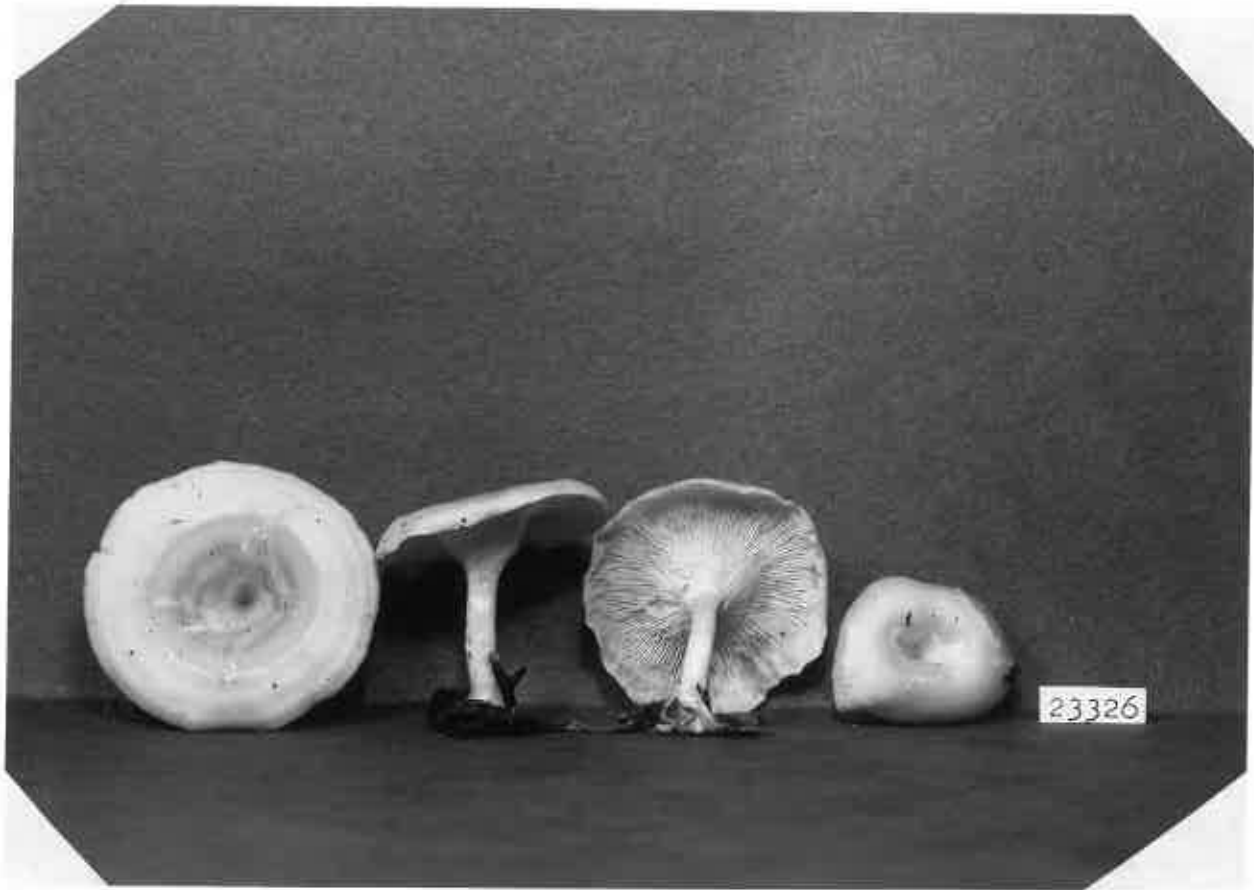
1. Spores globose, echinulate..... 2
Spores ellipsoidal, ovoidal, or pip-shaped, or if globose
then not echinulate..... 7
2. Pileus 5-10 cm. broad..... 3
Pileus 2-5 cm. broad..... 4
3. Lamellae purplish..... 1. L. ochropurpurea (Berk.) Fk.
Lamellae flesh-colored..... 2. L. laccata var. proxima Boud.
4. Lamellae flesh-colored..... 5
Lamellae pallid or deep violet..... 6
5. Margin of pileus even..... 3. L. laccata
Margin of pileus striatulate... 4. L. laccata var. striatula Fk.
6. Lamellae pallid..... 5. L. laccata var. pallidifolia Fk.
Lamellae deep violet..... 6. L. laccata var. amethystina Bolt.
7. Pileus not hygrophanous..... 3
Pileus hygrophanous..... 54
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from pileus..... 9
Pileus smaller; lamellae not paxilloid..... 10
9. Stipe bulbous; spores 4-6 (7) x 2.5-3.5 μ
..... 7. Leucopaxillus giganteus (Fr.) Singer
Stipe equal; spores 6-7.5 x 4.5-5 μ
..... 8. Leucopaxillus tricolor (Fk.) Kühner
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12. Pileus, lamellae, and stipe reddish-orange..... 13
Sporophore not so colored..... 14
13. Spores spherical-ovoid, 4.5-5.5 μ 10. C. illudens (Schw.) Sacc.
Spores ellipsoidal-ovoid, 7-9 x 5 μ 11. C. subilludens Murr.
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Pileus neither white nor creamy-white..... 17

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.....14. C. subeocentrica Murr.
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Pileus not so colored..... 19
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.....15. C. conglobata Vitt. (*Lyophyllum conglobatum)
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25. Spores ellipsoidal; flesh mild or unpleasant but not bitter.. 26
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.....22. C. alachuana Murr.
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.....25. C. Westii Murr.
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unpleasant.....26. C. No. 20267
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 Pileus avellaneous, disk fuliginous; spores globose, about
 5 μ51. C. submedia Murr.
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71. Pileus white, shining; margin striatulate when wet.....
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71. C. compressipes var. autumnale Kauff.



23326a- *Clitocybe adirondackensis* (Pk.) Sacc.

24925

CLITOCYBE AERUGINOSA Bigelow

Pileus 5.5 cm. broad, convex, hygrophanous, disc "glaucous-gray" or "court gray", elsewhere "pale glaucous green", densely fibrillose (under lens), margin even. Context white, soft; odor faintly alkaline, taste acidulous.

Lamellae adnate, close or nearly crowded, narrow, cream-colored, lamellulae rather numerous, edges even, concolorous.

Stipe 5 cm. x 8 mm., white, slightly striate, base curved, tubular.

Spores-deposit failed.

CLITOCYBE ALAGHUANA Murrill

Florida Acad. Sci. Proc. 7:107. 1945.

"Pileus convex to depressed, irregular, solitary, about 6 cm. broad; surface dry, uneven, subglabrous, margin incurved, even, lobed; context very thin, white, unchanging, very bitter at once; lamellae decurrent, unusually narrow, close, some forked halfway, entire, white, pale yellowish when dry; spores globose, smooth, hyaline, uninucleate, about 4 μ ; stipe equal, white, tomentose, especially at the base, 2 x 0.8 cm.

"Type collected by West, Arnold and Murrill on dead leaves in Prairie Creek Hammock, July 15, 1938 (F 17903). A very bitter species with grayish cap and close, narrow gills."

Singer places this in Armillariella.

CLITOCYBE ALBIDULA Pk.

New York State Museum Ann. Rept. 46: 103(23). 1893

Pileus 2-4 cm. broad, convex, finally expanded and somewhat depressed, disk subumbilicate, lubricous when wet, hygrophanous, glabrous, pallid with an olive tinge (not matched), striatulate (wet). Flesh thin, pliant, pallid; odor and taste farinaceous. Lamellae slightly decurrent, whitish, close, not broad, tapering either end, edge even. Stipe 2.5-4.5 cm. x 3-6 mm., equal, at times compressed, dingy, glabrous, shining, moist, not viscid, tubular.

Spores short-ellipsoidal, 4-5 x 2-3 μ , white in mass.

Cystidia: none observed.

Habitat and Distribution. - On soil, in pine woods, Tennessee, November-December.

Discussion. - Smith (letter) says that the spores in No. 18864 are a bit small but not enough to exclude C. albidula.

22223 - *Clitocybe albidula* Fr.

~~(cf 22641, *C. diatrata*)~~

18864 - *Clitocybe albidula* PK.

CLITOCYBE AURANTIACA (Fr.) Studer

Hedwigia 40:6. 1900

Cantharellus aurantiacus Fr. Syst. Myc. 1:318. 1821.

Hygrophoropsis aurantiaca Schroeter, in Cohen, Krypt.
Fl. Schles. 3:511. 1889.

