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Coprinus Notebook 2

L. R. Hesler

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Coprinus: Literature

(Key to Species marked: *)

- Smith, A. H. Studies in the dark-spored agarics.
Mycologia 40:669-707. [Coprinus species
described, pp. 670-684.] 1948.
- * Lange, Morten and A. H. Smith. The Coprinus-
Ephemerus group. Mycologia 45:747-780. 1953.
~~With a key to several species.~~
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- * _____ . Flora Agaricina Danica IV. 1939. With a key.
- Lange, Morten. Species conception ^{of} the genus Coprinus.
Dansk Bot. Arkiv. 14:6. 1952.
- * Murrill, W. A. The Agaricaceae of tropical North America.
Mycologia 10:62-85. [Coprinus, p. 82-85.] 1918.
~~With a key to 8 species.~~
- * Earle, F. S. Keys to the North American Species of the
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38-47. 1967.
- * Massee, George. A revision of the genus Coprinus.
Ann. Bot. 10:123-184. 1896.
^(old series)
- Petersen, R. H. Observations on ~~the~~ Coprinus ephemerus.
Mycologia 52:513. 1960.
- Romagnesi, H. Les coprins. Rev. Mycol. (Paris) 6:20-35. 1941.
- _____. Etude de quelques Coprinus. Rev. Myc. (Paris)
16:108-128.
- _____. Ditto. Rev. Mycol. 10:73-89. ~~1945~~ 1945.
- Smith, A. H. and L. R. Hesler. New and unusual dark-
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Mitchell Sci. Soc. 62:177-200. 1946.
- Lange, M. + A. H. Smith. The Coprinus ephemerus
group Mycologia 45: 747-780.
- van Waveren, E. K. 1968. The stercorarius group of the genus
Coprinus. Persoonia 5: 131-176.

COPRINUS ALACHUANUS Murrill

Lloydia 5:154-155. 1942

"Pileus convex to subexpanded, scattered, 3-4 cm. broad; surface striate, white, with white flocci, margin entire to ragged and often upturned with age; context thin, white; lamellae free, narrow, close, inserted, entire, soon blackening; spores subglobose, smooth, brownish-black, opaque, about $11 \times 9 \mu$; stipe equal or tapering upward, smooth, glabrous, milk-white, bulbous, about 7-8 x 0.3-0.5 cm.

"Type collected by W. A. Murrill in soil in an open hammock at Gainesville, Fla., Mar. 21, 1938 (F 16094). Found but once. The spores are shaped somewhat like short barrels, supported on tiny pegs."

Coprinus angulatus Pk.

Buffalo Soc. Nat. Sci. Bull. 1(2): 54. 1873

Coprinus boudieri Quel., Bull. Soc. Bot. France 1877.

Smith's Description: Mycologia 45:764-765. 1953

Pileus 0.4 - 2.5 cm high, at first acorn-shaped, obtuse, then ovoid to hemispheric, becoming expanded, when young dark tawny to "Mars Brown" all over, sometimes with a faint purplish tint, marginal area fading to ochraceous tawny then lead-colored to blackish from the spores, margin ~~recurved~~ recurving, wrinkled striate-sulcate. Context thin, fragile; odor and taste not distinctive, strongly deliquescing in humid weather.

Lamellae pallid becoming black, edges white-fimbriate until deliquescing, close then subdistant, moderately broad.

Stipe 1-5 cm long, 1-3(4)mm thick, whitish, often brownish within, pubescent.

Spores black in deposits, 7.3-11.6 μ 4.5-8.1 μ much flattened, mitriform (Bishop's head-dress shaped) in face view, obliquely ovate-elliptic in profile, varying within this pattern, germ pore apical. Basidia 16-33(39) x 7-10 μ , 4-spored. Paraphyses 14-18 x 8-12 μ . Pleurocystidia 55-125(150) x (20)40-70 μ ; cheilocystidia 20-50 x 10-15 x 3-4 μ , dimorphic: (a) similar to pleurocystidia, (b) ventricose bottle-shaped. Pileocystidia 30-117 x 7-23 x 6.5-9.5 μ , inflated, mostly ~~membranate~~ subacuminate, intergrading to thick-walled sclerocystidia.

Hab. On soil, ~~along~~ base of stump, and on charcoal(Smith); Knox County and GSMNP(Chimneys Camp Ground), March to August; four collections(Nos. 8929, 9211, 14153, 14168).

Smith comments that if a velate species with the same type of spores exists, as Jossierand(1944) supposes, it should be described as a new species.

14168

angulatus PK.

~~COPRINUS BOUDIERI Quél.~~

~~Buffalo Soc. Nat. Sci. 1(2): 54. 1873.~~

~~Bull. Soc. Bot. France, p. 1877~~

Coprinus Boudieri Quél., Bull. Soc. Bot. Fr. 1877.

Pileus 2-3 cm. broad, cylindrical, or hemispherical, expanding somewhat, slowly deliquescent, grayish, disk^c brown, with scattered mealy particles, sulcate to disk.

Flesh very thin, delicate. Lamellae adnate, crowded, narrow, black, deliquescent. Stipe 8-12 cm. x 2-4 mm., white, very fragile, splitting, equal, hollow.

Spores 8-9 x 4.5-5.5 μ , angular, key-stone shaped, dark brown under microscope, "blackish violet gray" in mass.

Pleurocystidia and cheilocystidia not found. Surface of pileus composed of cells which are globose, colorless, smooth, 20-63 μ diam.

Habitat and Distribution. - On soil and at base of stump, Knox and Sevier (Park) Counties, Tennessee, May-August.

Identified by Smith.

Coprinus angulatus Pk.

~~New York State Mus. Ann. Rept. 26:60. 1874.~~

Plants

Pileus ~~2.5~~ 2.5 - 5 cm high, 1.2 - 2.4 cm broad, hemispherical or convex, disc smooth, plicate-sulcate. Context sub-membranaceous.

Lamellae subdistant, reaching the stipe, whitish then black.

Stipe 1 mm thick, whitish, equal, smooth.

Smith's Description (Mycologia 40:670.)

Spores 8.5-10(11) x 5.7-6.3 x 7-8.8 μ , dark bistre to blackish in KOH, somewhat flattened, truncate-ellipsoid in profile, resembling a blunt arrow head in face view, apical hyaline pore broad and conspicuous. Basidia 18-32 x 7-9 μ , 4-spored, trimorphic. Paraphyses inflated, hyaline, readily collapsing. Pleurocystidia (50)60-100(120) x (15) 20-60, hyaline, smooth, thin-walled and readily collapsing; cheilocystidia 15-40 μ diam. and vesiculose, or fusoid-ventricose, 38-46(55) x (7)9-14 μ , both types ~~with~~ thin-walled and hyaline. Gill trama hyaline in KOH or colored cinnamon brown toward the pileus trama. Pileus trama with a cuticle of vesiculose cells, one cell deep, from among them arising numerous pileocystidia, (32)60-90 x 9-16 μ , subcylindric to ventricose at ~~base~~ base, apices obtuse to subacute, walls thin and hyaline or slightly thickened in basal part and either hyaline or tawny in KOH; flesh below cuticle tawny to cinnamon brown in KOH.

Hab. In woods. Craggan, September.

Buffalo Soc. Nat. Sci. Bull. 1(2):54. 1873.

Coprinus
borderi
Quel.

Coprinus apiculatus R.

Jorrey Bot. Club Bull. 22:206. 1895

Pileus ^{about} 6 mm broad, campanulate or deeply
convex, acute or apiculate, grayish, furfuraceous,
plicate-striate to the disc. Context membranous.

Gamellae reaching the stipe, black, subdistant,

few. Stipe 2 - 3.3 cm long, scarcely 1 mm thick,
filiform, white, glabrous.

Spores $7.5 \times 4 \mu$, ellipsoid, black.

Hab. Fewiston, Pa.

Coprinus aquatilis PK.

New York State Mus. Ann. Rept. 27: 96. 1875

Pileus ~~2.5~~ 5 - 6.5 cm high, ~~5~~ - 12 - 16 mm broad,
campanulate, ^{yellowish then} yellowish brown, furfuraceous,
sulcate-plicate almost to disc. Context membranous.
Famellae reaching the stipe, brownish then black,
subdistant.

Stipe whitish, furfuraceous, slender, equal, hollow.

Spores $12.5 \times 7.5 \mu$.

On sticks + twigs, in wet places, Adirondack
Mts., August.

Coprinus atramentarius (Fr.) Fr.

on or at base of stump, poplar, Campus, U-T, Knoxville,
leg. A J. Sharp, Sept. 7, 1936

Pileus in dense cespitose clusters, 2.5- 5 cm high,
3-6 cm when expanded; disc "drab", elsewhere ^{my}grayish, darkening
with maturity (spores), central portion squamulose, margin
striate, Context pallid, soft, watery; odor and taste
mild.

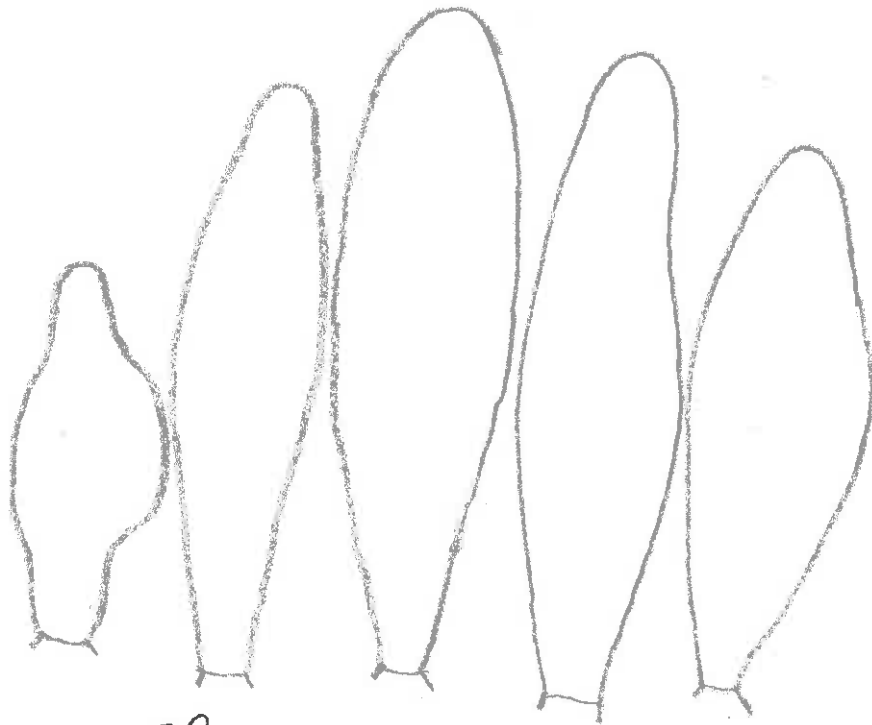
Lamellae free, grayish then brownish, finally
black, crowded, medium broad.

Stipe 5-11 cm long, .6-10 mm thick, white, veil
^{or ring, which at maturity may be}
leaving a zone at the base, hollow.

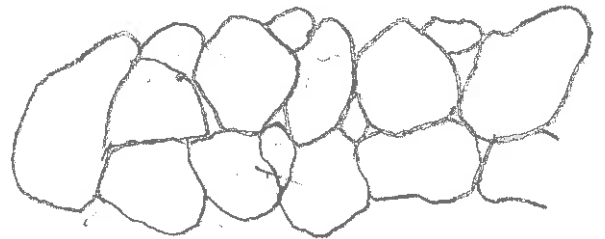
Spores 7-8.5(9) x 4.5 - 5 μ , ellipsoid, with a small
germ-pore, smooth. Basidia 32-35 x 8-11 μ , 4-spored.
Paraphyses 22-25 x 10-12 μ . Pleurocystidia 50-88(106) x
20-26 μ , ventricose, extending prominently across from one
gill to the next; ~~Pileus xanthic~~ cheilocystidia not found.
Pileus cuticle cellular, about 2 cells deep, of irregular
shape.

Cephus atramentarius

9419



Pl x 1000



Pileus cuticle x 1000



Profile

Face

Spores x 8000

Coprinus atramentarius (Fr.) Fr.

Epicr. Myc., p. 243. 1838

Agaricus atramentarius Fr., Syst. Myc. 1:308. 1821.

(Adapted from ~~Smith's~~ Smith's Description: Mushrooms in Nat. Hab., p. 575.)

Pileus up to 6 cm high, 4-6cm broad when expanded, with a silvery lustre, disc "drab" or more sordid brownish, grayish toward the margin, apical(disc)area often minutely/scaly, ^{brownish} striate. Context soft, watery umber, soon deliquesceing; odor and taste not distinctive.

Lamellae free, pallid grayish, brownish, then black, rather broad, crowded.

Stipe 10-15 cm long, 8-12(20)mm thick, white, brownish fibrillose to scaly up to the sub-basal zone left by the broken veil, silky fibrillose above.

Spores black in deposits, (7)8-9 x 4.2-5 μ , ovoid, smooth, with a pore. Basidia (20)24-27 x 7-8 μ , Paraphyses 11-15 x 9-12 μ , vesiculose. Pleurocystidia 150 x 30 μ , soon collapsing. Pileus cuticle of inflated cells.

Hab. Around stumps and at base of trees. East Tennessee Counties, April-November (Nos. 3629, 8416, 8926, 9640, 15796).

Coprinus brassicae Pk.

New York State Mus. Ann. Rept. 43:18. 1890

Peck's Description

Pileus 8-10 mm broad, ovate or conical, then broadly convex, white becoming grayish brown, squamulose, finely striate to disc, margin splitting and becoming recurved. Context membranous.

Lamellae reaching the stipe, brown with a slight ferruginous tint, narrow, crowded.

Stipe 16-20 mm long, slender, white, glabrous, slightly thickened at base, hollow.

Smith's Description (Mycologia 40:672. 1948)

Spores 6.2-7.8 x 3.6-4 μ , dull cocoa brown in KOH, not flattened, ellipsoid in either view, apical pore hyaline, distinct but small. Basidia 4-spored. (No other micro characters determinable on material examined.)

Hab. On decaying stems of cabbage, Menands, August.

Smith states that the ^{characters} ~~characters~~ of the veil could not be determined.

Hanna (Mycologia 31: 251-257. 1939) states that it is a synonym of C. utriculicola (Berk. & Br.) Buller. He reports small sclerotia in cultures.

Coprinus burkei Smith

Elisha Mitchell Sci. Soc. Jour. 62:178. 1946

Pileus 3-6 mm high, when expanded 6mm broad, obtusely conic, then broadly so, pallid to milky white over marginal area, cream color over disc, at first covered with pallid threads of universal veil, these soon evanescent or remaining near disc, on drying becoming sulcate-striate. Context delicate; odor and taste not recorded.

Lamellae free, pallid then cocoa brown, close,
narrow.

Stipe 1-2 cm long, 0.5 mm thick, white, equal or slightly enlarged at base, with a volva like zone of veil remnants at base, fibrillose or pruinose upward.

Spores pale cocoa color in KOH, finally fuscous, 5.5-6.3x (3)3.8-4.2 x 4.5-5.3 μ , somewhat flattened, subspheric to broadly ovate, slightly inequilateral to broadly ovate in profile, pore inconspicuous, apical. Basidia 12-16 x 6-7 μ , trimorphic. Paraphyses coprinoid. Pleurocystidia 10-15 μ diam, cylindric, abundant; cheilocystidia none seen (apparently all had collapsed). Pileus cuticle of enlarged cells. Veil remnants of hyaline contorted hyphae, with numerous short rod-like projections or spines, at least main trunk thick-walled (similar to those of C. phaesporus) although hyaline.

near

Hab. On fern petioles, /Birmingham, Alabama,
Dr. R. P. Burke, June, 1942.

See discussion, Mitchell Jour. 62: 178.

Coprinus calyptratus Pk.

Torrey Bot. Club Bull. 22: 205. 1895

Coprinus asterophorus Long & Mentzer, Mycologia 37:120. 1945

Peck's Description

Pileus about 5 cm broad, at maturity with a few grayish floccose scales, and with a calyptra ~~which is persistently~~ ^{which is persistently} ~~stellately split~~ ^{and} ~~membranous~~ dingy yellow or subtan ^{and} striate to disc, grayish-floccose along the striae ridges.

Lamellae free, dark lead color, then black.

Stipe 7.5-10 cm long, 4-6 mm thick, white, becoming blackish on drying except at the base, equal, hollow.

Smith's Description (Mycologia 40:672)

Spores 17-21 x 10-13 μ , not appreciably flattened, germ pore small and slightly eccentric in profile. (No other details obtainable from the type.)

Smith considers C. asterophorus to be a synonym. The volva leaves on the pileus a covering (calyptra) which is yellowish and a good field character. The spores are similar to those of C. sterquilinus, but differs in the more compact organization of the veil tissue (Smith).

Bartholomew

~~Peck~~ collected it on cultivated soil, in Kansas, and sent it to Peck. August. No "button" seen.

COPRINUS CAPILLARIPES Murrill

Florida Acad. Sci. Proc. 7:125. 1945

"Pileus conic to broadly convex, gregarious, 4 x 4 mm.; surface gray, squamulose, sulcate, margin revolute; context very thin, pallid; lamellae free, rather distant, narrow, soon blackening; spores broadly ellipsoid, smooth, dark-brown, apiculate, 10-11 x 7-8 μ ; stipe hairlike, smooth, glabrous, equal, snow-white, about 3 cm. long; annulus wanting.

"Type collected by W. A. Murrill in an open grassy lawn at Gainesville, Fla., July 26, 1939 (F 19975). A very dainty little species, found but once."

Coprinus comatus var. breviceps PK.
New York State Mus. Ann. Rept. 49: 29. 1896.

COPRINUS COMATUS (Fr.) S. F. Gray

Nat. Arr. Brit. Pl. 1:633. 1821

(Description adapted from Smith: Mushrooms, pp. 573-574)

Pileus ³⁻⁸~~4-12~~ cm. high, 3-5 cm. wide, at first ellipsoid or cylindric, expanding, dry, at first "clay-color" to "cinnamon-buff," or "smoke gray" to very sordid brown, soon torn into scales by the expansion of the cap and then surface fibrillose to fibrillose-scaly with the tips of the scales yellowish brown and the remainder whitish, the disk may remain glabrous or become decorated with small erect scales, margin appressed to the stipe at first and connected to it by a band of tissue which separates to form a movable annulus. Flesh thick on the disk, thin over the margin, white, quickly deliquescing; odor not distinctive, taste mild or slightly unpleasant. Lamellae free or meeting the apex of the stipe, moderately broad, equal, white, quickly deliquescing, very crowded. Stipe 6-20 cm. x 1-2 cm. thick at apex, up to 3 cm. thick at the base, equal or fusiform and with a narrowed radicating base, or furnished with a distinct pseudorhiza, hollow but with a central strand of white fibrils, white and fibrillose above, somewhat discolored around the base, with or without a movable annulus.

Spores 11-14 (15) x 6.3-8 (8.5) μ , smooth, black in mass, not flattened, subellipsoid to slightly inequilateral in side view, in face view the base ovate-pointed and apex obtuse to truncate, hyaline pore apical or slightly off center. Basidia

(more, next page)

four-spored, trimorphic, the longest 36-40 x 10-22 μ , the shortest 22-26 x 10-12 μ . Paraphyses 30-34 x 15-20 μ , globose to saccate on a short narrow pedicel. Pleurocystidia none; cheilocystidia vesiculose to saccate, 40-60 x 15-30 μ , hyaline. Gill-trama of loosely arranged enlarged cells. Subhymenium appearing cellular in sections. Pileus trama fibrillose. Cuticle of compactly and radially arranged narrow (5-8 μ) hyphae which are subgelatinous in KOH (material taken from near disk).

- Habitat and Distribution. - On grassy soil[^] in pastures, and open woods, Tennessee and Florida (doubtless throughout the Southeast), ^{April - November} ~~May - October~~.

All our collections local (except some from New York by Drs. Petersen and Olexia); on lawns, roadsides, and in low moist woods (Tyson Park); Nos. 3640, 4098, 14169, 17757, 39182, 40149, 40170. ~~April - November~~

17757 Coprinus comatus (Muller ex Fr.) S. F. Gray

on soil, low, wet, open woods, Tyson Park, Knoxville,
Tenn., Oct. 20, 1946

Pileus 4 - 7 cm high, 4-6 cm broad, white scaly from the uplifted pileus cuticular fibers, at middle with a vinaceous tint from the lamellae.

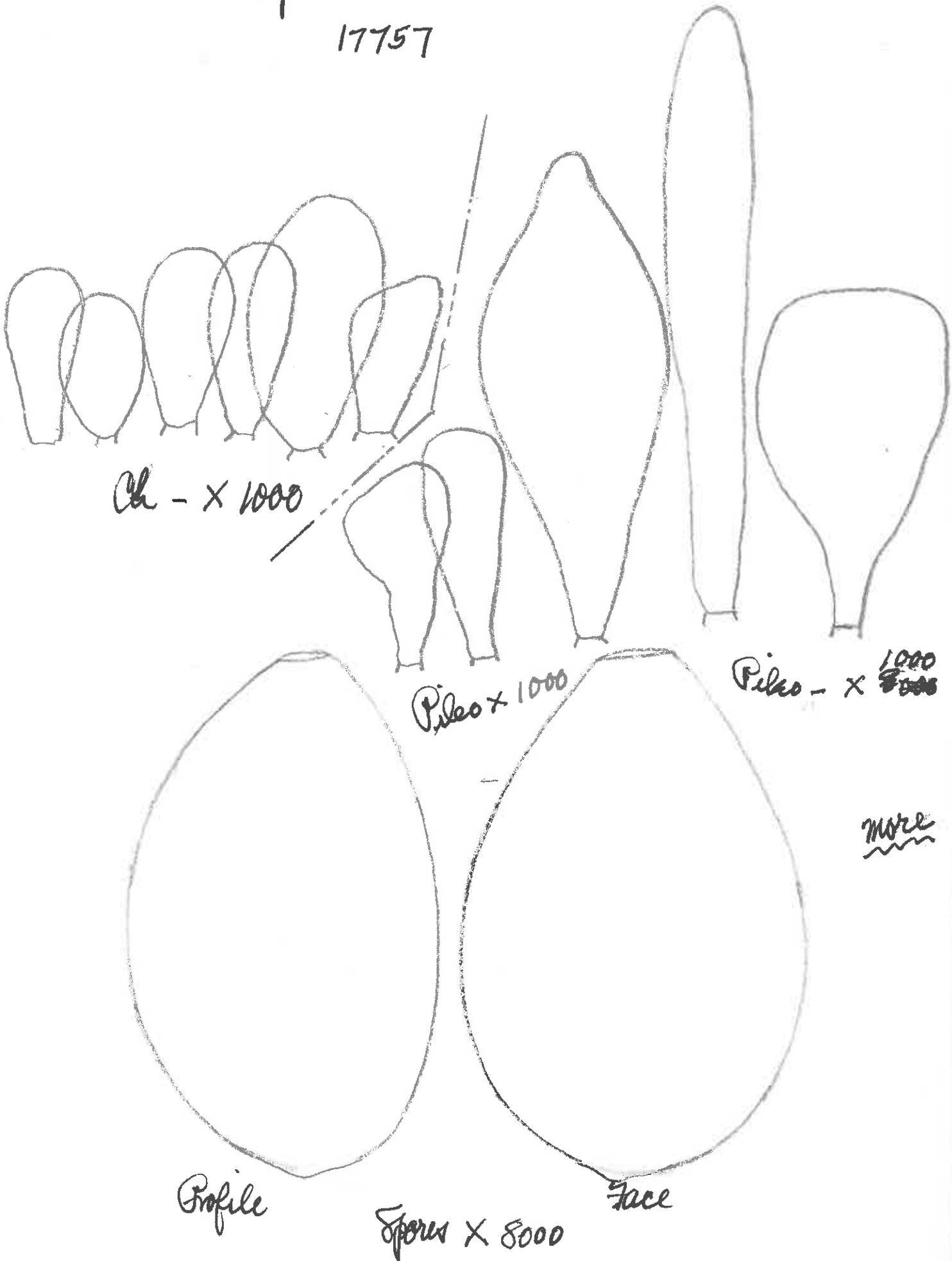
Stipe 6-20 cm long, 9-13 mm thick, whitish.

Ring movable.

Spores 10-14.5 x (6)7.5-9.5 μ , ellipsoid to obscurely inequilateral in profile, ovoid to ellipsoid in face view, smooth, apical germ-pore large, spores dark-brown in 2% KOH. Pleurocystidia none found; cheilocystidia 30-54 x 16-28 μ , vesiculose to subpyriform, or saccate. Pileo-40-225 x 18-40 μ , clavate, spathulate/ventricose, cystidia/as terminal elements of uplifted fibrils on pileus cuticular hyphae. Pileus cuticle a zone of somewhat gelatinous hyphae, 4-7 μ broad. Hypodermium of brownish hyphae, 3-6 μ broad. Caulocystidia none found on young stipes. Cystidia on movable ring, as terminal elements of surface hyphae, 62-110 6-26 μ , cylindric, subcylindric or subclavate, thin-walled.

