



November 2013

## Conocybe Notebook 3

L. R. Hesler

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CONOCYBE Fayod

Preliminary Key

to North American Species

—

L. R. Hesler

April, 1975

CONOCYBE Fayod

Key to Sections

1. Cheilocystidia lecythiform (9-pin-shaped)
  2. Veil present, as remnants on pileus margin, or sometimes <sup>eae</sup> as an annulus on the stipe .....Sect. Intermed~~iales~~
  2. Veil absent or rudimentary .....Sect. Conocybe
1. Cheilocystidia more or less fusoid-ventricose, sometimes subcapitate but not lecythiform
  2. Spores rough .....Sect. Verrucispora
  2. Spores smooth
    3. Veil remains as a membranous annulus .....Sect. Pholiotella
    3. Veil, if present, not forming a membranous annulus
      4. Veil distinct (examine young basidiocarps) .....  
.....Sect. Naucorioides
      4. Veil absent or extremely rudimentary..Sect. Filiformes

Sect. <sup>222</sup>Intermedia

Key to Species

1. Annulus absent, veil remnants as sordid buff fibrils  
on pileus margin ..... C. Sm-13259  
(and Sm-28916)
1. Annulus present, membranous ..... 2
  2. Spores 7-9(10)  $\mu$  long ..... C. pinguis
  2. Spores 6-7.5  $\mu$  long ..... 3
    3. Pileus "chestnut brown", fading to dull buff, striate  
when wet; stipe darkening from the base up..C. intermedia
    3. Pileus paler: "sudan brown", fading to dull buff,  
even; stipe base becoming bister where handled .....  
.....C. brunnea  
(incl. Sm-41704)

Sect. Conocybe

Key to Subsections

1. Spores (10)11-16(18)  $\mu$  long .....Subsect. Macrospora
1. Spores shorter
  2. Spores 8-11(12)  $\mu$  long .....Subsect. Mesospora
  2. Spores 6-8(9)  $\mu$  long .....Subsect. Microspora

Sect. Conocybe

Subsect. Macrosporae

Key to Species

- 1. Spores 5-8  $\mu$  broad ..... 2
- 1. Spores 8-10  $\mu$  broad ..... 21
  - 2. Margin of pileus ribbed, striate, striatulate, or sulcate, at least when wet ..... 3
  - 2. Margin even, when wet or dry ..... 16
- 3. Basidiocarps distinctly caespitose; stipe white ..... C. caespitosa
- 3. Not with the above combination of characters ..... 4
  - 4. Margin of pileus ribbed; pileus ochraceous-yellow, pallescent ..... C. lactea  
(Bolbitius tener)
  - 4. Margin and pileus colors not so ..... 5
- 5. Stipe 1 mm or less in diameter ..... 6
- 5. Stipe 1 or more mm in diameter ..... 10
  - 6. Pileus pale grayish, shining ..... C. tenera f. tennella
  - 6. Pileus otherwise colored ..... 7
- 7. Stipe stramineous, tapering upward ..... C. alachuana
- 7. Stipe brown or brownish, equal ..... 8
  - 8. Pileus "cinnamon rufous" when fresh and moist ..... C. Tenn-2792  
(also Tenn-10395)
  - 8. Pileus of other colors ..... 9
- 9. Pileus 6-10 mm broad, "tawny olive"; stipe 0.2-0.3 mm thick ..... C. Tenn-20860

- 9. Pileus 10-25 mm broad, "Rood's brown" when wet, "hazel" when dry; stipe 0.6-1.0 mm thick .....C. Tenn-39224
- 10. Pileus yellow-ocher or honey-yellow, often with a greenish tint .....C. tenera var. subovalis
- 10. Pileus colors not as above ..... 11
- 11. Lamellae narrow ..... 12
- 11. Lamellae broad ..... 15
- 12. Stipe pale yellow, pruinose overall from lecythiform caulocystidia .....C. Sm-12093
- 12. Stipe brownish, or becoming so at maturity ..... 13
- 13. Pileus pale ochraceous tawny, fading to yellowish; stipe twisted, base marginate-bulbous .....C. Sm-21606
- 13. Pileus and stipe not as above ..... 14
- 14. Pileus "avellaneous" to "wood brown", disc "sepia"; stipe-base slightly bulbous .....C. Sm-23930
- 14. Pileus russet to tawny, fading to dull tawny; stipe equal .....C. Sm-45482
- 15. Pileus deep red-brown ("walnut brown"), fading somewhat; lamellae close, medium broad .....C. Tenn-24342
- 15. Pileus paler brown (rusty to "sayal brown"), fading; lamellae more or less subdistant, broad .....C. Tenn-20837  
(also Tenn-21022)
- 16. Pileus isabelline, or pinkish cinnamon ..... 17
- 16. Pileus otherwise colored ..... 18
- 17. Pileus uniformly isabelline (pinkish cinnamon), margin in age becoming brown; stipe pubescent, pallid .....C. fuscimarginata
- 17. Pileus dull pinkish cinnamon with a fulvous (tawny) tint; stipe glabrous, concolorous with the pileus .....C. glabra
- 18. Stipe minutely pubescent overall; pileus somewhat rugulose .....C. pubescens
- 18. Stipe and pileus not so ..... 19
- 19. Growing on grassy soil .....C. Tenn-20441
- 19. Growing on dung ..... 20

- 20. Pileus "tawny olive"; stipe long (5-10 cm); lamellae medium broad; on horse dung .....C. Tenn-17187
- 20. Pileus ochraceous tawny to rusty brown, fading to pinkish buff; stipe 2.5-4.5 cm long; lamellae narrow .....C. Sm-34620
- 21. Pileus margin sulcate, striate, or striatulate ..... 22
- 21. Pileus margin even, when wet or dry ..... 32
- 22. Pileus margin sulcate, surface sorded brown; lamellae pale reddish becoming safron-yellow; stipe white, shining .....C. crocospora
- 22. Pileus striate; other characters not in above combination ..... 23
- 23. Stipe 1 mm or less in thickness ..... 24
- 23. Stipe 1 mm or more in thickness ..... 26
- 24. Lamellae distant; pileus pale farruginous, fading to buff-colored .....C. capillaripes
- 24. Lamellae close; pileus not as above ..... 25
- 25. Pileus smooth, "light buff", disc "antimony yellow" .....C. Tenn-12445
- 25. Pileus rugulose, tawny orange, disc tawny .....C. Tenn-29016
- 26. Stipe at first white, becoming more or less colored at maturity ..... 27
- 26. Stipe white and remaining so ..... 30
- 27. Stipe becoming yellowish ..... 28
- 27. Stipe becoming pinkish buff or brownish ..... 29
- 28. Lamellae crisped and intervenose; stipe slightly bulbous; caulocystidia fusoid-ventricose, some with coiled necks .....C. crispa
- 28. Lamellae and stipe not so; caulocystidia lecythiform .....C. tenera var. tenera
- 29. Pileus "Mikado brown" when wet, "light buff" when dry; lamellae broad; stipe white, becoming brown; growing on dung .....C. Tenn-13380



- 29. Pileus "ochraceous tawny" when wet, "clay color" when dry; lamellae narrow; stipe "pinkish buff", becoming concolorous with pileus; on horse dung .....C. Sm-13462
- 30. Stipe very pubescent .....C. crispella
- 30. Stipe glabrous or not strikingly pubescent ..... 31
- 31. Pileus dry, buff color with a grayish tint, disc darker, surface atomate .....C. Tenn-39217
- 31. Pileus isabelline (near pinkish cinnamon); stipe base with a more or less persistent volva limb .....C. locellina
- 32. Pileus "russet", with fine white hairs (tufts of caulocystidia); on horse dung .....C. Tenn-13378
- 32. Pileus yellowish, buff, or pinkish cinnamon ..... 33
- 33. Lamellae distant and broad; stipe white; pileus pinkish cinnamon (isabelline); spores 12-15 (sometimes 18  $\mu$ ) long .....C. magnispora
- 33. Lamellae close or crowded (rarely subdistant); stipe, pileus, and spores not in the above combination ..... 34
- 34. Stipe 1 mm or less in diameter ..... 35
- 34. Stipe 1-3 mm, or more, in diameter ..... 36
- 35. Pileus 3-4 mm broad, dry, ochraceous with a delicate, filamentous "bloom" .....C. tenerella
- 35. Pileus 10-27 mm broad, viscid when wet (from gelatinous hypodermium) .....C. Tenn-3660
- 36. Stipe stramineous, equal; caulocystidia lecythiform .....C. mexicana
- 36. Stipe not so colored; caulocystidia not lecythiform ..... 37
- 37. Stipe white or creamy, the base brownish-lilac; odor faintly disagreeable .....C. rickenii
- 37. Stipe pallid brownish; odor mild, on horse dung .....C. Tenn-14156a

Subject. MesosporaeKey to Species

1. Spores (5.5)6-8  $\mu$  broad ..... 2
1. Spores 4.5-6  $\mu$  broad ..... 4
  2. Pileus yellowish, atomate when dry; margin plicate-striate; stipe 2-4 mm thick ..... C. flava
  2. Pileus and stipe not as above ..... 3
3. Pileus "snuff brown" to "Saccardo's umber"; lamellae brownish ..... C. antipoda var. humicola
3. Pileus dull flesh-colored; lamellae yellowish .... C. fragilis
  4. Pileus margin striatulate, at least when wet ..... 5
  4. Pileus margin even, wet or dry ..... 11
5. Pileus hygrophanous, "antimony yellow" when wet, "tilleul buff" when dry; stipe whitish ..... C. Sm-14257
5. Pileus some shade of brown; stipe white or colored ..... 6
  6. Stipe 1 mm or less in thickness ..... 7
  6. Stipe 1 mm or more (1-3 mm) thick ..... 8
7. Pileus rufous-chestnut, frosted with colorless hyphae; lamellae cream to ocher, becoming concolorous with the pileus; stipe reddish brown ..... C. Tenn-27960
7. Pileus brownish, glabrous; lamellae brown; stipe pale brownish to reddish brown ..... C. Tenn-16338  
(and Tenn-20398)
  8. Pileus brownish, fading to "warm buff" or yellow; stipe flanged-bulbous and longitudinally ridged ..... C. "Burke" (Naucoria)
  8. Pileus brownish, fading but not to yellow; stipe with or without a bulb ..... 9
9. Stipe dingy whitish, equal; pileus drying to pinkish buff ..... C. Tenn-10452

- 9. Stipe pallid honey-colored ..... 10
- 10. Stipe bulbous; pileus drying to pinkish buff .....C. Sm-14109
- 10. Stipe equal; pileus drying to ochraceous-tawny .....C. Sm-14119
- 11. Pileus cinnamon brown, velvety and micaceous; gills broad .....C. Tenn-26219
- 11. Pileus and lamellae not as above ..... 12
- 12. Pileus ochraceous buff; lamellae rather broad; caulocystidia lecythiform .....C. Tenn-29010
- 12. Pileus ochraceous tawny, fading to pale grayish-avellaneous; caulocystidia clavate .....C. Sm-46588

Subsect. MicrosporaeKey to Species

1. Pileus margin even, when either wet or dry ..... 2
1. Pileus margin striate or sulcate, at least when wet ..... 5
  2. Pileus uniformly isabelline; stipe rather long-radicate; spores angular (more or less rhomboid)..C. antipoda f. floridana
  2. Pileus, stipe, and spores not as above ..... 3
3. Stipe wooly-fibrillose, honey color to yellow ocher, darkening from the base up .....C. fibrillosipes  
(also Sm-25948)
3. Stipe white, not darkening ..... 4
  4. Pileus glabrous, rugosely-reticulate, cinnamon when wet, buff or yellowish when dry; stipe 2-4 mm thick .....C. reticulata
  4. Pileus densely brownish fibrillose-reticulate; stipe 8 mm thick .....C. Tenn-25525
5. Stipe 1 mm or less in thickness ..... 6
5. Stipe 1-10 mm thick ..... 9
  6. Lamellae broad to very broad ..... 7
  6. Lamellae narrow ..... 8
7. Stipe ochraceous tawny, pruinose above; pileus dull ochraceous tawny cinnamon buff with a grayish tone .....C. Sm-46637
7. Stipe pallid; pileus fulvous brown .....C. Tenn-14440
8. Spores 4-4.5  $\mu$  broad; pileus brownish cinnamon, paler on drying .....C. Teneroides
8. Spores 4.5-6  $\mu$  broad; pileus tawny to grayish tawny .....C. Tenn-29015
9. Stipe pure white, rarely yellowish or brownish in age; pileus strongly sulcate .....C. intrusa
9. Stipe colored; pileus if sulcate, not strongly so ..... 10

- 10. Basidiocarps lignicolous ..... 11
- 10. Basidiocarps on soil or debris ..... 12
- 11. Pileus tawny when wet, "cinnamon buff" when dry; stipe watery honey-colored, clavate-bulbous; germ-pore not evident .....C. Sm-31236
- 11. Pileus "bay" when wet, tawny when dry; stipe whitish when young, cinnamon in age; germ-pore present, but not truncate .....C. Sm-33-731
- 12. Pileus "snuff brown" disc darker, margin striate when moist; stipe pale ocher then fulvous, bulbillate .....C. pilosella
- 12. Pileus when faded-evenly "pale pinkish buff", faintly sulcate; stipe pale gray .....C. Sm-44

Section Verrucispora

Key to Species

1. Spores 6-7(8) x 4.3-5  $\mu$ ; pileus light ochraceous yellow;  
on dead wood (Cuba) .....C. martiana
  
1. Spores 4.5-5 x 3.5  $\mu$ ; pileus tawny; on soil (Idaho) .....  
.....C. idahoensis

Sect. Pholiotella

Key to Species

- 1. Basidiocarps growing on dung ..... 2
- 1. Basidiocarps growing on moss, soil, or humus ..... 3
  - 2. Pileus "buckthorn brown" when wet, fading to light ochraceous buff or "pinkish buff" when dry; stipe glabrous, dark brown; spores 5-6  $\mu$  broad, distinctly truncate; cheilocystidia apices obtuse to capitate ..... C. stercoraria
  - 2. Pileus russet when wet, fading to ochraceous tawny; with buff fibrils, buff, base yellow then darkening; spores 4-4.5  $\mu$  broad, with a pore, not truncate; cheilocystidia apices acute ..... C. fimicola
  - 3. Pileus yellowish red to ferruginous, fading to pale yellow or buff and becoming rugose ..... C. rugosa
- 3. Pileus and annulus not as above ..... 4
  - 4. Pileus ochraceous tawny when wet, pinkish buff when dry; annulus with a thick cottony margin; stipe often flexuous ..... C. flexipes
  - 4. Pileus ochraceous when wet, tawny to cinnamon rufous when dry; annulus not cottony; stipe not flexuous ..... C. filaris