Pileus 3-6 cm., convex, finally expanded-depressed or concave, margin inrolled then often uplifted and undulate, appressed-velvety, "zinc orange" to "ochraceous-orange," disk darker, somewhat fading at maturity, margin even. Flesh soft, tinged orange, thin on margin; odor and taste mild. Lamellae decurrent, crowded, "mikado orange," dichotomously branched, narrow, edges thick and even. Stipe 3-4 cm. x 5-8 mm., dingy, tinged orange, fibrillose to velvety, equal (rarely ventricose), often curved, spongy-solid.

Spores 5-7 x 3-4 μ , ellipsoidal, white in mass, smooth, not amyloid. Fleurocystidia and cheilocystidia none.

Habitat and Distribution. - On soil and decayed logs, conifer and deciduous woods, Tennessee, North Carolina, and Florida, July-August.



20509- *Clitocybe aurantiaca* (Fr.) Studer

CLITOCYBE AUSTRALIS Murrill

Lloydia 7:303. 1944

"Pileus infundibuliform, cespitose, 4-6 cm. broad; surface dry, smooth, subtomentose under a lens, uniformly isabelline to ochraceous-fulvous, margin reflexed, lobed, even, concolorous; context thin, white, unchanging, odorless, mild; lamellae decurrent, inserted, close, narrow, entire, white to pallid, unchanging when bruised or dried; spores ovoid, smooth, hyaline, about $3 \times 2 \mu$; basidia 4-spored, cystidia none; stipe subequal, white, unchanging, solid, tough, nearly smooth, pubescent to mycelioid, 2-4 x 0.4-0.6 cm.

"Type collected by W. A. Murrill in moist leaf-mold in thin frondose woods at Gainesville, Fla., Oct. 6, 1943 (F 20118). Suggesting C. adirondackensis but larger and densely cespitose."

CLITOCYBE AZALEARUM Murrill

Lloydia 5:137. 1942

Armillariella Azalearum (Murr.) Sing., Agar. p. 216. 1949

"Pileus irregular, infundibuliform, gregarious, reaching 4.5 cm. broad; surface dull, glabrous, uniformly pallid to pale-avellaneous, pallid on drying; margin even, entire to undulate; context very thin, white, unchanging, mild, slightly fragrant; lamellae adnate or slightly decurrent, mostly tapering behind, arcuate, narrow, distant, inserted, some forked, white to isabelline, drying darker; spores ovoid, smooth, hyaline, 1-guttulate, about 5 x 3 μ ; cystidia none; stipe rather tough and slightly flexible, hollow, flat, subglabrous, dull-avellaneous, drying pallid, 3 x 0.5-0.8 cm.

"Type collected by W. A. Murrill among humus in an azalea bed at Gainesville, Fla., July 13, 1939 (F 19732). Suggesting C. infundibuliformis but entirely distinct in color and gill arrangement."

CLITOCYBE BRUMALIS (Fr.) Qué1.

Champ. Jura et Vosges, p. 91. 1872

Pileus 2-4 cm. broad, convex, finally expanded and somewhat depressed, at times disk subumbilicate and usually darker, lubricous when wet, hygrophanous, glabrous, pallid with an olive tinge to watery buff (not matched), striatulate when wet, even when dry. Flesh thin, pliant, pallid; odor mild to farinaceous, taste farinaceous, soon bitter. Lamellae adnate-decurrent, whitish to buff, close to nearly subdistant, medium broad, tapering either end, edges even. Stipe 2-4.5 cm. x 3-6 mm., equal, at times compressed, dingy, apex white mealy, elsewhere glabrous except base which may be strigose, shining, moist, not viscid, hollow.

Spores short-ellipsoidal, 4-4.5 x 2-2.5 μ , white in mass, non-amyloid. Pleurocystidia and cheilocystidia none. Clamps present (Bigelow).

Habitat and Distribution. - On soil, pine woods, Tennessee, November-December.



21626 - *Clitocybe brumalis* (Fr.) Quel.

CLITOCYBE CANDICANS Fr.

Epicr. Myc., p.63. 1838

Agaricus candicans Fr. Syst. Myc. 1:91. 1821

Pileus 2-4 cm., white, hygrophanous, glabrous but appearing hoary when dry, convex, at times depressed, margin even.

Flesh white, thin; odor and taste mild. Lamellae arcuate-decurrent or adnate-short-decurrent, rather close, thin, narrow, white. Stipe 3-4 cm. x 3-7 (10 when compressed) mm., glabrous, base white mycelioid, white above, dingy below, equal or tapering downward, hollow.

Spores 4-5 (6) x 3-3.2 μ , ellipsoidal, smooth. Clamps present.

Habitat and Distribution. - On humus, soil, and tree trunk (oak), Tennessee, July-January.

Discussion. - Bigelow gives the spores for my No. 20776 as 5-6.5 x 2.5-3.5 μ , clamps present; for No. 16665, spores 5-6.5 x 2-3.5 μ , elliptic, smooth, not amyloid. No. 17464 is not

C. candicans; it may be subfumosa Bigelow.

carolinensis (Bigelow + ~~Harley~~)

CLITOCYBE No. ~~21888~~ (Bigelow #1072)

(No. 22024 is the same)

Fileus 3-6 cm. broad, convex, plane and with or without an umbo, finally rarely broadly depressed, or plane, at first livid or "drab" and white-fibrillose, not hygrophanous, finally grayish buff (not matched) and usually with a band of water-soaked spots near margin which is radiately ridged. Flesh white, firm; odor and taste mild. Lamellae subdecurrent, finally short-decurrent, pale buff then darker buff, narrow, close, many short, several forking behind, edges even. Stipe 3-7 cm. x 6-10 mm., white above, dingy below, appressed-silky, equal, dry, spongy-stuffed.

Spores 5-7 (8) x 2.5-3.5 μ , narrow-ellipsoid to pip-shaped, smooth, non-amyloid.

Habitat and Distribution. - On soil, in mixed deciduous-pine woods, North Carolina, July.

Discussion. - Bigelow has it in his manuscript but has no suitable name for it yet.



21888 - *Clitocybe carolinensis* Bigelow & Hester
(Bigelow #1072) x 3/4

29905

CLITOCYBE CAROLINENSIS BIG. & HES.

PHOTO

Horse Cove, August 26, 1967

Pileus umbonate, ivory, margin ridged (ribbed), gills cream.

Spores in mass: cream.

CLITOCYBE CATINA (Fr.) Qué1.

Champ. Jura Vosg., p. 215. 1872

*This is
adivondae Kewico*

Agaricus catinus Fr., Epicr. Myc., p. 72. 1838

Pileus 3-4 cm. broad, convex-depressed, finally more or less infundibuliform, glabrous, buff-white, moist, not viscid, not hygrophanous, margin even. Flesh thin, white; odor and taste farinaceous. Lamellae decurrent, crowded, white to buff-tinted, narrow, edge ^Sentire. Stipe 3-4 cm. x 4-6 mm., white to dingy, equal or base sub-bulbous, apex pruinose, base fibrillose, stuffed-spongy.

Spores 4-5.5 x 3 μ (Kauffman), 6-8 x 4-5 μ (Peck).

Habitat and Distribution. - On humus, in deciduous and mixed woods, Tennessee, July-August.

CLITOCYBE CLAVIPES (Fr.) Kummer

Der Führer in die Pilzkunde, p.124. 1871

Agaricus clavipes Fr., Syst. Myc. 1:86. 1821

Agaricus (Clitocybe) carnosior Pk., New York State Cab.
Ann. Rept. 23:76. 1872

Pileus 3-8 cm. broad, convex, obtuse and at times umbonate at first, then plane to depressed, not hygrophanous, grayish brown to "olive buff," glabrous, sometimes faintly zoned, margin even. Flesh white, thick on disk, thin on margin; odor mild or sub-alkaline, taste mild. Lamellae arcuate-decurrent, narrow to medium broad, whitish, finally "cream color," close to subdistant, few forked, many short, edges even. Stipe 3-6 cm. x 4-8 mm., tapering upward, base clavate (up to 2 cm. diam.), often somewhat bulbous, concolor to pileus, fibrillose, spongy-solid.

Spores 6-8 x 4-5 μ ellipsoidal, *white in mass, not amyloid.*

Habitat and Distribution. - On soil, in pine and ^{deciduous} ~~frondose~~ woods, North Carolina, July-September.

Discussion. - Bigelow says spores of No. 9444 are 6-7 x 4.5 μ , not amyloid, clamps present.



20966 - *Clitocybe clavipes* Fr.