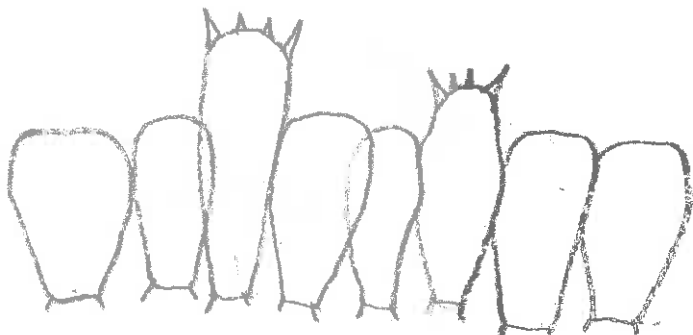
Coprinus comatus

17757

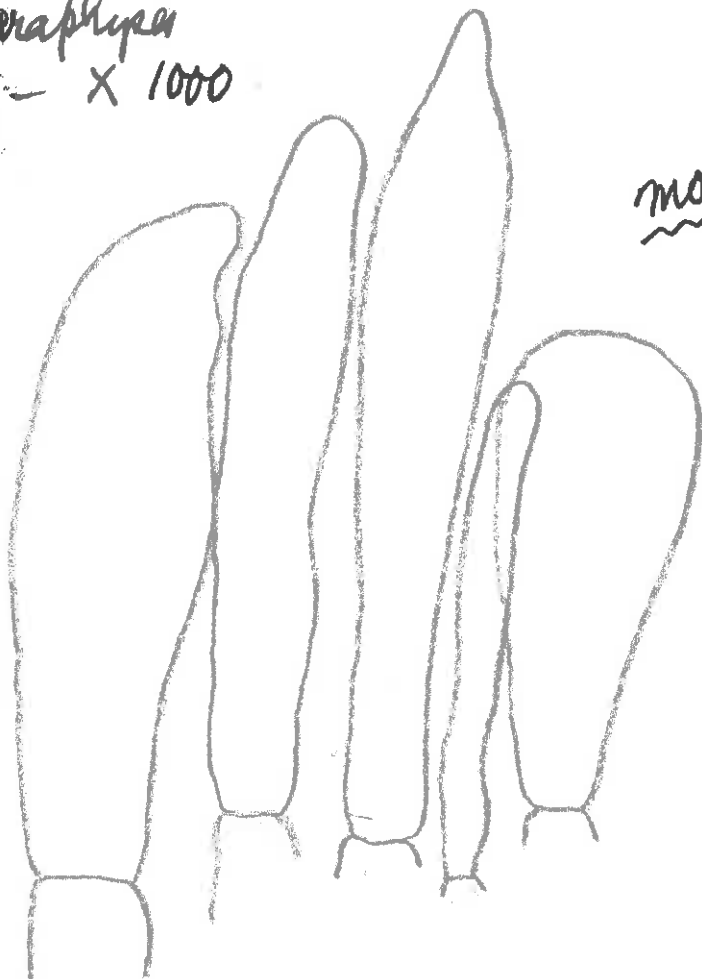


Coprinus comatus

17757



Hymenium: Paraphyses
+ Basidia - X 1000



more

Cystidia on movable
annulus - X 1000



17757 - *Coprinus comatus* Fr.



on soil, roadside, Lyons View, Knox Co., Tenn.,
Nov. 27, 1973

Spores 10-14.5 x 6-8 μ , ellipsoid, with a distinct apical germ-pore. Basidia 30-37 x 10-12 μ , 4-spored. Paraphyses 18-25 x 10-14 μ . Pleurocystidia none; cheilocystidia 30-54 x 16-28 μ , vesiculose^{to} subpyriform. Cystidia as terminal elements on the hyphae composing the movable annulus 62-110 x 6-26 μ , cylindric to sub-cylindric or subclavate, thin-walled.

13357

COPRINUS CORDISPORUS Gibbs

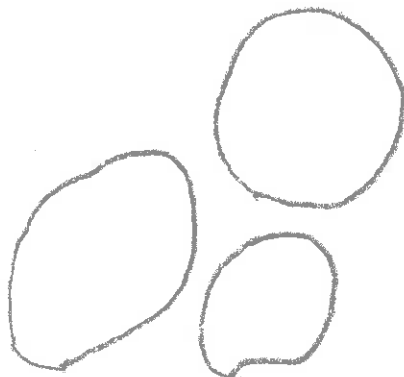
Pileus 2-12 mm. broad, convex-conic, expanding, grayish to nearly black, disk ochraceous and slightly depressed, ochre, mealy, margin recurved, soon deliquescent, plicate at first, then sulcate. Flesh very thin. Lamellae free, subdistant to distant, soon black, narrow. Stipe 2.5-8 cm. x 0.3-1 mm., white, pubescent, glabrescent, base hairy, hollow. Veil not forming a ring.

germ pore apical but rather obscure,
Spores 6.5-8 x ~~4.5-6.5~~ ^{5-7 μ , (subglobose} ~~lens-shaped~~ to sub-cordate, often
flat-sided, occasionally 5-6-sided,
 smoky brown (under 'scope). Pleurocystidia pyriform,
 35-43 x 16-20 μ . Cells ~~composing meal~~ ^{the on pileus} on pileus, ~~smooth~~
 globose to ovoidal, 17-60 μ diam., smooth to slightly granulate.
↑ cells

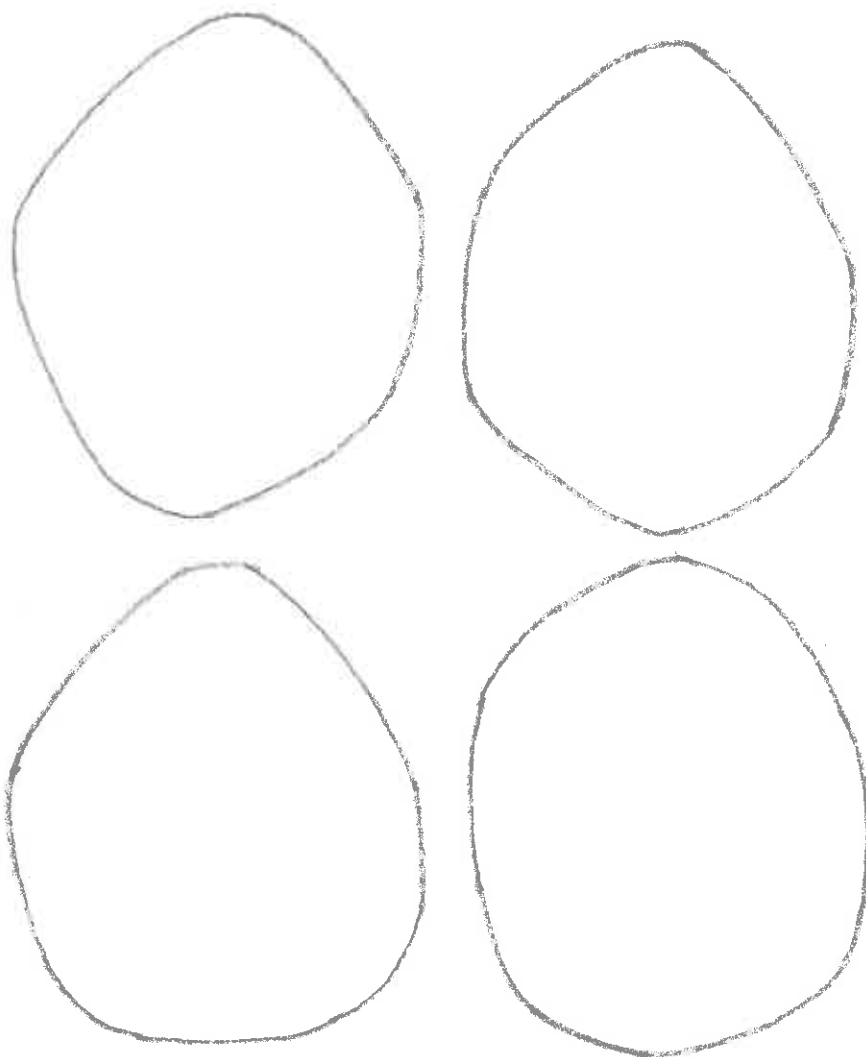
Habitat and Distribution. - On horse and cow dung, Know County, Tennessee, February-November. All collections were developed in the laboratory (Nos. 13357, 13763, and 14064, on dung from the University Farm, Knoxville; Nos. 17442 and 17453, ~~from~~ ^{on} dung collected in Panama + developed in the laboratory at Knoxville by Dr. S. R. Meyer.

Coprinus cordisporus Gibbs

13357



Cells from pileus surface (meal)
x 1000



Spores x 8000

13763

Coprinus cordisporus Gibbs

on cow-dung, Barnhill Farm, Knox County, Tenn.,
May 4, 1941; developed in a moist chamber in Laboratory.

Pileus 8-12 mm broad, convex then expanded, grayish finally blackish, with pale ocher granules(meal) which at times appear as papillae, margin striate-plicate, finally crenate-lobed. Context membranous.

Lamellae free, finally black, narrow, subdistant.

Stipe 5-8 cm long, 0.5-1.0 mm thick, white, fragile, pubescent then glabrous, base slightly enlarged.

Spores 6-8 x 5-6.5(7.5) μ , distinctly subcordate to subtriangular, often flat-sided, occasionally broader than long, germ-pore apical and more distinct than in some other collections, brown in KOH, smooth. Pleurocystidia 35-43 x 16-20 μ , scattered to very rare, more or less pyriform to subvesiculose; cheilocystidia not found. Pileus cuticle of vesiculose cells, walls thin, smooth to obscurely granulate. ~~Meal~~ Meal on cap composed of subglobose ~~cells~~
41
to ellipsoid-ovoid cells, 27-~~36~~⁴¹ x 27-30 μ .

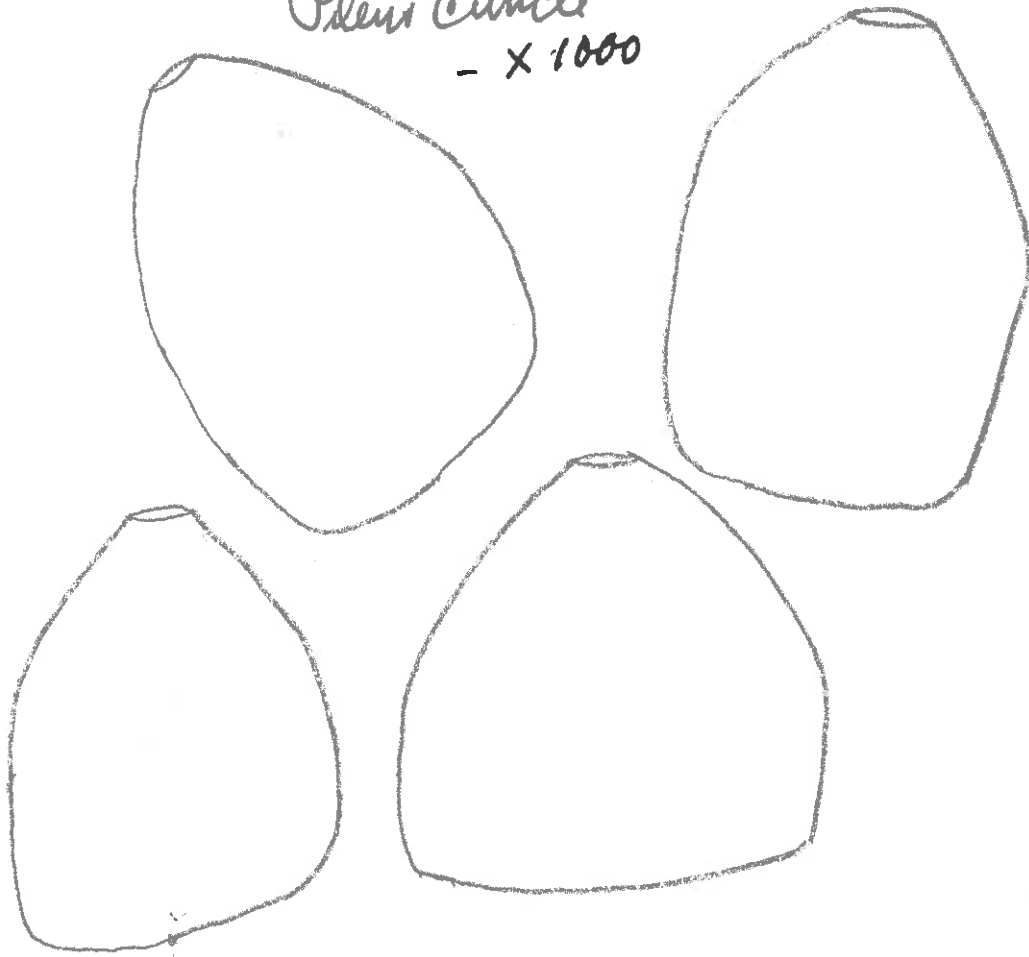
The angular-subcordate spores are much more
and its germ-pore more distinct
noticeably so/than in other collections.

Caprinus cordisporus Gibbs

13763



Pileus cuticle
- X 1000



Spores X 8000

14064

Coprinus cordisporus Gibbs

on horse-dung, U-T Farm, Knoxville, Tennessee,
leg. S. L. Meyer, det. LRH, Nov. 7, 1941

Spores as in No. 13763, majority of them distinctly
subcordate to subtriangular, smooth, germ-pore distinct.

Stipe sutcile of repent, dry hyphae. No caulocystidia
found.

17442

Coprinus cordisporus Gibbs

on horse-dung, Panama, leg. S. L. Meyer, developed
in the laboratory, Knoxville, Feb. 1946.

Spores 6-8 x 5.5-7.5 μ , distinctly subcordate to
slightly triangular, some nearly ellipsoid, smooth, germ-
pore apical, distinct.

Stipe 3.5 - 4.5 cm long, 0.20- ~~0.30 x thick~~ 0.3 mm
thick, white, very fragile.

17453

Coprinus cordisporos Gibbs

on horse dung, Panama, leg. S. L. Meyer, Jan. 13,
1946. Developed in moist chamber at Knoxville,
det. Hesler.

Pileus 3-6 cm broad, expanding, disc slightly
depressed, surface covered with ~~X~~ pallid to ochry-pallid,
mealy particles, margin sulcate. Context membranous.

Lamellae reduced to a line, very distant.

Stipe 2-4 cm long, 0.5 ^{0.8} ~~2~~ mm thick, glabrous,
~~stipe~~ diaphanous, hollow.

Spores mostly cordate-subrotund, 6.5 - 7.5 x 5.5-
6.5 μ , ^{some} ~~many~~ almost ellipsoid, 7-8 x 4-5 μ , ^{germ-pore apical} brown, Cystidia
^{Meal} not observed. [^] Cells on cap surface globose to subglobose,
hyaline, smooth, 17-27 x 18-30 μ .

Illustrations: ^{741,} Lange, Mycologia 40: fig. II; ^{743,} and III, 1948.
[Description below from Lange, M. Mycologia 40:739. 1948]

↪ Pileus 12-20mm ~~xxxxx~~ high, expanding ovate, finally plane, whitish then grayish, plicate-striate nearly to disc, disc not sharply delimited, ~~xxxxxxx~~ at first with granulose to filamentous covering, dingy whitish, in places reddish avellaneous, these areas brownish in mature specimens. Context thin, watery white; odor and taste nauseating, pronounced (as in C. narcoticus).

Lamellae free, whitish, then pale pinkish cinnamon, finally black, narrow, rather crowded, edges floccose, whitish until deliquescing.

Stipe 5-6 cm long, 3-5 mm thick, white, ^{scabrose-tomentose from} short fibrils, especially so ~~fibrillous~~ toward base which is also covered with granulose veil elements, ^{and} which are tinged reddish avellaneous, attenuated upwards, hollow, not fragile; *stipe and veil both turn red a few seconds after being touched, and after some minutes fade to*

Spores in deposit black, 11.6-14.2 x 8.3 - 10μ, mostly 12.5 - 13 x 8-9μ, broadly ovoid, usually slightly flattened, some of them obscurely angular in face view, dark umber in ~~H₂O~~ H₂O, coal black in KOH, truncate, germ-pore conspicuous, slightly eccentric. Basidia 30-45 x 10-11μ, 4-spored, more or less dimorphic. Paraphyses pear-shaped. Pleurocystidia 18-30(50) x 15-40μ, scattered to rare, vesiculose and soon collapsing (all material grown in culture ~~may~~ devoid of pleurocystidia). Gill edges of pear-shaped, ~~with~~ subglobose to globose cells, 15-35μ broad, borne on thorn-like projections on cylindric filaments. Veil on

vineous brown or avellaneous (readily seen in cultured specimen, difficult to see on those in nature.)

cap similar to tissue on gill-edges, readily collapsing,
often with brown material between. Clamp connections
on mycelium.

Hab. In large clusters, on old decaying haystack,
Ann Arbor, Mich., leg. Smith & Lange, May. Previously
recorded from France, Switzerland, and England.

on horse dung, University of Tenn., Farm,
Knoxville, Feb. 24, 1941, leg-S.L.Meyer, det-
L R Hesler, confirmed by A H Smith,

Pileus 2 - 4 mm broad, subcylindric to subconvex
at first and slightly reddish brown, soon expanding and paler
brownish,
to whitish, disc/at times slightly depressed, coated with
~~numerous~~ numerous particles ~~which~~ which are reddish
brown, plicate then sulcate, lobed to crenate. Context very
thin and membranous.

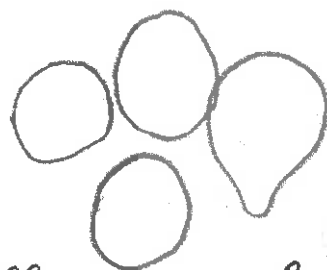
Lamellae free, distant, narrow, white then brown,
finally black and deliquescing.

Stipe 1-4 cm long, filiform, white, translucent,
glabrous above, pilose to pubescent downward, no ring. Veil
reddish brown soon grayish, granulose, evanescent.

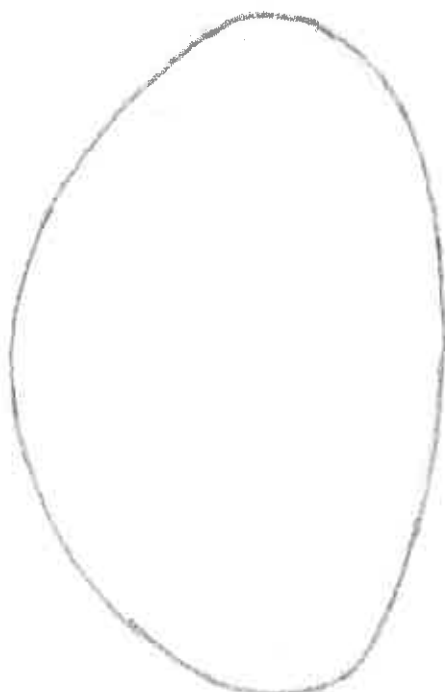
Spores 10-12.5(16) x 6-7.5(10) μ , obscurely inequi-
lateral in profile, ellipsoid in face view, ^{apex} ~~apex~~ obscurely
truncate, ~~dark brown~~ dark brown in 2% KOH, purplish-black in
deposits. Pleurocystidia and cheilocystidia not found.
Basidia 18-27 x 9-11 μ , 4-spored. Mealy particles on pileus
composed of cells, some of which are pale brownish, others
colorless, thin-walled and smooth, globose to subellipsoid,
mostly 12-16 x 10-12 μ . ~~Ganilocystidia~~ Pileocystidia not found.

Coprinus curtus Kalchb.

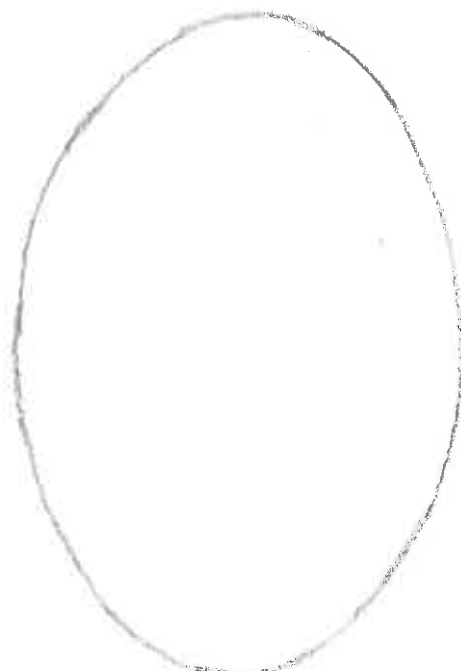
13358



Cells from mealy particles
on cap - $\times 1000$



Profile



Face

Spores $\times 8000$

17445
~~17745~~

Coprinus curtus Kalchbr.

on horse dung, Panama, leg. S. L. Meyer, det. LRH,
developed in the laboratory, Feb. 1946.

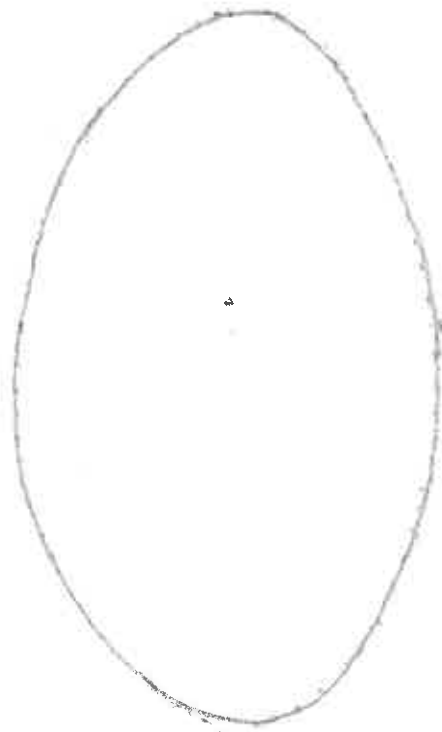
Spores 10-13 x 6-7.5(8) μ , apparently slightly more
slender than in 13358. Cells composing veil remnants
on pileus (mealy material) globose to subglobose, 12-38 μ
diam., some cells colorless, others pinkish brown.

Coprimus curtus

~~17745~~ <
17445



Basidia
x 1000



Spores x 8000

14232

Coprinus domesticus (Fr.) S. F. Gray

on maple stump, Knoxville, Tenn., leg. LRH, det.
A. H. Smith, June 15, 1942

Pileus 2-4 cm broad, expanding-plane, "saya
the universal veil breaking up into warts, composed of brown fibrils,
brown", ~~with scattered darker brown scales, striate to the~~
and appearing as scales,
disc. Context thin, deliquescent.

Lamellae attached to a collarium, whitish, soon
black, narrow, crowded.

long,
Stipe 2-4.5/x 1.5-3mm thick, white, densely white-
hairy, tapering upward, base subbulbous, fragile, universal veil
leaving a rim at or near base, *at times also with brown warts.*

(5.5)6-8
Spores ~~5.5-7.5~~ x 3.5-4.5 μ , ellipsoid in face view,
subreniform in profile, smooth, medium brown in 2% KOH, germ-
pore apical, obscure. *(87)* Pleurocystidia 28-52 x 11-22 μ ,
ventricose, vesiculose, subclavate, conspicuous but widely
scattered; cheilocystidia not found (Smith reports ~~them~~ them:
as 12-20 μ diam., vesiculose, collapsing). Paraphyses
coprinoid. Pileus cuticle a layer or zone of one to two layers
of cells which are cuneate, cubical, subvesiculose, to
irregular forming a palisade. Pileocystidia not observed (that
is, none arising from between the cuticle cells). The scales
on the pileus composed of tufts of brown fibrils, of irregularly
shaped cells, often the terminal elements pileocystidioid, ~~these~~
these as remnants of the universal veil. ~~Gaulocystidia not~~
found.

This species has been confused with several other
taxa. The one described by Pennington (in Kauffman, Agar, Mich.)
does not belong in this series of Coprini.

(Notes from Smith & Hesler: Jour. Elish. Mitch. Sci. Soc.
62:179-180. 1946)

Pileus 1.5-2.5cm high, 3-5 cm broad when expanded, conic then convex to nearly plane, pale to dark ochraceous tawny, at first with fibrillose universal veil over surface, which breaks up to form areolate warts, warts usually with a tuft of brown fibrils, at first radiately wrinkled, then sulcate-striate, splitting. Context thin, fragile, brown; odor and taste not distinctive.

Lamellae attached of stipe, White, broad, crowded, pruinose under lens(cystidia).

Stipe 4-7 cm long, 3-6 mm thick, white, at times clavate, pubescent above. ^{basal annulus as} Veil leaving/a line. Universal veil leaving brownish warts, *on cap, + sometimes at base of stipe.*

Spores blackish in deposits, 7-8.6 x 3.7-4.2 μ , not appreciably flattened, ellipsoid in face view, slightly ~~reniform~~ reniform in profile, pore apical. Paraphyses coprinoid. Pleurocystidia (32)80-130 x (14)20-50 μ , readily collapsing; cheilocystidia 12-20 μ diam., vesiculose, collapsing. Pileus cuticle of vesiculose-pedicellate cells, 15-30 μ diam. Universal veil remnants of chains of vesiculose cells, 30-60 x 10-18 μ .