Sect. Naucorioides

Key to Species

- 1. Pileus 6-10 cm broad, pale yellowish tawny; stipe white; with lageniform pleurocystidia, 33-50 x 8-11  $\mu$ ...C. ludoviciana
- 1. Pileus much smaller (3.5 cm in diameter or less); pleurocystidia absent ..... 2
  - 2. Spores 6.5-8(9)  $\mu$  long ..... 3
  - 2. Spores 8-11(12.5)  $\mu$  long ..... 5
- 3. Stipe pallid, becoming brown from the base upward ..... C. Sm-40537
- 3. Stipe white, base may be colored ..... 4
  - 4. Stipe sulcate-striate, base often tinged blue or green; pileus striate when wet .....C. sulcatipes
  - 4. Stipe not sulcate, white throughout; pileus plicate-sulcate .....C. plicatella
- 5. Pileus hygrophanous, pinkish buff when dry .....C. Sm-44925
- 5. Pileus hygrophanous, yellowish when dry ..... 6
  - 6. Caulocystidia filamentous; pileus margin striate (wet) .....C. Sm-14173
  - 6. Caulocystidia rentricose, with a neck and more or less capitate; pileus margin even .....C. Sm-34533



Sect. FiliformesKey to Species

1. Stipe white overall, or only the base colored ..... 2
1. Stipe finally colored ..... 5
  2. Pileus margin sulcate-striate; lamellae yellowish ..... C. plicatella
  2. Pileus margin striate to slightly so; lamellae at first white, becoming brownish ..... 3
3. Stipe white, base often tinged blue or green, striate-sulcate ..... C. sulcatipes 4
3. Stipe white overall, and remaining so ..... 4
  4. Pileus watery ochraceous to ochraceous tawny when wet, pale pinkish buff when dry, densely pubescent; odor slightly foetid ..... C. pygmaeo-affinis
  4. Pileus tawny when wet, whitish when dry, glabrous; odor mild ..... C. Sm-44151
5. Spores 4-4.5  $\mu$  broad ..... 6
5. Spores 6.5-8(8.5)  $\mu$  broad ..... 7
  6. Pileus tawny when wet, cinnamon buff when dry; stipe becoming tawny ..... C. filipes
  6. Pileus tawny to brown when wet, pinkish buff when dry; stipe becoming greenish-gray ..... C. Sm-29
7. Pileus tinged gray; stipe becoming lead-color, spores 12-13.5  $\mu$  long ..... C. plumbeitincta
7. Pileus watery cinnamon when wet, whitish-buff when dry; stipe pale greenish-gray to bluish; spores 8-9.5  $\mu$  long ..... C. cyanopes

Atkinson, George F. 1918. The genus *Galerula* in  
North America. Amer. Phil. Soc. Proc. 57:  
357-374. Gives a synopsis of <sup>58</sup> species,  
and describes some 13 new species. and  
lists (1) some species which need further  
study, and (2) excluded <sup>sp.</sup> species.

Conocybe: Literature

van Naveren, E. Kato. 1970. The genus Conocybe  
Subgenus Pholiotina. I. The European  
annulate species. Persoonia 6: 119-165.

[Critical descriptions + illustrations, and  
discussion; Conocybe vs Pholiotina;  
bibliography.] — Key to species, p. 142;

Watling, Roy. 1971. Observations on the  
Bolbitiaceae - IV. Developmental studies on  
Conocybe with particular reference to the  
annulate species. Persoonia 6: 281-289.

[Discussion of characters, and relation to  
structure + development.]

———. 1971. The genus Conocybe subgenus  
Pholiotina II. Some European exannulate  
species and North American annulate species.  
[For Part I (by van Naveren), see Persoonia 6: 119-165]

Finger, Rolf y Antonio P. R. Digilio. 1951. Prodrómo  
de la Flora Agaricina Argentina. Filices 25:  
pp. 286-329 (on Bolbitiaceae). Keys + descriptions

Watling, R. 1976. Observations on the Bolbitiaceae XV  
The taxonomic position of those species of Conocybe  
possessing ornamented bandspores. Rev. de Mycologie  
Fontes 40: 31-34.

Conocephala

*Albacinerea* Sing. Sydowia 4:130. 1950  
*antipoda* (Fasch) Kuhn f. *floridana* (Murr.)  
Sing. 4:131. 1950 [syn. *Galerula*  
*floridana* Murr. Myc. 33: 445, 1941; 1952  
*Galerula canalipes* Murr. Florida 5:147.  
*crispella* (Murr.) Sing. Sydowia 4:132. 1950  
*intrusa* (Pk) Sing. " 133. 1950  
[syn. Cort. i. Pk. For. Bul 23: 416. 1896]

+ several others

CONOCYBE

v. Waveren, E. Kits. 1970. The genus Conocybe subgen. Pholiotina. I. The European annulate species. Persoonia 6:119-165.

Watling, R. 1964. The taxonomic characters of the Bolbitiaceae with particular reference to the genus Conocybe. PhD thesis, Edinburgh.

\_\_\_\_\_. 1971. The genus Conocybe subgenus Pholiotina II. Some European exannulate species and North American annulate species. Persoonia 6:313-339.

Lange, J. 1938. Flora Agar. Danica, IV:29-42. (Conocybe under Galera)

Generand, M. 1974. Notes critiques... etc.  
[Conocybe (Pholiotina) brunnea Rge. - Kühn.]  
Bull. Soc. Myc. Fr. 90: (esp. p. 252).  
Reprint in my files !

Conocybe

From Index to Mycologia

- ambigua 51: f389, 393-5  
angusticeps 4: 248  
antipoda 51: 530  
var. humicola 51: 529, 530  
brunnea 51: 395  
bryorum 4: 247  
cinerascens 51: 396  
cylindracea 51: 395  
echinospora 4: 75, 332  
halophila 51: f 389, 397  
hypnorum 4: 75, 247  
lactea 45: 869  
livata 4: 248  
macrocephala 51: 395  
macrorhina 45: 871  
mesospora 51: 395  
missionum 45: 871  
ochracea 51: 395-397  
plumbeitincta 51: 395-7  
reticulatorugosa 45: 873  
rickeni 51: 395  
rickeniana 51: 395  
semiglobata 4: 248

- sirophylla 51: 395  
siliginea 51: 394-398  
var. ambigua 51: 393-4  
var. ochracea 51: 395  
f. bispora 51: 397  
siliginoides 50: 244  
ophaenorum 4: 248  
spiculoides 51: 395  
tener 3: 100, f. 100  
4: 74, 247  
5: 36  
39: 88  
51: 395  
teneroides 51: 530

[See also Sydowia 4: 130 -  
for several species, by Singer]

Conocybe

Key to Subg. Recognized by K + R:

A) Partial veil none. Pileus margin destitute of floccos. Cuticle sometimes  $\pm$  pubescent from cystidia similar to those on the lamellae (edges?), or by fine filaments. Stipe without annulus, entirely powdery-pruinose or velvety. . . . . Subg. Euconocybe

A) Partial veil  $\pm$  evident, visible at the moment the cap opens, floccos on the cap margin or annulus on the stipe, not typically of powder on the stipe-apex. Pileus cuticle destitute of cystidia, but often showing on the apex  $\pm$  cylindric hyphae, with frequent septa,  $\pm$  as cushions, not erect, which represent remnants of the veil. Always in woods. . . . . Subg. Pholiotina

CONOCYBE ALACHUANA (Murrill) comb. nov.

Galerula alachuana Murr., Torrey Bot. Club Bull. 67:229. 1940.

Murrill's Description

Pileus 5-7 mm broad, conic to convex, avellaneous-isabelline, umbo isabelline, glabrous, dry, margin striate, straight.

Lamellae adnate, fulvous, ventricose, broad, medium distant, lamellulae present, edges white.

Stipe about 6 cm long, 1 mm or less thick, stramineous, glabrous, tapering upward, dry.

Notes by Hesler (Type: F 18326)

Spores 11-13 (14) x 6-8 (9)  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, wall 0.3  $\mu$  thick, smooth, truncate, reddish brown in 2% KOH. Pleurocystidia none; cheilocystidia 12-18 x 6-7  $\mu$ , <sup>leafyiform</sup> ~~flask-shaped~~, with a short, slender neck, and an abrupt, globose capitellum (Conocybe-type), few, small, inconspicuous. Pileus cuticle of irregularly shaped cells. Stipe cuticle of repent, slender hyphae. <sup>¶</sup> Type det. Murrill, F 18326, on soil, under hardwood trees, Planera Hammock, Florida, October 21, 1938.

Murrill says it suggests G. tenera, and altho having similar spores, it differs in several ways.



Conocybe

GALERULA ALACHUANA Murr.

GALERULA ALACHUANA Murr.

Planera Hammock, Florida, Merrill- F 18326,

Type, October 21, 1938

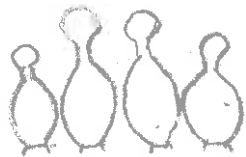
Notes by Hesler (Type)

Spores 11-13 (14) x 6-8 (9)  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, wall smooth, 0.3  $\mu$  thick, apical end truncate, reddish brown in 2% KOH. Pleurocystidia none; cheilocystidia 12-18 x 6-7  $\mu$ , conocybe-type, small and inconspicuous. Gill trama a narrow zone of slender, subparallel hyphae. Pileus cuticle of irregularly-shaped cells.

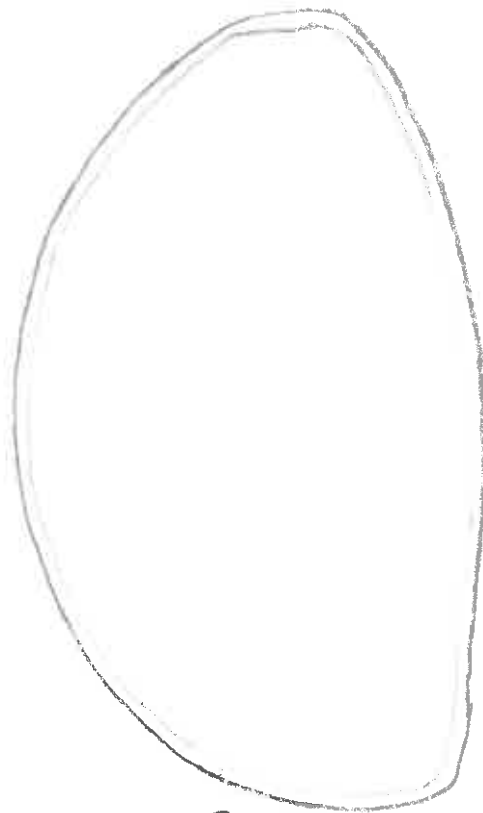
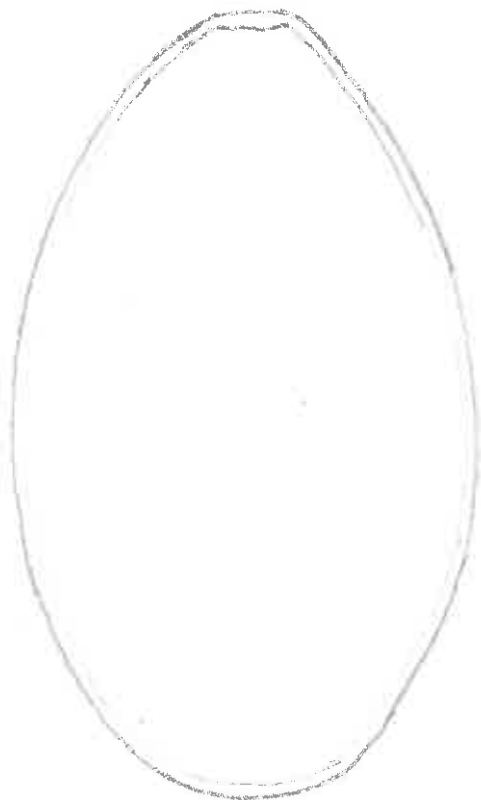
This is Conocybe alachuana (Murr.) comb. nov.

*Galerula alachuana* Murk.

Type (7 18326)



Ch x 1000



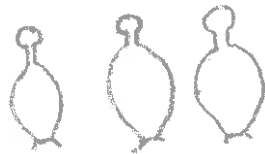
~~Sp~~ Face  
view

Spores x 8000

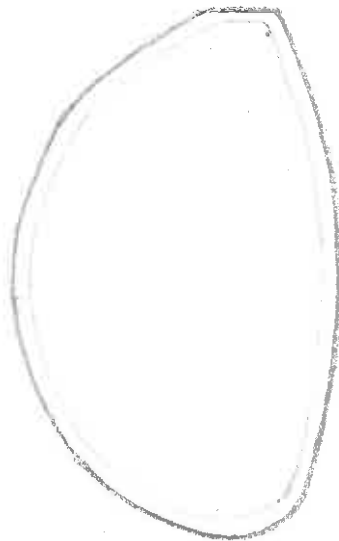
Profile

*Galerula (alachuana Murr?)*

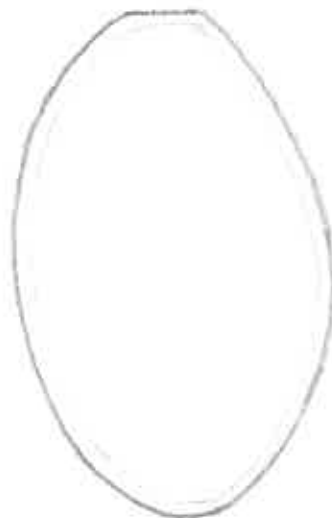
7 18318 (G-type)



Ch x 1000



Profile



Face

Spores x 8000

GALERA ALACHUANA Murr. (?)

Co-Type (F 18318)

Sugarfoot Hammock, near Gainesville, Florida, det.  
Murrill, labelled Co-Type, October 18, 1938.

Notes by Hesler

Spores 8-9 (10) x 5-5.5 (6)  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, smooth, truncate, wall 0.3  $\mu$  thick, red-brown in 2% KOH. Pleurocystidia none; cheilocystidia 14-18 x 6-7  $\mu$ , conocybe-type. Pileus cuticle of irregular cells.

Although labelled Co-Type, this has much smaller spores than the Type (F 18326). This one he called "Galera"; apparently Murrill used these two names (~~Galera~~ <sup>Galera</sup> and Galerula) interchangeably.

CONOCYBE (GALERULA) ALACHUANA (Murr.)

F 17927, ex-Murrill Herb., no collection data.

Notes by Hesler

Spores (10) 11-14 (15) x <sup>6-8</sup>~~6-8~~ (9)  $\mu$ . Otherwise similar to Type.

CONOCYBE ANTIPODA f. FLORIDANA (Murr.) Singer

Sydowia 4: 131. 1950

Galerula floridana Murr., Mycologia 33:445. 1941.

Galerula canalipes Murr., Lloydia 5:147. 1932.

Cynocbe ambigua (Kühner) Sing.

Pilaa 22: 485. 1949 (1951)

[See descr. in Mycolgia 51: 393-395. 1959]

Afghanistan species. (?)

CONOCYBE FLORIDANA (Murr.) comb. nov. [or a form of *C. antipus*]  
Galerula floridana Murr., Mycologia 33:445. 1941.