21878 - *Clitocybe clavipes* (Fr.) Kummer

~~Base not/heads to wood.~~
ganga right
Bigelow says
OK



5050 - *Clitocybe clavipes* Fr.



5050 - *Clitocybe clavipes* Fr.

29906

CLITOCYBE CLAVIPES

PHOTO

Needles, pine planting, Horse Cove, August 26, 1967

Pileus umber, becoming paler, margin short-ridged. Odor and taste mild.

CLITOCYBE COKERI Hesler

Lloydia 6:251-254. 1943

Pileus 2-⁶/₈ cm. broad, convex-plane, more or less broadly depressed or subumbilicate, in age with a spreading or uplifted margin, hygrophanous, color variable, "deep brownish drab," "dark vinaceous drab," "Vandyke brown," "cinnamon-drab," "Verona brown," or "natal brown," darker when wet, paler when dry, glabrous or minutely fibrillose, not viscid, margin at times striate (wet). Flesh medium, concolor, rather firm, scissile; odor and taste farinaceous. Lamellae adnate to decurrent, "brownish drab," "purple drab," "vinaceous drab," "deep dull lavender," "dark vinaceous-gray" to nearly "snuff brown" in age, medium close to subdistant, many short, medium broad, narrow behind, broader in front, at times forked and anastomosed at base, edges even. Stipe 3-10 cm. x 3-10 mm., equal or tapering upward, concolor with pileus or lamellae, white fibrillose (with a silvery hue), solid or stuffed with a white pith, or becoming hollow, not viscid.

Spores (7) 8-9 (11) x 4.5-5.5 (6.5) μ , ellipsoid, smooth,* apiculate, white in mass, faintly amyloid; basidia 36-54 x (6) 8-10 μ ; pleurocystidia and cheilocystidia none; gill trama of nearly parallel hyphae, 4-7.5 μ in diameter.

Habitat and Distribution. - Scattered on soil in deciduous or coniferous woods, October to January, eastern Tennessee and Oregon.

*appearing rough-punctate, but when stained with floxine + examined under oil-immersion they are smooth.



21623. *Clitocybe cokeri* H. S. Gentry - X $\frac{3}{4}$

24602



24602 - *Clitocybe cokeri* Hervey



24590

24590 - *Clitocybe cokeri* Hesler



12963 - *Clitocybe Cokeri* + *tricolor* - X1



21583 - *Clitocybe Cokeri* Arndt



22561 - *Clitocybe Cokeri* Hesler



20769 - *Clitocybe Cotteri* Hesler

CLITOCYBE COMPRESSIPES Pk. forma AUTUMNALE Kauff.

Michigan Acad. Sci., Arts, & Letters Papers 8:191-192. 1927

Pileus 1.5-4 cm. broad, whitish, tinged buff, sub-hygrophanous, convex, becoming plane or slightly depressed to depressed-umbilicate, glabrous, margin incurved, even (dry), even or faintly striate (wet). Flesh thin, whitish to buff; odor and taste mild or fungoid. Lamellae sub-decurrent, many short, narrow, close, whitish to "cartridge buff," edges even. Stipe 2-5 cm. x 3-6 mm. (10 mm. at apex when compressed), usually compressed, dingy, delicately fibrillose, stuffed then hollow, base at times enlarged or attenuated downward, tomentose.

Spores 4.5-5.5 (6.5) x 2.5-3.5 μ , smooth, white in mass, pale yellowish in Melzer's reagent. Pleurocystidia and cheilocystidia none.

Habitat and Distribution. - On soil and humus, pine woods, Tennessee and Georgia, November-December.

Discussion. - The form differs from the species in its lack of farinaceous odor and its thicker stipe.

Bigelow studied my No. 21582, and says that it compares favorably with the type but the spores of the type are 4-5 x 2.5-3 μ , and he found them in No. 21582 ^{to be} 6.5 x 3.5 μ , and he ~~doubts~~ is in doubt about ~~the Kauffman's form~~ the relationship of K's form.



21582 - *Clitocybe compressipes* Pk. f. *autumnale* Kauff.
some doubt in Bigelow's mind

CLITOCYBE CONCAVIFORMIS Murrill

Florida Acad. Sci. Proc. 7:107. 1945

"Pileus convex, slightly depressed, solitary, 1 cm. broad; surface dry, subglabrous, opaque, smooth, uniformly black, margin even, entire; context thin, pallid, unchanging; lamellae long-decurrent, very distant, rather broad, arcuate, inserted, entire, white; spores globose or subglobose, smooth, hyaline, 1-guttulate, about 4 μ ; stipe subequal, smooth, glabrous, white, about 2 x 0.25 cm.

"Type collected by West, Arnold and Murrill on an oak log in Planera Hammock, eleven miles northwest of Gainesville, Fla., July 16, 1938 (F 17889). About as black above as a mushroom ever gets, and white all below. Apparently very rare in this region."

CLITOCYBE CORTINARIOIDES Murrill

Lloydia 9:315. 1946

"Pileus convex to depressed, solitary, 5.5 cm. broad; surface dry, smooth, glabrous, pallid, margin even, entire; context thin, white, unchanging, odorless; lamellae adnate or slightly decurrent, inserted, narrow, crowded, entire, violet, fulvous after drying for some time; spores ovoid, smooth, hyaline, about $5 \times 3 \mu$; cystidia none; stipe equal above the bulbous base, finely fibrillose, smooth, pale-violet, shining, $3 \times 0.5-0.7$ cm.

"Type collected by W. A. Murrill in a live-oak hammock at Gainesville, Fla., Jan. 1, 1940 (F 20040). Suggesting C. violaceifolia Murr., described from Oregon. The violet gills and stem remind one of certain species of Cortinarius."