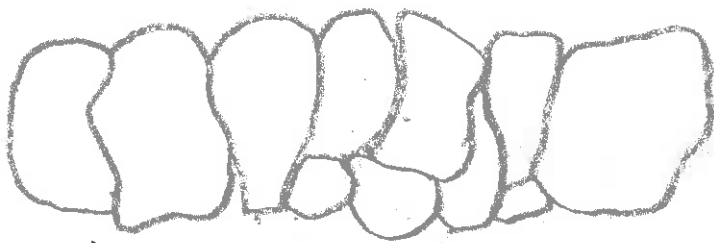
Hab. Around stumps/ of deciduous trees, / ^{Tennessee} ~~Tennessee~~ and Michigan. *No. 2791 + 14232, Knoxville, May-June, identified by Smith.*
See discussion: Mitchell Jour 62:179-180.

Cephus domesticus (Fr.) S. F. Gray

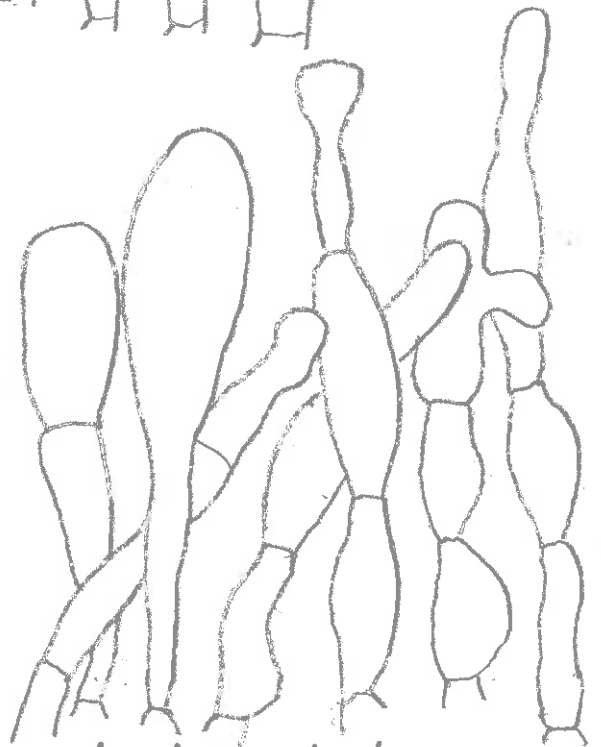
14232



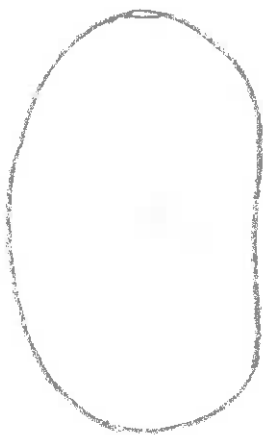
Sp $\times 1000$



Pileus cuticle $\times 1000$



Epicuticular tuft on
pileus - $\times 1000$



Profile



Face

Spores $\times 8000$

Coprinus ebulbosus (Pk.) Pk.

Torrey Bot. Club Bull. 22:491. 1895

Coprinus picaceus var. ebulbosus Pk., New York State Mus. Ann.
Rept. 44:20. 1891.

Pileus ^{up to 200 basidiocarps} ~~sometimes 100 or more~~ ⁽¹⁵⁾ gerritose, in a cluster,
up to 5 or 6 cm high, 1.5 - 10 cm broad when
expanded, at first ovoid to cylindric, ^{or ellipsoid,} expanding
campanulate, white or whitish becoming blackish,
~~with~~ the cuticle ^{loosening} ~~lifting~~ to form ^{tawny to} buff-colored scales,
which are more or less concentric, margin
striatulate, revolute. Context pallid; watery,
thin; odor and taste mild or at times suggesting
raw Irish potatoes.

Basidia free, ^{to pallid,} white, finally black from the
spores, deliquescing, crowded, medium broad,
edges fimbriate.

Stipe 4 - 16 cm long, (3) 5 - 12 mm thick,
white or whitish, equal or tapering slightly
upwards, with pallid or buff-colored scales
(sometimes concentric), glabrescent, hollow.

Veil ^{webby} as a fringe on cap-margin, and at times
an evanescent annulus on the stipe, apical

or somewhat inferior.

Spores $7 - 8.5 \times 4.5 - 5.5 \mu$, ellipsoid, smooth, blackish in deposit, brown in KOH under the microscope, occasionally with a ventral hump (as seen in profile); perhaps a second germ pore, ^{obscure} apical pore present, ~~obscure~~.

Paraphyses $10 - 16 \times 10 - 16 \mu$, subglobose.

~~Pleurocytidia~~ Basidia $18 - 20 \times 6.5 - 7.5 \mu$, 4-spored.

~~Pleurocytidia~~ ~~$54 - 94 \times 15 - 26 \mu$~~ ^{yeast} ~~$8 - 12 \times 16 - 35 \mu$~~ , cylindric or subcylindric; ~~$44 - 72 \times 16 - 22 \mu$~~ Cheilocytidia $44 - 72 \times 16 - 22 \mu$, cylindric to subfusoid.

Pileus cuticle of vesiculate, hyaline cells, ^{about} one cell deep.

Hab. On soil, ^{lawn}, around elm + hackberry trees and stumps, Knoxville, May - August.

Collections: Nos. 3641, ~~3934~~ 4475, 13236, 11460, 12220, 14163, 14197, 15780, ¹⁷⁶²⁸ ~~20862~~, 22986, 28192.

in fact the two species [if they are distinct], resemble each other so closely as to be indistinguishable in the field.

It is near C. quadrifidus, the ventral hump on the spores of C. bulbosus ^{said by Smith to be} distinctive.

It is also said that the spores of C. bulbosus are slightly narrower than in C. quadrifidus.

Further comparative study of these two ~~sp~~ is desirable.

The pileus cuticle in C. bulbosus is about one cell deep, whereas in C. quadrifidus it is several cells deep.

Coprinus ebulbosus Pk.

Torrey Bot. Club Bull. 22:491. 1895

(Smith's Description, Mycologia 40:673)

Based on the Type

Spores $7-8.4 \times 4.4-5\mu$, dull chocolate brown in KOH, smooth but often with a ventral hump as seen in side view (apparently a second pore), oblong to subellipsoid in face view, subellipsoid to slightly inequilateral in profile, apical pore present but obscure. Paraphyses $10-16 \times 10-16\mu$, subglobose. Pleurocystidia $80-120 \times 18-32\mu$, subcylindric, scattered, thin-walled and readily collapsing; cheilocystidia none seen. Pileus cuticle of vesiculose of hyaline cells about 1 cell deep.

The ventral hump on ~~xxxx~~ the spore is distinctive. Close to quadrifidus, but differs in slightly narrower spores. Not clear whether ventral hump is an abnormality, or it might be a useful character.

3641

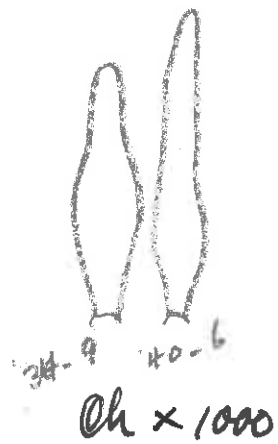
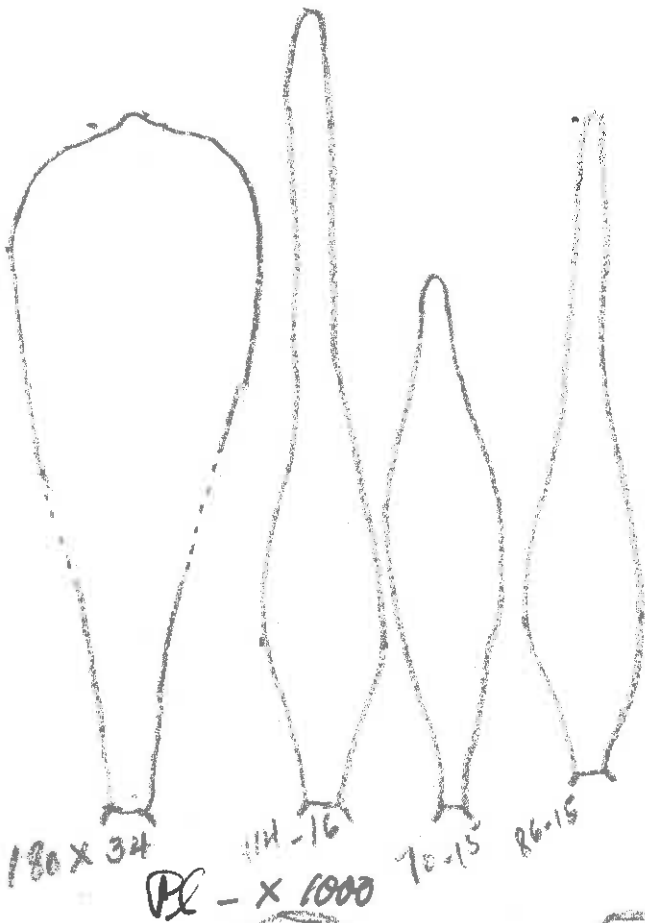
Coprinus ebulbosus Pk.

on lawn, near stump, Knoxville, leg. Ruby Rice,
June 5, 1934

Spores 7-8.5 x 4.5-5.5 μ , slightly inequilateral in profile, ellipsoid in face view, smooth, apical germ-pore present (truncate), no ventral humps found. Pleurocystidia 70-196 x 15-41 μ , ampullaceous, more rarely clavate, widely scattered; cheilocystidia 34-40 x 6-9 μ , ampullaceous, scarce. Pileus cuticle of irregularly shaped cells, ~~several cells deep~~. one to two cells deep.

Coprinus bulbosus PK.

3641



Profile



Face

Spores x 8000

4475

Coprinus ebulbosus Pk.

base of elm tree, Island Home, Knoxville, Tenn.,
~~Aug~~ July 17, 1934

Spores 7-8.5 x 4.5-5.5 μ , ellipsoid in face view, slightly inequilateral in profile, smooth, apical pore present, no ventral hump found. Pleurocystidia 78-103 x 16-23 μ , ampullaceous. scattered to rather abundant, conspicuous; cheilocystidia not seen. Pileus cuticle one cell deep.

13236

Coprinus ebulbosus Pk.

on lawn, Univ. Missouri Campus, Columbia, Mo.,
leg-det J.B.Routien, June 17, 1940.

Notes by Hesler

Spores 7-8.5 x 4-5(5.5) μ , ellipsoid in face view, slightly inequilateral in profile, smooth, with an apical germ-pore. Pleurocystidia ampullaceous; cheilocystidia not found. Pileus cuticle about one cell deep.

15780

Coprinus ebulbosus Pk.

at base of elm tree, Knoxville, Tn., Aug. 10, 1943
leg S.A.Cain.

Pileus up to 15 cm broad when expanded, ovate
in the buttons, whitish, scaly, striatulate to disc.

Spores 7-8.5 x 4.5-5 μ , slightly inequilateral in
profile, ellipsoid in face view, smooth, pore apical, no
ventral humps seen. Pleurocystidia 88-120 x 7-18 μ ,
ampullaceous, rather abundant, conspicuous; cheilocystidia
not seen. Pileus cuticle one-cell deep.



15780 - *Coprinus ebulliosus* PK.

17626

Coprinus ebulbosus Pk.

at base of elm stump, Knoxville, Tenn., leg. A.J.Sharp,
det. A. H. Smith(cf. LRH), June 24, 1946

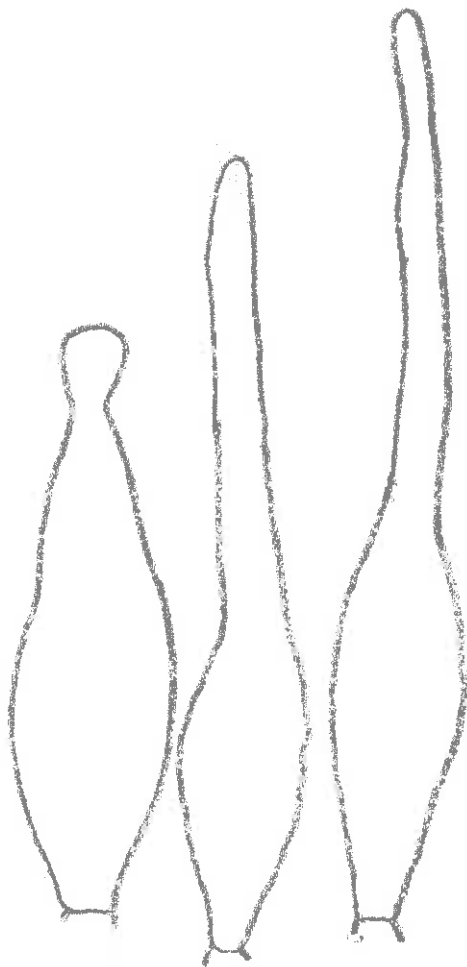
Spores (6.5)7-8.5 x 4.5-5 μ , ellispoid in face view, slightly inequilateral in profile, smooth, with an apical pore(no ventral hump seen). Pleurocystidia 52-80 x 15-24 μ , ampullaceous, thin-walled; cheilocystidia not seen. Pileus cuticle about one cell deep.

on soil, near site of an elm stump(stump had been removed for paveing); Turner House, U-T Campus, Knoxville, Tn/, leg. Ron Petersen, May 3, 1966

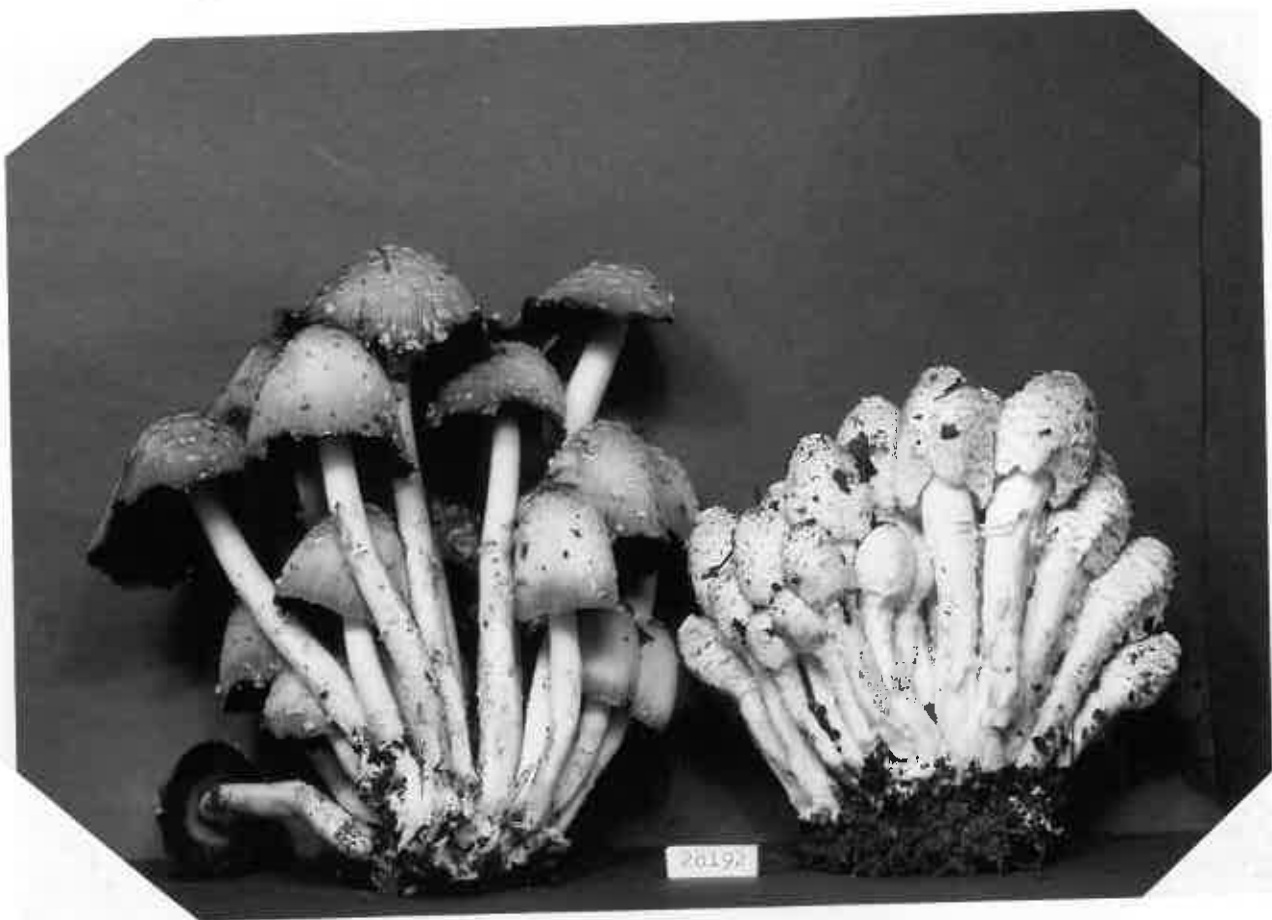
Spores (6) 7-8.5 x 4.5-5.5 μ , slightly inequilateral in profile, ellipsoid in face view, smooth, pore apical(no ventral hump observed). Pleurocystidia 76 - 122 x (10)17-24 μ , ampullaceous, rather abundant, conspicuous; cheilocystidia not found. Pileus cuticle one cell deep.

Coprinus bulbosus OK

28192



H x 1000



28192 - *Coprinus ebulbosus* GK.

13376

Coprinus ephemeroides (Fr.) Fr.

on mule dung, University Farm, Knoxville, Tenn.,
developed in the laboratory, Feb. 24, 1941

Pileus at first cylindric, 4-6 mm high, becoming convex then exoanded, heavily mealy, pileis at first a faint vinaceous buff, then whitish, ~~mm~~ margin sulcate to disc, finally splitting. Context very thin, membranous.

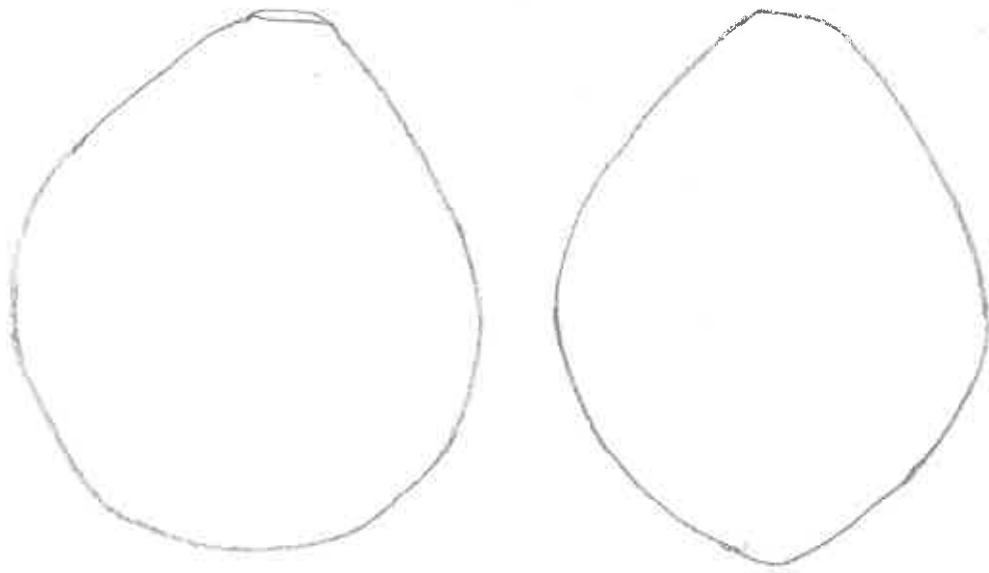
Lamellae free, narrow, subdistant, deliquescing.

Stipe 6-10 cm long, 0.7-1.0 mm thick, white, glabrous, no sclerotia found. Ring evanescent, sometimes left as a brim near the base of the stipe.

Spores 7-9 x 6.5 - 8.5 μ , subglobose, sides often obscurely flattened, at times subcordate-subtriangular, smooth, brown in KOH. Cystidia not found.]Lange states thst the cystidia are globular, 23-30 μ .

Coprinus ephemeroides (Fr.) Fr.

13376



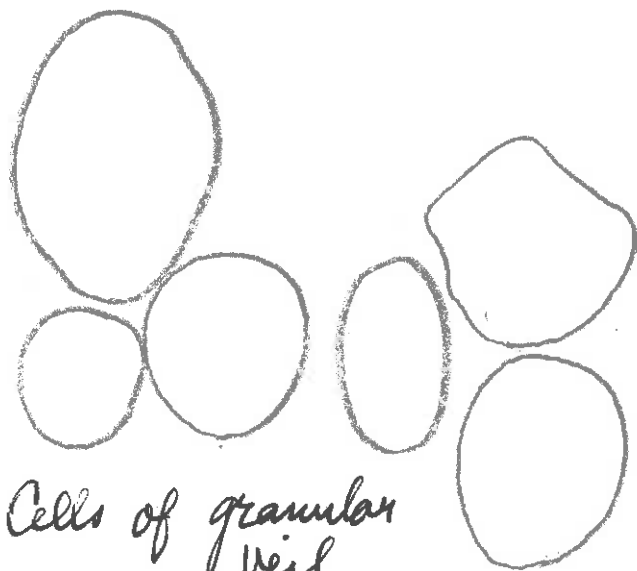
Spores x 8000

Agaricus ephemeroides Fr., Syst. Myc. 1:313. 1821.

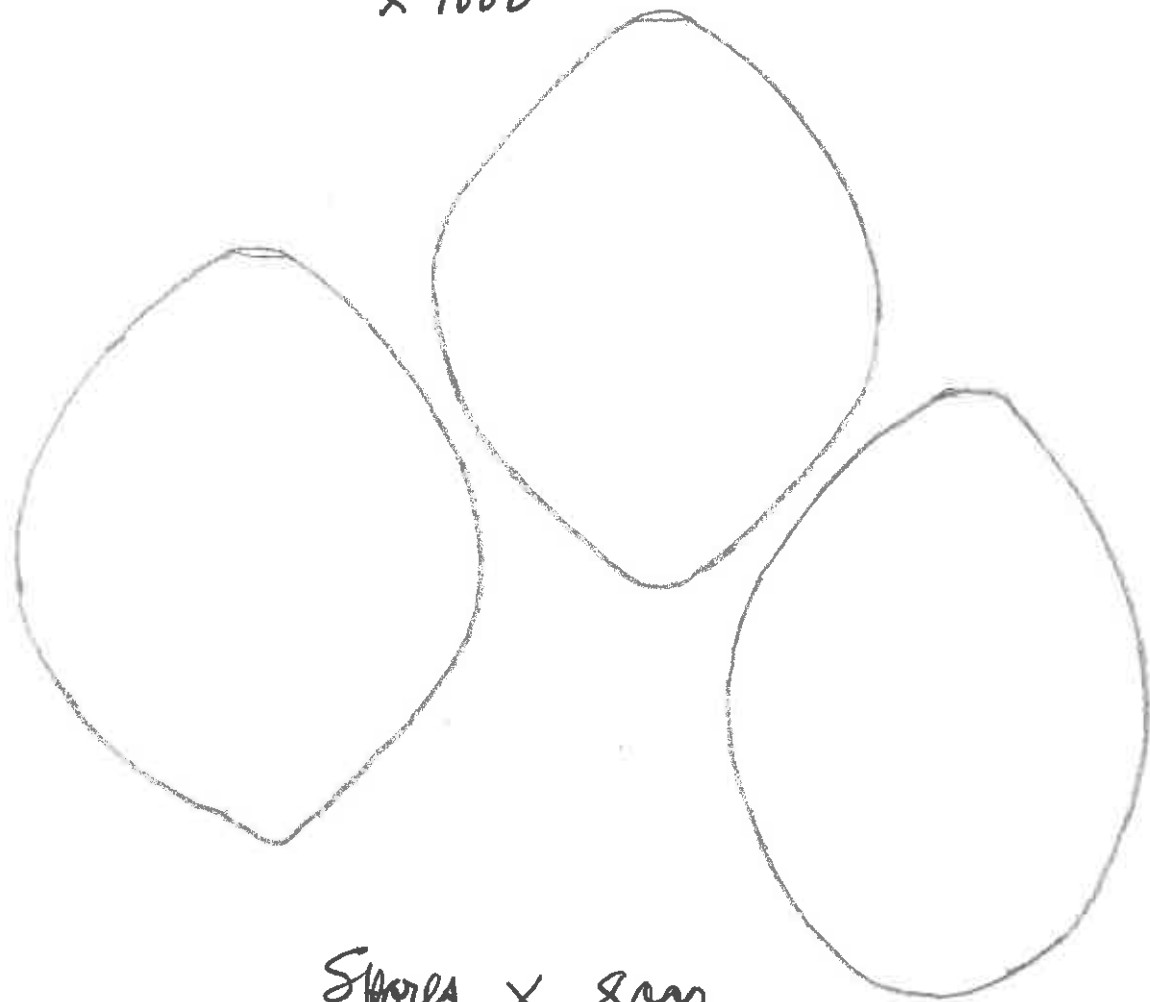
Spores 8.5 - 10 x (6.5)7 - 8 μ , subglobose, often with obscurely flattened sides, at times subovoid, more rarely rather slender ellipsoid, smooth, germ pore apical, dark brown in 2% KOH. Pleurocystidia and cheilocystidia not seen. Pileus cuticle cellular. Cells of granular veil globose to subglobose or ellipsoid, 17-38 x 15-28 μ , wall thin and smooth.