Murrill's Description

Pileus 2-5 cm broad, conic to subexpanded, uniformly isabelline, glabrous, dry, margin even, becoming upturned. Context thin, pallid; odorless.

Lamellae adnate or adnexed, soon becoming pale fubrous, narrow, close, unequal.

Stipe 7-10 cm long, 1-3 mm thick, pallid, equal, long-radicate, glabrous.

Notes by Hesler - *Type*

Spores 7-9 x 5-6  $\mu$ , not inequilateral in profile, ovoid, often 2-6-sided with blunt angles, (rhomboid or subangular) smooth, truncate, at times the apex with a slight "nose", red-brown in 2% KOH. Pleurocystidia none; cheilocystidia 16-20 x 4-7  $\mu$ , flask-shaped, with a short neck and a globose capitellum, sparse, inconspicuous. Gill trama a narrow zone of slightly interwoven, slender hyphae. Pileus cuticle of dry, irregularly shaped cells. Stipe cuticle of dry, repent hyphae. Caulocystidia not found (only a few hyphal tufts).

Type collected by Murrill (F 16435), in sandy soil, under trees, Sugarfoot Hammock, near Gainesville, Florida, June 5, 1938.

*Caulocystidia* are reported by Singer (1950),  
10.5-25 x 3.5-8  $\mu$ .



Singer (Agar., p. 523, 1962) lists Galerula floridana Murr. as a synonym of Conocybe antipoda (Fasch) Kühner. (See: K & R, p. 347, and fig. 452 showing subangular spores. They call it C. antipus (Fr. ex Fasch) Kühner.)

CONOCYBE FLORIDANA (Murr.) comb. nov.

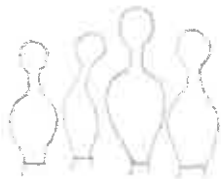
Galerula floridana Murr., Mycologia 33:445. 1941

Packet labelled "Co-type", F 16387, leg.-det. Murrill, in oak woods, Gainesville, Florida, June 3, 1938.

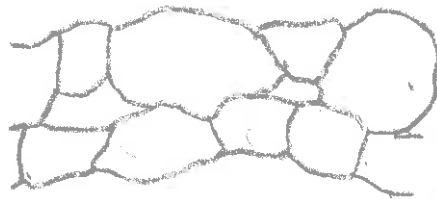
Spores same as in Type.

*Conocybe florida* (Murr.)  
(Galera)

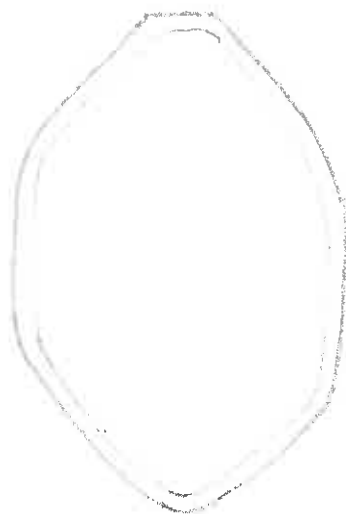
Type 716435



Ch x 1000



Plantlet cuticle  
x 1000



± angular



subovoid  
(scarcely angular)

Spores x 8000

CONOCYBE ANTIPODA (Lasch) Kuhner var. HUMIGOLA Thiers

Mycologia 51:520. 1959

Pileus 9-13 mm broad, conic to subconic, unchanging or becoming convex, evenly dark brown to umber ["snuff brown" to "Saccardo's umber"] to occasionally brown ["saya brown"] during all stages of development. Context thin, about 2 mm, concolorous with surface; odor and taste not distinctive.

Lamellae ascending-adnate to adnexed, becoming free with age, light brown to pale fulvous ["clay color" to "ochraceous tawny"]<sup>X</sup> at maturity, close to subdistant, narrow, thin, ~~entire~~ margin entire, concolorous, lamellulae of 1-2 lengths.

Stipe 4-6.5 cm long, 0.5-1 mm thick (at apex), olivaceous to yellow ["pale olive buff" to "Marguerite yellow"] during all stages of development.

Spores bright rusty brown in KOH, flattened and obscurely in face view, angular ~~in face view~~, ellipsoid in profile, germ pore terminal, 7.8-10.9 x 4.5-5 x 6.2-7.8 $\mu$ ; pl not differentiated, ch 14-17 x 5-8 $\mu$ , 9-pin-shaped, thin-walled, capitate. Gill trama of interwoven hyphae. Pileus cuticle a palisade of vesiculose to occasionally globose cells. Pileo and caulo, and clamps not found.

On plant debris, in open oak woods, Wellborn, Brazos county, Texas, May 8, 1953, <sup>leg.</sup> ~~leg.~~ Thiers-1883 (type).

which smaller  
Near C. teneroides ~~has~~ has ~~larger~~ spores, soft fragile flesh, tough~~er~~ stipe and a cinnamon brown rather an umber pileus.

Conocybe

NAUCORIA APPENDICULATA Murr.

See Singer's note  
(next page)  
(= intermedia ?)

Bull. Torrey Bot. Club 67:229. 1940

Conocybe (Pholiotina) intermedia (Smith) Kühner,  
Type

Pileus 1.3 cm broad, broadly convex, isabelline, disc subfulvous, dry, glabrous, margin striate, appendiculate. Context membranous.

Lamellae adnexed, rounded behind, fulvous, edges white-fimbriate, medium distant, broad, inserted.

Stipe 4 cm long, 10 mm thick, pallid and fibrillose, above, concolorous with the pileus and squamulose below, equal, smooth. Veil slight, small, not leaving a ring.

Notes by Hesler (on Type)

Spores (5.5)6.5-8 x 4-4.5  $\mu$ , slightly inequilateral to subreniform in profile, ellipsoid in face view, pale yellowish brown in water, paler in Melzer's reagent, slightly darker yellowish brown in 2% KOH, no germ pore, not truncate, smooth. Pleurocystidia none; cheilocystidia 23-28 x 4-5  $\mu$ , flask-shaped and slightly capitate, sparse and inconspicuous. Pileus cuticle of repent, dry hyphae; pileocystidia not found. Stipe cuticle of repent hyphae; caulocystidia none, but aerial hyphae (epicuticular) present. Clamp connections none.

Type collected by West, Arnold, and Murrill on oak log, in Planera Hammock, near Gainesville, Fla., Oct. 21, 1938, Type No. F 18367.

A note in the packet, signed by Singer, states that this is one of the varieties of Pholiotina septentrionalis (Smith) Singer. [Pholiota intermedia Sm. = Pholiotina [Conocybe] intermedia (Sm.) Kühner. See Kühner, Les Genre Galera.]

CONOCYBE BESSEYI (Pk.) Heim

C. R. Acad. Fr. 192:291. 1931

A discussion is found in Sydowia 9:428. 1955, by Singer,

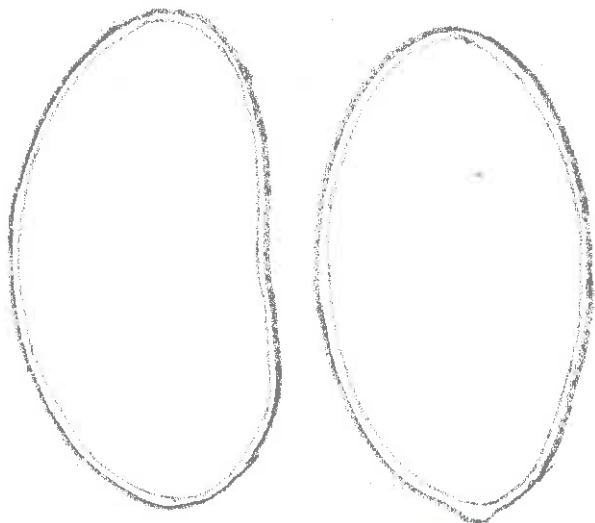
In Agar. p. 795, Singer lists Galeropsis tenaxi (Pk.) Heim

This is a Galeropsis !

*Nannoria appendiculata* Murr.  
Concepts Type - 718367



Ch x 1000



Profile

Face

Spores x 8000



Conocyte brunnea J. Range + Kuhnert ex Hedling

[ Description in Perissonia 6: 318-325 ]  
" " Bull Soc. Myc. Fr. by Joverand  
1974. Reprint in files.

*Conocybe (?)*

*Exalvde*

MYCENA BRUNNEIDISCA Murrill

North Amer. Flora 10:192. 1917

Type

The packet contains only small fragments entirely unsatisfactory for study.

The type has been examined by Watling, who states that the small fragments of the carpophore confirm this to be a member of the Bolbitiaceae. The finding of collapsed cells on the gill-edge which are lecythiform in outline suggest---(illegible) it to be a Conocybe sp. If so, the name should be abandoned, for Conocybe is already a difficult genus without imposing on the---(illegible) who's anatomy can not be studied"--Roy Watling, April 29, 1965.

Type, Murrill-223, on soil, Jamaica, December 17, 1908.

CONOCYBE CAESPITOSA (Murrill) comb. nov.

Galerula caespitosa Murr., Mycologia 33:445. 1941.

Description by Murrill

Pileus strictly caespitose, 1.5 cm broad, hemispheric, not fully expanded, pale rosy-isabelline or avellaneous, dry, pulverulent, glistening like mica, margin long-striate. Context very thin.

Lamellae squarely adnate, pallid to fulvous, edges whitish, narrow, crowded, lamellulae present.

Stipe 2-4 cm long, 1-3 mm thick, white, glabrous, dry, equal.

Notes by Hesler (Type)

Spores 10-14 x 6.5-8  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, smooth, truncate, red-brown in 2% KOH, wall 0.3  $\mu$  thick. Pleurocystidia none; cheilocystidia 17-25 x 6-8  $\mu$ , <sup>lecythiform</sup> ~~fish-shaped~~, with a short neck and an abrupt capitellum, widely scattered, inconspicuous. Pileus cuticle of subglobose to ellipsoid cells, 10-17 x 8-12  $\mu$ . Stipe cuticle of dry, repent, hyphae.

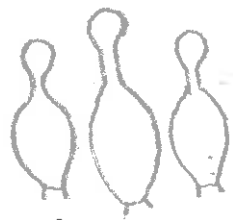
Type, leg. Murrill (F 16437), June 1, 1938, on a chip in sawdust pile, Gainesville, Florida.

Murrill states: It is near G. Kellermani (PK.) Murr., but definitely caespitose and with longer spores.

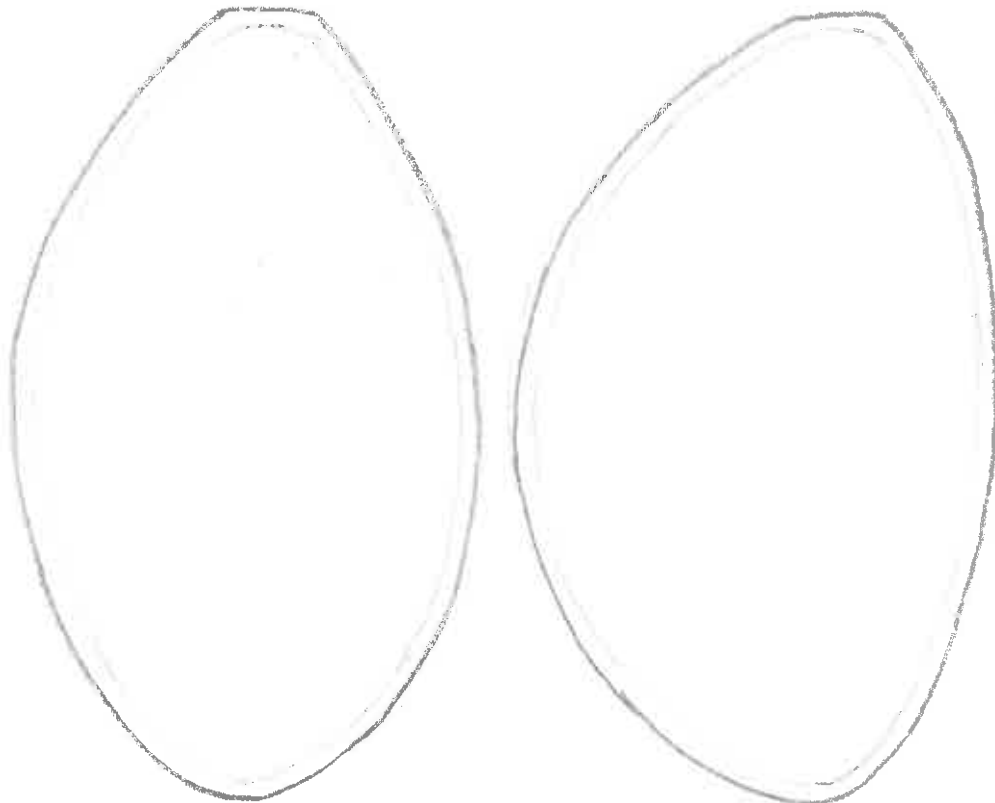
Material from Florida Herb. shows that F 16389 is labelled Type  
(from Gainesville, May 29, 1938), and F 16437 is marked "Co-Type".  
The two collections are in agreement.

*Galerula caespitosa* Murr.

Type: 7 16389 [= Conocyte]



ch x 1000



Face      Profile  
Spores x 8000

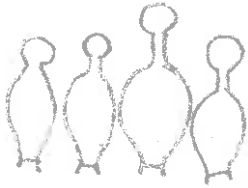
16155            CONOCYBE CAESPITOSA (Murr.) comb. nov.

On sawdust, Gainesville, Fla., leg. Murrill, Nov. 1, 1941

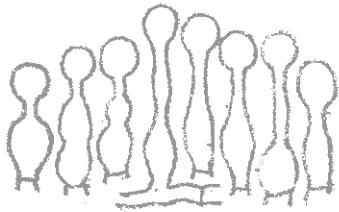
Notes by Hesler

Spores 11-15.7 x 6.5-8  $\mu$ . Caulocystidia in small tufts, subcylindric to subclavate. Otherwise as in the Type.