CLITOCYBE CYANOLENS Métrod

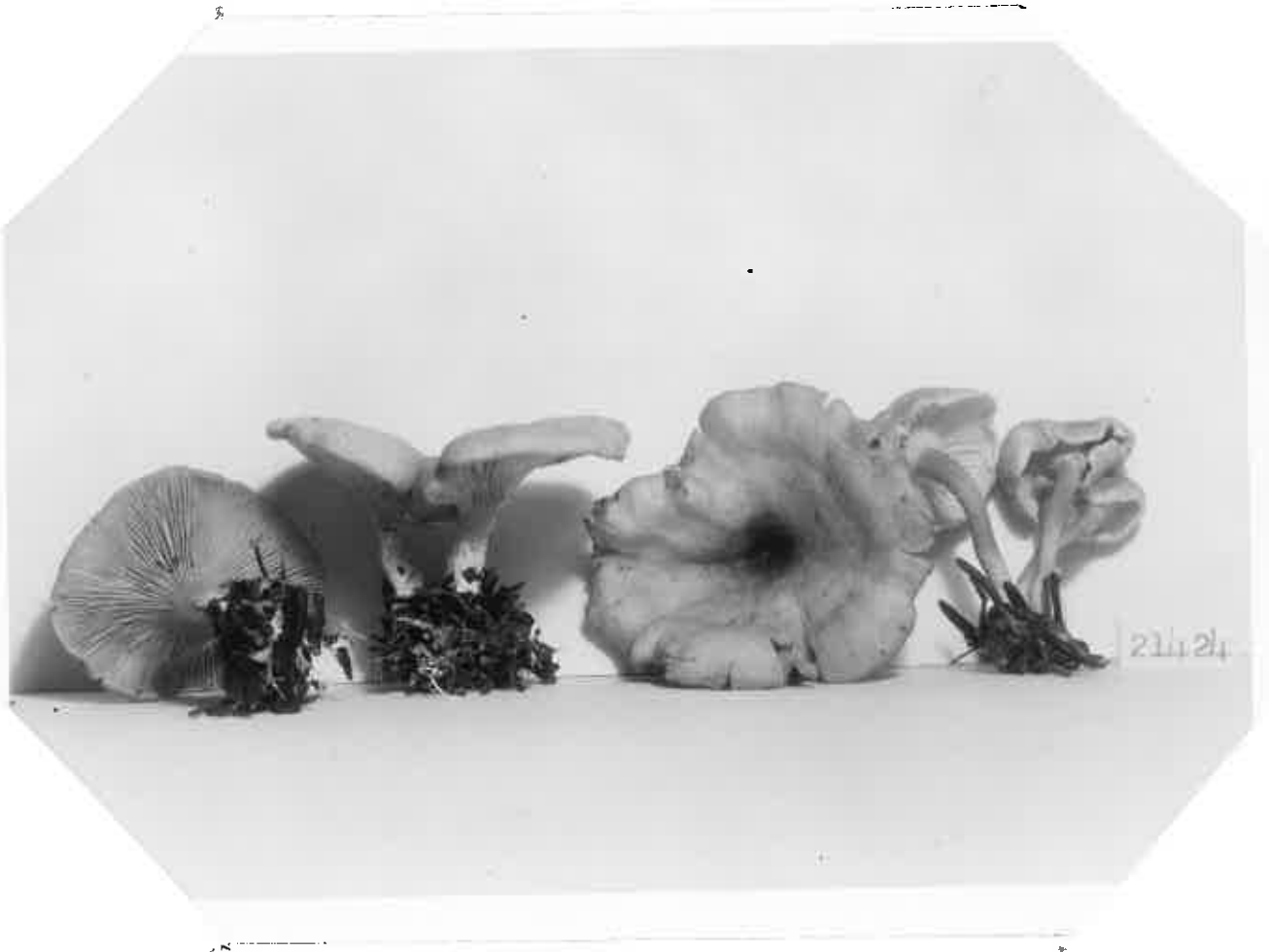
Bull. Soc. Myc. Fr. 67: 387. 1952

Pileus 2-5 cm. broad, at first convex-turbinate, expanding plane or only slightly depressed on disk, finally upturned, not hygrophanous, at first smoky gray to grayish-olive (not matched), at times pale buff, somewhat paler at maturity, glabrous but appearing fibrillose-velvety under lens, surface often concentrically rivulose, margin even. Flesh white, unchanging, thick on disk, thin on margin; odor and taste slight or farinaceous. Lamellae decurrent, arcuate, white, finally pale creamy white, easily separable (paxilloid), narrow, close, occasionally forked, intervenose, edges even. Stipe 1.5 cm. x 3-7 mm., dry, pallid to dingy grayish or brownish, glabrous, base white-mycelioid, at times white-rhizoid, solid then spongy to hollow, equal, often flexuous and base curved.

Spores 5-6 x 2.5-3.5 μ , ovoid-ellipsoid, smooth, non-amylid, color in mass: white, at times with a tint of olive. Pleurocystidia and cheilocystidia none.

Habitat and Distribution. - Scattered to gregarious, rarely subcespitose, on soil and humus, in deciduous and conifer woods, Tennessee and North Carolina, June-July.

Discussion. - Bigelow says of No. 21380 that clamps are present, cuticle of cap consisting of a turf of cystidioid end cells. C. lactariiformis Murr. is closely related and might be a dry-weather form.



21424 - *Clitocybe cyanolens* Métrod



21380 - *Clitocybe cyanolens* Métrod - X1

CLITOCYBE CYATHIFORMIS (Fr.) Kummer

Der Führer in die Pilzk., p.120. 1871

Pileus 3-6 cm. broad, convex, depressed-umbilicate, hygrophanous, "saya brown," glabrous, margin involute, even. Flesh medium thick, dingy; odor and taste mild. Lamellae decurrent, moderately close, dingy brownish, edges even. Stipe 3-5 cm. x 3-6 mm., dingy, often tapering upward, base subbulbous.

Spores 7-10 x 4-6 μ , amyloid. Clamps none.

Habitat and Distribution. - On soil, humus, and on oak and chestnut logs, Tennessee and North Carolina, August-
November.

Discussion. - We have collected what appears to be C. cyathiforme forma americana Kauffman, No. 10723 (see: Michigan Acad. Sci., Arts & Letters Paper 8:192. 1927). It was on log and trunks of beech, Flat Creek, Swain County, North Carolina, August 1, 1937. The lamellae are more distant than in the species, and the spores are rough.

CLITOCYBE DEALBATA (Fr.) Kummer

Führer in die Pilzkunde, p. 121. 1871

Pileus 1.5-4 cm. broad, convex, then plane, disk depressed, white, hygrophanous, with a faint zone when wet, glabrous, margin even. Flesh whitish, rather thin; odor mild, taste slightly astringent. Lamellae adnate-decurrent, white, finally dingy cream, close, rather narrow, rarely forked, alternately long and short. Stipe 1-3 cm. x 3-5 mm., white, fibrillose, equal or slightly enlarged at base, stuffed to hollow.

Spores 4-5 x 2.5-3 μ . Clamps present.

Habitat. - On lawn, Hesler's, Knox County, October 17, 1959.

35638 CLITOCYBE DENSIFOLIA (Favre) Bigelow & Smith PHOTO
On lawn, under pear trees, Knoxville, Tennessee, coll. A. J.
Sharp, September 28, 1971.

Pileus 3.5-8 cm broad, white, center "cartridge buff,"
viscid, appressed-fibrillose, margin radiately ridged.
Context white; odor mild to fungoid, taste at first mild,
becoming slightly musty-unpleasant.

Lamellae adnate or adnate-subdecurrent becoming adnexed,
white, in age near vinaceous buff, crowded, narrow, few
forking behind, lamellulae numerous.

Stipe 4-7 cm x 6-12 mm, white or pallid, sub-clavate,
stuffed.

Spores in deposits: "vinaceous buff," 3.5-4.5(5) x
2.5-3(3.5) μ , ellipsoid, smooth, non-amyloid.

39740 CLITOCYBE DENSIFOLIA (Favre) Bigelow and Smith

In oak-pine woods, Cades Cove, September 25, 1974

Pileus singly or caespitose (2-3 in a group) 5-8 cm broad, white, appressed-silky, hygrophorous, even. Context white, thin, fragile; odor and taste strongly fungoid.

Lamellae adnate-decurrent, whitish, becoming "vinaceous buff," crowded, narrow, with scattered lamellulae, fragile.

Stipe 3.5-4.5 cm long, 4-6 mm thick, white, equal above the slight bulb, dry.

Spores in deposit: "tulleul buff" (thin deposit), 4-5 x 3-3.5 μ , ellipsoid.

CLITOCYBE DIATRETA (Fr.) Kummer

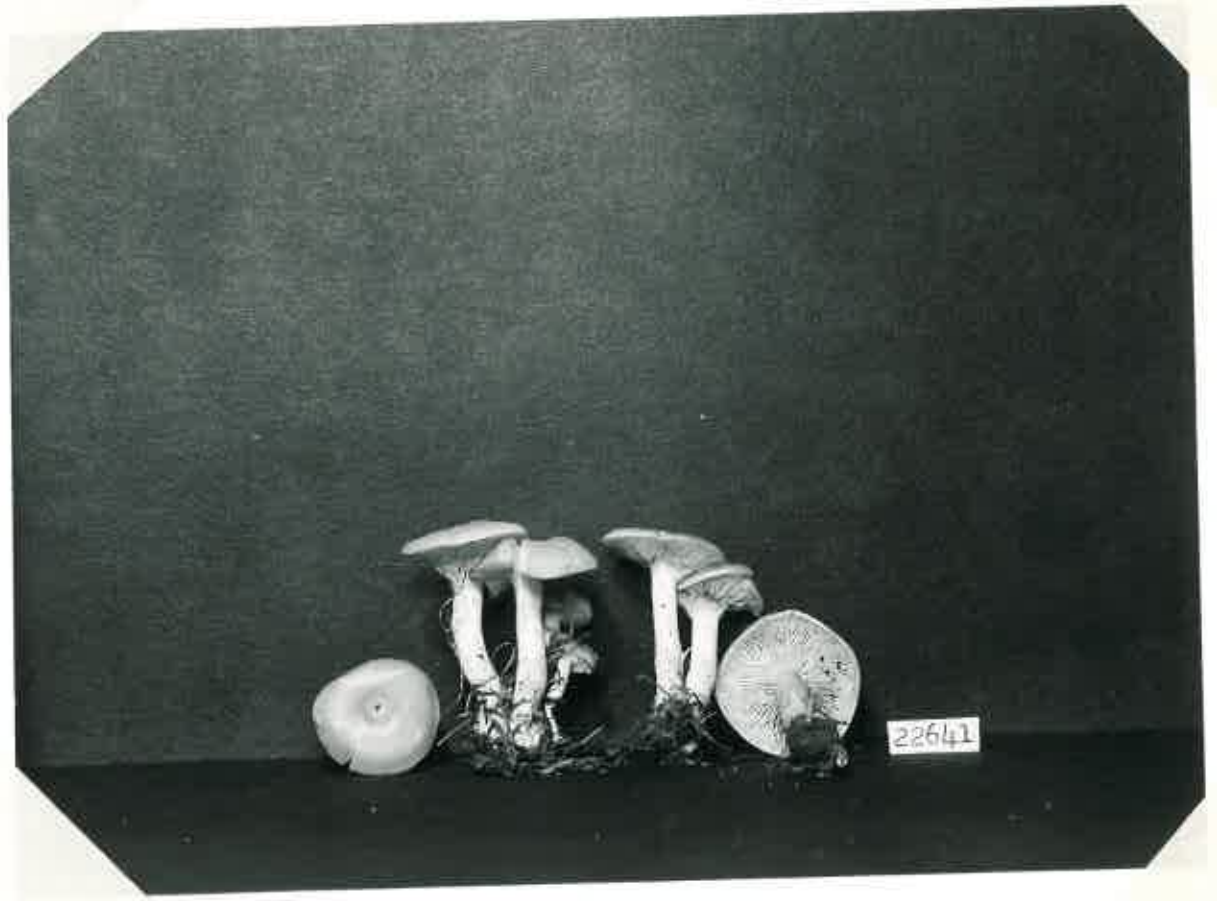
Der Führer in die Pilzkunde, p.121. 1871