Coprinus ephemeroides (Fr.) Fr.

14152



Cells of granular
veil
X 1000



Spores X 8000

17446

Coprinus ephemeroides (Fr.)Fr.

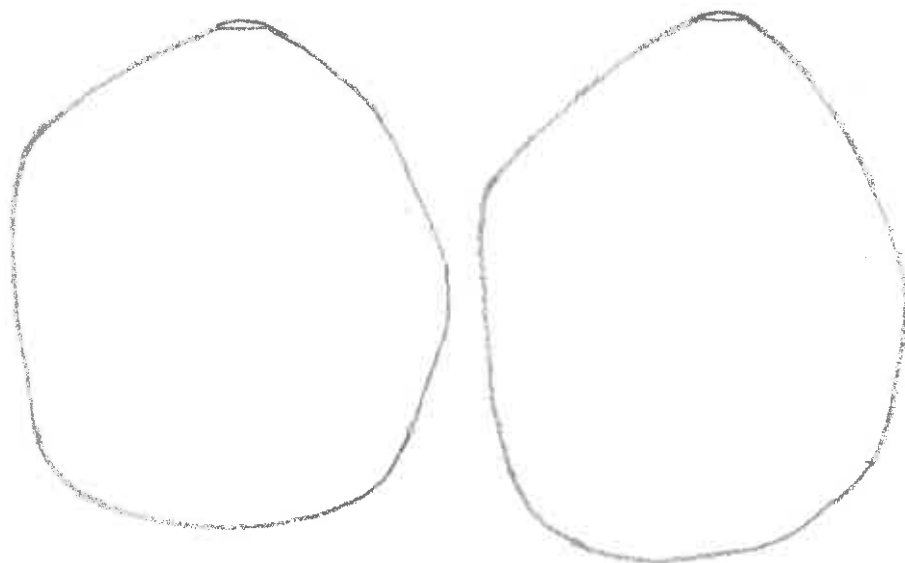
on horse dung, Panama, leg. S L Meyer, det. LRH;
developed in the laboratory Feb. 1946.

Ring very conspicuous on the stipe when fresh.

Spores subglobose but a larger percentage of them
~~ang~~ angular to somewhat 5-sided than in most collections
which I have examined.

Coprinus ephemeroides (Fr.) Fr.

17446



Spores X 800

17462

Coprinus ephemeroides (Fr.) Fr.

on cow-dung, Chorrera, Panama, leg. S L Meyer,
det. LRH (cf. AHSmith) [developed in the laboratory]
Feb. 1946.

Pileus at first cylindric, 3-5 mm high, expanding
plane and then 4-8 mm broad, "buttons" pale buff, ~~granular~~,
the granules whitish, ^{granular-mealy,} sulcate part way to disc. Context
very thin.

Lamellae narrow, distant,
0.3-0.4 mm
Stipe 3-4.5 cm long, ~~0.3-0.4 mm~~ thick, equal, whitish,
base slightly swollen. Volva remaining as ~~xx~~ a/ring which
is ~~median~~ but may be inferior, and sometimes as a/volval
brim.

Spores 7-9 x 7-8 μ , subglobose to globose, more
rarely somewhat ellipsoid, smooth, pore apical, sides
often obscurely flattened. Pleurocystidia and cheilo-
cystidia not seen. Cells composing the meal on cap more
or less globose, or ellipsoid, thin-walled. Pileus
cuticle apparently cellular.

Coprinus ephemerus (Fr.) ~~sensu Loquin~~ ~~(1947)~~

Bull. Soc. Myc. France 63: 95-88, 1947.

Agaricus ephemerus Fr., Syst. Myc. 1:313. 1821.

(Kauffman's Description)

Pileus 1-2 cm broad, ovate then campanulate, finally expandwd, often splitting and revolute, disc ~~xx~~ yellowish brown to reddish bay, at first ~~slight~~ slightly pruinose with minute hairs, strictae, plicate when expanded. Context very thin.

Lamellae slightly adnexed or barely reaching the stipe, usually white at margin, linear.

Stipe 3-6 cm long, 1-2 mm thick, white, equal or slightly tapering upward, hollow.

Lange & Smith: Mycologia 45:757. 1953

Spores 8.6-16.7 x 5.3 - 8.5 μ , average 11.35 - 15.4 x 6.1-7.6 μ , black in deposit, $\frac{D}{d}$ 1.8-205, slightly flattened to almost terete, elliptic-oval in profile, ovate in face view, moderately dark brown to almost black, black in KOH, germ pore on abaxial side. Basidia 4-spored. Pleurocystidia 60-120 x 22-45 μ , vesiculose, more or less pedicellate; cheilocystidia similar, 20-60 x 20-30 μ , subglobose, a few elongate-ventricose. Pileus cuticle of globose to subglobose cells, 25-30 μ diam. in the grooves oblong, then up to 70x25 μ . Pileocystidia 33-94 x 9-19x 3.5-8 μ , ^{thin-walled (no sclerocystidia)}, more or less ventricose,

neck subcylindric to somewhat tapering, apex obtuse,
hyaline or faintly brownish below. ~~Sclerocystidia absent.~~

(horse, cow, sheep).

Hab. On ~~cow~~ dung, usually after droppings have
^{also on soil, and} aged a month or more; on rotting straw in Europe. *Collections:*
Nos. 10718, 14155, 14244, 19647, 20415, Knoxville, April-August.

Distinguished from other large-spored species

of the group by the presence of clamp connections.

Smith states that perhaps ~~know~~ the name should be discarded
(p.758).

* See: Loquin, Bull. Soc. Myc. Fr. 63:75-88. 1947.

14155

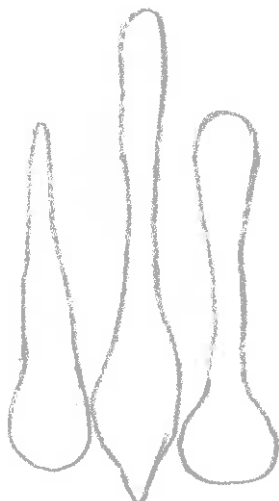
COPRINUS EPHEMERUS Fr.

Epicr. Myc. p. 252. 1838

Pileus convex, finally revolute, 7-18 mm. diam., "fuscous" to "dark grayish brown," disk reddish-brown, pruinose, plicate to disk, very thin, membranous. Lamellae free or nearly so, distant, somewhat forked, narrow. Stipe 3-9 cm. x 0.5-1.0 mm., whitish, translucent, glabrous except fibrillose base, delicate.

Spores 10-15 x 5.5-8 μ , ellipsoidal to ovoidal, mostly 6-sided, angles sharp, brown (under 'scope). Pleurocystidia cylindrical to ventricose, 32-96 x 8-30 μ ; cheilocystidia none. Surface of cap of globose to subglobose cells, 24-48 x 17-45 μ ; Pleurocystidia scattered, 58-81 x 5.5-9 μ , bottle-shaped, capitate.

Habitat and Distribution. - On soil (gardens, lawns), and on horse and sheep dung, Knox County, Tennessee, April-August, Some collections from the field; others developed in the laboratory.



20445

Coprinus ephemerus (Fr.) Fr.

on freshly cultivated garden soil, Timberlake Rd.,
Knoxville, Tenn., leg-det Hesler, Aug. 3, 1952.

Pileus 10-18 mm broad, Convex-expanding, glistening
and plush-like, otherwise glabrous.

Spores (10) 12-15 x 5.5-7 μ , ellipsoid to ovoid, smooth,
black in deposit. Pleurocystidia 32-90 x 8-30 μ , cylindric to
ventricose; cheilocystidia not found. Glistening particles
on cap of globose to subglobose cells, 24-48 x 17-45 μ ; with
scattered ~~on~~ setae on surface 48-80 x 8-10 μ , ~~scattered~~, cylindric.

19647

Coprinus ephemerus Fr.

on horse and sheep dung, Woddson Drive, Knox County,
Tennessee, leg-det Hesler, May 28, 1950

Spores (9) 11.2-12.8 x (5.5) 6.4-7.5 μ .

Setae on pileus about 48 x 8 μ , 3.2 μ on stalk.



Seta on cap
x 1000

14093

Coprinus fimetarius Fr.

Epicr. Myc., p. 245. 1838

Pileus 1-3(5)cm broad, ovate in the bud, expanding, finally revolute, disc brownish, elsewhere grayish, surface covered with white fibers the tips of which become recurved, more finally splitting radially. or less glabrescent, striate-plicate, Context very thin and membranous, somewhat deliquescent.

Lamellae free, white then black, very narrow, close to subdistant.

Stipe 7-15(24) cm long, 1-3 mm thick, the base about 3-5 mm thick, equal ^{or with a slight bulb with and "rooting" below, often} ~~or~~ tapering upward, white, fibrillose scaly, hollow. Universal veil a loose ~~web~~ web which becomes ^{turn into distinct flaccid scales.} Spores 8.5-11 x 5-6.5 μ , black in deposits. Basidia 24-27 x 9-11 μ , 4-spored. Pleurocystidia (40)72-112 x 17-27 μ , somewhat vesiculose, broadest toward the base or middle. Pileus cuticle cellular.

Hab. On dung of horse, cow, rabbit, and on compost of saw-dust & manure. Knox and ^{Morgan} ~~Adams~~ Counties, April-November. Collections: Nos. 9634, 14093(det. AHS), 14411, 15778, 15805, 16760. No. 15778 developed in moist-chamber in the laboratory.

No. 16760 on manure heap, Halls Crossroad forming a "fairy-ring" 25 feet diameter. Lange reports it with a "tap-root".

16760

Coprinus fimetarius Fr.

on manure heap, Hall's Cross-Roads, Knox Co., Tenn.,
Apr. 22, 1945

Pileus 1.5 - 2.5 cm high, 1-3 cm broad when expanded, cylindric to subovoid when young, disc brownish, elsewhere grayish, surface covered with white fibrils the tips of which become recurved, glabrescent, striate-plicate, ~~finally~~ finally splitting radially. Context very thin and membranous, somewhat deliquescent.

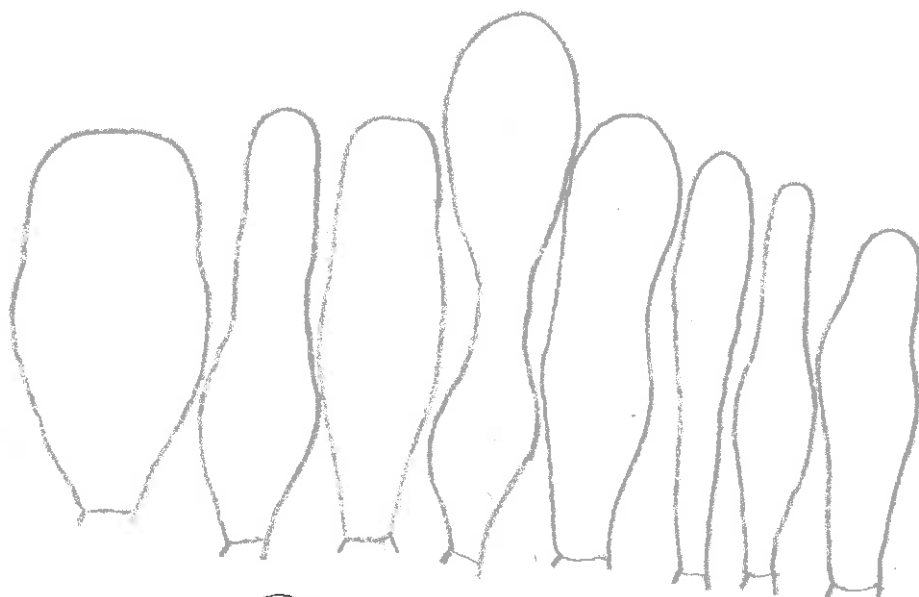
Lamellae free, white then blackish, narrow, close ~~to~~ to subdistant.

Stipe 6 - 12 cm long, 1-3(5) mm thick, often tapering upward, subbulbous at soil line and sometimes radicate below. somewhat scaly, hollow.

Spores 8-11 x 4.5-5.5(6) μ , ellipsoid in face view, scarcely or only very slightly inequilateral in profile, germ-pore apical, usually rather obscure, smooth. Basidia 24-27 x 9.5-11 μ , 4-spored. Pleurocystidia 50 - 84(112) x 9 - 26 μ , usually broad and slightly ventricose, but at times cylindric/and relatively slender, very conspicuous, moderately abundant; cheilocystidia not found. Pileus cuticle cellular, cells variable in shape, not gelatinizing. Pileocystidia(setae) scattered, clavate to cylindric, and rather hyphoid, 38 - 46 x 4-5 μ .

Forming a "fairy-ring" some 25 ft. diameter. The spores are a bit small for this species, but otherwise rather typical.

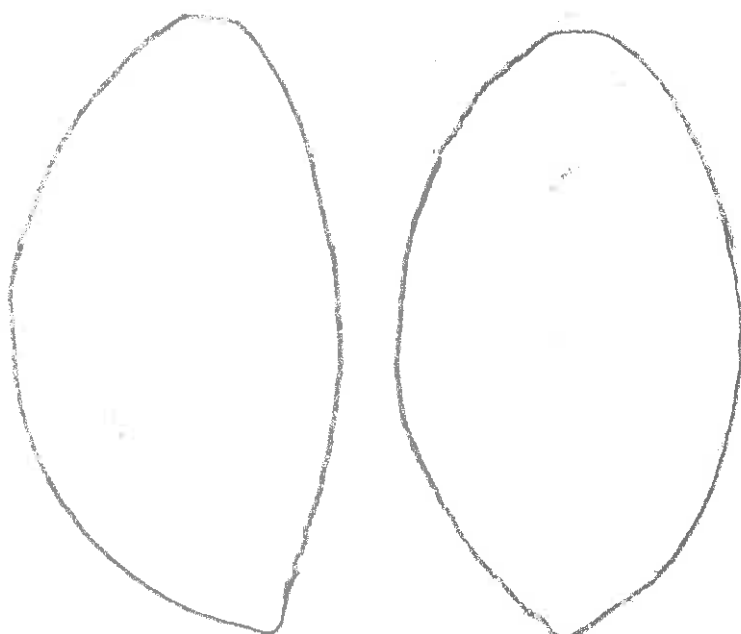
Coprinus finetarii Fr.
14093



Pile $\times 1000$



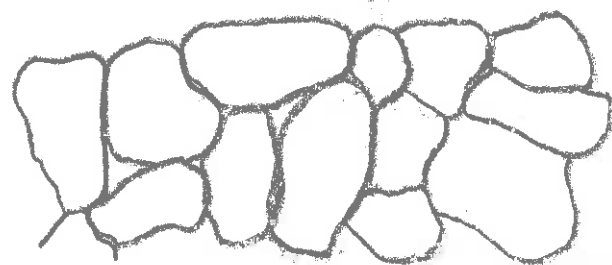
Gills $\times 1000$
"setae"



Profile

Face

Spores $\times 8000$



Pileus cuticle

COPRINUS FLORIDANUS Murrill

Florida Acad. Sci. Proc. 7:125-126. 1945

"Pileus broadly convex, gregarious, 1.5-3 cm. broad; surface gray or avellaneous-isabelline, isabelline on the disk, distinctly radiately sulcate, margin entire; context very thin, white, odorless; lamellae adnexed, medium broad, medium close, inserted, entire, gray when first seen, soon blackening; spores ellipsoid, smooth, black, about $10 \times 5 \mu$; cystidia none; stipe subequal, enlarged at the very base, smooth, glabrous, subhyaline, about 4×0.2 cm.

"Type collected by W. A. Murrill about an old stump in partial shade at Gainesville, Fla., May 28, 1938 (F 16218). Found several times since in the vicinity."

Coprinus insignis Pk.

Buffalo Soc. Nat. Sci. Bull. 1(2): 54. 1873

Plants 8-10 cm high, pileus 4-6 cm broad when expanded, campanulate, grayish-fawn, disc sometimes cracking in small areas or scales, sulcate-striate to disc. Context thin.

Lamellae ascending, crowded.

Stipe 10-13 cm long, 6 mm ~~thick~~ thick, pure white.

Spores 10-12.6 x 7-8.4 μ , dark bistre in KOH, exospore wrinkled and cracked to form obscure warts, or causing the surface appearing uneven, slightly inequilateral in profile, oblong or base somewhat pointed in face view, apex with a protruding lens-shaped pore which causes it to appear snout-like. Basidia 4-spored. Paraphyses inflated, readily collapsing. Pleurocystidia subcylindric, collapsing; cheilocystidia none seen. Pileus cuticle not sharply defined in sections.

The size and general appearance of C. atramentarius, but distinguished from it and allies by its rough spores, Smith observes that in several Sections of Coprinus, both smooth and rough spores are found, with quite similar macroscopic characters. He further states that smooth and rough spored ^{species} ~~forms~~ may be ~~more closely related~~ more closely related than two rough-spored species.

Hab. About trees in woods, Worcester, New York, July, Peck.

Coprinus jonesii PK.

Jarrey Bot. Club Bull. 22: 206. 1895

at times caespitose,
Pileus, 2-5 cm broad, campanulate, becoming
broadly convex or expanded, covered with tawny-gray
or pale ^(fawn-colored) cerise, floccose scales, ± glabrescent, striate,
split or revolute, when young the apex blunt or
truncate. Context submembranous.

Gills free, white to whitish, becoming
black, linear, crowded.

Stipe 5-7.5 cm long, 4-6 mm thick,
white, minutely floccose, hollow, ^{equal or} tapering slightly
upward.

Spores $7.5-9 \times 6 \mu$, broadly ellipsoid,
black.

Hab. In a cellar. Vermont. April.

G. B. Jones.

Near fimentarius, of which it might be considered
a variety, but distinguished by its truncate young pileus,
differently colored scales & smaller spores.

over

Smith's Description(Mycologia 40:676).

Spores 7-9 x 6-7 μ , terete or slightly ocmpressed, subellipsoid in profile, subcircular in face view, black or nearly black in KOH, exospore separable from endospore only under considerable pressure, pore broad and distinct. Paraphyses 10-12 μ broad, readily collapsing. Pleurocystidia apparently long-cylindric, collapsing; cheilocystidia none seen. Universal veil remnants of filaments, hyaline to sordid brownish in KOH.

A member of the lagopus series, but distinct on spore characters.

Coprinus laceratus Pt.

Torrey Bot. Club Bull. 26: 68. 1899.

Pileus ^{cespitose,} 2.5-4 cm broad, ^{then campanulate,} ovate, covered with a white, separable, floccose coat which ^{soon} separates into scales or patches which disappear, striate nearly to center, margin lacerated, pale buff becoming darker. Context thin.

Gamellae free, white then black, close, thin.

Stipe 5-7.5 cm long, about 4 mm thick, white, equal or slightly thickened at the base, striate, hollow.

Spores 12-15 x 8-10 μ , ellipsoid.

Hab. On manure, mixed with shavings.

Ohio. Lloyd.

Mature glabrous specimens resemble pale forms of micaceus; young plants resemble quadrifidus but the mature plants do not split to the center as in that species, & the spores are larger than in it.

Coprinus laniger PK.

Forrey Bot. Club Bull. 22: 491. 1895

Pileus ^{caespitose}

12-24 mm broad, conic or campanulate, when young covered by numerous tawny tomentose or floccose scales which partly disappear in age, pallid, tawny, or grayish-ochraceous, sulcate-striate nearly to apex. Context thin.

Gamellae whitish then brownish-black, crowded.

Stipe 2.5 cm long, 2-4 mm thick, white, slightly thickened at base, minutely downy or pruinose, hollow.

Spores 7.5-10 x 4 μ , oblong-ellipsoid.

Hab. At base of cottonwood stump. Kansas.

July. E. Bartholomew.

Resembles micaceus but has more narrow spores + floccose-squamose young pileus.

over

Smith's Description(Mycologia 40:677)

Spores 8-10.5 x 3.5-4.2 μ , dark dordid reddish brown in KOH but soon chocolate-graish, smooth, not flattened, narrowly ellipsoid to subcylindriv in face view, almost staright to concave in side view& the back convex, pore lens-shaped. Paraphyses 12-15 x 8-12 μ , inflated. Pleurocystidia 50-90(or more)x 16-30 μ , readily collapsing. Pileus cuticle i cell deep. Layer heneath cuticle of chain of globose ~~mf~~ or keg-shaped cells, finally thick-walled.

Close to domesticusbut differs in its long narrow spores and very broad germ pore. The cespitose habit is a less constant character.

Cyprinus macrosporus (Pk.)
New York State Mus. Ann. Rept. 31: 35. 1879

Pileus 5-7.5 cm high, 2.5-5 cm broad, ovate,
then expanded, white, ^{squamose and} disc brownish, floccose-
squamulose, rimose-striate.

Famellae free, white then black, crowded.

Stipe 2 mm thick, white, glabrous,
subbulbous. Annulus showing a trace near base.

Spores ^{very} large, 20-25 x 10.5-16 μ .

Hab. On soil, open fields, Ficonderoga, Aug.

Cf. closely with C. sterquilinus!



5236 - *Coprinus micaceus* Fr.

Photo

13379

Coprinus micaceus (Fr.) Fr.

Epicr. Myc., p. 247. 1838

Agaricus micaceus Fr., Syst. Myc. 1: 309. 1821.

Pileus 1-5 cm broad, ovoid then campanulate,
~~buff~~ to tawny or "clay color, disc darker, fading to
"pinkish buff", glistening with micaceous particles which
may persist to maturity or may disappear ^{earlier} in age plicate-
striate to disc. Context thin, white, deliquescent;
odor fungoid, taste mild.

Lamellae narrowly adnate or nearly free, seceding,,
white, then tinged vinaceous gray, becoming black and deliquescent,
broad, crowded, edges floccose.

Stipe 3-8 cm long, (2)3-7 mm thick, white, silky
to slightly pruinose, with a faint white, fibrillose, basal
zone, apex striate, base sometimes slightly enlarged. Veil
of loose, glistening particles on the pileus, and a rim at
the stipe base.

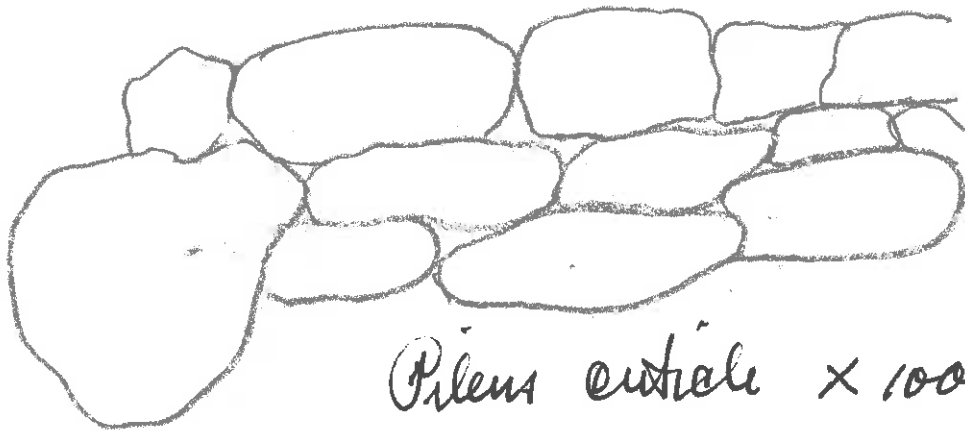
Spores 7-10 x 4.5-5.5(6)μ, subovoid, blackish in
deposit, brown ^{in 2% KOH} under the microscope, smooth. Basidia 4-spored.
Paraphyses 10-20 x 8-10μ. Pleurocystidia 40-85 x 10-35μ, ^{(165) (57)} or larger,
balloon-shaped; ~~hexianghex~~ cheilocystidia similar, smaller,
39-40 x 10-30μ. Micaceous particles composed of cells, 16-47μ
~~20-50μ~~ diameter, globose, or with a short stalk and pyriform.

Hab. Gregarious to caespitose, around stumps and
trees of hardwood, March-~~September~~ October. Collections: 3642, 3643,
3644, 3645, 4177, 4839, 4840, 5236, 10386, 11481, 13379,
18684, 18692, 20793, 20794, 26779. Eastern Tennessee and
Western North Carolina.