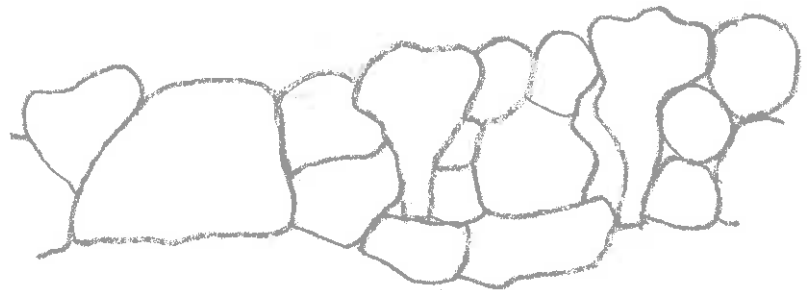
*Coscybe canalipes* (Murr.) comb. nov.  
(= *Gabera canalipes* Murr.) - Type (7 18714)  
[Watling (letter) says it is reported to be a form of *C. antipus*]



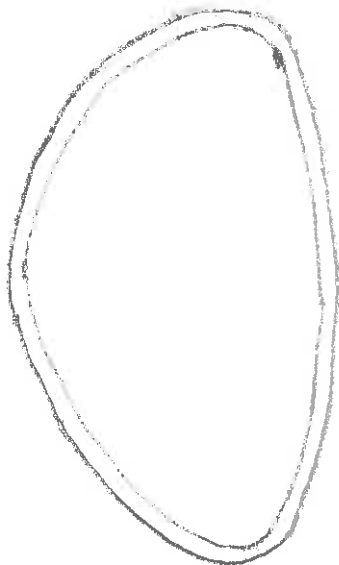
Ch x 1000



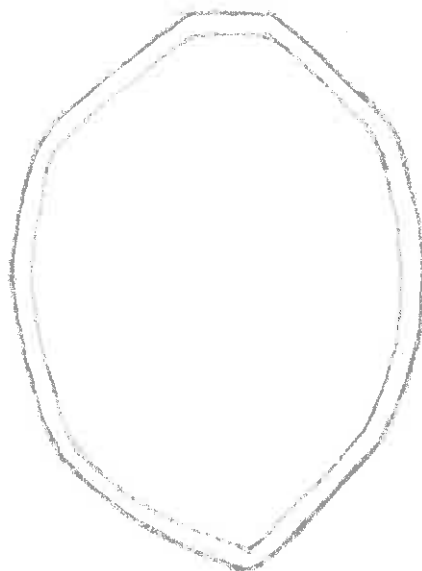
Caulo x 1000



Pileus Cuticle - x 1000



Profile



Face

Spores x 8000

*Galera capillaripes* Pk.  
CONOCYBE CAPILLARIPES (Pk.) Smith (in ed.)

Galera capillaripes Pk., Torrey Bot. Club Bull. 26:66. 1899.

Galerula capillaripes (Pk.) Murr., N. A. Flora 10:163. 1917.

Pileus 4-5 mm broad, subcampanulate, obtuse, hygrophanous, pale ferruginous when moist, buff color when dry, glabrous, margin faintly striatulate when moist.

Lamellae adnate, pale ferruginous, rather broad, distant.

Stipe 2-3 cm long, less than 1mm thick, concolorous with the pileus, glabrous, flexuous.

Notes on Type (by Hesler)

Spores 12-15.5 x 7.5-9(10.5)  $\mu$ , ellipsoid to subovoid, smooth, wall double, truncate, rusty brown in 2% KOH. Pleurocystidia none; cheilocystidia not found (material sparse, and badly eroded or eaten by an insect). (Smith, in his notes, describes cheilocystidia as 15-20 x 7-9(10)  $\mu$ , ventricose-capitate, nine-pin-shaped.) Pileus cuticle an hymeniform layer of vesiculose or clavate cells, 9-16 x 8-12  $\mu$ . Pileocystidia none (Smith describes them as filamentous). Stipe cuticle of dry, repent hyphae. Caulocystidia none (Smith reports them as fusoid-ventricose to clavate, but none capitate, near the apex).

Type on lawns and grassy places, Ohio, May and June, leg. C. G. Lloyd.

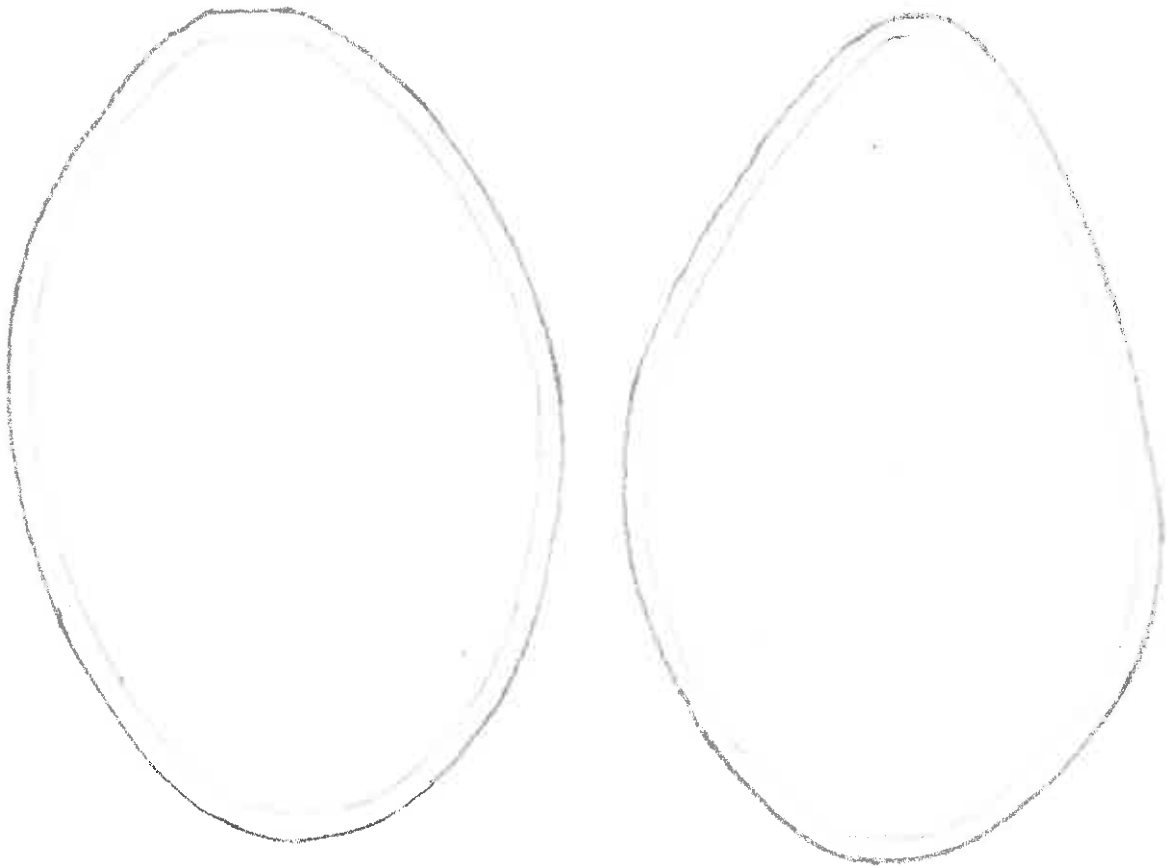
Peck observes that it might easily be taken for a dwarf form of Galera tenera (Schaeff) Fr., from which its capillary flexuous stipe and more distant lamellae serve to distinguish it.



In his notes, Smith gives the spores as 9-11 x 6-7  $\mu$ , and states that the stipe-base becomes vinaceous brown or darker dull brown. He describes it from the University of Michigan campus, Smith - 52. He does not mention the Type.

*Galera capillaripes* PK.

Type



Spores X 8000.

Conocybe:  
Phalotina coprophila (Kühner) ~~Fr.~~ Kühner (1935)

~~Sydowia 4: 141. 1950~~

Galera (Conocybe) Coprophila Kühner, Le Genre Galera,  
p. 125. 1935.

CONOCYBE CRISPELLA (Murr.) Singer

Sydowia 4: 132. 1950

Galerula crispella Murr., Lloydia 5: 148. 1942.

(Singer's Description)

This species is rather common in Florida as well as in Argentina. It is very close to *C. lateritia* sensu *Ricken, Kühner*, but differs in having somewhat smaller spores, darker hygrophanous pileus, transparent striae on the margin and sulcate margin when dry.

Pileus "oak, briar" or "burnt umber" M & P in center, a mixture of "lariat" and "bran" on margin, becoming avellaneous on center and much paler avellaneous buff on margin when drying out (near "maple" M & P), striate on margin over one half to three quarters of the radius, the striation either disappearing in drier material and reappearing in the herbarium, or sulcate in dry fresh material, later often splitting deeply from the margin (one third to one half), distinctly hygrophanous and glittering when dry, 25-53 mm. broad<sup>2</sup>, and about 15 mm. high, obtusely conical to conico-campanulate, eventually somewhat expanding and becoming umbonate-subapplanate. — Lamellae "Pablo" M & P, ascendant, linear, adnexed to subfree, narrow (2-3 mm.), close; spore print intensely ferruginous. — Stipe pure white, strongly pubescent but slightly glabrescent in age, with slightly enlarged basal portion (1.5-5 mm. in diameter), 56-105  $\Rightarrow$  1-3 mm., pseudorhiza none. — Context white, unchanging, odorless, mild.

Spores 10-13.5 (13.7)  $\Rightarrow$  7-8.8 (9.3)  $\mu$ , more rarely reaching up to 16  $\Rightarrow$  9.4  $\mu$ , well colored, with distinct germ pore, smooth; basidia 18.3-29  $\Rightarrow$  11-13.5  $\mu$ , short-clavate, 4-spored with very few 2- to 3-spored ones intermixed in some caps; cheilocystidia 21-29  $\Rightarrow$  7-9.4  $\mu$ , capitate, capitulum 3-4.2  $\mu$ ; dermatocystidia of the stipe clavate, ventricose, fusoid, often undulate, in most specimens some of them elongated into hyphous prolongations ("hairs"), 23-30  $\Rightarrow$  7-9  $\mu$  (without the hair-portion); pileus with an epicutis of piriform-vesiculose bodies forming a continuous hymenium; dermatocystidia none or extremely few; ammonia not forming needle-like crystals with the hymenophore; all hyphae with clamp connections.

Among Gramineae in shaded lawns and in woods, on earth or on scattered dung; fruiting from January until June (Argentina), August (Florida).

<sup>2</sup>) The measurements of the pileus are always given in a straight line from one edge of the margin to the opposite edge of the margin; they are consequently lower than those obtained by Kühner for the same individual.

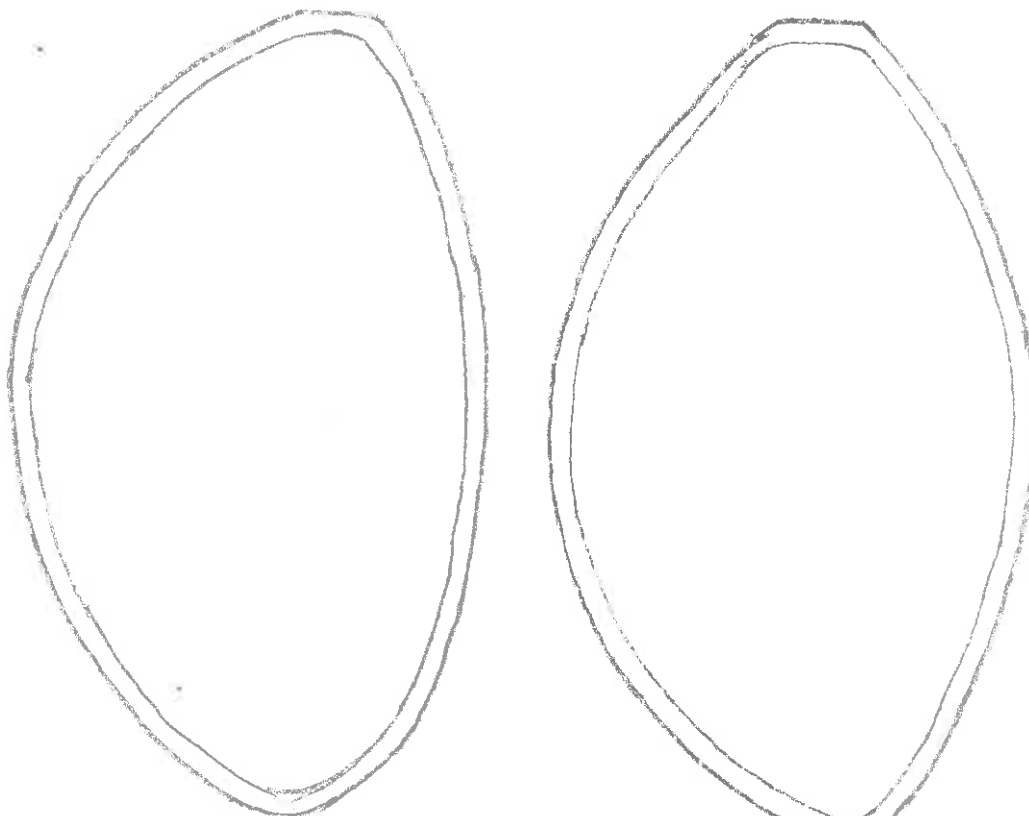
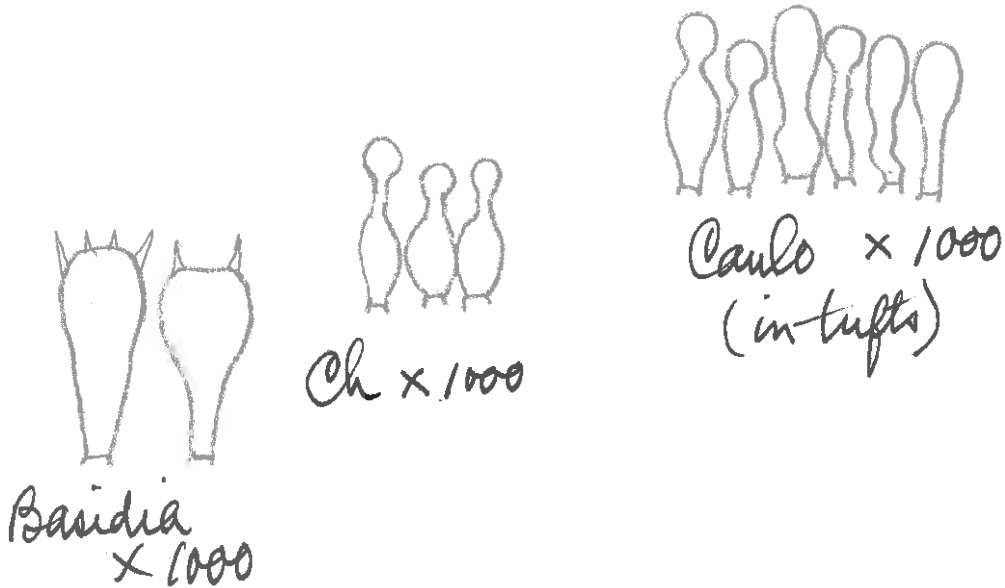
over

Material studied: U. S. A. Florida. Gainesville, W. A. Murrill F 18576 (FLAS, type). — ARGENTINA. Prov. Tucumán. Anta Muerta, R. Singer T 582 (LIL); Tucumán, R. Singer T 79 (LIL).

This species may have been described before Murrill's publication. In fact, Murrill says "Closely related to *G. crispa* Longyear" which is undoubtedly true. However, I have not studied the type of that species. The description would indicate larger spores, non-striate pileus, anastomosing and less close lamellae, and it may well be that this is the true *Agaricus laterilius* Fries. *C. crispella* is certainly different from Kühner's conception of *Conocybe lateritia*, a species now redescribed by Métrod under the name of *Conocybe lactea* (Lange) Métrod. Another species which might possibly be close to or identical with *C. crispella* is *Galera argentina* Speg. However, the type is in very poor condition, and although the spores are of approximately the same size as those of *C. crispella*, one cannot be sure that this is the same as Murrill's species. Consequently, the latter is here accepted.