Pileus 1-3 cm. broad, convex, expanding planō-convex, depressed, glabrous, moist, hygrophanous, "pinkish-buff" when wet, whitish or "pale pinkish buff" when dry, margin even. Flesh thin, concolor to pileus (wet and dry); odor and taste mild or slight. Lamellae adnate-decurrent, white, close, medium-broad to narrow, unchanging, many short, few forking, edges even. Stipe 1-3 cm. x 3-5 mm., whitish, densely appressed-fibrillose, equal or base slightly enlarged, tubular. Veil none.

Spores 3.5-4.5 x 2.4-3 μ ellipsoid, rough, yellowish in Melzer's, white in mass. Pleurocystidia and cheilocystidia none. Epicutis fibrillose, some hyphae more or less erect.

Habitat and Distribution. - Lawn, under pine, Tennessee, September.

Discussion. - Gregarious to subcespitose. Bigelow, who studied my 22641, comments that in his collections the spore-mass is more ivory than white. No 21897 is not C. diatreta but is C. vermicularis (Fr.) Quel.



22641 - *Clitocybe diatreta* (Fr.) Kummer

CLITOCYBE DICOLOR (Secr.) Murr.

Mycologia 7:260. 1915

Pileus 2-6 cm. broad, convex then expanded, slightly depressed, margin finally more or less up-turned, margin striate, hygrophanous, grayish-brown (moist) ("drab" or "light drab"), glabrous. Flesh thin, water-soaked, concolor, odor fungoid, taste slightly farinaceous. Lamellae sub-decurrent, medium broad, close to subdistant, texture somewhat waxy (suggesting *Hygrophorus*), concolor. Stipe 1.5-4 cm. x 3-5 mm., scurfy or mealy at apex, elsewhere glabrous, spongy then hollow, equal or tapering downward, fragile (base especially waxy-fragile). Spores 7-9 x 3.5-6 μ , variable, elliptical. Cystidia slender, clavate, usually appendiculate, appendage at times forked, not conspicuous, 32-36 x 3.5-5.5 μ . Gill trama interwoven.

Habitat and Distribution. - On soil, under spruce, North Carolina, Indian Gap, June.

Discussion. - The odor suggests *C. ditopa* Fr., but the spore-size relates it to *C. metachroa* Fr., which however has a plane cap and adnate gills. "Waxy" gills and waxy-fragile base of stipe are striking characters.

CLITOCYBE ECCENTRICA Pk.

Torrey Bot. Club Bul. 25:321. 1898

Pileus 2-4.5 cm. broad, convex, almost expanding, disk depressed, white with a pale buff tint, "olive-brown" in button-stage, disk slightly darker, glabrous, hygrophanous, margin more or less lobed, even when dry, faintly striatulate when wet. Flesh thin, pliant, white; odor faintly pungent, taste bitter. Lamellae short-decurrent, close, narrow, at first dingy white soon "light buff," finally "warm buff," thin, few forked, edges even. Stipe 3-5 cm. x 2.5-4 mm., central to slightly eccentric, pale buff but with a white appressed silkiness, base strigose and with a long, white rhizomorph, flexuous, solid to spongy.

Spores 4-4.8 x 2.6-3 μ , ellipsoid, smooth, apiculate, color in mass: white with a faint tint of pale cream, yellowish brown in Melzer's reagent. Pleurocystidia and cheilocystidia none.

Habitat. - On rotten wood, acorns, and dead leaves, in deciduous woods, Timberlake Road, Knoxville, June 10, 1957.

Discussion. - In 22586, Bigelow ^{found} ~~found~~ the spores 4-6 x 2.5-3.5 μ , and also observed clamps.

22586 - *Clitocybe eccentrica* Fr.

29165

CLITOCYBE eccentrica *Pk.* PHOTO

On rotting log, Cades Cove, July 20, 1966.

Pileus white, soon tinged yellow or ivory, infundibuliform, glabrous, striate (under lens). Context white, thin; odor and taste mild.

Lamellae decurrent, narrow, crowded, white then slightly cream.

Stipe dingy, strigose at base, slightly silky above, hollow, equal, sometimes compressed.

Spore deposit: white.

Cf. C. leptoloma.



29165 - *Clitocybe eccentrica* PK.

CLITOCYBE ECTYPOIDES (Pk.) Sacc.

Syll. Fung. 5:169. 1887

Pileus 2-5 cm. broad, thin, broadly umbilicate to infundibuliform, finely virgate with close-pressed fibrils, squamulose-punctate with black points, hygrophanous, watery-gray to dull watery-yellow, or "light cadmium yellow," margin spreading and even. Flesh watery, thin, pliant, concolor to pileus. Lamellae long decurrent, "light cadmium yellow," "mustard yellow" to "warm buff," narrow, sometimes forked, close to subdistant, edges rather thick. Stipe 2-5 cm. x 2-5 mm., equal or tapering upward, firm, solid, pruinose, concolor to pileus or paler, white-mycelioid at base.

Spores 7-9 x 4-5.5 μ , ellipsoidal, smooth, amyloid, white in mass (see below). Pleurocystidia and cheilocystidia not found.

Habitat and Distribution. - On rotting stumps and logs, Tennessee, June-August.

Discussion. - In No. 21615, from Claxton School, Anderson County, December 18, 1954, the spores in mass were "primrose yellow," amyloid, smooth. Bigelow found clamps in my No. 20969.



20969 - *Clitocybe ectypoides* Pk.

24947

CLITOCYBE ectypoides PK.

Photo

Pileus 1.5-3 cm. broad, deeply depressed to infundibuliform, hygrophanous, pale yellowish-buff (not matched), finally darker (near "dresden brown"), glabrous, even. Context pallid; odor and taste mild.

Lamellae long-decurrent, yellowish, becoming reddish-brown spotted, close, narrow, many short.

Stipe 2-3 cm. x 2-4 mm., concolorous, often eccentric, glabrous, base white-strigose, equal, solid.

Spore print failed.

Near C. eccentrica.



24947 - *Clitocybe* ~~*strobiliformis*~~ Pr.

CLITOCYBE EPICHYSIUM (Fr.) Bigelow

Mycologia 50:40. 1958

Pileus 2-3 cm. broad, convex, umbilicate, hygrophanous, "pallid mouse gray" when dry, grayish black (not matched) when wet, umbilicus black, appressed-fibrillose, margin incurved then expanded, striate. Flesh thin, pliant, concolor; odor alkaline, taste mild. Lamellae arcuate, decurrent, some forked; near "pale smoke gray," broad, thin, close. Stipe 1-2 cm. x 2-3 mm., concolor with pileus or darker, apex fibrillose, base strigose, elsewhere glabrous, hollow, equal, or tapering downward, dry.

Spores 7-9 x 4-5.5 μ , ellipsoidal, smooth, yellowish-brown in Melzer's reagent. Pleurocystidia and cheilocystidia none. Gill-trama very loosely interwoven. Stipe hollow, not marasmioid.

Habitat and Distribution. - On hemlock, stump, Tennessee to Alabama, March to October.

CLITOCYBE FASCICULATA Big. & Sm.
Brittonia 21:160. 1969
~~LEPISTA CAESPITOSA (Bres.) Singer~~

~~Folio 22, 192, 1951~~

~~Clitopilus caespitosus~~ PK., New York State Mus. Ann. Rept.
41:65. 1888

~~Tricholoma canasolium~~ *fr.* ~~caespitosum~~ Bres., Fungi Trid.
2: 1892

Pileus 4-7 (9) cm. broad, at first convex, then plano-convex, finally expanded but margin uplifted-incurved, often undulate, white to faintly creamy white, densely fibrillose, dry, at times faintly zonate, with a watery zone midway (in No. 22170), margin sometimes ridged. Flesh white, firm, thick on disk, thin on margin; odor and taste slightly astringent to fungoid. Lamellae adnate-decurrent, crowded, medium broad to narrow (1-2 mm.), white, becoming "pinkish buff," edges even. Stipe 3-8 cm. x (5) 10-15 mm., white, densely fibrillose, dry, equal or often clavate at base, spongy-solid then hollow.