Pileus entire a zone of cells, 5-7 cells deep, grading
into the hyphoid pileus trama; cuticular cells large, 20-45x
10-30μ, forming a pseudoparenchymatous zone.

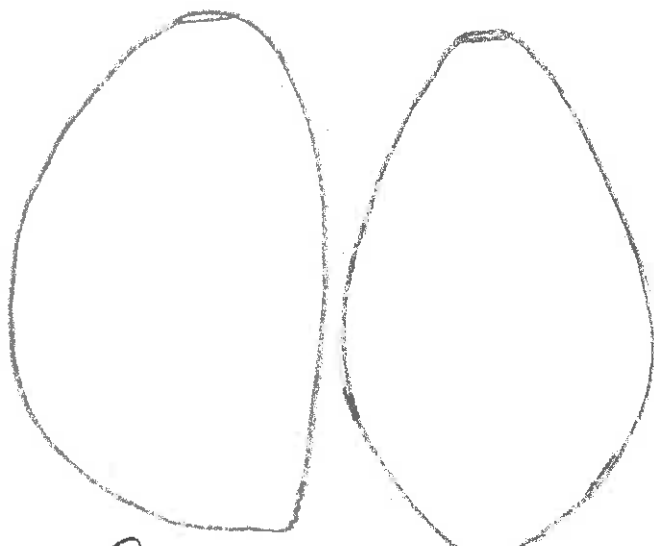
Coprinus micaceus (Fr.) Fr.

13379



Pileus cuticle $\times 1000$

[see another, better,
drawing, next sheet]



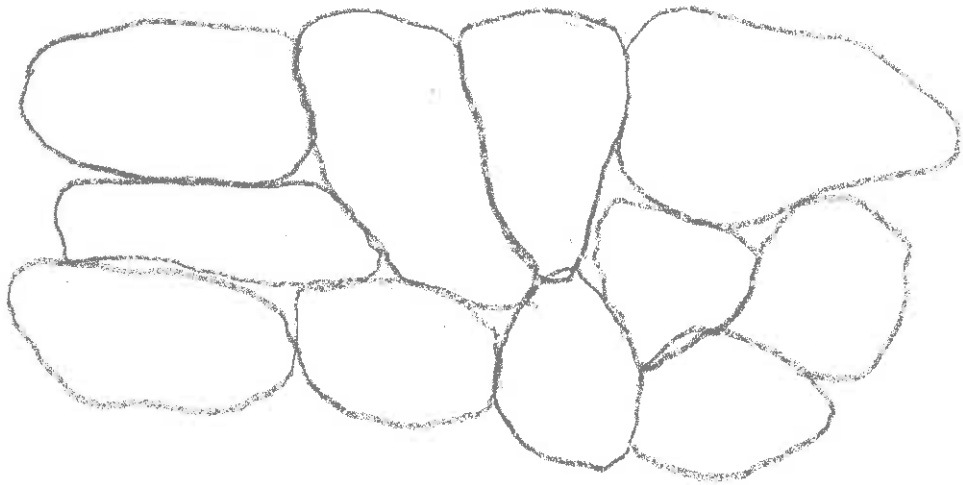
Profile

Face

Spores $\times 8000$

Coprinus micaceus (Fr.) Fr.

13376



Pileus cuticle (4-7 cells thick) - \times
1000



13379 - *Coprinus micaceus* Fr.

18684

Coprinus micaceus (Fr.) Fr.

on lawn, Knoxville, Tenn., leg-det Hesler, Sept. 16, 1948

Pileus 2-4 cm broad, expanded, disc "cinnamon buff", elsewhere darker (dingy buff), with scattered, white, small squamules or mealy particles, striate to disc. Context thin, deliquescing.

Lamellae rounded, free, soon black, narrow, crowded, deliquescing.

Stipe 3.5-6.5 cm long, 3-7 mm thick, white, shining, with scattered fibrils, hollow, base subbulbous. Veil not observed, if any.

20794

Coprinus micaceus (Fr.) Fr.

Photo

Same as 20780? Jones Rd. (now Montlake Rd.), Knox
County, Tenn., leg-det Hesler, Mch 15, 1953

Pileus usual.

Spores 7-8 x 4.8-5.5 μ , ellipsoid (not key-stone-
shaped). Pleurocystidia ~~150-155 x~~ 150-165 x 50-57 μ .



Caprinus micaceus Fr.

Photo : T.H. Campbell

18246

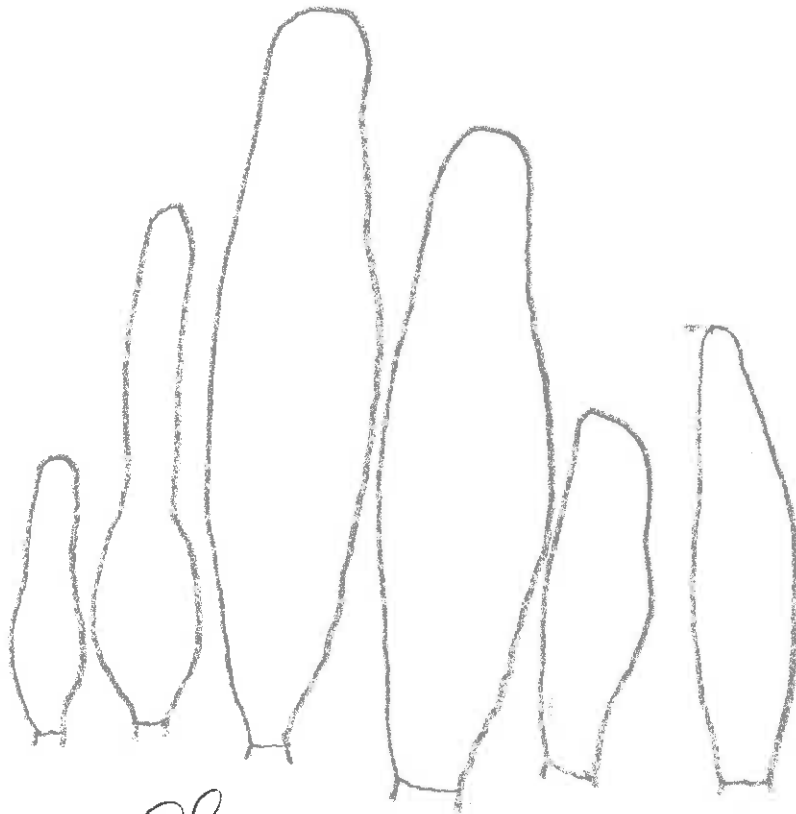
Coprinus micaceus (Fr.) Fr.

Burt Lake, Cheboygan, Mich., leg-det A. H. Smith,
July 13, 1947

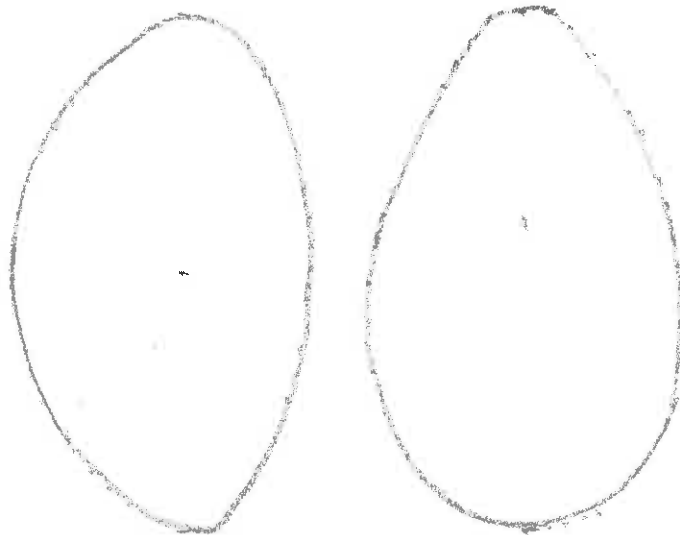
Notes by Hesler

Spores 7-8.5(9) x 4.5-5 μ , slightly inequilateral in profile, ovoid to subellipsoid in face view, smooth, pore apical, brown in KOH. Pleurocystidia 39-96 x 10-25 μ , ventricose to ampullaceous; cheilocystidia not found. Pileus cuticle of repent hyphae. Cells of granules on pileus surface 18-33 x 12-18 μ , subellipsoid to ellipsoid. No pileocystidia found.

Coprinus micaceus
18246



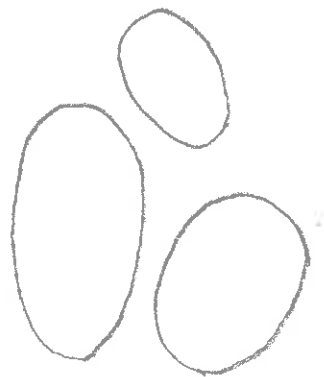
Pl $\times 1000$



Profile

Face

Spores $\times 8000$



Cells from
granular floccules
or pileus
 $\times 1000$



20794 - *Coprinus micaceus*

Coprinus narcoticus (Fr.) Fr.

Epicr. Myc., p. 250. 1838

Agaricus narcoticus Fr., Stst. Myc. 1:311. 1821.

Pileus 7-10 mm ~~xxxxxx~~ high, 4-6mm broad, cylindric, finally expanding, grayish, with floccose-mealy powder/ which *is* ~~the~~ delicate and easily removable, striate. Context thin, white; odor foetid, nauseating, especially when crushed, slightly ~~suggesting~~ Irish potatoes or alkaline.

Lamellae nearly free, white, then brownish, ~~finally~~ finally black, soon deliquescing, linear, medium broad.

Stipe 2-6 cm long. 1-2mm thick, watery, villose, base strigose, solid but delicate. Veil/ ~~grayish~~ or dingy-white, ~~xxxx~~ leaving remnants as mealy particles on the pileus.

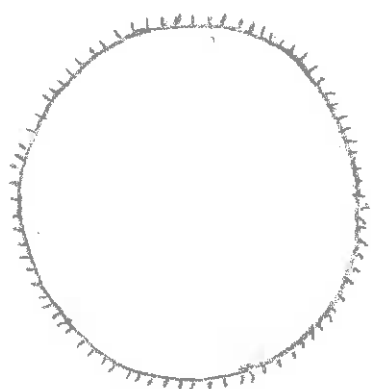
Spores brown in KOH under the microscope, $8-10(11) \times 4.5-5.5(6) \mu$, ~~obscurely inequilateral in profile, ellipsoid in face view, with~~ ~~ellipsoid, smooth~~ (Lange reports a colorless - a perispore bag, in KOH.), ~~apiculate~~. (Pl. and sheath around the spore) Pleurocystidia 90×38 ; cheilocystidia not found. ~~Sclerotia~~ Sclerotia black, interior white, 2-11 mm diameter, at times bearing "conidia" on the surface. (Lange says they are subglobose, 20-40 μ diam.) ~~seems to be~~ (Lange says that C. narcoticus is devoid of sclerotia)

Hab. On dung, East Tennessee and Western North Carolina, August. The sclerotia ~~xxx~~ develop after several crops of basidiocarps appear, and with some drying out of the substratum. This species needs to be compared with C. sclerotigenus E. & E., which ^{also} has a sclerotium.

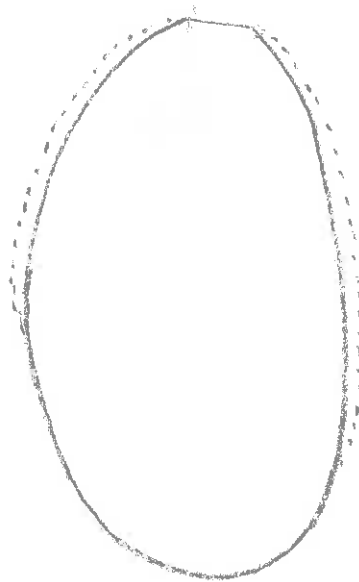
Collections: Nos. 9353, GSMNP, Indian Creek, and ~~Nos~~ 13359, from U-T Farm, developed on dung in a moist chamber.

Coprinus narcoticus (Fr.) Fr.

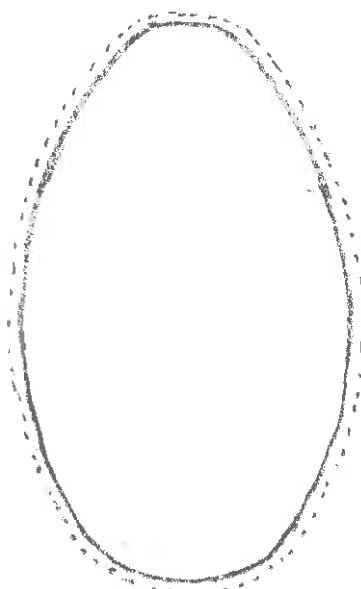
13359



Spore cell - from
pileus surface - $\times 1000$



Profile



Face

Spores $\times 8000$

Coprinus niveus (Fr.) Fr.

Epicr. Myc., p. 246. 1838

Agaricus niveus Fr. Syst. Myc. 1:311. 1821.

Pileus 1.5-3 cm broad, at first more or less ellipsoid, expanding, covered at first with a white floccose down.

Lamellae slightly attached, narrow, finally blackish.

Stipe 4 - 6 cm long, 5 -7 mm thick, tapering slightly upwards, white, villose, hollow.

Spores 15-18 x 11-13 μ , Cella of pileus coating globose.

On cow and horse dung, in pastures.

Lange comments that the C. niveus of Massee is C. rostrupianus, and his C. stercorarius is ~~C. rostrupianus~~ C. niveus.

13377

Coprinus plicatilis

near minor Karst.

on Horse dung, grown in the Laboratory,
Knoxville, Tenn., February 24, 1941

(cf. *ephemerus*)

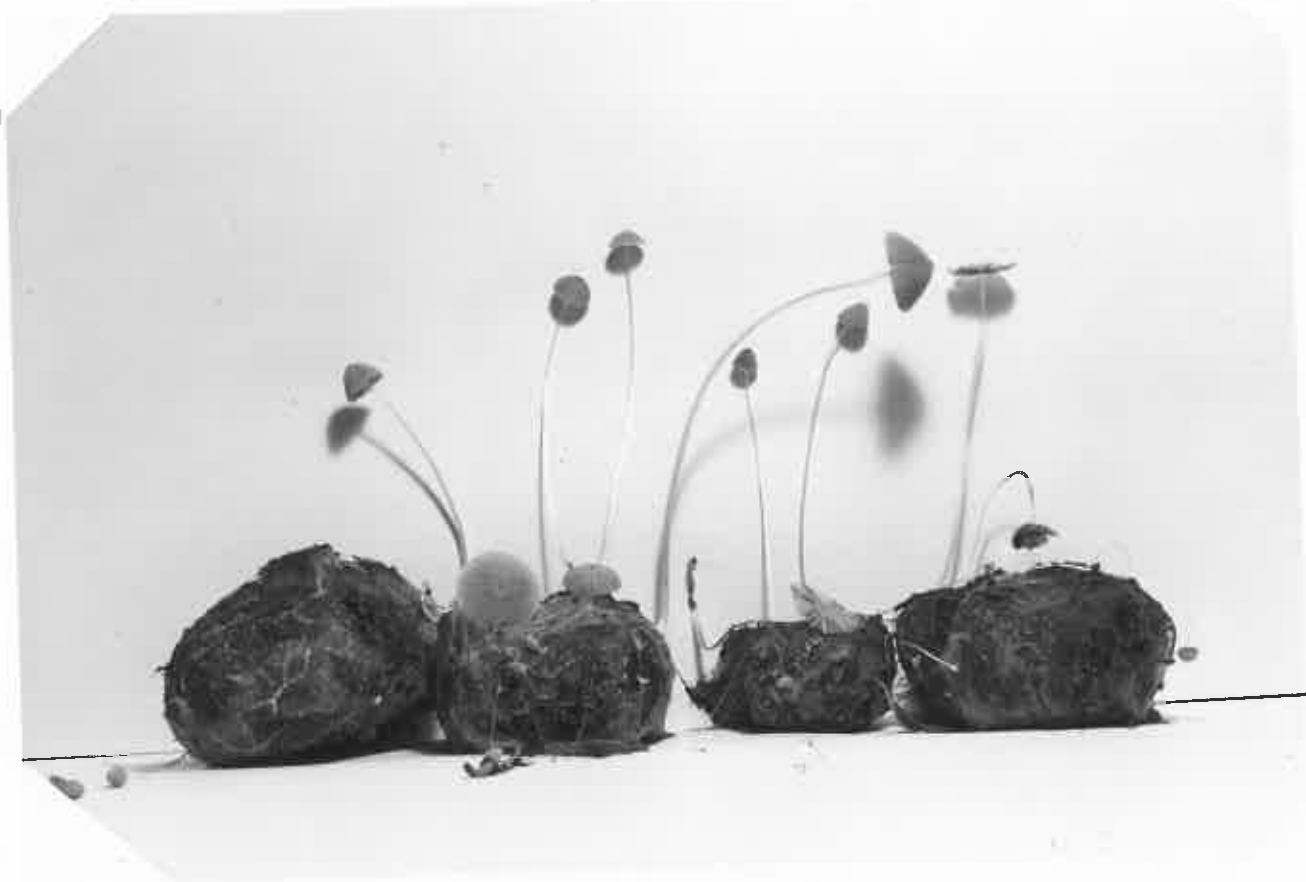
Pileus 12-28 mm broad, about 10 mm high, ovate-cylindric then conic-campanulate, finally expanding-convex, plicate-sulcate, grooves grayish black, ridges and disc "clay color", ~~granular and somewhat micaceous~~, margin crenate. Context membranous.

Lamellae free but reaching a collarium, narrow, linear, subdistant to nearly close, blackish, edges whitish.

Stipe 4-10 cm long, 1-2 mm thick, white, the base near "clay color," translucent very fragile, glabrous or (under a lens) with scattered fibrils, equal, base subbulbous, hollow.

Spores 12-14(16) x (7)10-11(13) μ , compressed (Lange ^{9.5-11 x 8-9.5 μ} , subrotund-triangular), a few ellipsoid with a transparent halo, smooth, black in deposits. Basidia 4-spored. Pleurocystidia not found; cheilocystidia 60-75 x 28-30 μ , flask-shaped. Pileus cuticle cells balloon-shaped.

Hab. On lawn and other grassy surfaces, Knox and Sevier Counties, Tennessee; also Louisiana; summer & fall. Collections: 3646, 8105, 9143, 13377*, 14079*, 19186, 19235, ~~19645~~, 23027, 29397. ~~vi~~ [Collections with an asterisk found on horse and mule dung, and developed in the laboratory.]



13377 - *Cephus plicatilis* Fr.



19186 - *Coprinus plicatilis* Fr. - X 2.

19645

Coprinus plicatilis (Fr.) Fr.

~~XXXX~~

on lawn, Knoxville, Tenn., legadet Hesler, July 17, 1950

Pileus 12-28mm broad, hemispheric then expanding-convex, "clay color", the color retained on the ridges, glabrous, sulcate to disc. Context membranous.

Lamellae attached to a collarium.

Stipe 4-7 cm long, 1-2 mm thick, shining-white, dingy below, nearly subbulbous.

Spores 9.5-.5 x 7-11 μ , ellipsoid to ovoid, often compressed to nearly angular. Cystidia not found.

on
13877 - The
apex
12-16x 7-13 μ

Coprinus plumbeus Fr.

New York State Mus. Ann. Rept. 29: 42. 1878.
~~1878~~.

Pileus 7.5-12 cm high, 2-3 mm broad, campanulate,
lead-colored, tawny or brownish yellow on ~~the~~ disc,
with tawny-cinereous hairs or flocci, sulcate-strate
nearly to apex. Context submembranous, fragile.

Famellae free, narrow, close.

Stipe 2-4 mm thick, white, slightly tapering
upward, floccose.

Spores $10 \times 6.5\mu$, ellipsoid.

Hab. On soil in wood, Grieg. Rept.

COPRINUS PRAEMAGNUS Murrill

Mycologia 35:431-432. 1943

"Pileus cylindric to subcampanulate, solitary, 10 x 7 cm.; surface white, finely striate, with a few small reflexed scales, margin entire; context thin, white, odorless, with nutty flavor; lamellae narrow, crowded, white at first, at length becoming black and melting away; spores ovoid, smooth, black, truncate, granular, about 15-18 x 8-10 μ ; cystidia narrowly flask-shaped with tapering neck, hyaline, about 65 x 12 μ ; stipe equal, smooth, glabrous, white, long-radicate, 8 x 2 cm.; root 7 cm.; annulus small, persistent, fixed 2 cm. above the base of the stipe.

"Type collected by W. A. Murrill in leaf-mold in a high hammock on the Newberry Road, seven miles west of Gainesville, Florida, Jan. 4, 1940 (F 19294). The largest species we have, measuring a foot in height, counting the root. It is evidently a wild woodland type unassociated with cultivated land or manure heaps. This spot was carefully watched by Mr. J. R. Watson and myself for three years without finding additional hymenophores. However, another collection was made several miles distant in March, 1942. The species resembles C. comatus in some ways but is larger and occurs in a different habitat."

Coprinus pulchrifolius Pk.

New York State Mus. Ann. Rept. 29:41. 1878

Plants 12-24 mm broad,
~~Plants~~ 5 - 7.5 cm high, conic or campanulate, cinerous,
sprinkled with minute whitish scales or granules, disc
yellowish, striate to disc. Context membranaceous.

Lamellae free, cinnamon brown, often with ~~afew~~ a few
hyaline spine-like processes, narrow, crowded.

Stipe scarcely 2 mm thick, white, fragile, hollow.

Spores 8-10 x 6-7 x 7-9 μ , black at first in KOH but
the dark pigment soluble in KOH

(Smith's Description: ~~ex~~, Mycologia 40:678)
Spores 7-8.4 x 4-4.2 μ , reddish brown, becoming gray
in KOH, ellipsoid in face view, slightly curved in profile,
or merely straight on ventral line and convex on dorsal line,
apical ~~hyaline~~ hyaline pore distinct. Basidia 4-spored.
Paraphyses inflated and hyaline in KOH. Pleurocystidia none;
cheilocystidia none seen (edges apparently deliquesced). Pileus
cuticle of globose, hyaline, inflated cells. Universal veil
remnants of hyaline, more or less globose inflated cells
separable
readily/~~separable~~ from each ~~other~~ other.

Hab. On soil, woods. Grieg. September.

Peck thought it puzzling because the lamellae were
"not found to be deliquescent". Further study ^{is} needed.

✓
COPRINUS PULCHRIFOLIUS Pk.

New York State Mus. Ann. Rept. 29: 41. 1878

Mycena^{*} pulchrifolia (Pk.) Murr., N. A. Flora 10:191. 1917.

(This is Murrill's name for Bolbitius^{*})

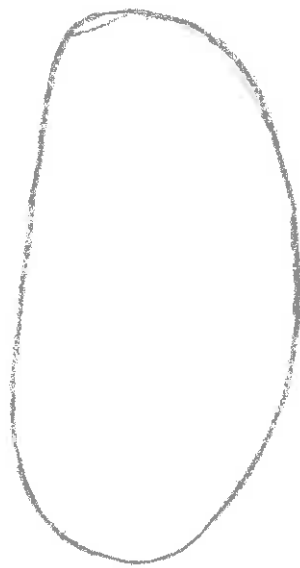
Notes on Type by Hesler

Spores 7-9(10) x 4-5 μ , inequilateral to reniform in profile, ellipsoid in face view, brownish with a darker tint, smooth, germ-pore present. Other micro characters difficult to interpret.

As Watling says, This is a Coprinus, and not a Mycena (Bolbitius) as Murrill interpreted it.

Type from Grieg, New York, 1878 (or earlier).

Coprinus pulchrifolius PK.
Type



Profile



Face

Spores X 5000

Coprinus quadrifidus Pk.

New York State Mus. Ann. Rept. 50:106. 1898

Pileus 5-7.5 cm broad, at first oval, then campanulate, finally more or less expanded, the margin revolute, when young adorned with ^asuperficial floccose-tomentose veil which soon separates into evanescent flakes or scales and reveals the finely striate pileus, whitish becoming grayish or grayish brown in age.

Lamellae free, whitish then dark purplish brown ~~black~~ then black, broad, thin.

Stipe 7.5-10 cm long, 6-8 mm thick, white, sometimes with a slight exanescent floccose ring near the base, equal or slightly tapering upward, hollow, floccose-squamulose.

Smith's Description, Mycologia 40:678. 1948

Spores smooth, dark chocolate in KOH, 7.5-9.5(10) 4-4.5(5.5) μ , very slightly compressed to terete, ellipsoid in profile, slightly ovoid in face view, apex truncate from a hyaline pore. Basidia 4-spored. Paraphyses 9-11 x 8-10 μ , vesiculose, hyaline, readily ~~collapsing~~ collapsing. Pleurocystidia 100-150 x 20-35 μ , thin-walled, readily collapsing, at times extending across the gill cavity; cheilocystidia 50-80 x 15-25 μ , subellipsoid, soon collapsing. Pileus cuticle a layer of hyaline vesiculose cells several cells ~~deep~~ deep. Veil remnants of filamentous hyphae, 6-10 μ diam. Clamp connections present.