*Conocybe crispella* (Murr.) Singer  
(= *Galera*)

718576 (Type)



Profile

Face

Spores x 8000

CONOCYBE CROCOSPORA (B. & C.) <sup>Kühner</sup> ~~comb. nov.~~  
~~Genre Galera, p. 137. 1935~~  
| Agaricus crocosporus B. & C., Ann. Mag. Nat. Hist. II.  
12:421. 1853.

Galera crocospora (B. & C.) Sacc., Syll. Fung. 5:866. 1887.

| Galerula crocospora (B. & C.) Murrill, North Amer. Flora  
10:168. 1917.

Murrill's Description

Pileus 2.5 cm broad or more, conic to convex, becoming depressed,  
sordid-brown, viscid, margin sulcate. Context thin.

Lamellae adnate, pale-ferruginous, becoming saffron-yellow, numerous.

Stipe 8-10 cm long, slender, white, silky-shining, fistulose, base  
thickened.

Notes by Hesler - Type

Spores 11-14 x 7-9  $\mu$ , reddish brown in 2% KOH, slightly inequilateral  
in profile, ellipsoid in face view, wall smooth, 0.3  $\mu$  thick, many obscurely  
to rather distinctly truncate. Pleurocystidia none; cheilocystidia 15-23 x  
5-8  $\mu$ , ~~frank shaped~~ <sup>lecythiform</sup>, with a short neck and an abrupt capitellum, inconspicuous  
and few (found only after several sections were made and examined). Pileus  
cuticle of small subpyriform cells, 12-15 x 5-8  $\mu$ , in mature pilei pushed out  
of position; a very thin, gelatinous zone in some sections. Stipe not  
sectioned.

Type, from South Carolina, on a moist, straw mat in a house.

Watling (letter 3/14/75) plans to study the Type soon.

Although the packet from Kew is labelled: "2567. Ag. crocophyllus  
B & C. Car. Inf.", the folder covered the herbarium sheet is labelled:  
"Galera crocospora (B. & C.) Sacc." Murrill (NAF 10:168) spells it  
"crocospora."

[I have written Dr. Derek Reid for his opinion about this inconsistency.]

Singer (Agar. p. 523. 1962), (Berk. and Curt.) Sacc. belongs under the  
genus Galerella Earle.

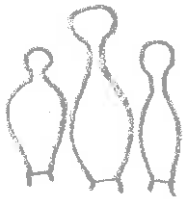
Letter from Derek Reid (dated Aug 6, '74) says that some  
specimens there ~~are~~ bear Berkeley's original determination as  
Agaricus crocophyllus, but it has been crossed out by  
Berkeley & the epithet Ag. crocosporus added. Clearly a  
case where Berkeley changed his mind before publication!



*Conocybe crocospora* (B. + C.) comb. nov.

[Agar. crocosporus B. + C.]

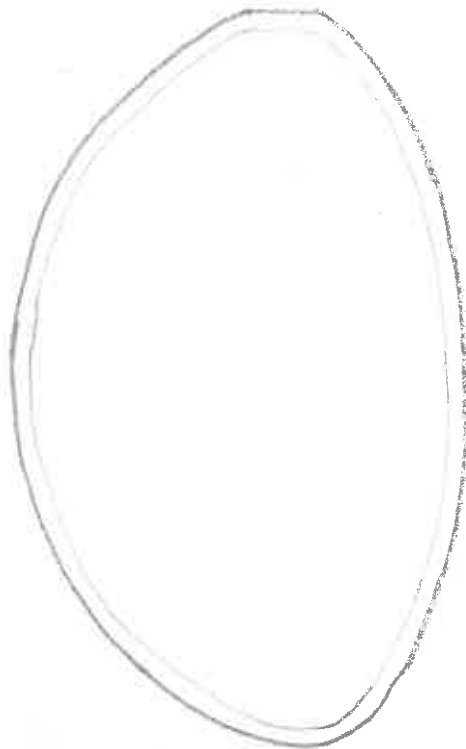
Type



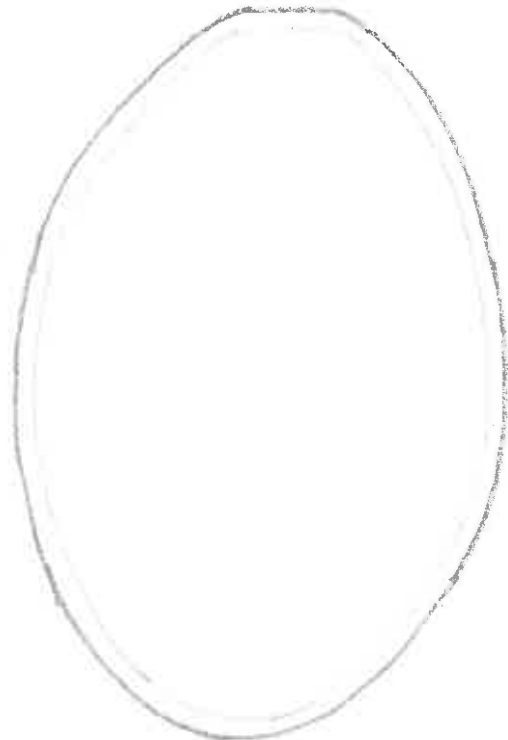
Ch x 1000



Pileus cuticular  
cells x 1000



Profile



Face

Spores x 8000

CONOCYBE CYANOPODA (Atk.) Kühner

Le Genre Galera, p. 128. 1935.

Galerula cyanopoda Atk., Amer. Phil. Soc. Proc. p. 367. 1918.

Pholiotina cyanopoda (Atk.) Sing.

? [Galera cyanopes Kauff., Agar. Mich., p. 500. 1918.]

CONOCYBE ECHINOSPORA Murr. exclude

Mycologia 4:75. 1912

Pileus 5 mm broad, conic to campanulate or convex, umbonate, fulvous-isabelline, umbo isabelline, glabrous, dry, striate.

Lamellae fulvous-isabelline, broad, distant.

Stipe 1-1.5 cm long, 1 mm thick, very pale lateritious, slight; tapering upward, glabrous.

Spores 7-8 x 4-5 $\mu$ , broadly ovoid, pointed at one end, ferruginous, echinulate.

Murrill-474, type, on clay bank, Cinchona, Jamaica, Dec. 25 - Jan. 8, 1908-09.

(I have not seen type.)

Type requested July 25, '74; G. H. Smith replied (letter Aug 12, '74) that he found a packet labelled Galerula (Conocybe) echinospora, containing notes but no specimen. I then suggested he look under Conocybe and Gabera, but no reply. (I assume he searched again, but failed to find it.)

Conocyte fibullosipes Watling

Perisoma 6: 325. 1971.

CONOCYBE FILARIS (Fr.)Kuhner

Le Genre Galera, p. 159. 1935

over

2:2. 1877.

Agaricus togularis var. filaris Fr., Icones Hymen., p. 1867.  
Kummer, Der Fuhrrer in die Pilzk., p. 85. 1871  
Pholiota filaris(Fr.)Kk., / ~~NxxxxStaxMxxxxBxxxxi22xxxxi998.~~

Pholiotina togularis (Fr.)Sing.,

Sage (Sylvia 11) says it is in South Amer  
+ N. Amer; follows higher ranges of mts.  
See *Ornitho (Ornitho) devex.*

Conybe funicola Witting  
Persoonia 6: 335. 1971

CONOCYBE FLAVA (Pk.) Kühner

Le Genre Galera, P. 137. 1935.

Galera flava Pk., New York State Mus. Ann. Rept. 45:19. 1893.

Galerula flava (Pk.) Murr., N. A. Flora 10:166. 1917.

Pileus 12-24 mm broad, ovate or campanulate, obtuse, moist or sub-hygrophanous, yellow, ~~atomate~~ when dry, surface breaking up into squamules, finely plicate-striate to the middle. Context thin.

Lamellae adnate, whitish then yellowish-cinnamon, close, narrow.

Stipe 5-7.5 cm long, 2-4 mm thick, white or slightly tinged with yellow, with white mealy particles, slightly striate at top, equal or slightly tapering upward, hollow.

Notes on Type (by Hesler)

Spores 9-12 x 6-8(8.5)  $\mu$ , ellipsoid, occasionally subovoid, wall thick, smooth, more or less truncate, brownish in 2% KOH. Pleurocystidia and cheilocystidia none.\* Pileus cuticle of more or less cuneate cells. Stipe cuticle of repent, dry hyphae.

The type material is very sparse. I failed to find either squamules on the pileus or cystidia on the gills.

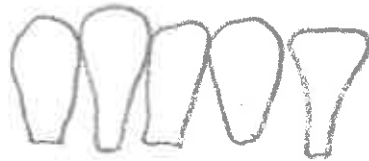
Type, on damp vegetable mold, in woods, Freeville, Tompkins County, New York, July.

\* Watling, in a note on the type packet says it is a true Conocybe and has been so placed by Kühner (1935), but without basionym cited. Watling then says: Conocybe flava (Pk.) Kühner.

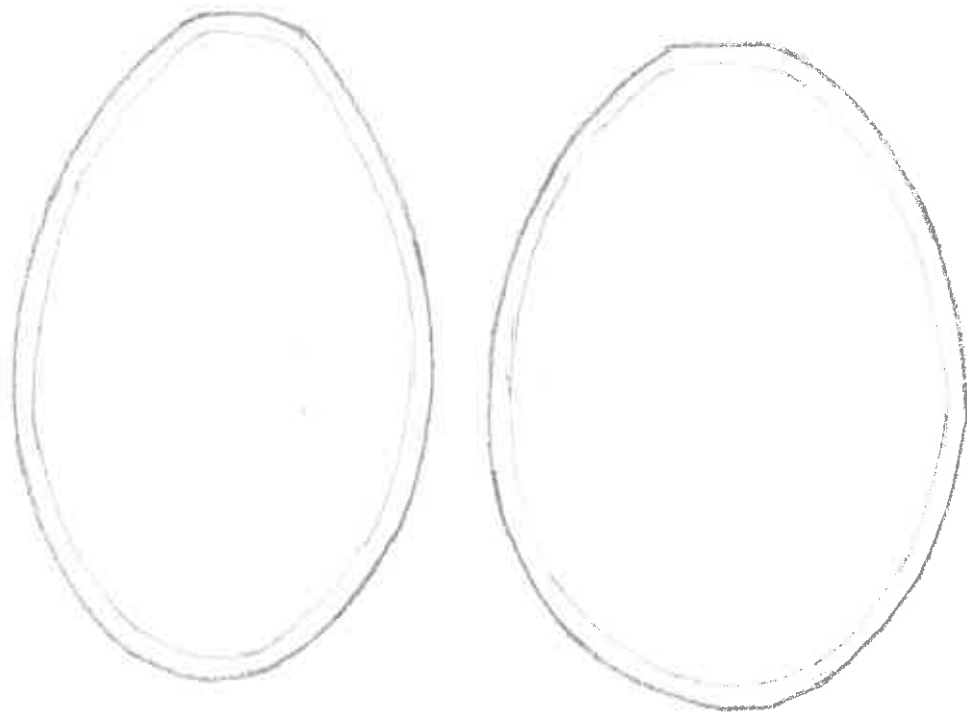


*Conocybe flava* (Pk.) Kühner ✓

Type (of *Galera flava* Pk.)



Pileus cuticle x 1000



Spores x 8000

Conocyme flexipes Watling

Persoonia 6: 336. 1971

CONOCYBE FRAGILIS (Pk.) Kühner

(Watling, in ed.)

Galera fragilis Pk., Torrey Bot. Club Bull. 24:144. 1897.  
(non G. fragilis Vel., Ceske houby, p. 548. 1921.)

Galerula fragilis (Pk.) Murr., N. A. Flora 10:164. 1917.

Conocybe siliginea var. fragilis (Pk.) Kühner, Le Genre Galera, p. 112.  
1935.

Pileus 6-10 mm broad, broadly campanulate, dull flesh color, glabrous.  
Context submembranous, very fragile.

Lamellae adnate, ascending, dark yellow or subochraceous, becoming  
ferruginous, subdistant.

Stipe 2-3 cm long, 1 mm thick, flexuous, hollow.

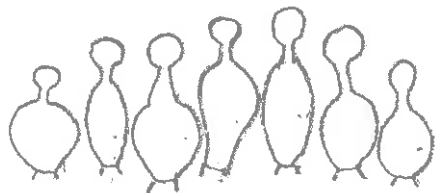
Notes on Type (by Hesler)

Spores 9-11 x 5.5-7<sup>(8)</sup><sub>^</sub> μ, obscurely inequilateral in profile, ellipsoid  
in face view, smooth, slightly thick, often more or less truncate,  
yellowish-brown in 2% KOH. Basidia 15-18 x 7-10 μ, 2-4-spored, more or  
less clavate-cuneate. Pleurocystidia none; cheilocystidia 15-20 x 5-9 μ,  
lecythiform, rather conspicuous although small. Pileus cuticle of about  
two layers of more or less vesiculose to ellipsoid or subglobose cells.  
Stipe cuticle of dry, repent hyphae. Caulocystidia rather conspicuous,  
some similar to cheilocystidia, other lacking a capitellum, some irregularly-  
shaped.

Type, leg. E. Bartholomew, Rooks County, Kansas, on soil, in grass.

Note in box by Watling says it should be known as Conocybe fragilis  
(Pk.) Kühner in Kühner (Mch. 24, 1966).

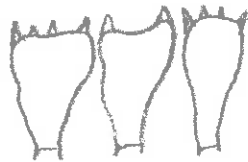
*Conocybe fragilis* (Pk.) Kühner (?)  
[= *Gilera fragilis* Pk.] - Type



Ch x 1000



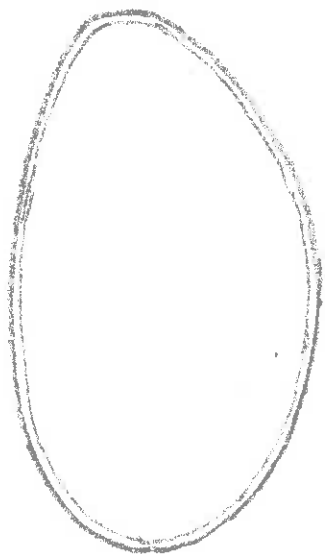
Pileus cuticle  
x 1000



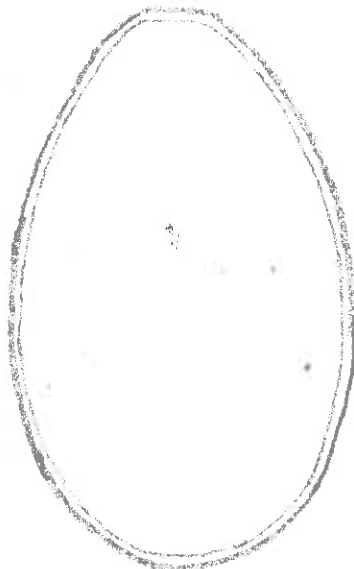
Basidia x 1000



Caules x 1000



Profile



Face

Spores x 8000

CONOCYBE FUSCIMARGINATA (Murr.) Sing.