Spores 3.5-5 x 2.8-3.5 μ , ellipsoid-ovoid, non-amyloid, smooth, in mass white with a pale pinkish or pinkish-cream tint. Pleurocystidia and cheilocystidia none.

Habitat and Distribution. - On moist soil, road bank, in woods, Tennessee and North Carolina, June and September.

Discussion. - Sporophores gregarious to compactly cespitose, about 20 μ in cluster, about 15 cm. across.

(more, next page)

23488

CLITOCYBE FASCICULATA Big. & Sm. nom. nov.

In deciduous woods, Pisgah National Forest, October 5, 1959

Pileus 6-11 broad, plane or slightly depressed, whitish to "pale pinkish cinnamon" with a faint smoky tint, densely appressed-fibrillose, slightly viscid (wet), radiately ridged to the disk. Context white, medium thick; odor unpleasant (suggesting Mutinus), taste strong, unpleasant.

Lamellae adnate to slightly emarginate, "light buff", crowded, narrow, edges rough.

Stipe 3-8 cm long, 12-18/^{mm} thick, dingy with white streaks, base white-mycelioid, rind rather hard, flesh soft, equal.

CLITOCYBE FELLIROIDES Kauffman

Michigan Acad. Sci., Arts & Letters 8: 194. 1927

Pileus 2-4 cm. broad, somewhat hygrophanous, "warm buff" to "chamois," convex, infundibuliform, slightly zonate, innately appressed silky, margin decurved. Flesh thin, white; odor and taste farinaceous, Gills decurrent, "warm buff" to "chamois," close, edge even. Stipe concolor, 4-7 cm. x 2-6 mm., hollow, fibrillose, fibrils forming a reticulation, more or less equal.

Spores $6-8(11) \times 3.5-5 \mu$, amyloid, ~~$3.5-5.5 \times 3.5-4 \mu$, sub-globose or short ellipsoid,~~ smooth. Clamps present.

Habitat and Distribution. - On soil, in woods, Headquarters, Great Smoky Mountains National Park, August.

Discussion. - Bigelow studied No. 13915 and reports the spores $6-8(11) \times 3.5-5 \mu$, amyloid, and with clamp connections.

CLITOCYBE FLORIDANA Murrill

Lloydia 7:327. 1944

Monadelphus floridanus Murr., Lloydia 7:308. 1944

"Pileus irregular, deeply infundibuliform, cespitose, 4-8 cm. broad; surface smooth, glabrous, uniformly white, not changing; margin deflexed, even, lobed and splitting; context thin, white, sweet, odorless; lamellae long-decurrent, narrow, crowded, entire, white, yellowish with age; spores ovoid, smooth, hyaline, uninucleate, about $3 \times 2 \mu$; stipe irregular, uneven, finely subtomentose, solid, white, 1-3 x 0.3-0.8 cm.

"Type collected by West and Murrill on dead oak wood in Kelley's Hammock, ten miles northwest of Gainesville, Fla., July 19, 1938 (F 17905). Like clusters of white lilies, irregular and somewhat torn. I first thought of Hexagona daedalea (Link) Murrill, and was surprised when I saw the gills."

CLITOCYBE GIBBA (Fr.) Kummer

Der Führer in die Pilzkunde, p. 123. 1871

Agaricus infundibuliformis ~~(Fr.)~~ Hymen. Eur., p. 93. 1874

Clitocybe infundibuliformis (Fr.) Qué1. Champ. Jura Vosges,
p. 52. 1872

Pileus 2-9 cm. broad, convex at first, then expanding-depressed, deeply umbilicate to infundibuliform, dry, "buff," "pinkish buff," "warm buff," at times "cinnamon buff," often faintly and broadly zoned, to silky tomentose, disk at times minutely floccose, glabrescent, margin ridged to faintly striate or even. Flesh white, thin, pliant; odor mild, taste mild or subalkaline. Lamellae decurrent, white to "cream buff," close, narrow, many short, few forked, edges even or fimbriate. Stipe 2.5-8 cm. x 3-17 mm., pale buff, tapering upward, dry, spongy, glabrous, base white mycelioid.

Spores 5-8 x 3-4 μ , tear-drop shaped, pip-shaped, or ovoidal to pyriform, curved-apiculate, smooth, white in mass, non-amyloid (yellowish in Melzer's solution). Pleurocystidia none; cheilocystidia clavate, 18-28 x 4-5 μ .

Habitat and Distribution. - On soil, in mixed woods, Tennessee, Kentucky, North Carolina, and Florida, May-October.

Discussion. - Bigelow studied 22350, says the caps were not fully expanded, and darker than usual, the spores 6-9 x 3-4.5 μ , obovate in face, lacrymoid from the side, not amyloid, clamps present. In 21859, Bigelow found the spores 5-7 x 3.5-4.5 μ .

23726

Clitocybe *gibba* (Fr.) Kummer Photo
in pine woods Claxton
School, Anderson Co.
July 12-60

Pileus 2.5-5 cm. broad, "light buff", "light ochraceous buff", "pinkish buff" to "cinnamon buff", deeply depressed to infundibuliform, dry, not hygrophanous, minutely silky (under lens), margin radiately ribbed. Context very thin, pliant, white; odor and taste fungoid.

Lamellae decurrent, white then pale cream, narrow, close, few forked, many short, edges even.

Stipe 2-3 cm. x 3-6 mm., white, white-fibrillose, equal, base white-mycelioid, solid then hollow.

Sporeprint failed.

24697

CLITOCYBE GIBBA (Fr.) Kummer

Photo

Pileus 2-10 cm. broad, deeply depressed, more or less umbonate, "ochraceous buff", hygrophane, glabrous, margin crimped-grooved (or ribbed). Context thin, firm, whitish; odor slightly pungent, taste slightly astringent (scarcely bitter).

Lamellae decurrent, white, soon pale cream, close, rather narrow, forking, many lamellulae.

Stipe 2.5-5 cm. x 5-14 mm., "syal brown", equal or enlarged at base, base slightly fibrillose, elsewhere glabrous, solid.

Fairy-ring, 8 ft. diam.



21859 - *Clitocybe gibba* (Fr.) Kummer



23726 - *Clitocybe gibba* (Fr.) Kummer



20900 - *Clitocybe gibba* (Fr.) Kummer



21369 - *Clitocybe gibba* (Fr.) Kummer
squamulosa

CLITOCYBE GIGANTEA (Fr.) Qué1.

Champ. Jura Vosges, p. 51. 1872

Leucopaxillus giganteus (Fr.) Singer

Pileus 9-15 cm. broad, depressed to concave to infundibuliform, whitish but stained more or less ochraceous to tawny, not hygrophanous, not viscid, glabrous (appearing appressed fibrillose under lens), margin even, uplifted, thin. Flesh thin, white, scissile; odor strong fungoid to sub-alkaline, taste mild to slightly bitter. Lamellae decurrent, rounded behind, narrow, crowded, many short, edges even. Stipe 5-9 cm. x 14-22 mm., dry, glabrous, base white-mycelioid, spongy-solid, dingy whitish, base usually curved.

Spores 5-7(8) x 3.5-4 μ , white, ellipsoid, smooth, apiculate, some weakly amyloid. Pleurocystidia abundant, clavate, with a narrow, terminal appendage, 36-54 x 5.5-7 μ ; cheilocystidia abundant, similar.

Habitat and Distribution. - In deep humus, mixed woods, Swain County (Park), North Carolina, August.

Discussion. - Clamps present. Bigelow, in studying No. 24483, found no cystidia but numerous basidioles. It may be that 14483 is C. candida but more likely C. gigantea.

Clitocybe

~~LEPISTA GLABELLA (Speg.) Singer~~

~~Lilloa 23:158. 1950~~

~~Lepista Westii Murr., Lloydia 7:316. 1944~~

(Description adapted from Singer, Lilloa 23:158-159)

Fileus (2) 3-12.5 cm. broad, convex, expanding, sometimes umbonate, smooth or minutely rugulose, "buckthorn brown" (M & P), moist, frequently drying in radial streaks. Flesh white or whitish, firm; odor weak, not distinctive to slightly unpleasant; taste mild. Lamellae sinuate to adnate, close, medium-broad, "suntan merida (1)" to "aloma," edges even to crenulate. Stipe 4-5 cm. x 10-20 mm., white or whitish, glabrous, often curved or base enlarged.