Hab. In deep damp vegetable mold or muc decayed wood, under basswood trees. Portage, June.

only

Smith states that this is one of our best known American species. Further, ^{he adds,} ~~that~~ the spores lack a ventral hump ^{(a pore).} a structure which is prominent in C. ebulbosus.

Smith (Mycologia 40:682) also says that both ebulbosus ^u and quadrifidus ^{separated} are ~~separated~~ from C. variegatus by the latter showing a gelatinous, hyphoid pileus cuticle (but, further study, he says, are needed on this point). ~~The~~

Collections: Nos. 11590, 17626. Both were identified by Dr. A. H. Smith. It has a strong resemblance to Coprinus ebulbosus Pk., but the spores of this latter species have a ventral hump.

3989

Coprinus quadrifidus Pk.

Photo
(by A.J. Sharp)

base of elm stump, Campus, U-T Knoxville, Tenn.,
May 26, 1959

cespitose

Pileus ~~sessile~~ (100 or more in a cluster),

1.3 - 4 cm broad, cylindric at first, expanding, pallid,
cuticle loosening to form scales which are tawny to black,
margin striatulate. Context pallid, thin; odor and
taste mild.

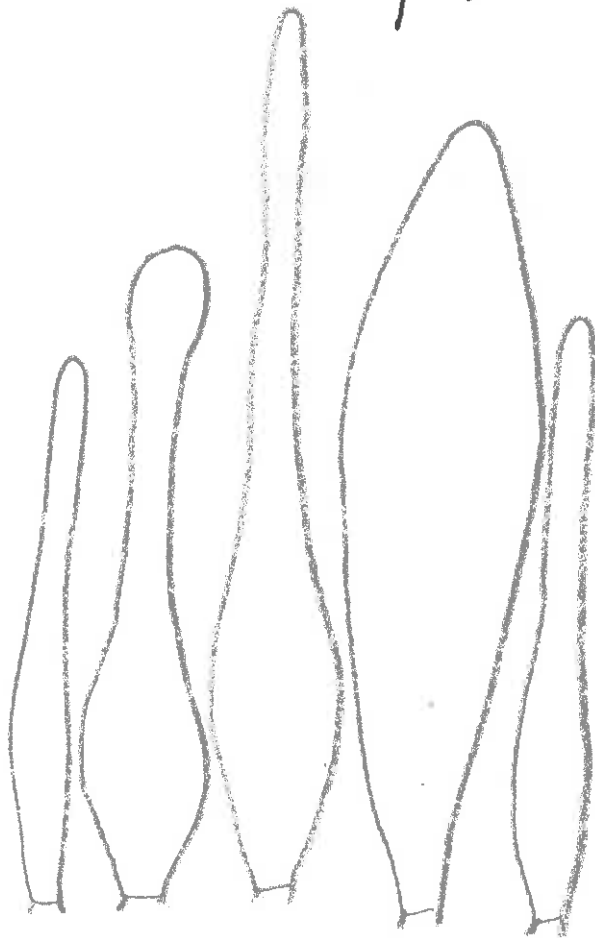
Lamellae free to nearly so, ascending, pallid
then brownish to black, crowded, deliquescing, edges
pruinose.

Stipe 4-14 cm long, 3-5 mm thick, whitish
with basal scales similar to those on pileus, glabrescent,
tapering upward slightly, hollow, fragile. Ring inferior.

Spores 7-^{9.5}~~9.5~~ x 4.5-5 μ , slightly inequi-
lateral in profile, ellipsoid in face view, ~~smooth~~ smooth,
germ-pore apical (none lateral as ventral humps), brown
in 2% KOH. Pleurocystidia 72-117 x 8-26 μ , ampullaceous,
more rarely ventricose, occasionally capitate, scattered,
conspicuous; cheilocystidia small, rare, about 26x6 μ ,
ventricose. Pileus cuticle of ~~several cells deep.~~
cells, several cells deep.

Coprinus quadrifidus PK.

3989



PK X 1000



3989 - *Coprinus* ^{*quadricaudus* PK.} ~~*bulbosus* PK.~~

Campus (Photo by E. L. Kirk)

on grass, lawn, West Knoxville, West Cumberland Ave., Knoxville, Tn., leg. RRRice, June 21, 1934

Pileus at first cylindric to ovate, finally exoanding, and then 5-5.5 cm broad, pale ochraceous when young, then whitish, with ochraceous scales which come from the uplifted cuticle fibrils, striatulate and splitting at maturity. Context white, thin.

Lamellae free or nearly so, white, then brown to blackish, very close, ventricose, 5-7mm broad,

Stipe 6-11 cm long, 6-12 mm thick, equal to attenuated upwards or downwards, fibrillose, the tipe of fibrils uplifted to form scales(as on the pileus), glabrescent, lightly stuffed to hollow, many stipes arising at the base(cespitose).

Spores (7)7.5-9.5 x 4.8-5.5 μ , slightly inequilateral in profile, ellisposed in face view, smooth, with an apicla germ-pore. Pleurocystidia 90-124 x 22-28 μ , ampullaceous; cheilocystidia not found. Pileus cuticle several cells deep.

This has the pilus cuticle structure and the spore-size for C. quadrifidus.

11590

COPRINUS QUADRIFIDUS Pk.

New York State Mus. Ann. Rept. 50:106. 1897

Fig: Pk
Det: AHS

Pileus 2-4 cm. broad, when expanded up to 8 cm. broad, at first cylindrical-ovate, 3-5 cm. long, whitish at first, then dingy, covered with numerous patch-like scales which are at first white, then with pale ochraceous tips, striate almost to disk. Flesh thin, delicate, watery brown. Lamellae free or nearly so, linear, crowded, relatively narrow, white then purplish and finally black. Stipe 10-15 cm. x 7-10 mm., white, densely fibrillose-silky, becoming scaly similar to pileus, hollow, equal, ring apical, evanescent.

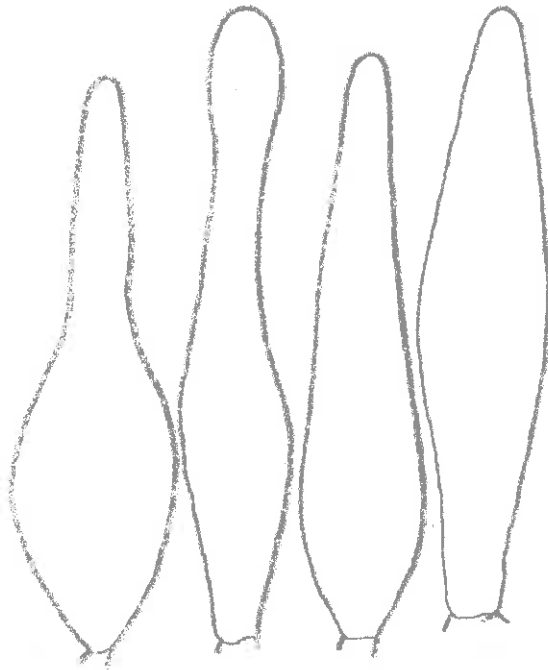
7-9.5 x 4.5-5.5 μ - 5.5 μ , in face view, slightly inequilateral in profile
Spores ~~ovoid~~, elliptical, smooth, brown under magnification, ^{germ-pore apical,} black in mass. Pleurocystidia ventricose, clavate, cylindrical, ^{54-78(104) x 15-36 μ ;} Cheilocystidia 30-42 x 6-16 μ , ^{ventricose to clavate.}
Pileus cuticle of zone 7 irregularly-shaped cells, ^{several cells deep.}
Habitat and Distribution. - On soil, base of elm and maple trees, Knox County, Tennessee, July-July.

Discussion. - Compare with C. ebulbosus Pk. Smith (Mycologia 40:679) says that in C. quadrifidus the spores lack the ventral hump (~~a~~ pore) found in C. ebulbosus.

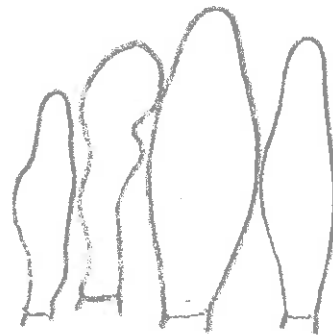
This fits ^{the} type in that the spores are ^{somewhat} larger than in ebulbosus, and pileus cuticle is several cells deep.

Coprinus

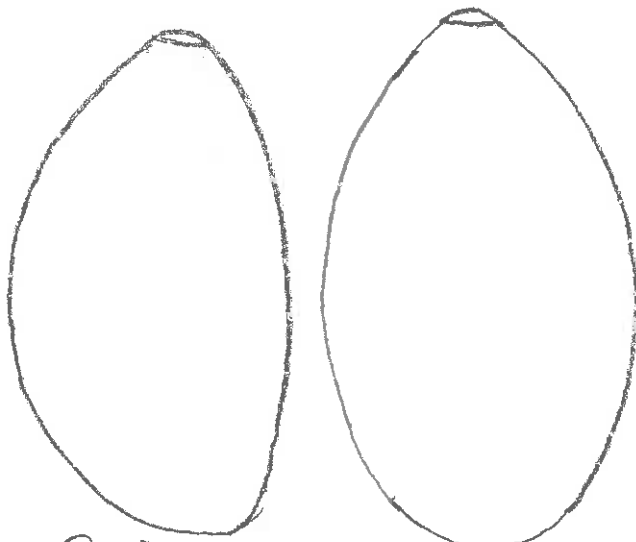
11590



Pl $\times 1000$



Ch $\times 1000$



Profile

Face

Spores $\times 8000$

12220

Coprinus quadrifidus Pk.

on soil, base of tree, Knoxville, Tn., July 9, 1939

Spores 7 - 9.5 x 4.5-5.5 μ , slightly inequilateral in profile, ellipsoid in face view, smooth, with an apical pore (no ventral hump). Pleurocystidia ampullaceous, rather large; cheilocystidia not found. Pileus cuticle several cells deep.

14163

quadrefidus OK.
Coprinus ~~bulbosus~~ Fr.

on lawn, Univ. Campus, Knoxville, leg-det LRH,
May 22, 1942

cespitose,
Pileus 5-10 cm broad when expanded, at first ~~ovoid~~
ovoid to cylindric, then expanded-campanulate, white or
whitish, becoming dingy blackish at maturity, with tawny, soft,
patch-like scales which are dense at first then scattered
as pileus expands, margin striate and revolute. Context
thin, white, watery above; odor and taste slight, suggesting
raw Irish potatoes.

Lamellae free, linear, white then blackening and
deliquescing, ^{narrow to medium} broad (5-7 mm), crowded.

Stipe 4-15 cm long, 7-12 mm thick, whitish, cylindric
to somewhat compressed, white-fibrillose, hollow.

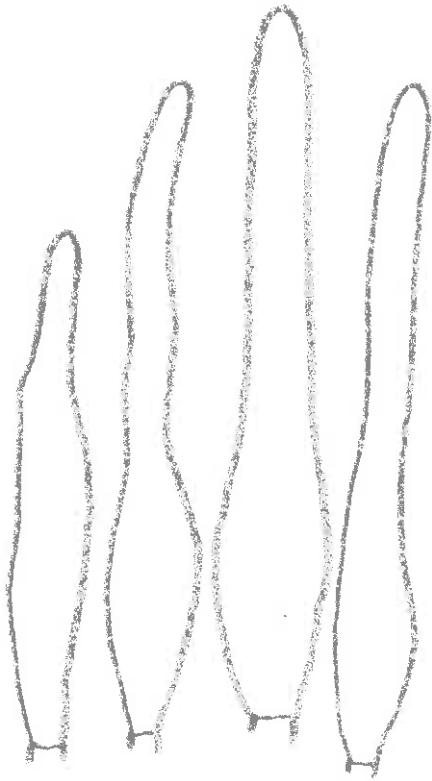
Spores ~~8-9 x 4.5-5.5 μ~~ 7.5-9 x 4.5-5.5 μ, slightly inequilateral in profile,
ellipsoid, blackish in deposit, brown under microscope, ^{germ-pore apical (no ventral hump).} ↑ in face view.
Basidia 18-20 x 6.5-7.5 μ,
4-spored. Pleurocystidia ~~(80) 18-20 x 27-30 μ, cylindric, few.~~ 68-205 x (8) 15-36 μ, ^{at ampullaceous,}
scattered, conspicuous; cheilocystidia none found. Pileus cuticle
Sometimes 200 or more basidiocarps in a cluster.

Rhizomorphs not conspicuous.

~~cf. C. quadrefidus.~~

ventral cells deep-

Coprinus quadrigidus PK.
14163



Pl x 1000

14197

Coprinus quadrifidus Pk.

at the base of elm stump, U-T Campus, Knoxville,
Tenn., May 30, 1942

Pileus 3-6 cm broad when expanded, at first convex-hemispheric, brownish when collected (no buttons seen), with white to brownish patch-like scales, striatulate to disc. Context then, delicate, fragile, watery-brown; odor and taste suggesting raw Irish potatoes.

Lamellae free but close to stipe, becoming blackish, crowded, ventricose and medium broad, edges fimbriate.

Stipe 6-13 cm long, 3-6 mm thick, white, dingy downward, glabrous above, scaly below, fragile, hollow. Ring basal but not conspicuous.

Spores 7.5-9.5 x 4.5-5.5 μ , slightly inequilateral in profile, ellipsoid in face view, smooth, pore apical (no ventral humps found), brown in KOH. Pleurocytsidia 87 - 148(200) x (15)27-38; ampullaceous, or subcylindric to subulate; chalcocystidia not found. Pileus cuticle several cells deep.

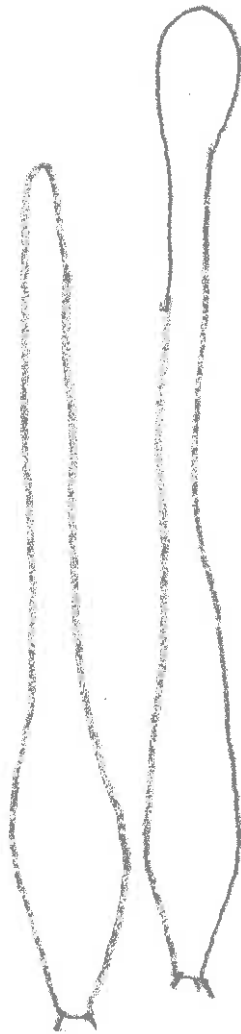
18245

Coprinus quadrifidus Pk.

In a bog, Cheboygan County, Mich., leg-det
A. H. Smith, July 9, 1947

Spores 7-8.5 x 4-5.2 μ , inequilateral in profile, ellipsoid in face view, smooth, germ-pore apical, no ventral hump(pore). Pleurocystidia 86 - 127 x 10-18 μ , flask-shaped with a very long slender neck, thin-walled; cheilocystidia not seen. Pileus cuticle of several cells deep.

Coprinus quadrifidus PK.
18245 (Mich)



$\times 1000$

on soil, under elm, UT Campus, Knoxville, Tenn.,
leg-A.J.Sharp, det-Hesler, June 17, 1953

Pileus up to 3 cm high, 4 cm broad (when expanded), ovoid-ellipsoid, white, cuticle torn into buff colored, concentric scales, margin striatulate. Context very thin, white; odor and taste mild.

Lamellae free, white, finally black, close^{or} crowded, ~~edges~~ edges fimbriate.

Stipe 13-16 cm long, 4-6 mm thick, white, equal, dry, at first with concentric buff colored scales, glabrescent, hollow. Veil white, webby, breaking to leave an evanescent^{apical} ring.

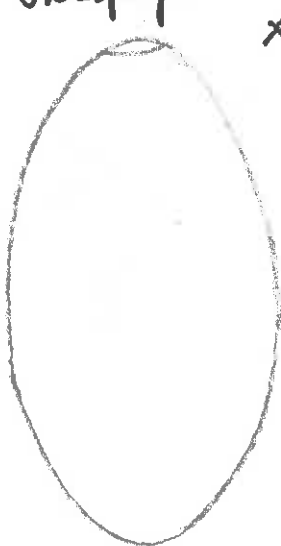
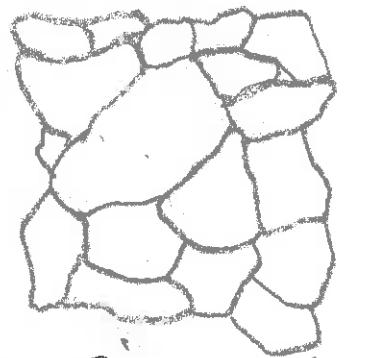
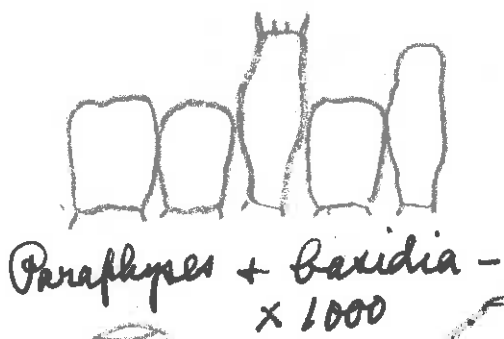
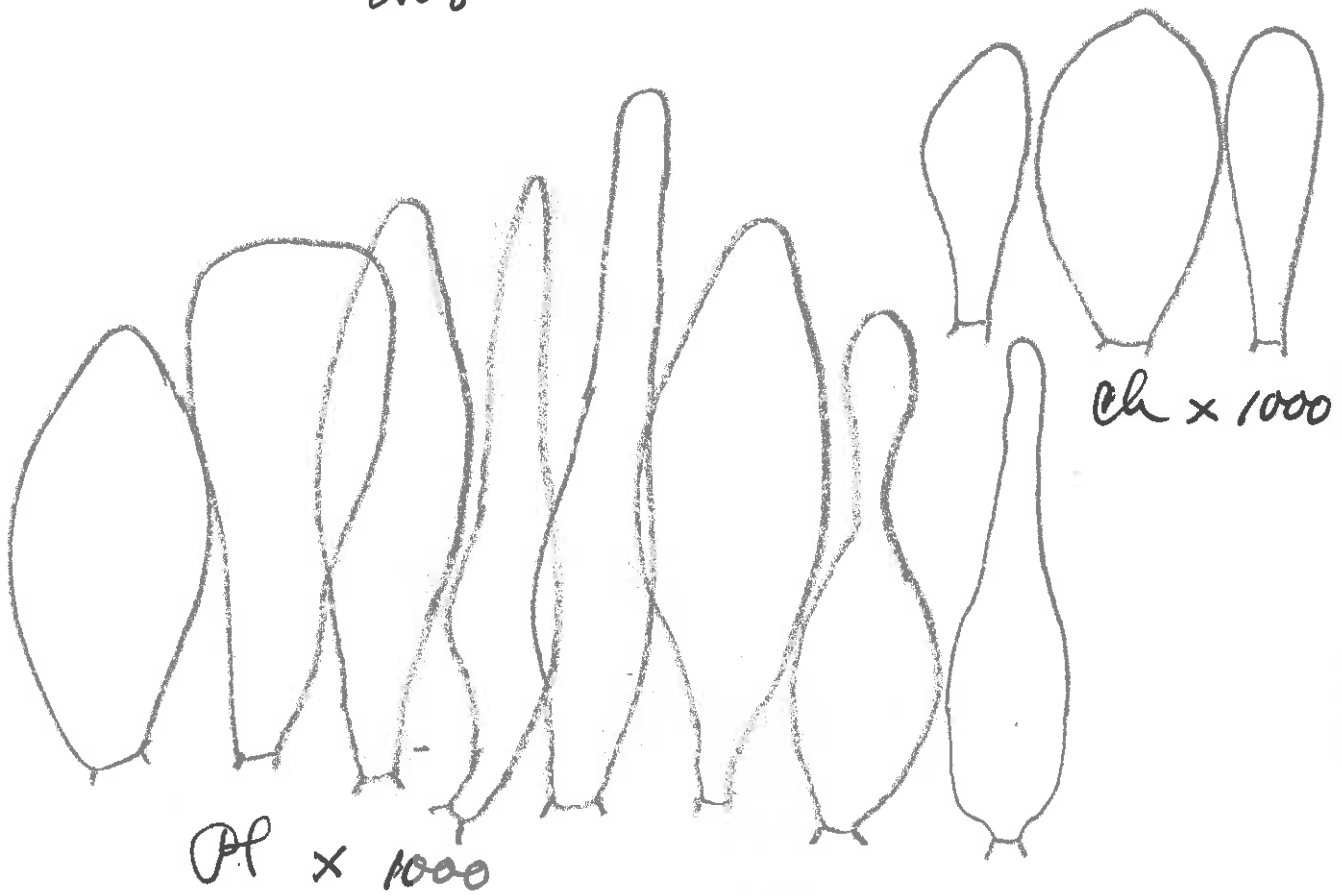
75
Spores 8-10 x 4.8 - 6 μ , black in deposit, ellipsoid, smooth. Pleurocystidia 96-104 x 40-44 μ , broadly cylindric, scattered; ~~x~~ cheilocystidia 44-72 x 16-22 μ , clustered, subfusoid to cylindric.

Spores 7.5-10 x 4.5-6.5 μ , obscurely inequilateral in profile, ellipsoid in face view, smooth, with an apical germ-pore, very rarely^a with a second germ-pore more or less lateral^(a ventral hump), brown in KOH. Bandia 18-24 x 6.5-8 μ , 4-spored. Paraphyses 14-17 x 10-12 μ . Pleurocystidia 58-94 x 15-26 μ , vesiculose, commonly more or less ampullaceous, subfusoid, subcuneate, scattered, conspicuous, thin-walled; ~~also~~ Cheilocystidia 36-44 x 12-25 μ , subcuneate, subclavate, ~~also~~ sparse, conspicuous. Pileus cuticle of irregularly-shaped cells, several cells thick. ~~over~~

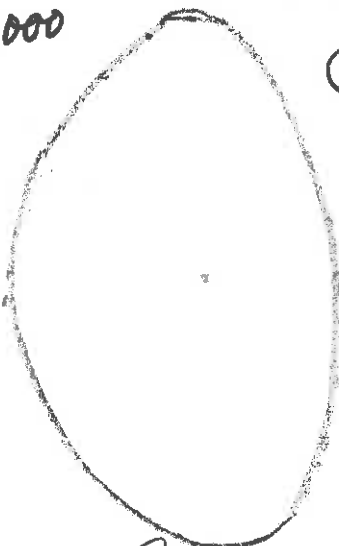
Scales on filaments of brownish, medium broad
hyphae.

Coprinus quadrifidus PK.

20862

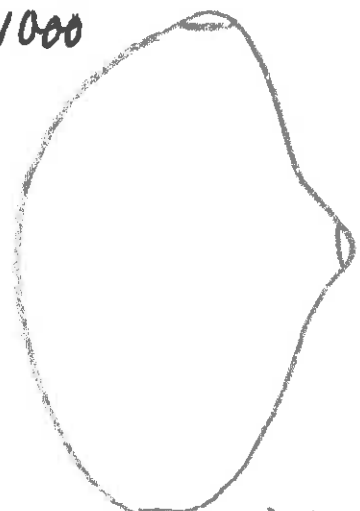


Face



Profile

Spores x 8000



Profile - with ventral bump x 1000



20862 - *Coprinus ~~bulbosus~~ PK.*
quadrifidus

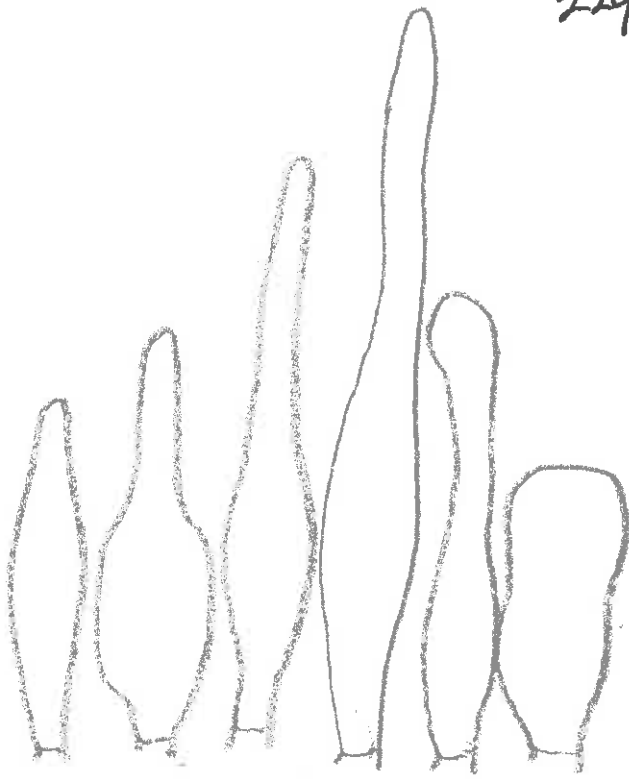
22986

Coprinus quadrifidus Pk.