Mycoflora Australis, p. 210. 1969

Galerula fuscimarginata Murr., Lloydia 5:148. 1942

Murrill's Type Description

Pileus about 1 cm broad, conic, not expanding,  
becoming brownish in age,  
uniformly isabelline, ~~glabrous, dry,~~ glabrous, dry,

even. Context membranous.

~~Lamellae~~

Lamellae adnate, crowded, narrow, inserted.

Stipe 4-5 cm long, <sup>±</sup> 1 mm thick, pallid, striate,

pubescent and enlarged above, base clavate.

Notes by Hesler (on Type)

11-13 x 7-8 $\mu$ ,

Spores ~~8-9 x 5 x 5-6 $\mu$~~ , slightly inequilateral in ~~pk~~

profile, ~~■~~ ellipsoid in face view, smooth, truncate. Pl

none; ch 10-18 x 3-5 $\mu$ , lecythiform. Pileus cuticle

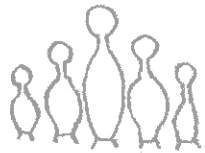
cellular. Stipe cuticle hyphoid, dry. Caulo 14-25 x 2.5-5 $\mu$ ,

clavate to lecythiform, in tufts.

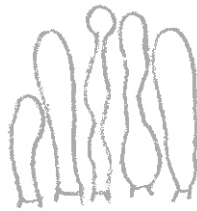
On soil, cultivated field, type (Murrill-F15977),  
Gainesville, Florida, May 12, 1939.

(See: full ~~description~~ description in Lilloa (25:301.)

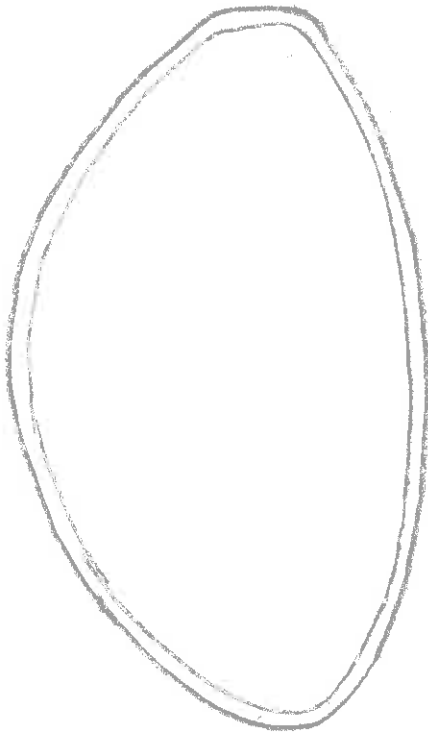
*Conocybe fuscimarginata* (Murr.) ~~Singer~~ <sup>Singer</sup>  
(*Galera*) Type (F 15977)



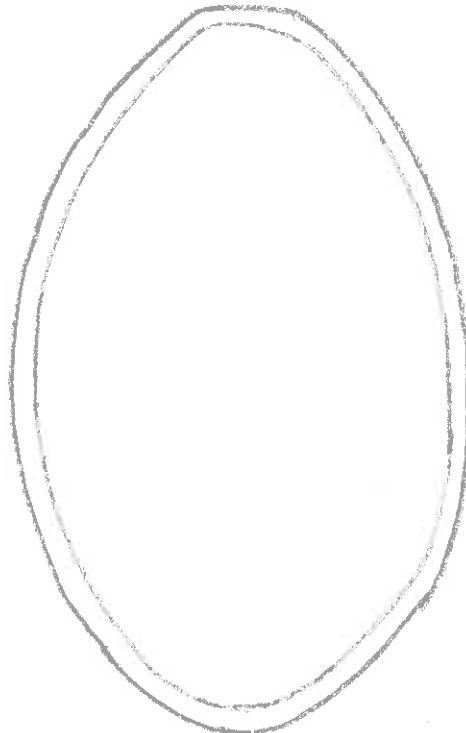
Ch x 1000



Caulo x 1000  
(tufts)



Profile



Face

Fans x 8000

CONOCYBE GLABRA (Murr.) comb. nov.

Galerula glabra Murr., N. A. Flora 10:163. 1917

Type

Pileus reaching 8 mm broad, conic to campanulate, uniformly dull-isabelline (dull pinkish cinnamon) with a fulvous tint, glabrous, not striate.

Lamellae adnate or adnexed, attenuated behind, dull-isabelline to fulvous, edges white-pruinose, not crowded, somewhat ventricose.

Stipe 2.5 cm long, 0.5 mm thick, concolorous, apex paler and pruinose, elsewhere glabrous, equal.

Notes by Hesler (Type)

Spores 12-14 x 6-8  $\mu$ , inequilateral in profile, ellipsoid in face view, smooth, truncate, wall 0.25  $\mu$  thick, reddish brown in 2% KOH. Pleurocystidia none; cheilocystidia 18-22 x 5-6  $\mu$ , lecythiform. Pileus cuticle of pyriform to cuneiform cells. Stipe cuticle of repent hyphae. Caulocystidia 12-20 x 3.5-6  $\mu$ , lecythiform, scattered.

The collection is mixed: the smaller basidiocarp is represented in the description above; the larger specimen has spores 8-10 x 4.5-5  $\mu$ , truncate, brown (not red-brown) and ventricose (not lecythiform) cheilocystidia. The latter is doubtless a Pholiota; the former a Conocybe.

C. glabra - page 2

Type (of Conocybe) on soil, Lake Placid, New York,  
Adirondack, Mts., July 17-29, 1912, leg. Murrill No. 99.

Should this taxon be Excluded?



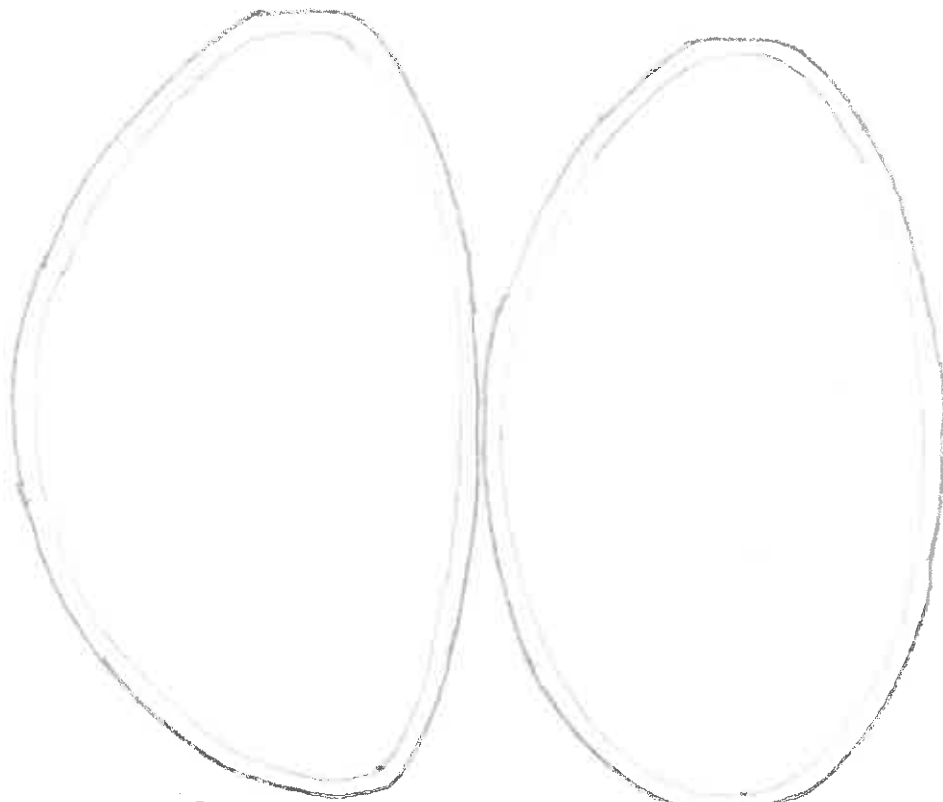
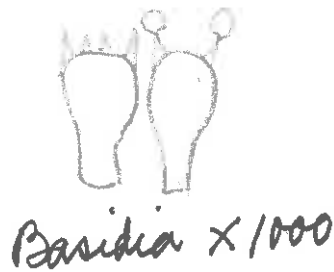
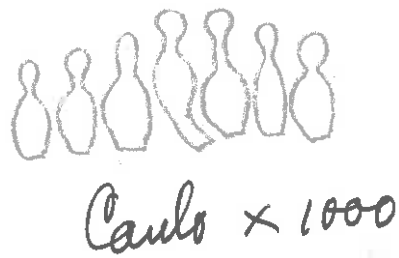
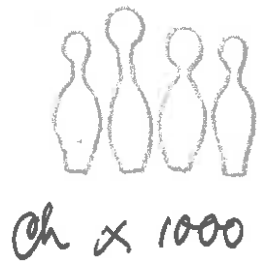
GALERULA GLABRA Murr.

Notes on Type (by Hesler)

Spores 11-14 x 7-8  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, smooth, truncate, wall double, rather thick, yellowish brown in 2% KOH. Pleurocystidia none; cheilocystidia 18-22 x 5-6  $\mu$ , lecythiform (Conocybe-like). Basidia 18-20 x 8.5-10  $\mu$ , 4-spored, clavate. Pileus cuticle cellular. Stipe cuticle of dry, repent hyphae. Caulocystidia 12-18 x 4-6  $\mu$ , lecythiform (similar to cheilocystidia).

A Conocybe.

*Conocybe glabra* (Murr.) comb. nov.  
[*Gabruia glabra* Murr.] - Type No. 99



Profile

Face

Spores x 8000

Conocybe halophila Sing.

*Mycologia* 51:397. 1959

from Afghanistan.

Cynocybe intermedia (A.A. Smith) Kühner  
[descri. in Persoonia 6; 315-318]

Conocybe intermedia (Smith) Kühner  
~~PHOLIOTA SEPTENTRIONALIS (Smith) Singer~~

4 Pholiota septentrionalis Smith, Mycologia 27:227. 1935.

1 Pholiota intermedia Smith, Ann. Myc. 32:<sup>479</sup>~~470~~. 1934 (non Singer, 1929).

Conocybe intermedia (Smith) Kühner, Le Genre Galera, p. 143. 1935.

2 Naucoria temulenta f. typique Heim & Romagn., Bull. Soc. Myc. Fr. 50:175. 1934.

3 Conocybe intermedia var. brunnea Lange & Kühner apud Kühner, Le Genre Galera, p. 143. 1935.

5 Galera brunnea (Lge. & Kühn.) Lange, Fl. ~~DKKX~~ Agar. Dan. 4:36. 1939.

Tenn-17661

CONOCYBE INTERMEDIA (Smith) Kühner  
~~ACROCYBE SEPTENTRIONALIS (Smith)~~

On humus (dead leaves), Indian Creek, GSMNP, July 21, 1946

Pileus 16 mm broad, convex, broadly and obsolete umbonate, viscid (nearly slimy), hygrophanous, "snuff brown" (wet), "tawny-olive" and plush-like (dry), margin striatulate (wet), even (dry). Context thin, odor mild.

Lamellae adnate with a decurrent tooth, crowded, "tawny-olive," ventricose, edges beautifully whitish-crenulate.

Stipe 4.5 cm x 2 mm, apex mealy, elsewhere glabrous, pallid above, dark brown below; annulus membranous, almost median, persistent.  $\uparrow$  Spores 7-8 x 4.5-4.8  $\mu$ , ellipsoidal, smooth. Pleurocystidia none; cheilocystidia clustered, clavate, capitate, 20-24 x 7-8  $\mu$ . Cuticle of pileus composed of a palisade of colorless pyriform cells with long brown stalks, 75-83 x 12-18  $\mu$ .

See *Making*: *Persoonia* 6: 315. 1971.

CONOCYBE INTRUSA (Pk.) Singer

Sydowia 4:133. 1950

Cortinarius intrusus Pk., Bull. Torrey Club 23:416. 1896.

~~Singer~~ (Singer's Description)

Pileus all shades between "pinkish buff" and "chamois" (R.), and often whitish near the margin, non-hygrophanous to very slightly subhygrophanous, subviscid when very wet in some caps, usually very strongly sulcate-rugose to wrinkled-scrobiculate in marginal portion, otherwise smooth, convex becoming appanate, very obtuse, 30—80 mm. broad. — Lamellae pale buffish yellowish, in youth almost whitish, very deeply and intensely ferrugineous when mature, more rarely watery ferrugineous, with entire or somewhat serrulate edge which becomes almost sinuate near the margin in some caps, usually narrower than the flesh, moderately broad (about one tenth of the diameter of the pileus), 3—8 mm. broad, rounded-attached, close to crowded; spore print ferrugineous. — Stipe pure white, rarely assuming some yellowish or brownish shades in age, stuffed, soon becoming hollow, pruinose all over, equal with slightly thickened base, nonradicate, 32—60  $\Rightarrow$  6—14 mm. (above); veil none. — Context pure white everywhere except for a narrow watery zone above the lamellae, fleshy in pileus and stipe, moderately fragile, unchanging, inodorous or with very slight odor of apple cider or reminding one of *Boletus edulis*, or of radish; mild to very slightly astringent.

Spores 6.8—7.5  $\Rightarrow$  4—4.2  $\mu$ , very slightly lens-shaped, and in frontal view up to 5.2  $\mu$  broad, and then the thickest portion just above the middle, deep rust color with a fulvous line around the endosporium, smooth with distinct germ pore; basidia 15—20  $\Rightarrow$  7—8  $\mu$ , 4-spored; cheilocystidia capitate, 17—27  $\Rightarrow$  8.8—10.6  $\mu$ ,

capitulum 3.5—4.2  $\mu$ , "neck" 2.7—3.5  $\mu$ ; pileus with a cellular epicutis without dermatocystidia; dermatocystidia of the stipe like those of the gill-edge, but some slenderer (7  $\mu$ ) and some larger (broader and longer), in bunches, hyaline; hyphae with clamp connections.

In greenhouses among cucumbers, or among pinks in beds and in plant pots with sheep manure, also on mushroom beds, usually in large numbers, fruiting all through the year.

Material studied: U. S. A. Massachusetts. Mansfield. E. V. Seeler (FH). — Newtonville, Lizzie C. Allen, with a colored plate (FH). — Boston, R. Macadam (NYS, type). Also indicated from New Jersey.

This has never been collected in the woods and fields, and there is a possibility that it is an introduced species. It is not closely allied to *Cortinarius multiformis* as stated by Peck but belongs in *Conocybe*. It has, however, the habit of a *Cortinarius* and is quite unusual in this regard. The section *Giganteae* Sing. (Sydowia 2: 36. 1948) has been proposed for it. The type species of the section was erroneously spelled *C. detrusa* instead of *intrusa*.