Spores 5.7-7.5 x 3.5-5 μ , ellipsoid, often rounded sub-angular, distinctly rough to strongly echinulate, non-amyloid. Pleurocystidia and cheilocystidia none.

Habitat and Distribution. - On soil and débris, Florida, September-November.

Notes on Type of L. Westii Murr.

Spores 6.5-8 x 3.5-5 μ , ellipsoid, spiny-warty, yellow in Melzer's reagent. Pleurocystidia and cheilocystidia none. Gill-trama subparallel. Epicutis subparallel, hyphae narrow, 2-4 μ broad.

Clitocybe

~~LEPISTA GRAVEOLENS (Pk.) Merrill~~

Big. + Sm.

~~N. A. Flora 10:111. 1917~~

Entoloma graveolens Pk. N. Y. State Mus. Ann. Rept. 53:844. 1900

(Peck: Rept. 53:844)

"Pileus thick, firm but brittle, convex, often irregular, glabrous, slightly flocculent on the margin, whitish, sometimes with a violaceous tint, flesh white, taste unpleasant, odor strong, disagreeable, earthy; lamellae narrow, close, adnexed, grayish white becoming pale salmon color; stem short, stout, solid, thickened or bulbous at the base, downy above, white, the bulb usually clothed with a soft, white tomentum; spores pale salmon color, elliptic, .00024 to .0003 of an inch long, .00016 broad, commonly uninucleate.

"Pileus 2 to 4 inches broad; stem 1.5 to 4 inches long, 8 to 12 lines thick."

Habitat and Distribution. - On soil, low woods, New York, October.

Discussion. - Peck says: "In size and shape this mushroom resembles *Tricholoma personatum*, and when it is tinged with a violaceous hue the resemblance is increased. Its strong unpleasant odor is very persistent and remains in the dried specimens, and its disagreeable flavor is not destroyed by cooking. It grows in dense clusters and in lines or arcs

(more, next page)

of circles. The color of the spores and the strong disagreeable odor easily distinguish the species from the masked tricholoma, with which it might otherwise be confused."

Notes on Type

Spores 6-7 x 3-4 μ , ellipsoid, smooth or slightly rough, yellowish-brown in Melzer's reagent. Pleurocystidia and cheilocystidia none. Gill-trama subparallel.

CLITOCYBE GRISEO-PALLIDA (Desm.) Singer

Lloydia 5:108. 1942

Pileus 14-18 mm. broad, membranous, convex, umbilicate, hygrophanous, "chaetura drab" (wet), near "drab" but paler (dry), hoary, disk fibrillose-punctate, margin coarsely striate when wet, even when dry. Flesh thin, pliant, concolor to pileus; odor and taste slight. Lamellae arcuate-decurrent, sub-distant, near "drab" but paler, medium broad, edges even. Stipe 12-16 mm. x 1-1.5 mm., glabrous, equal, concolor to pileus, solid becoming hollow.

Spores 8-12 x 4.5-6 (7) μ , variable: ellipsoid, sublanceolate, subpip-shaped, smooth, apiculate, brownish in Melzer's reagent. Pleurocystidia and cheilocystidia none. Gill-trama interwoven. Stipe hollow, not differentiated into cortex and rind, composed of uniformly interwoven hyphae.

Habitat and Distribution. - On grassy soil, North Carolina, June.

Discussion. - Kühner & Romagnesi, p. 127, give spore measurements 9-16 x 4.5-6 μ ; Bresadola gives spores: 8-12 x 5.5-8 μ .

CLITOCYBE HARPERI Murrill

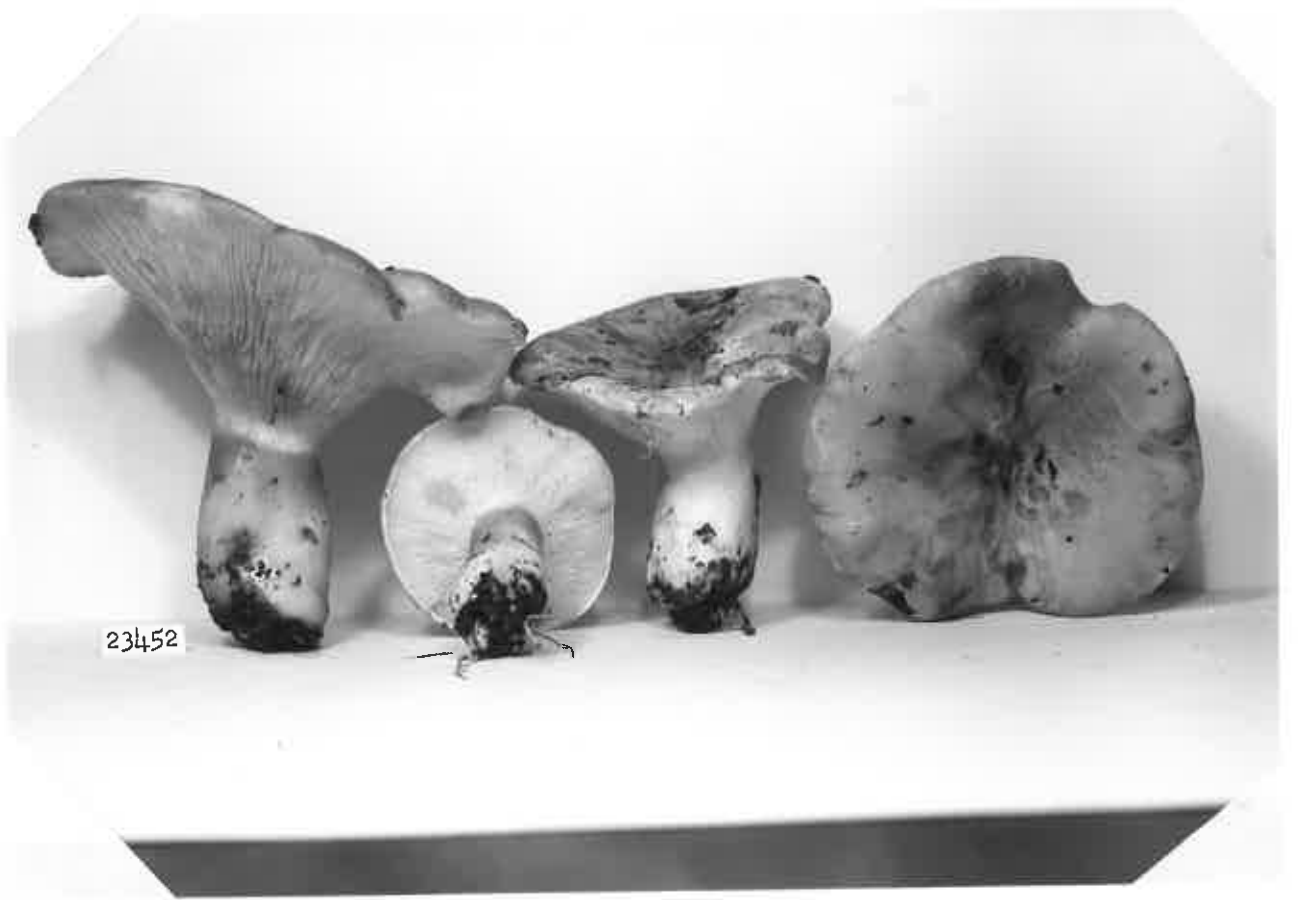
Mycologia 5:209. 1913

- Pileus 4-12 cm. broad, convex, expanding sub-depressed, dry, not hygrophanous, densely tomentose or matted-fibrillose, glabrescent, dusky pale olive-brown or grayish-brown (not ~~matched~~), margin even. Flesh firm, white, unchanging, thick; odor strong or pungent-nauseous (faintly like Simblum sphaerocephalum), taste fungoid, becoming unpleasant or faintly acrid. Lamellae decurrent, separable from pileus, crowded, narrow, white, finally "light buff," becoming dark-to-black-spotted, many short, edges slightly fimbriate. Stipe 4-6 cm. x 15-25 mm., white or tinged grayish-brown like the pileus, slightly silky-fibrillose, firm or hard, solid, dry, equal or slightly enlarged at base, at times with yellow rhizomorphs.

Spores ³4-5 x 2.5-3.5 μ , smooth, ellipsoid, white in mass, yellowish in Melzer's. Pleurocystidia none; cheilocystidia clustered, cylindric, some more or less nodulose, 18-25 x 2.5-3 μ . Gill-trama subparallel. Epicutis of densely interwoven hyphae, 5-6 μ broad.