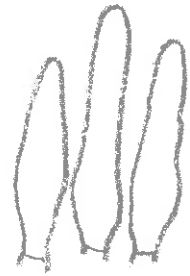
on garden soil, Yale Ave., Knoxville, Tenn.,
under hackberry tree, May 23, 1959

Spores 7.5 - 9.5 x 4.5 - 5.5 μ , slightly inequilateral in profile, ellipsoid in face view, smooth, pore apical (no ventral humps seen), brown in KOH. Pleurocystidia 38-96 x 10-16 μ , ampullaceous, rarely subcylindric, scattered, conspicuous; cheilocystidia 18-24 x 4-6 μ , ventricose, rare. Pileus cuticle several cells deep.

Coprinus quadrifidus PK.
22986



Pl x 1000



ch x 1000



22986 - *Coprinus* ~~*bulbosus* PK~~
quadrifidus PK.

Coprinus retundosporus Pk.

New York State Mus. Ann. Rept. 31:35. 1879

~~Pileus~~ ^{5-7.5cm} (pileus) ^{2.5cm}
~~Plant~~ ~~4-6mm~~ high, about ~~1mm~~ broad, campanulate,
whitish to pale cinereus, with a thin floccose/subpersistent
tomentum, even. Context thin.

Lamellae free.

Stipe white, slightly tapering upward.

(Smith's Description, Mycologia 40:679. 1948)
~~Spores~~

Spores 8-10 x 6-7 x 7-9 μ , black in KOH, but the
dark pigment soluble in KOH and ~~mounting~~ the mounting fluid
becoming bister and leaving the exospore hyaline, and the
endospore dark bister, in profile sub~~ell~~ipsoid, slightly
flattened, in face view broadly ovate but when only endospore
is colored appearing subcircular. pore broad, exospore
separable if KOH mounts slightly crushed under cover glass.
Paraphyses 16-20 x 10-18 μ , globose to ellipsoid. Pleuro-
cystidia 28-36 x 9-14 μ , fusoid-ventricose (not typically
coprinoid); cheilocystidia not seen. Pileus cuticle of
radially arranged hyphae. Veil remnants filamentous. No
clamps seen.

Hab. About the roots of trees, in woods, Catskill
Mts., September.

^{And}
Spores nearly globose, behavior of pigment in
spores unusual for a Coprinus.

Peck's description incomplete because the collection
he saw was old and dry.

Coprinus sassii Lange & Smith

Mycologia 45:755. 1953

Coprinus ephemerus f. bisporus Sass, Amer. Jour. Bot.
16: 1929.

Illustrations:

Figs. 2, 10.
Lange, J. Dansk Bot. Arkiv. 14: / 1952.

(Lange & Smith, Description: Mycologia 45:754-755)

Pileus 0.8 - 2 (2.6) cm high, narrowly conic, ~~xx~~ expanding to obtusely conic, margin finally recurving and splitting, "russet" to "cinnamon brown" with a purplish flush/ when young, "mummy brown" when spores mature, disc retaining a tawny tinge, pruinose at first, soon glabrous, plicate-straight to disc. Context thin, soft, delicate; odor and taste none.

Lamellae free or just reaching the stipe, pallid, edge whitish ~~xxxxxxxx~~ but finally black overall as they deliquesce, rather crowded.

Stipe 4-8 cm long, 2-3 mm thick, white or more frequently flushed with a tint of the pileus from the base up, fragile and very delicate.

Spores in deposit black, 12.8-20 x 7.9-11 μ , average 15.2 x 8.7-9.8 μ , $\frac{D}{d} = 1.7-1.75$, almost terete ~~broadly~~ ovate/ in face view, elliptic-ovate in profile, dark brown, blackish brown in KOH, germ pore distinctly visible on abaxial side, large, about 2.5 μ broad. Basidia ~~18-38~~ 18-38 x 9-12.5 μ , constantly 2-spored, dimorphic, the short

over

type often considerably shorter than the long one.
~~Par~~ Paraphyses subglobose, 12-18 x 18-25 μ . Pleuro-
cystidia 50-90 x 15-55 μ , ~~xxxx~~vesiculose, scattered to
abundant; cheilocystidia similar, mostly 30-60 x 30 μ .
Pileus cuticle of subglobose cells, 20-35 μ diam.
Pileocystidia 30-100 x 4.5-16 x 1.5-5 μ , rather thick-
walled; brownish from base up, some of them typically
sclerocystidia, all narrow, pedicellate to sessile,
subventricose to acuminate, apex acute, base freely
incrusted with hyaline material.

Hab. Gregarious on horse-dung and rotten
straw, USA.

Differs from the type ~~sp~~ var. of ephemerus
by its color and pileocystidia.

Coprinus sclerotigenus E. & E.

Ellis and Everhart, The Microscope, p. 129. 1890.

(Kauffman's Description: Agar. Mich., p. 221. 1918)

Pileus 5-12 mm high and broad, ovoid or ovoid-oblong, then campanulate, at first covered with a white mealy veil, which later ~~disappears~~ becomes dark and sometimes almost entirely disappears.

Lamellae adnexed.

Stipe 2.5-10 cm long, slender, subequal, usually straight above, more or less flexuous below where it is downy. Springing from sclerotium which is black outside, white inside.

Spores 8-10 x 5-6 μ , obliquely ellipsoid.

Hab. On sheep dung. Veil observed in type at
^{by Kauffman}
NYBG, as meal on pileus.

May be identical with C. tuberosus Qué1. It is possible that C. stercorarius sensu Lange is the same as C. tuberosa.

See Tenn collections Nos. 13373 & 14143.

Coprinus semilanatus Pk.

New York State Mus. Ann. Rept. 24:71. 1872

Plant 8-12 mm high, pileus 16-24 mm broad, broadly conic then expanded and strongly revolute, pale grayish brown, margin sometimes split, finely and obscurely rimose-striate, farinaceo-atomaceous^{but}. Context submembranaceous.

Lamellae free, close, narrow.

Stipe about 2mm thick at base, about 1.5 mm at apex, about 5.5 cm long, white, tapering upward, lower half with cottony flocci which are easily rubbed off, smooth or slightly farinaceous above.

(Smith's Description, Mycologia 40:680)

Spores 12.5 - 15 x 7-8.4 x 9-12.5 μ , nearly coal black in KOH, flattened, subellipsoid in profile, obscurely angular ~~to~~ and broadly ellipstical to subcircular in face view, pore inconspicuous or projecting to form a snout. Universal veil of thin-walled readily ~~expand~~ collapsing globose to barrell-shaped cells.

Hab. On rich soil and dung, Sandlake, August.

Smith says it is a member of the C. niveus group.

Collections : 13375 (from cow dung, developed in the laboratory); 18345 on cow dung, Anderson Co., Tenn., det. A.H. Smith.

13375

COPRINUS SEMILANATUS Pk.

New York State Mus. Ann. Rept. 24:71. 1872

Illustrations:
Repr. 24, Pl. 4, figs. 15-18.

Pileus 1-1.5 (3) cm. broadly conic, white then "drab-gray," disk pale brownish, faintly striate, atomate, mealy, margin with fugaceous floccose down. Flesh membranous, fragile, odor mild. Lamellae free or narrowly attached, crowded, linear, narrow, edges whitish. Stipe 6-10 cm. x 3-5 mm., white, fragile, hollow, mealy to pubescent above, floccose below, base sub-bulbous. Annulus slight, evanescent.

Spores black in mass, pale brown to brown (under 'scope), 12-14.5 x 9-11 μ , limboform, a few elliptical, slightly angular, smooth. Pleurocystidia scattered, elliptical-cylindrical, 45-120 x 23-45 μ ; cheilocystidia on edges pyriform, subglobose to elliptical, 21-43 x 14-21 μ . Cells on surface of pileus smooth, globose to subglobose, 25-72 x 25-64 μ .

Habitat and Distribution. - On cow dung, Knox and Anderson Counties, Tennessee, February-November. Our two collections were developed in the laboratory.

18345

Coprinus semilanatus Pk.

on cow-dung, Clinton, Anderson Co., Tennessee,
leg: LRH, det: A.H. Smith, Nov. 23, 1947

Pileus 1.5 - 3 cm broad, conic-campanulate, umbonate,
mealy, striatulate nearly to disc. Context thin, fragile;
odor mild.

Lamellae narrowly attached, crowded, not broad.

Stipe 6-9cm long, 3-5 mm thick, white, shining,
fragile, apex mealy; annulus basal, slight.

Spores 12-14.5 x 8.5-11.5 μ , *broadly ellipsoid to broadly subovoid,*
at times compressed to slightly flattened, smooth. ~~sublimoniform,~~
No cystidia found. Cells of "meal" on pileus surface
globose to subglobose, smooth, 25-72 x 25-64 μ .

= a variant of micaceous?

Coprinus seymourii PK.

New York State Mus. Ann. Rept. 28: 49. 1876.

Pileus ^{caespitose}, 7-10 cm high, 16-24 mm broad, dark-brown, disc sometimes reddish, smooth or with minute granular scales, strongly striate or subpubescent, margin splitting & revolute. Context thin, fragile.

Lamellae reaching the stipe, brown then black, close, narrow.

Stipe 2 mm thick, smooth or slightly pulverulent, white, equal, hollow.

Spores $6.5-7.5 \times 5-6 \mu$, broadly ovate, compressed.

Hab. On clay soil. Albany, October.

Allied to ~~micaceous~~ micaceous but thinner, more fragile, darker in color, with more narrow lamellae.

over

Smith's Description(Mycologia 40:680)

Spores 6.2-7.8 x 3.1-3.5 x 4-4.6 μ , rusty bister in KOH, changing to chocolate color, flattened, subellipsoid in side view, obscurely triangular in face view, pore distinct. Paraphyses inflated, readily collapsing. Pleurocystidia and cheilocystidia none seen. Pileus cuticle sellular, walls of cells thickened in the angles at the base.

A member of the micaceus group; Smith not satisfied that it is more than a variant of micaceus.

Coprinus silvaticus Pk.

New York State Mus. Rept. 24:71. 1872

(Smith's Description, Mycologia 45:754. 1953)

Pileus 1-4 cm high, broadly elliptic-ovate then broadly convex and finally almost plane, ^{edge sometimes recurving,} disc and back of striae dark brown, darker when very moist, paler in some forms, appearing somewhat viscid when moist, finely pubescent soon almost glabrous, Context concolorous with pileus, pelliculose except over the disc; odor and taste none, tardily deliquescing.

Lamellae adnate to almost free, brownish when young, black when spores ripen, narrow, crowded to subdistant.

Stipe 1-8 cm long, 0.2-2.5mm thick, whitish to yellowish brown.

Spores 10.3-15.8 x 6.2-10 μ , flattened, broadly ovate or almost circular in face view, slightly inequilateral in profile, with low warts and ridges covered by a more or less distinct wrinkled hyaline epispore, apiculus prominent, blackish brown to almost impellucid, germ pore apical, Basidia 20-46 x 9-11.5 μ , 4-spored, rarely with few 2-spored intermixed, tetramorphic, long type narrow, much protruding. Paraphyses inflated. Pleurocystidia absent; cheilocystidia 38-64 x 16-18 x 5-8 μ , in a rather dense band. Pileus trama brownish, cuticle of vesiculose cells. Pileocystidia 75-135 x 15-25 x 4.5-9.5 μ ; sphaerocystis present but seldom numerous, 20-35 μ broad, brownish with wrinkled walls. Clamp connection on mycelium.

over

Hab. **Subfasciculate** to gregarious, on rich soil
in woods and gardens.

Cyprinus spraguei B. + C.

Ann. + Mag. Nat. Hist. III: 4: 292. 1859

COPRINUS SPRAGUEIFORMIS Murrill

Florida Acad. Sci. Jour. 8:196-197. 1945

"Pileus convex to subexpanded, gregarious, about 2 cm. broad; surface plicate with isabelline disk and ridges, subglabrous, margin entire; context membranous; lamellae attached to a disk, inserted, subdistant, narrow; spores ellipsoid, smooth, opaque, black, about $12 \times 6-7 \mu$; stipe equal, pallid, smooth, glabrous, shining, $7-9 \times 0.1-0.2$ cm.

"Type collected by W. A. Murrill on an open grassy lawn in Gainesville, Fla., Jun 12, 1944 (F 32925). Abundant on lawns in the vicinity after rains during warm weather.

Having the aspect of C. Spraguei B. & C. but with larger spores. Also suggesting C. hemerobius Fr., but having narrower spores and showing wider smoky furrows between the ridges on the cap."

Coprinus stercorarius Fr.

Epicr. Myc., p. 251. 1838

Pileus 2.5 - 3 cm high and broad, ovate then campanulate, densely covered with white glistening meal, margin striate.

Lamellae adnexed.

Stipe 7-12 cm long, white, minutely mealy at first, hollow.

Spores 14-15 x 8 μ .

Hab. On dung and manured ground.

The above from Masee: Ann. Bot. 10: 167. 1896 (first Series).

Collection: No. 3647, on half-buried wood, University Farm, Knoxville, April 17, 1934.

Masee places it in his Sect. V μ characterized by him as follows: "Volva and ring absent. Pileus covered by glistening ~~perkinian~~ micaceous particles when young"

Coprinus sterquilinus (Fr.) Fr.

Epicr. Myc., p. 242. 1838

Agaricus sterquilinus Fr., Syst. Myc. 1:308. 1821.

Coprinus oblectus Fr., Epicr. Myc., p. 243. 1838.) in Kauffman's ~~vi~~
view.

Coprinus stenocoleus Fr.)

Coprinus macrosporus Pk., N.Y. State Mus. Ann. Rept.
31:35. 1879.)

then conic and
Pileus at first short-cylindric, /expanding, 5-6 cm
broad when expanded, disc white tinged with brown or
fuscous, villous or silky, becoming torn into squarrose
scales especially on the disc, sulcate half-way to disc.
Context white, thin.

Lamellae free, white then purpurplish, soon black.

Stipe 10-15 cm long, white, slowly discolored when
bruised, subfibrillose, slightly attenuated upwards, hollow
but the base solid, thickened, peronate, the sheath or
volva with a free margin.

Spores 18-25 μ , smooth black (Kauffman)
Spores 15-22 x 8-14 μ (K & R)

COPRINUS SUBDOMESTICUS Murrill

Florida Acad. Sci. Proc. 7:126. 1945

"Pileus convex, not expanding, scattered to somewhat gregarious, 1.5-3 cm. broad; surface white, shining, decorated with small white separable scales, becoming gray and finely striate, margin incurved and somewhat sulcate when young, becoming fimbriate or ragged; context thin, white, with pleasant flavor; lamellae tapering at both ends, just touching or free, 5 mm. broad at the middle, close, inserted, pallid to blackish, edges white, entire; spores broadly ovoid, smooth, opaque, blackish, 10-12 x 6-8 μ ; stipe slightly enlarged below, exannulate, smooth, glabrous, white, base bulbous, immarginate, 1.5-3 x 0.3-0.4 cm.; universal veil breaking into small fragments.

"Type collected by W. A. Murrill in open sandy soil in dry oak-pine woods, near Gainesville, Fla., Mar. 15, 1940 (F 18529). Found but once. C. domesticus Fr. is larger, with brown disk and spores 14-16 x 7-8 μ ."

Coprinus subpurpureus Smith

Mycologia 40:684. 1948

(Smith's Description)

Pileus 1.5cm high, up to 3.5 cm broad, when expanded, finely pruinose-pubescent when young, soon glabrous as the cystidia collapse, disc "natal brown" to "benzo brown", marginal area "light cinnamon drab", in age the disc "dark purple drab" over disc and blackish over the margin. Context very thin and fragile, delicate; odor and taste none.

Lamellae narrowly adnate, near "tilleul buff", narrow, close becoming subdistant, darkening to black overall before the edges deliquesce.

Stipe 4-10 cm long, 1-2.5mm thick, dull lilac umber when young, pallid in age, densely pruinose-pubescent but soon glabrescent, base white-strigose.

Spores in deposits black, 12-14 x 5.5-6.8 x 7-8 μ , germ pore eccentric, in face view with a ventral pore visible (but not humped as in C. ebulbosus), narrowly ~~subovate~~ subovate to elliptic in face view, with a suprahilar depression in side view. Basidia 4-spored, tetramorphic, 18-30 x 6-7 μ . Paraphyses hyaline, inflated, otherwise not distinctive. Pleurocystidia not seen; cheilocystidia 10-30 μ diam., vesiculose to broadly fusoid-ventricose. Gill trama very thin, appearing ~~xxxxxxxxxxxx~~ cellular in sections, slightly vinaceous brown in sections of young gills. Pileus trama thin, appearing to be a mixture of narrow filaments

over

and large cells. Cuticle a single layer of vesiculose ~~xxxx~~
~~xxx~~yo pedicellate cells from which thin-walled pileo-
cystidia, 60-100 x 10-16 μ , project; the layer beneath the
cuticle ~~is~~ vinaceous brown to lilaceous brown (in KOH),
with clamp connections.

Hab. On wet leaves, inspringy areas, beneath
hardwoods, Colonial Point, Burt Lake, Cheboygan Co.,
Michigan, July 31, 1947, type (Sm-26158).

COPRINUS SUBRADIATUS Murrill

Lloydia 7:323. 1944

"Pileus convex to plane, solitary, 2 cm. broad; surface isabelline, glabrous, soon rimose to the small disk, margin entire, paler; context membranous, pallid; lamellae adnexed, founded behind, narrow, close, inserted, fimbriate, white, becoming dirty-pallid on drying but not entirely dissolving; spores ovoid, smooth, purplish-brown, opaque, truncate, about $8-9 \times 5 \mu$; cystidia none; stipe white, enlarged and pubescent above and below, subglabrous in the middle, $5 \times 0.05-0.15$ cm.

"Type collected by W. A. Murrill in a pile of charcoal in oak woods at Gainesville, Fla., July 26, 1939 (F 16331). Related to C. radiatus and C. Spraguei."

COPRINUS SUBRORIS Murrill

Lloydia 8:288-289. 1945

"Pileus campanulate to expanded, gregarious, 5-10 mm. broad; surface radiate-sulcate, furfuraceous, pale-grayish, isabelline at the center, margin entire, revolute with age; context membranous; lamellae free, narrow, subdistant, soon black; spores ellipsoid, smooth, chocolate, about $11 \times 8 \mu$; stipe capillary, smooth, white, shining, glabrous, about 3-5 cm. long.

"Type collected by W. A. Murrill on a rich open grassy lawn in Gainesville, Fla., May 25, 1944 (F 38819). Suggesting C. Wrightii B. & C. and C. roris Quél. in some ways. Very dainty and delicate."

Coprinus variegatus Pk.

Buffalo Soc. Nat. Sci. Bull. 1(2):54. 1873

densely cespitose,
Plants/6-10 mm high, pileus 1-1.5 mm broad,
oblong-ovate then campanulate, hygrophanous, pale watery
brown when moist, whitish or cream colored when dry,
variegated by scales and patches by superficial ochraceous
tomentum, margin finely striate. Context fleshy.

Lamellae free, ascending, white then rosy-brown,
finally black, lanceolate, crowded.

Stipe 2-4 mm thick, white, at first peronate-
annulate, then floccose-pruinose, with white branching
root-like threads at base, equal, brittle, hollow.

Notes by Smith(Mycologia 40:682)

Spores 7-9(10) x 5-6.2 μ , subellipsoid to ovoid,
not flattened, often with a ventral hump or blister(pore?),
dull cocoa brown in KOH, gradually fading to avellaneous or
wood brown(immature?)pore distinct. Basidia 4-spored.
Paraphyses ~~60-120 x 15-28 μ , cylindrical~~, hyaline, readily
collapsing, thin-walled. Pleurocystidia 60-120 x 15-28 μ ,
cylindric, hyaline, thin-walled, readily collapsing;
cheilocystidia not seen. Pileus of narrow, gelatinous hyphae.

Hab. On thin soil covering rocks, West Point, June.

Distinguished from ebulbosus and quadrifidus by its
gelatinous cuticle, according to Smith(but more work needs
to be done on this point).

COPRINUS WESTII Murrill

Mycologia 43:236. 1951

"Pileus cylindric to campanulate, gregarious, 10 cm. high and 13 cm. broad; surface white, densely imbricate-scaly, margin entire to ragged, concolorous; context thin, white, odorless; lamellae narrow, crowded, white, at length black and melting; spores ellipsoid, black, smooth, 20-25 x 12-14 μ ; stipe equal, radicate, smooth, glabrous, white, unchanging, about 20 x 1.5-2 cm.; annulus none.

"Type collected by Erdman West on the ground in mixed woods at Warren's Cave, northwest of Gainesville, Fla., Oct. 27, 1946 (F 25778). Found but once. Suggesting C. praemagnus Murr. but differing in several important characters."

on plaster, ceiling of building, Knoxville,
Tenn., leg. Jas. Rhea, Oct. 24, 1950

(This collection~~x~~ was left at my office, dried. The clerk of the store stated that it grew at a point under a roof-leak.) Cf. C. domesticus (Fr.) S.F. Gray

Coprinus No. 3640

(No notes; see specimens)



3640 - *Coprinus*

COPRINUS No. 3990

Pileus conical, 1.5-2 cm. high, 1.5-2 cm. broad at base, warm-buff in button-stage, finally darkening, the disk remaining warm-buff, with micaceous, white pulverulence, margin striatulate. Flesh thin, soon deliquescing. Lamellae adnexed, close, narrow, finally blackish. Stipe 7-10 cm. x 2-3 mm., white, fragile, minutely pruinose throughout, tapering upward slightly, hollow. Annulus basal (within 5-10 mm. of the very base), floccose-fibrillose.

Habitat and Distribution. - On humus (peat) under azalea, Hesler's, Timberlake Road, May 28, 1959.

COPRINUS NO. 4945

Pileus 15-25 mm., hemispheric, not expanding, glabrous, "saya brown" when young, then "pinkish buff," becoming paler except on disk, finally darkening at full maturity, striatulate. Flesh thin, fragile. Lamellae narrowly adnate, medium broad, crowded, white, soon "hair brown," finally nearly black, marcescent, edges minutely fimbriate. Stipe 5-9 cm. x 2-3 mm., white, shining, glabrous, equal, hollow.

Spores 10-12 x 5-6 μ , ellipsoid, smooth, brown. Basidia 4-spored. Pleurocystidia and cheilocystidia few, similar, vesiculose-clavate, 36-44 x 9-12 μ . Epicutis of large vesiculose cells, 25-50 x 20-35 μ ; no hairs and no pilocystidia.

Habitat and Distribution. - On straw and other humus, Tennessee, June.

Discussion. - Near C. hemerobius Fr.

Coprinus

on soil, edge of woods, Lyons Bend Rd., Knox County,
leg. Dave Smith, Sept. 12, 1974

Pileus 2 - 3 cm broad, campanulate, expanding, more or less umbonate, unbo "hair brown", elsewhere dark gray, plicate-striate to disc. Context thin, membranous.

Lamellae adnexed, pallid, sprinkled with blackish spores, medium close to subdistant, medium broad, deliquescent.

Stipe 5-7 cm long, 1.1.5mm thick, white, fragile (soon collapsing), hollow, equal or tapering upward.

Coprinus No. 13374

Pileus hemispheric, 5-7 mm. high x 4-6 mm. diam., pallid brownish (near "clay color"), disk slightly darker, striate to disk, glabrous (or under binocular granular), sprinkled micaceous.

Flesh membranous.

Lamellae free, narrow, linear, subdistant, whitish, sprinkled with black spores.

Stipe 5.5-9 cm. x 0.5-0.7 mm., watery, fragile, hollow, whitish, translucent, glabrous.

Spores subcordate to subtriangular, 12-15.5 x 11.5-13.5 μ , or a few elliptical, 11-14 x 9-10 μ , dark-brown, nearly black (under 'scope), opaque, smooth.

Cells on surface of pileus clavate, colorless, smooth, 38-65 x 20-22 μ , studding surface.

Close to C. miser Karst. which has smaller spores (7-9 μ diam.), and cap cells ovato-globose, 18 μ diam. Resembles C. ephemerus Fr. which has setae on cap about 50 μ long (spores 10-15 x 6-7.5 μ).

On horse dung, Knox County, Tennessee, February.

Developed in the laboratory.

COPRINUS No. 14063

Pileus up to 5 mm., elliptical, finally expanded and radially split, pallid, disk^k "snuff brown" (when young), surface with glistening setae (seen under lens). Flesh membranous. Lamellae narrow, subdistant, almost reaching stipe, deliquescent. Stipe up to 4 cm. x 1 mm., white, densely fibrillose (in moist chamber), fragile.

Spores 7.5-8 x 5-6 μ , elliptical, dark brown (under 'scope). Pleurocystidia cylindric-clavate, 40-54 x 14-16 μ . Surface of pileus of a palisade-like layer of cells 24-30 x 16-18 μ ; numerous bristle-like setae among cells, 36-54 x 5-9 μ .

Habitat and Distribution. - On horse dung, Knox County, Tennessee, November. Developed in the laboratory.

cf. ephemerum.