(over)

This species is reported from Argentina by  
Singer (see: Revue de Mycologie 18: 18. 1953.)



CONOCYBE JURUENSIS (Henn.) Singer

See: Mycologia 39:88. 1947

descr. a species with warty spores. (No  
in Mycol. 39:88)

Conocybe lactea (J. Lange) Metrod

Bull. Soc. Mycol. Fr. 61: 46. 1940

Galera lactea Lange, Fl. Agar. Dan. 4: 33. 1939.

Conocybe lateritia (Fr.) Kühner sensu Kühner, Gen. Galera,  
p. 121. 1935.

The last synonym is listed by Hongo, Tottori Mycol.  
Inst. (Japan), no. 11, July 1974. (Was it so listed by  
an earlier author?)

CONOCYBE LACTEA (Lange) Metrod

LECTOTYPE of Bolbitius tener Berk., selected by Watling,  
from Berkeley collection at Kew.

Spores 10-~~12~~<sup>13</sup> x 7-8  $\mu$ , obscurely to not inequilateral  
in profile, ellipsoid in face view, smooth, wall 0.4  $\mu$   
thick, many obscurely to rather distinctly truncate,  
reddish brown in KOH. Pleurocystidia none found; cheilo-  
cystidia <sup>16</sup>~~15~~-18 x 6-7  $\mu$ , lecythiform, sparse, inconspicuous.  
Pileus cuticle cellular (difficult to make out, in  
sections). Stipe not sectioned.

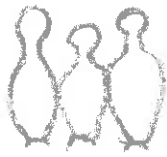
A type-written statement was found in the folder.  
It states that in the larger packet there are two rows of  
specimens, the upper of which is Conocybe tener (Lange)  
Metrod, from type locality. It has 4-spored basidia, and  
lecythiform cheilocystidia, and irregularly subcapitate  
to non-capitate caulocystidia. It appears that the above  
statement was prepared by Watling.

Bolbitius tener Berk. is superseded by Conocybe  
tenera (Fr.) Kühn. It is a Conocybe (not Bolbitius) and  
Berkeley's specific epithet was preoccupied by Fries'  
Agaricus tenera Fr.

Dennis Orlon & Hora (Index) give: Bolbitius tener Berk.  
= Conocybe lactea (J. Lange) Metrod ✓

Conocybe lactea (Fungi) Metrod

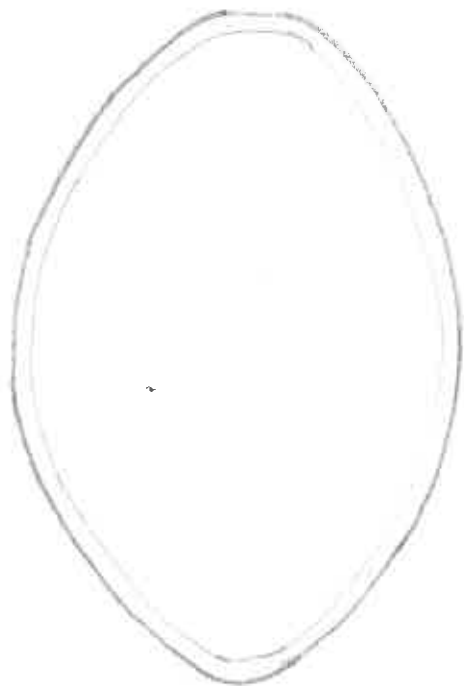
Reotype of Polbitius tener Berk., selected by  
Waltling, from collection of Berkeley at Kew



Ch x 1000



Profile

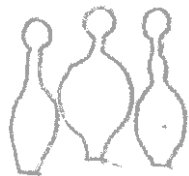


Face

Spores x 8000

abrupt capitellum, widely scattered (absent in many sections). Gill trama narrow, of slender, slightly interwoven hyphae. Pileus cuticle a single layer of dry cells, 12-27 x (5)9-15  $\mu$ , subclavate, subspathulate, subpyriform, often with a basal stalk; pileocystidia, 28-44 x 5-9  $\mu$ , subflask-shaped to ventricose, often (usually) with more or less of a neck. Stipe cuticle of repent hyphae, with (at apex) tufts of caulocystidia, 23-30 x 4-6  $\mu$ , subventricose, subclavate, some with a neck but rarely ~~with~~ with a capitellum.

Conocybe lactea (J. Fange) Métrod  
18196 (Mich.)



ch x 1000

[Spores as in 23907, from Sweden]

23907

CONOCYBE LACTEA (J. Lange) Metrod

On lawn, Leiden, leg.-det. Maas G., Aug. 13, 1959

(Rijksherbarium No. 12905)

(= Bolbitius tener Berk.)

Notes by Maas G.

Pileus 12-20 mm high, 8-14 mm diam., narrowly conical, at first entirely ochraceous yellow, later pallescent near margin, remaining ochraceous yellow in center or even becoming brownish yellow, somewhat wrinkled, ribbed towards margin, minutely pruinose. Context pale yellowish brown.

Lamellae free to adnexed, narrow (- 2 mm), thin, yellow-brown, edges white.

Stipe 55-90 mm long, 2 mm thick, fistulose, straight or somewhat flexuous, equal except for bulbous base (- 4mm), minutely striate, somewhat shining, pruinose all over, flesh white.

Cuticle of pileus made up of globular cells, with pileocystidia scattered among them.

Notes by Hesler

Spores 11-14 x 7.5-8.5  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, wall 0.4  $\mu$  thick, more or less distinctly truncate, brown in 2% KOH. Basidia 25-27 x 11-12  $\mu$ , 2-4-spored. Pleurocystidia none; cheilocystidia 20-26 x 7-11  $\mu$ , lecythiform, with a short neck and an

18196

CONOCYBE LACTEA (Lange) Metrod

leg. Smith and Stuntz, det. Stuntz, Cheboygan Co.,

Mich., July 15, 1947

Notes by Hesler

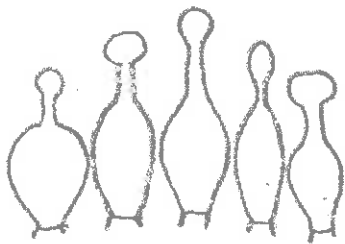
Spores 11-14(15) x 7-9  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, smooth, truncate (at least in several), reddish-brown in KOH. Cheilocystidia 17-20 x 6-9  $\mu$ , lecythiform, inconspicuous. Pileus cuticle cellular, the cells pushed out of palisade-position, with a thin gelatinous zone. Pileocystidia not found.



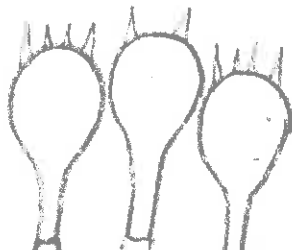
*Conocybe lactea* (Fänge) Metrod

Teru - 23907 (from Feiden, Maas G.)

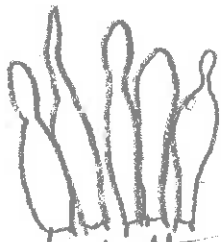
[= *Boletinus tener* Berk.]



Ch x 1000



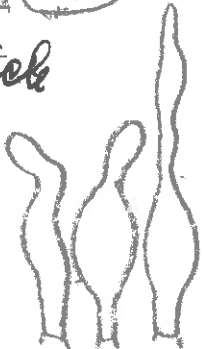
Pandia x 1000



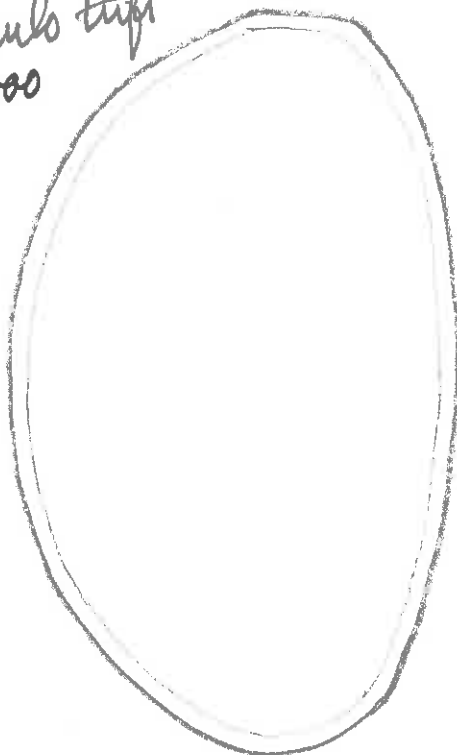
Caulob tuft  
x 1000



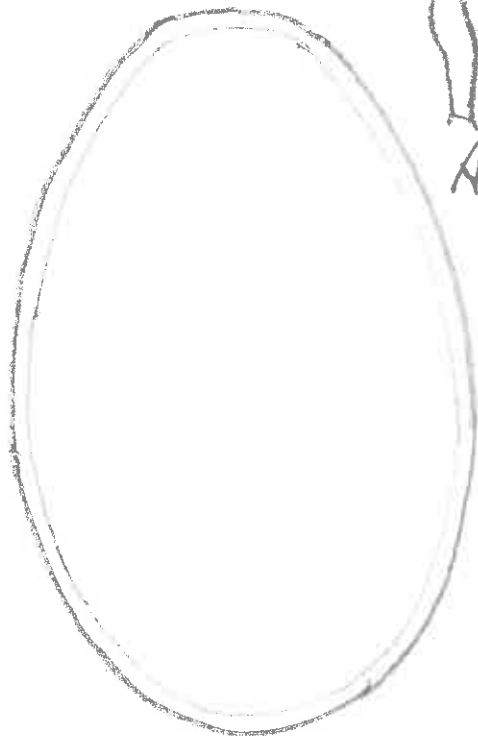
Pileus cuticle  
with pilei - x 1000



Additional pilei  
x 1000



Profile



Face

Spores x 8000

CONOCYBE LOCELLINA (Murr.) comb. nov.

Galerula locellina Murr., Lloydia 9:327. 1946.

Murrill's Description

Pileus about 4 cm broad, conic, isabelline, disc darker, dry, margin at times upturned, closely striate. Context thin, dull-isabelline; odor slightly unpleasant, taste mild.

Lamellae adnate, pallid, close, narrow.

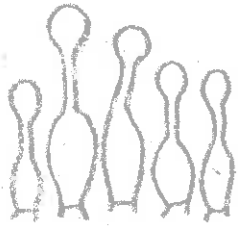
Stipe 7-9 cm long, 5-10 mm thick, white, atomate and pubescent to almost glabrous, tapering upward from a clavate base, hollow. Volva limb entire, small, white, sometimes persisting.

Notes by Hesler (Type)

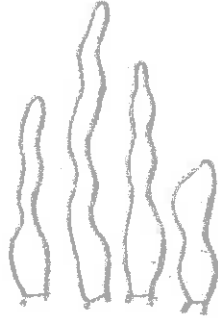
Spores 11-13 x 7-9  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, smooth, truncate, wall 0.4  $\mu$  thick, red-brown in 2% KOH. Pleurocystidia none; cheilocystidia 17-24 x 4-7  $\mu$ , flask-shaped, with a neck longer than in most other taxa, with a capitellum (lecythiform). Gill trama a narrow zone, hyphae slightly interwoven. Pileus cuticle of irregularly shaped cells, with scattered pileocystidia, 18-42 x 4-5  $\mu$ , + hair-like, often with a slightly enlarged base. Stipe cuticle of dry, repent hyphae, with scattered tufts of hyphae (scarcely caulocystidioid).

Type leg. Murrill, F 22477, on sawdust from a stable, Gainesville, Florida, February 19, 1945. Murrill states: "Kept in Galerula because of its close affinities. In the young stages the volva is very distinct but it usually becomes indistinct or disappears with age."

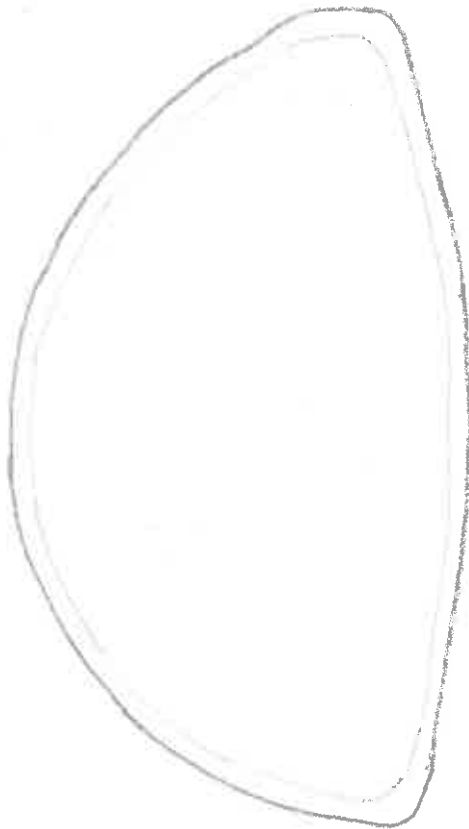
*Conocybe locellina* (Murr.) comb. nov.  
(*Galera*) Type - F 22477.



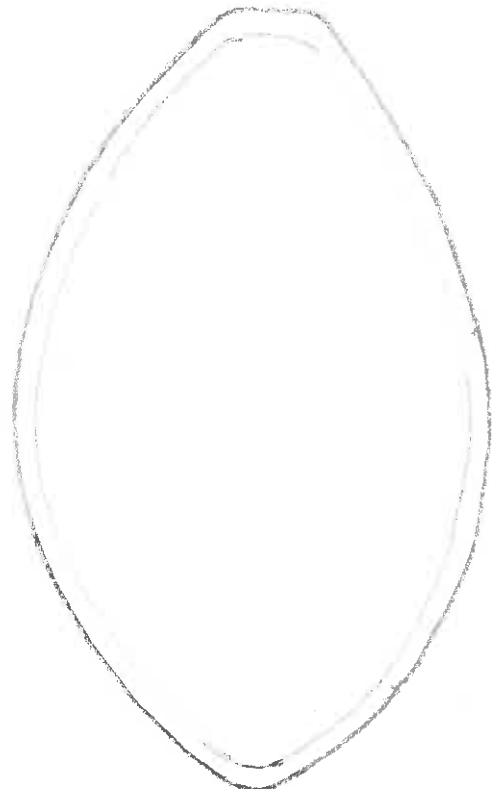
Ch x 1000



Piles x 1000



Profile



Face

Faces x 8000

*Conocybe*

PHOLIOTINA LUDOVICIANA (Murr.) comb. nov.

Gymnopilus ludovicianus Murrill, N. A. Flora 10:204. 1917.

Murrill's Description

Pileus 6-10 cm broad, depressed, pale-yellowish-tan, moist, not viscid, glabrous, margin not striate. Context white, mild.

Lamellae adnate, pale cinnamon, narrow, crowded.

Stipe 10-12 cm long, 10 mm thick, white, glabrous, cylindrical, often curved, firm. (Veil not mentioned).