Habitat and Distribution. - On soil, deciduous woods, Tennessee, October and December.

Discussion. - Bigelow finds spores 3.5-4.5 x 2.5-3 μ ; no clamps.



23452 - *Clitocybe harperi* Murr.



22692 - *Clitocybe harperi* Murr.

19518 - *Clitocybe harperi* Murr.

CLITOCYBE HIGHLANDENSIS Hesler & Smith

Lloydia 6:254-~~255~~. 1943

Pileus 2-11 cm. broad, convex, becoming expanded to plane or the disk becoming somewhat depressed, silky to glabrous, white or dingy white when young, becoming "light buff" or "avellaneous," disk "pinkish buff," surface merely moist, soon dry, not hygrophanous, margin even, or more or less plicate to striate. Flesh thick under the disk, thin along the margin, white; odor none or slightly fragrant, taste mild, at times tardily becoming slightly farinaceous-bitter. Lamellae at first adnate, becoming slightly emarginate and with a decurrent tooth, moderately close to subdistant, 50 more or less reach the stipe, 3-4 tiers of lamellulae, medium broad to broad and in age ventricose (12 mm. more or less), white becoming "light buff" or "cartridge buff" to "ivory yellow." Stipe 4-9 cm. x 6-16 mm., stuffed, becoming hollow, tapering upward slightly, white, apex pruinose to furfuraceous, elsewhere appressed-fibrillose and rimose, strigose over the enlarged spongy base, bases at times curved and connate.

Spores 4-5 x 1.5-3 μ , ellipsoid, or sub-pip-shaped or subovoid, rough (under oil), white in mass, not amyloid; basidia four-spored, 18-22 x 3.5-4.5 μ ; pleurocystidia and cheilocystidia not differentiated; gill-trama interwoven to

subparallel, not amyloid; pileus trama loosely interwoven, hyphae more or less radially arranged and 5-8 μ thick, no clamp connections seen. Cuticle of narrow, parallel hyphae.

Habitat and Distribution. - On soil, at times caespitose, in pine and mixed woods, Tennessee and North Carolina, July-September.

Discussion. - Gregarious to caespitose. Bigelow says No. 12903 has clamps.



21883 - *Clitocybe highlandensis* Hesler + Smith

29955

CLITOCYBE highlandensis

PHOTO

Soil, pine planting, Highlands, near Harbison Lake, August 27, 1967

Pileus ivory, \pm dingy when wet, hygroph. Gills nearly subdistant.

Stipe equal or clavate, soft-fragile, holding clumps of needles.

CLITOCYBE HOHENSIS (Smith) Bigelow & Hesler

Omphalia hohensis Smith, Contr. Univ. Mich. Herb. 5:27. 1941.

Pileus 5-10 mm. broad, convex, expanding, umbilicate, glabrous, hygrophanous, "chaetura drab" to dark grayish-brown, paler when dry, umbilicus darker, margin striate when wet. Flesh thin, dark-grayish, paler when dry; odor and taste mild. Lamellae adnate-decurrent, rather narrow, subdistant, cinereous, occasionally forked, edges even. Stipe 6-10 mm. x 0.2-0.4 mm., firm, concolor to pileus, glabrous, equal, solid.

Spores 7-9 x 4-5 μ , ellipsoid to subpip-shaped, more or less apiculate, smooth, brown in Melzer's reagent. Pleurocystidia and cheilocystidia none. Stipe solid, with a narrow rind, a narrow thick-walled cortex and a loosely interwoven (but solid) "pith."

Habitat and Distribution. - On sandy-clay soil, Tennessee, July and November.

Discussion. - Kauffman gives the spores 9-11 x 5 μ . This is U-T No. 9700.

Clitocybe

~~HYGROPHORUS~~ HUDSONIANUS Jennings

~~Carnegie Museum Mem. 12(III):2. 1936~~

A *Clitocybe*
acc. to Bigelow
(letter Apr 28. 1936)
He will publish
in *Flora*

Pileus 0.5-3.0 cm. broad, plane or centrally and marginally depressed, dull corn yellow, fading to a pale yellow when dry, glabrous but not shining, viscid and rubbery-cartilaginous when moist.

Lamellae sub-arcuate, strongly decurrent, distant, intervenose, wide, thick, waxy, when dry not fading so much as does the pileus.

Stipe about 1-2.5 cm. long, 1.5-2 mm. thick, when dry pale yellow to almost white, dull, straight or curving upwards, cartilaginous, hollow, minutely powdery puberulent, slightly enlarged and matted with white cobwebby mycelium at the base.

Spores 5-8 x 4-5 μ , ellipsoid, smooth, hyaline, rather thin-walled.

Habit, habitat, and distribution. - On moss, Canada, 1930.

Material studied. - CANADA: Sutton (type); Bigelow 5313.

Observations. - Jennings (1936) states: "When moistened the fungus quickly revives and becomes cartilaginous and viscid, soon taking on a dark umber color which is retained when the fungus is again dried. The plants arise from the brown peaty portions of tufts of the moss Dicranum fuscescens. The species

seems nearest to Hygrophorus nitidus Berkeley & Curtis (Hydrocybe nitida Murrill), but it differs from the latter species in having a plane or depressed pileus and a puberulent stem."

Judging from the portion of the type which we examined, the stature of the species is almost identical with that of H. ceraceus. Its consistency, however, is much firmer. The puberulence of the stipe is very conspicuous under a lens, and under a microscope is found to be caused by numerous projecting undulating hyphae up to 150 μ long and 8-10 μ thick. The pileus-trama is perfectly homogeneous and the hyphae measure 6-8 μ broad. No lactifers were seen. The gill-trama is very intricately interwoven. Its hyphae measure 3-6 μ in diameter. No cystidia were seen on the sides and edges of the lamellae. The basidia are four-spored and measure 38-44 x 6-7 μ . The spores are smooth, not amyloid, and measure 7-8 x 3.5-5 μ . The iodine reaction of the flesh of the pileus, gill-trama and hymenium is yellowish brown.

We are inclined to regard the visciduity mentioned by Jennings as a false visciduity caused by the somewhat resinous feel of the dried specimens. At least we were unable to demonstrate any gelatinizing layers of tissue in our mounts. The dried specimens have the unpolished appearance of members of the H. pratensis series, but are even firmer in their consistency. We have not, of course, seen fresh material.

Hygrophorus hudsonianus Jennings, Mem. Carnegie Mus. pt. III
(Botany), 12: 2. 1936.

(Notes by Bigelow)

Pileus: 8-23 mm. broad, convex at first, disc soon becoming shallowly depressed, margin crenate and faintly pellucid-striate at times, expanding to broadly convex, finally plane or rarely broadly infundibuliform, surface glabrous or with white pubescence about the disc, somewhat waxy-appearing at times, hygrophanous, color bright orange-yellow when moist (O 18-12°, O0Y 18-12°) fading very slowly to whitish (O 19-6°); flesh thin, rather brittle and cartilaginous, concolorous with the surface of pileus and fading in a similar manner, odor and taste not distinctive.

Lamellae: adnate at first, soon becoming short decurrent, finally moderately decurrent, subdistant, broad (3-4 mm.), waxy-appearing, near concolorous with the moist pileus but not fading, edges even.

Stipe: 1.5-2 cm. long, 1.5-3 mm. broad, usually equal, base with a small amount of white tomentum, fistulose, often curved, surface white pubescent, pallid or pale orange-yellow (O0Y 18-6°, O 19-6°) beneath the pubescence.

Spores: 6-8(-9) x 4-5.5(-6) μ , usually elliptical or obovate, rarely oblong or subglobose, smooth, not amyloid, pale orange-yellow in mass (nearest O0Y 19-12°); basidia 29-52 x 5.5-7(-8) μ , usually 4-spored, rarely 2-spored, sterigmata 5-6.5 μ long; cystidia: caulocystidia present, 60-130 μ long, 5-8 μ in diameter, hyaline, walls thin and smooth; pileus tissue: \pm homogeneous, hyphae usually cylindrical, 2-8 μ in diameter, hyaline in KOH, clamp connections absent; gill trama interwoven, hyphae cylindrical, 2-5 μ in diameter.

Gregarious to subcespitose, on tundra. July and August.

Material examined: Mt. Albert, Gaspé Parc, Quebec, Bigelow 5306, 5307, 5308, 5310, 5311, 5312, 5313, 5314, 6180; Whiteface Mt., New York, S. J. Smith.