COPRINUS No. 14080

Pileus 10-14 mm. high, expanding, revolute, surface with dingy grayish woolly, pyramidal, soft scales (composed of loosely mixed elliptical and hyphal cells). Flesh thin; odor somewhat alkaline. Lamellae free, narrow, deliquescent, black. Stipe 4-5 cm. x 1-2 mm. (apex), tapering upward, base enlarged (clavate), narrowed below, enlargement, fibrillose (densely so at base), with an indistinct fibrillose ring which is at first apical, finally inferior; attached to a soft grayish sclerotium (5-10 mm. diam.).

Spores 7-9 x 5-5.5 μ , elliptical, black in mass.
Pleurocystidia and cheilocystidia (?) Cells of pileus surface of two types: (1) elliptical to globose, 36-60 x 25-50 μ , smooth or slightly granular, colorless; (2) hyphal, 7-10 μ broad.

Habitat and Distribution. - On cow dung, Knox County, Tennessee, November.

Discussion. - This is near C. stercorarius Fr.

cf. narcoticus (odor: alkaline)

14094

COPRINUS No. 14094

Pileus 5-7 mm. diameter, at first densely white hairy, finally grayish to blackish with tufts of hairs around disk, plicate, margin recurved. Flesh thin, membranous. Lamellae free, narrow. linear, subdistant, blackish from spores. Stipe 8 cm. x 0.5 mm., white, with white fibrils, glabrescent, very fragile, translucent.

Spores black, elliptical, 10-12.5 x 7-7.5 μ . Pleurocystidia 36-50 x 18-20 μ , ventricose, scattered. Pileus surface with globose, rough, hyaline cells, as well as "hyphoid hairs."

Habitat and Distribution. - On horse dung, Knox County, Tennessee, November 7, 1941.

Discussion. - This is close to C. radiatus Fr.

17447

Coprinus

on horse dung, Panama, leg. S. L. Meyer, March
22, 1945 (developed in a moist chamber) at Knoxville,
March 20, 1946)

Pileus 18-30 mm broad, ellipsoid, gray in ~~button~~
densely
button stage and/pilose-squarrose, white, expanding, revolute.
~~Stalks~~ Context white, thin.

Lamellae free, narrow, close, thin.

Stipe 8-12 cm long, 1-2mm thick, base of stipe
2-3mm thick, white, slightly attenuated upward, not rooting,
hollow, pilose.

Spores 8-11 x 5-7 μ , black in deposit, ellipsoid.
Pleurocystidia and cheilocystidia not found. Scales on pileus
composed of septate hyphae, 20-40 μ broad, on the stipe
20-30 μ broad.

17984

Coprinus

on log, Greenbrier, GSMNP, Sevier Co., Tenn.,
leg Hugh Iltis, Oct. 5, 1947

Notes by Smith: It is near C. seymourii, but has bright yellow mycelium at base, and is on wood. Need to know whether the veil is bright yellow when fresh, and whether it is ^(the pileus?) granulose or fibrillose. - A. H. Smith

COPRINUS No. 18167

Pileus 6-9 mm. broad, semiglobose-cylindric, finally expanding-convex, at first whitish, soon "pinkish-buff," becoming gray to gray-black toward maturity (from the spores), disk remaining "pinkish-buff," pruinose when young, more or less glabrescent, atomate, sulcate to disk. Flesh membranous, deliquescent. Lamellae narrowly adnate, seceding, broad, ~~sub~~stant, white, finally grayish, sprinkled with black spores, edges minutely fimbriate. Stipe 2-3 cm. x 0.5-1.0 mm., white, glistening, more or less silky, equal, hollow. Veil delicately fibrillose, white, leaving a median annulus which soon disappears.

Spores

Habitat and Distribution. - On dead wood, bark, and grass, A. J. Sharp's yard, Knoxville, Tennessee, June 10, 1959.

Pileus 2-6 cm. broad, at first hemispheric-convex, expanding somewhat and then convex, sub-umbonate, at first slightly granular-scaly, finally glabrous, micaceous, white to "cartridge buff" when young, finally "cinnamon," "sandal brown," "tawny-olive" or "ochraceous tawny," disk "tawny" to "russet," sub-sulcate, finally striate. Flesh very thin, fragile. Lamellae free, narrow, crowded, at first white, then "light pinkish cinnamon," finally "ochraceous tawny." Stipe 7-13 cm. x 2-5 mm., white, silky-striate, tapering upward, sub-bulbous, bulb 9-12 mm. diam., sub-emarginate, hollow. Veil breaking to form an ochreate, basal "volva."

Spores ellipsoidal, 7-9 x 4-4.8 μ , smooth, "chaetura black" in mass, brown under 'scope. Pleurocystidia 80-128 x 35-67 μ , sub-cylindric, broader below. Scales on pileus composed of globose to ellipsoidal cells, (16) 30-45 x 24-40 μ .

Habitat and Distribution. - On soil, around stump, Knox County, Tennessee, June.

Discussion. - This is in the radians-group, according to Smith. Deliquescence begins rather early and is nearly or quite complete.



18563 - *Coprinus* (radiatus group)

Pileus 3-5 cm. broad, 3 cm. high, "Prout's brown" to "raw umber," conical, not expanding greatly, at first with white appressed "frost-like" scales which largely disappear, scales composed of branched hyphae of two types: (1) of brown, moniliform cells; (2) of colorless, moniliform cells (larger than brown cells); finely plicate-striatulate ^{to sulcate,} becoming rimose. Flesh white, thin, pliant. Lamellae white at first, finally black, free, crowded, tapering slightly either way, slowly and slightly deliquescing. Stipe 4-7 cm. x 3-5 mm., white, broadened somewhat at base, hollow, with a brown ozonium-tuft at base. Veil not conspicuous, and leaving no ring.

Spores "light seal brown" in mass, ellipsoidal, (6.8) 8-9.5 x 3.4-4.8 μ . Pleurocystidia cylindrical-ovoidal, 89-150 x 36-41 μ . The surface of pileus is composed of epidermal-like cells 20-35 x 17-27 μ .

Habitat and Distribution. - At base of stump, scattered or in groups of 2-4, Knox County, Tennessee, April.

Discussion. - Same as No. 18933. *Cf. micaceous + radians.*



18913 - *Coprinus*

Same as #18933

18933

Coprinus

Photo

around stump, Knoxville, Tenn., leg. Hesler Apr. 30, 1949

Pileys up ~~to~~ 4 cm broad, convex-campanulate, at first with white scales which largely disappear, at first pale gray brown, disc darker, finally surface "hair brown", striatulate to disc, Context deliquescing at a moderate rate.

Stipe 6-7 cm long, 5mm thick, tapering upward slightly.

Spores 7-9.5 x 4-4.8 μ . Pleurocystidia 96-150 x 32-40 μ .

Same as No. 18913. Cf. radians



18933 - *Coprinus*

Name as #18913

Coprinus No. 18936

Photo

Fileus 3-4 cm. high, finally up to 6 cm. broad, whitish with scattered, recurved scales.

Stipe 10-14 cm. x 6-9 mm., white, hollow, equal. No evident veil or volva.

On lawn, Knox County, Tennessee, May, 8, 1949



18936 - *Coprinus*

COPRINUS No. 18985

Pileus 5-8 mm. diam., 7-9 mm. high, cylindric-ovoid, white, silky, atomate, with pale yellow-brown, soft, ~~felt~~^{felt}-like scales, plicatulate. Flesh thin, soft. Lamellae narrowly attached or nearly free, linear, white, blackening slowly. Stipe 10-17 mm. x 1-1.5 mm., white, slightly silky-fibrillose, equal, hollow. Annulus none.

Spores 8-9 x 5.5-7 μ , ovoid to ellipsoidal, smooth, brown (under 'scope). Pleurocystidia long, cylindric, 67-128 x 11-17 μ . Scales on pileus composed of parallel, colorless hyphae, 3-4.5 μ diam.

Sherp's lawn,

Habitat and Distribution. - On garden soil, [^]Knox County, Tennessee, June 17, 1949.

cf. C. dilectus.

COPRINUS No. 19228

Pileus 12-25 mm., conic-campanulate, glabrous, pale tawny-buff (not matched), disk darker (fulvous), striate to disk. Stipe 6-11 cm. x 1-2 mm., white, shining, delicate, glabrous, hollow.

Spores 11-12.5 x 7-8 μ . Surface cells of pileus hyphal.

Habitat and Distribution. - On lawn, Knox County, Tennessee, August.

Discussion. - Near C. hemerobius Fr.



19228 - *Coprinus*

COPRINUS No. 19231

Pileus 15-25 mm. broad, at first (button-stage) semi-globose, "tawny-olive" or paler, "buttons" with scattered, fibrillose, evanescent squamules, finally expanded plane and "pale smoke gray," atomate, surface composed of globular cells, 20-40 μ diam., plicate, disk pale fulvous. Flesh thin; deliquescence slow. Lamellae adnate, close, concolor to pileus, sprinkled with dark spores, medium broad, narrowed slightly behind, edges fimbriate. Stipe 2-3 cm. x 2-3 mm., white, mealy at apex, elsewhere fibrillose-striate, base often curved, slightly bulbous, hollow. Annulus cortinate, basal, evanescent.

Spores broadly ellipsoidal, smooth, ends blunt, 8-10.5 x 5.5-8 μ . Pleurocystidia not found.

Habitat and Distribution. - On lawn, Knox County, Tennessee, August.



19231 - *Coprinus*

($\times \frac{5}{4}$)

COPRINUS No. 19482

Pileus 1.5-2 cm. broad, expanding, splitting radially into 3-5 lobes, pallid-grayish, with a few white fibrils, plicate to disk. Flesh membranous. Lamellae nearly free, narrow, subdistant, many short. Stipe 4-6 cm. x 1-2 mm., white, pruinose, flaccid, hollow, equal or tapering upward.

Spores

Habitat and Distribution. - Bare soil, lawn, A. J. Sharp's, Knoxville, Tennessee, June 4, 1959.

COPRINUS No. 19631

Pileus at first ellipsoidal, then expanded-campanulate, micaceous, with soft warts and mealy particles (composed of globose, smooth cells, 24-56 μ diam.), grayish, disk brownish, striate-plicate, deliquescent. Lamellae free, almost subdistant, narrow. Stipe white, floccose, equal, base sub-bulbous, hollow; ring, if any, very slight.

Spores 7-9 x 4.5-5 μ , ellipsoidal, ends rather blunt.

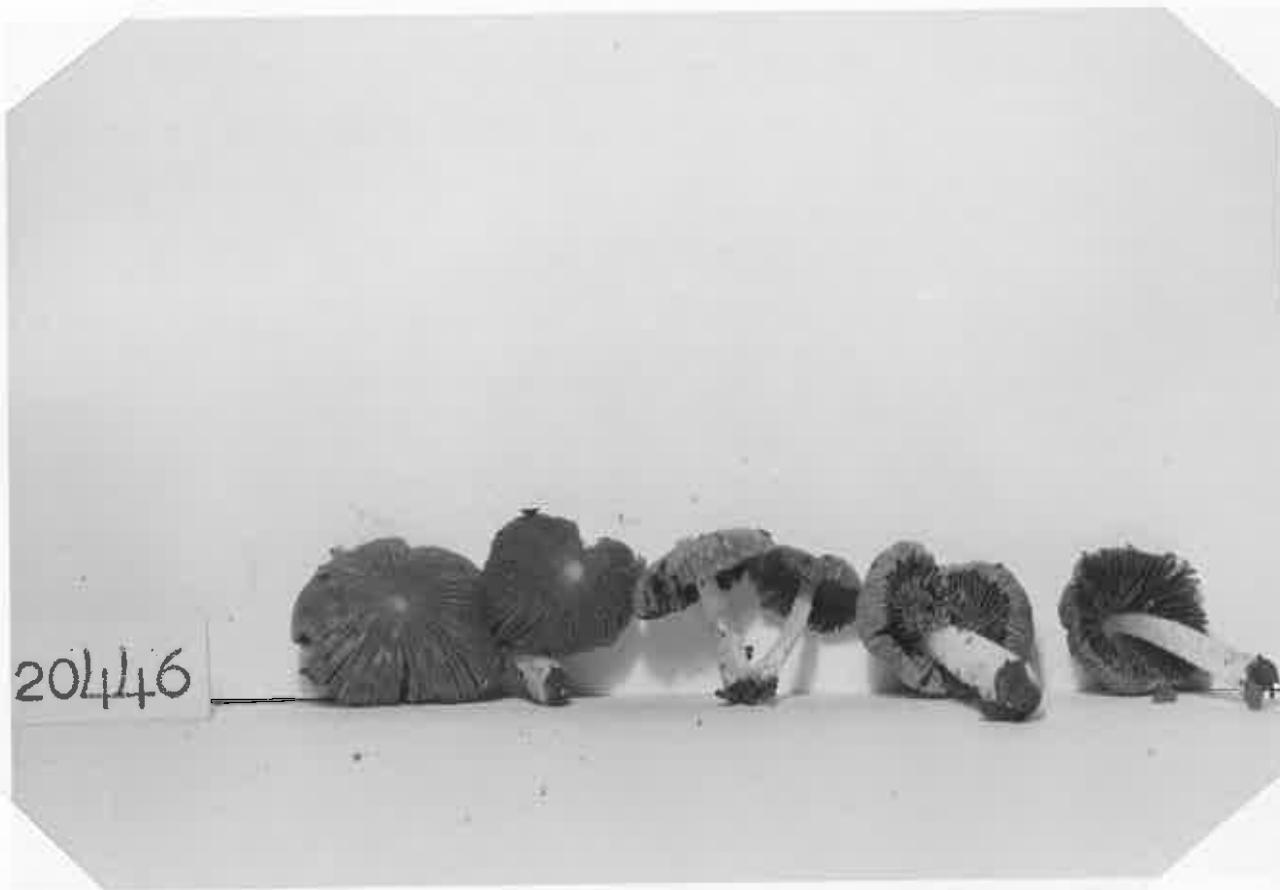
Habitat and Distribution. - On soil, Knox County, Tennessee, February.

Pileus 10-12 mm. high, hemispheric to conic-convex, micaceous, with scattered, white, felt-like scales (composed of large filaments, 20-48 μ diam.), grayish-black when mature; whitish in the "bud" from dense, felt-like scales, plicate to disk. Flesh thin, grayish-black. Lamellae ascending, narrowly adnate, medium broad. Stipe 1.5-2 cm. x 4 mm., white, fibrillose-woolly, densely so when young, hollow. Veil slight, at times leaving slight, false ring at base of stipe.

(8)
Spores 9-10 (11) x 7-8 μ , smooth, ellipsoidal, black in mass. Pleurocystidia ventricose, 37-76 x 20-30 μ ; cheilocystidia pyriform-balloon shaped, 38-43 x 27-32 μ . Basidia 22-25 x 9-11 μ , nearly cuneate; 4-spored.

Habitat and Distribution. - On garden soil, Knox County, ^{Timberlake Rd.,} Tennessee, August 3, 1952

Discussion. - Close to C. apthosus Fr., which Kange figures with a much longer stipe (7-8 cm).



20446 - *Coprinus*

x $\frac{5}{3}$

COPRINUS No. 20564

Pileus ovoid-cylindrical, not expanding, 2-3 cm. broad, 3-3.5 cm. high, near "pale smoke gray," minutely fibrillose, not scaly, margin striate in age. Flesh white, thin; odor and taste mild. Lamellae ascending, narrowly attached, white then black, medium broad, crowded, edges fimbriate. Stipe 6-8 cm. x 5-7 mm., ring membranous, finally inferior, rather persistent, white above, dingy below, tapering below, apparently attached to a sclerotium (?), hollow.

Spores 8-10 x 5-5.5 μ , ellipsoidal, brown under microscope, smooth. Pleurocystidia not found.

Habitat and Distribution. - At base of decaying, standing tree, Sevier County (Park), Tennessee, September.



20564 - *Coprinus*

COPRINUS No. 20780

Pileus 2-3 cm. broad, hemispheric at first, finally convex-expanding, glabrous, floccose in button stage, atomate (under lens), disk "buckthorn brown," elsewhere paler, striate to disk. Flesh thin, watery brown, deliquescent; odor none. Lamellae narrowly adnate, ascending, rather broad, crowded, finally black, edges floccose. Stipe 5-8 cm. x 2-3 mm., pallid, floccose in youth, somewhat glabrescent, apex mealy-floccose, tapering upward or equal, hollow. Veil silky, slight, evanescent.

Spores 8-9 x 4.5-5.5 μ , black in mass, key-stone to lemon-shaped, smooth. Pleurocystidia 112-128 x 45-48 μ , vesiculose. Cuticle of pyriform cells, 25-38 x 12-22 μ .

Habitat and Distribution. - In humus, caespitose, clusters of 10-20 carpophores, in deciduous woods, Knox County, Tennessee, January.

Discussion. - Compare C. micaceus. See No. 20793.



20780 - *Coprinus*

on soil, Timberlake Rd., Knox County, in woods,
leg. Hesler (Hesler's woods), Mch. 15, 1953
as,
[from same station ~~xx~~, /and agrees with, 20780]

Spores 8-9.5 x 4.8-5.5 μ , somewhat key-stone-shaped.
Pleurocystidia 112-192 x 43-55 μ , vesciculose. ^{Surface} ~~examine~~ of
pileus of ~~pyriform~~ to brick-shaped cells, 32-36 x 28-35 μ .



20793 - *Coprinus*

COPRINUS NO. 21378

Pileus 3-3.5 cm. broad, 1-1.5 cm. high, grayish-white then "clay color," with scattered, echinate, mealy veil-remnants, plicate to disk. Flesh thin, pallid; odor and taste mild. Lamellae nearly free, attached by a line, crowded, narrow, slowly deliquescent. Stipe 3-4 cm. x 2-3 mm., white, apex white-floccose, elsewhere glabrous, hollow.

Spores 8-10 x 4-5 μ , ellipsoid, smooth. Pleurocystidia scattered, cylindrical, (80) 121-160 x 26-30 (43) μ ; cheilocystidia none.

Particles on pileus composed of globose (25-35 μ diam.) to ellipsoid cells 42-54 x 26-35 μ .

Habitat and Distribution. - On and near oak stump, Tennessee, May.

23051

Coprinus

on horse dung, Cades Cove, GSMNP, Blount Co., Tenn.,
leg Hesler, July 25, 1958

Pileus 1-2 mm broad, white, conic-cylindric, then expanded-depressed, disc brownish, strongly striate ~~xxxxxxx~~ or sulcate to disc. Context membranous.

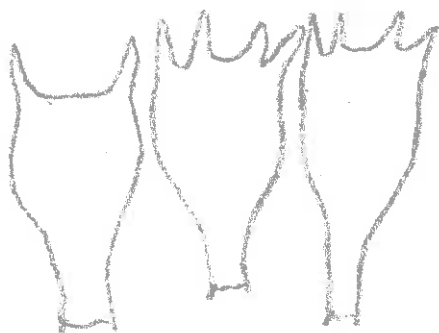
Lamellae free, narrow, distant, about 10-12 reach stipe.

Stipe 1-1.5 cm long, 0.2-0.3 mm thick, pellucid-white, equal, glabrous(naked eye).

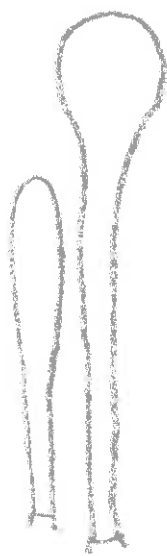
Spores 7.5 - 9 x 5-6 μ , ellipsoid, smooth, blackish in deposit. Basidia 9-11 x 4.5-5 μ , 2-4-s-ored. Pileocystidia 6-14 μ (apex). cylindric-clavate, 53- 78 x ~~3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100~~ μ . Caulocystidia 50 - 76 x 5-15 μ (apex), similar.

Coprinus

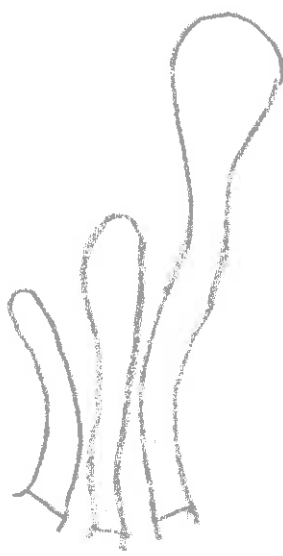
No. 23051



Basidia (x about 3000)



Pileus (x about 900)



Caulo (x about 900)

23285

Coprinus
on lawn, Tobler Road
Coll.: A. J. Sharp, Oct. 11, 1959

Fileus 3-6 mm. broad, 4-6 mm. high, cylindric, not expanding, disk yellowish-buff, elsewhere gray (not matched), atomate, plicate. Flesh thin, pallid. Lamellae narrowly attached, ascending, medium broad, nearly close, grayish, sprinkled black (from spores). Stipe 2-3.5 cm. x 0.8-1.4 mm., white, shining, apex with short hairs, elsewhere glabrous, hollow.

COPRINUS No. 23703

around stump of hackberry

A. J. Sharp's lawn June 2-60

Pileus 3-4.5 cm. broad, expanding convex-campanulate, gray-brown, at first pale buff, disk remaining buff for some time, finally gray-brown with more or less numerous pallid flaky-scales, especially on the central portion, striate to disk. Flesh membranous, pallid, soon dark, quickly deliquescent; odor and taste mild. Lamellae free, narrow, crowded, pallid, soon black and deliquescing. Stipe 4-7 cm. x 3-4 mm., white, minutely pubescent-downy, tapering slightly upward, hollow.

Spores in deposit "dark vinaceous drab"

24175

COPRINUS

on roots of Celtis stump
Coll: A. J. Sharp, Sharp's lawn, May 7, 1961

Pileus more or less ovoid, finally expanding-campanulate, disk "colonial buff", elsewhere "cream buff", glistening, striate to disk. Context membranous. Lamellae free, whitish, finally blackish, deliquescent, crowded. Stipe 6-8 cm. x 2-3 mm., white, minutely short-tomentose, equal above a slight bulb, hollow.

Coprinus No. 24328

Photo

85MNP
on birch stump, Chimneys, July 5-'61
^

Pileus "tawny olive", glabrous, more or less micaceous,
plicate or deeply striate. Stipe white, veil none.

cf. 20780 + 20793.



24328 - *Coprinus*

24359 Coprinus

oak bark, Norris Dam June 27-61

Pileus 4-7 mm. broad, 4-6 mm. high, grayish, minutely
white hairy, striate.



24359 - *Coprinus*
disseminatus ?

*quadricolor?
sterile?*

COPRINUS No. 25622

PHOTO

on rotting oak log, Cades Cove, July 5-'63

Pileus cylindric, 2.5-3.5 cm. long, expanding only slightly and then 3-3.5 cm. broad at base, "ivory yellow", with dingy brown, flat scales, minutely striatulate to disk. Context membranous, white; odor and taste noticeable raphanoid.

Lamellae ascending, narrowly attached, crowded, medium broad, pallid, slowly darkening to dark-gray or blackish, deliquescence slow.

Stipe 5-7 cm. x 6-9 mm., white, hollow, appressed-fibrillose, equal above the marginate bulb (bulb up to 20 mm. diam.). Veil median to sub-median, membranous, more or less persistent.



25622 - *Coprinus*

26052

COPRINUS

Photo

in compost, Broome's, Knoxville, June 25, 1964

Pileus ± cespitose, 3-6 cm, ovoid to subcylindric, finally campanulate to expanding-convex, whitish, cuticle torn into scattered, flat, "chamois" scales, margin finely striatulate. Context thin, pallid; odor and taste mild.

Lamellae rounded, narrowly attached, almost free, crowded, medium narrow, white, finally blackish, deliquescent.

Stipe 6-11 cm x 5-10 mm (apex), attenuated upward and base at times slightly enlarged, whitish, scattered-fibrillose, hollow. Veil whitish, breaking to leave an evanescent nearly basal ring.



26052 - Coprinus

on compost, J.K.Underwood's garden, Knoxville,
Tenn., July 17, 1966

Pileus 30-45 mm high, 13-25mm broad, "deep neutral gray",
disc pallid, at first covered by a white universal veil,
~~firmly~~ finally the veil remnants as numerous white patches,
the margin minutely striatulate. Context thin, concolorous.

Lamellae narrowly attached, at first grayish white, finally
concolorous with the pileus, very crowded, narrow.

Stipe 6-11 cm long, 5-11 mm thick, white, equal below ~~xxx~~
the narrowed apex. hollow. Volva a closely adhering sheath.

cf musci + narcoticus.



28195

28195 - *Coprinus*

30005

COPRINUS

Base of living buckeye tree, Indian Creek, September 5, 1967

Pileus pale-grayish (not matched), disc pale-brown, becoming striatulate to disc.

Stipe white. Veil leaving a medium to inferior ring.

39754

Coprinus

in large troupes around a stump, Cherokee Orchard, base
of Mt. LeConte, GSMNP, near Gatlingburg, Tenn.,
Sept. 17, 1974

Pileus cylindric-hemispheric, "tawny olive", disc darker,
striatulate to disc. Context thin.

Lamellae white, soon blackish, crowded, deliquescent.

Stipe white, glabrous. Veil not evident.