Notes by Hesler (Type)

Spores (7.5)8-11 x (4.5)5-6  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, wall 0.25  $\mu$  thick, smooth, germ present, at times somewhat truncate, pale yellowish brown in 2% KOH. Basidia 24-30 x 6-7  $\mu$ , 4-spored. Pleurocystidia 33-50 x 8-11  $\mu$ , lageniform (neck often rather long and slender), scattered; cheilocystidia 18-27 x 4-7  $\mu$ , subventricose to subclavate, inconspicuous. Gill trama normal, hyphae subparallel, 4-6  $\mu$  broad. Pileus cuticle an epithelial zone, 2-3 cells thick, cells irregularly shaped to subpyriform or cuneiform. Stipe cuticle of ~~tp~~ repent hyphae. Caulocystidia in small tufts, 36-53 x 6-10  $\mu$ , more or less clavate to subventricose.

Watling (letter, Mar 14-75) plans to transfer it to Conocybe.

Type on living maple, in City Park, New Orleans, La.,  
leg. F. S. Earle, No. 39, Sept. 3, 1908.

Generic Position

It is excluded from Gymnopilus because of its dry, cellular pileus cuticle, and the presence of a germ-pore in the spores. The spores are too pale, and the cystidia (pleurocystidia and cheilocystidia) are wrong for Agrocybe.

Although the spores are pale, and pleurocystidia are present, I am inclined to place it near Conocybe (subgenus Euconocybe of Kühner and Romagnesi), or even better in Pholiotina (sect. Piliferre Kühner) of Singer, because of its normal gill trama, the lack of a capitellum on the gill-cystidia, and its pileocystidia (scattered among the cells of the pileus cuticle).

*Conocybe?*  
GYMNOPIILUS LUDOVICIANUS Murr.

(= Conocybe)

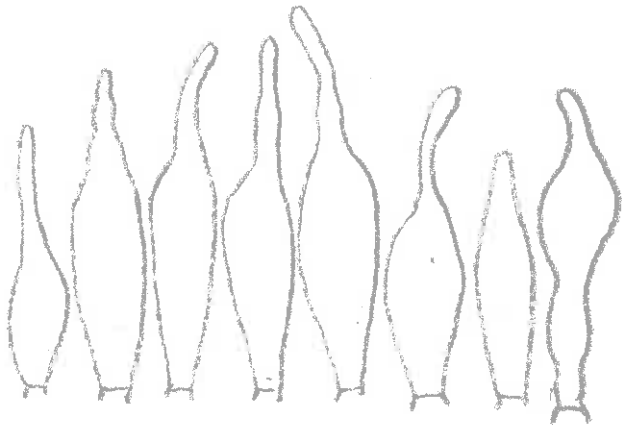
At base of living maple, in City Park, New Orleans,  
La., leg. F. S. Earle, No. 39, Sept. 3, 1908

Type

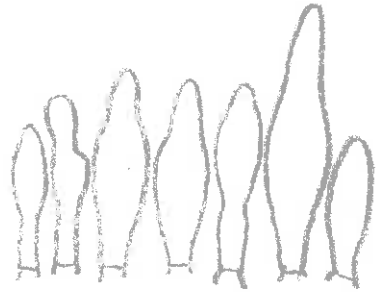
. Spores 8-12 x 4.5-5.5(6) $\mu$ , ellipsoid in face view, only slightly inequilateral in profile, smooth, germ-pore present. Basidia 22-28 x 6-7 $\mu$ , 4-spored. Pleurocystidia 34-42 x 5-10 $\mu$ , more or less ventricose or clavate, apices often slender, tapering; cheilocystidia 20-36 x 6-9 $\mu$ , ventricose. Gill trama subparallel. Pileus trama more or less radial. Cuticle a zone of pseudoparenchyma - cells somewhat isodiametric, but bearing also ventricose or flask-shaped erect cells which project above the level of the cuticle cells - pilocystidia. Clamps not found. Pileus and gill trama yellowish brown in KOH; reddish brown in Melzer's reagent.

Because of the structure of the cuticle I would place this in Conocybe.

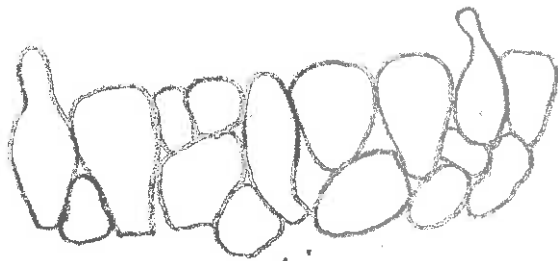
*Pholiotina ludoviciana* (Murr.) comb. nov.  
 [= *Gymnopilus ludovicianus* Murr.] - Type



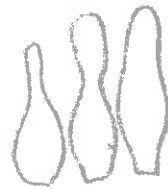
gl x 1000



gh x 1000



Pilei cuticle  
 + pileocystidia - x 1000



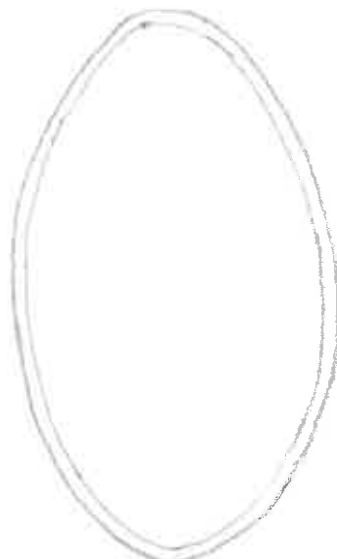
more  
 pilei.



cauls  
 x 1000



Profile

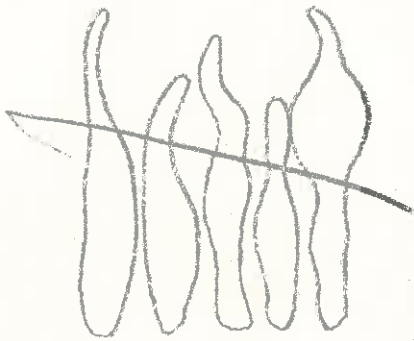


Face

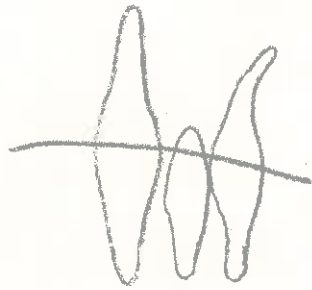
Spores x 8000

*Gymnopilus ludovicianus* Murr.  
(= Conocybe)

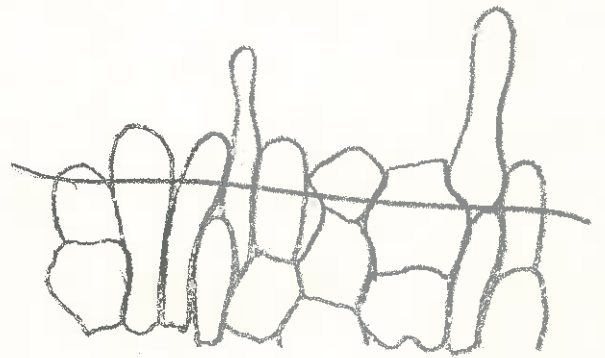
Type



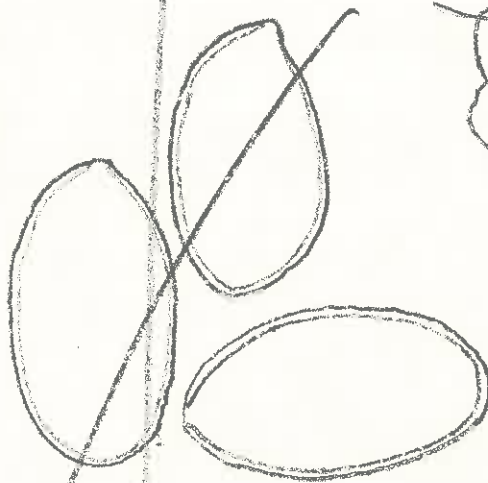
Pl. - x 1000



Ch. - x 1000



Portion of Cuticle  
- x 1000



Spores - x 4000



Conocybe  
~~GYMNOPIIUS~~ LUDOVICIANUS (Murrill) *comb. nov.*

North Amer. Flora 10: 204. 1917

Pileus 6-10 cm broad, firm, depressed, surface glabrous, moist, not viscid, pale-yellowish-tan, margin not striate, upturned. Context white; mild.

Lamellae adnate, crowded, narrow, pale-cinnamon.

Stipe 10-12 cm long, 1 cm thick, cylindric, often curved, firm, white, glabrous, solid.

Spores 8-12 x 4.5-5.5(6) $\mu$ , ellipsoid in face view, only slightly inequilateral in profile, smooth, germ-pore present. Basidia 22-28 x 6-7 $\mu$ , 4-spored. Pleurocystidia 34-42 x 5-10 $\mu$ , more or less ventricose or clavate, apices often slender, tapering; cheilocystidia 20-36 x 6-9 $\mu$ , ventricose. Gill trama subparallel. Pileus trama more or less radial. Cuticle a zone of pseudoparenchyma - cells somewhat isodiametric, but bearing also ventricose or flask-shaped erect cells which project above the level of the cuticle cells - pilocystidia. Clamps not found. Pileus and gill trama yellowish brown in KOH; reddish brown in Melzer's reagent.

Because of the structure of the cuticle I would place this in Conocybe.

Letter from Watling (Mar 14, '75) says he plans to transfer it to Conocybe.

Conocybe macrorhiza<sup>m</sup> (Speg.) Sing.

Galera macrorhiza<sup>m</sup> Speg.

Singer (Sydowia) thinks it close to C. neoantipoda  
(Atk.) Sing. sensu Kühner.

Singer  
CONOCYBE MAGNISPORA (Murr.) ~~comb. nov.~~  
Sydowia 4:135. 1950 530.  
Galerula magnispora Murr., Mycologia 35:531. 1943.

Murrill's Description

Pileus reaching 1.2 cm broad, convex, not expanding, isabelline, glabrous, estriate, margin even. Context thin; odor not characteristic.

Lamellae adnate, soon becoming fulvous, broad, ventricose, medium distant, inserted.

Stipe 3-4.5 cm long, 1.2-2 mm thick, white, shining, glabrous, slightly enlarged below, hollow.

Notes by Hesler (Type)

Spores 12-15 (18) x 8-9.5  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, wall 0.4  $\mu$  thick, smooth, truncate, red-brown in 2% KOH. Pleurocystidia none; cheilocystidia 15-27 x 5-8  $\mu$ , ~~flask-shaped~~ <sup>leathiform</sup>, neck short, slender, with a capitellum, inconspicuous. Pileus cuticle cellular. Stipe cuticle of repent hyphae. Caulocystidia none found.

Type on old cow dung, Gulf Hammock, Levy Company, Florida, Murrill F 19841, March 8, 1942.

Murrill describes the spores as 15-20 x 10-12  $\mu$ . I found most 12-15 x 8-9.5  $\mu$ , rarely up to 18  $\mu$  long, none 20  $\mu$ , and none 10-12  $\mu$  broad.

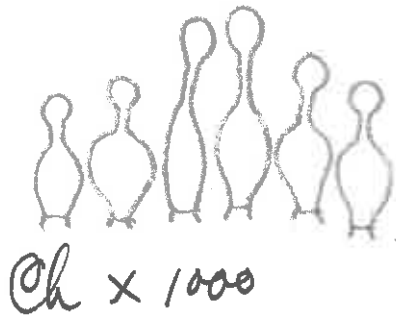
Full descr. by Singer, Sydowia 4:135, found on Florida and Argentina. and Mycolflora Australis p. 211. 1969.

Murrill finally (p. 530) quotes Singer as follows:

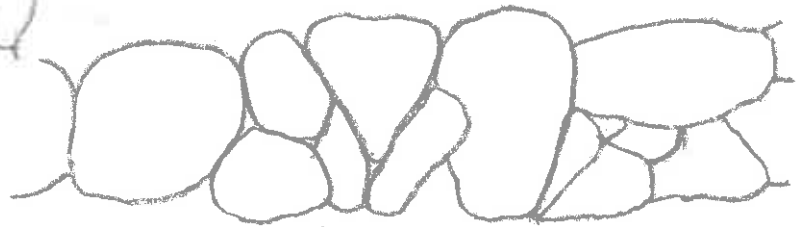
"According to Singer, 'Spores 11.3-17.5 x 8-10  $\mu$ , deep-derrugineous, with a large germ-pore and distinctly truncate, with a double, smooth wall. Basidia short, 21.5-34 x 12.7-14  $\mu$ , the majority 4-spored but among them numerous 2-spored and 3-spored ones. Cheilocystidia fusoid-ventricose, the apex contracted into a thin neck the tip of which is thickened into a globulose appendix 3-3.8  $\mu$  diam., entire length 20.7-27.5  $\mu$ , largest diameter 6.8-7.8  $\mu$ . Cystidia none. The hymenium forms no needle-like crystals in ammonia (15 min.). ~~I found no cheilocystidia as described above by Singer.~~ The epicutis of the pileus consists of an hymeniform layer of piriform cells (33 x 20 $\mu$ ). The epicutis of the stipe consists of numerous versiform but no capitate (fusoid, cylindric, subampallaceous, clavate) dermatocystidia or so-called "hairs", which are hyaline. Hyphae with clamp connections".

(above). I found no cheilocystidia as described by Singer

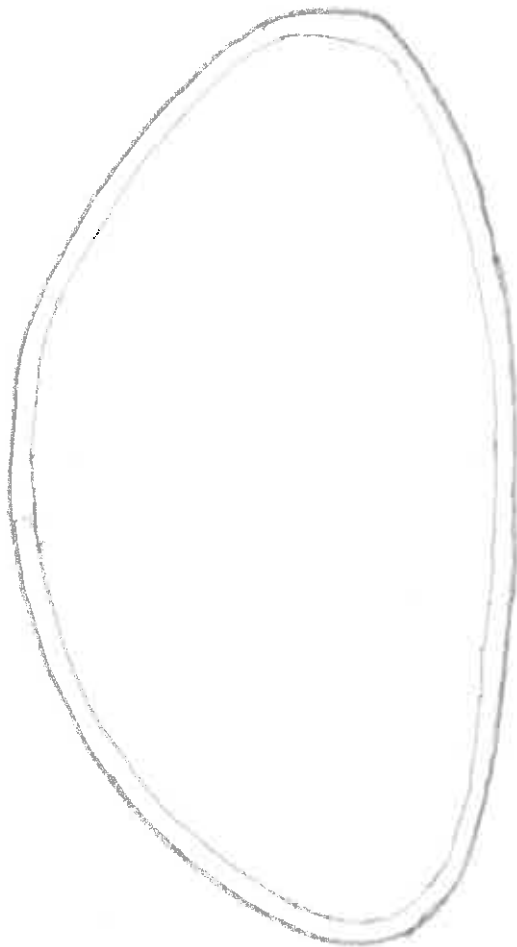
*Cynoclype magnispora* (Murr.) ~~comb. nov.~~ <sup>Singer</sup>  
(*Galerula*) Type: 719841



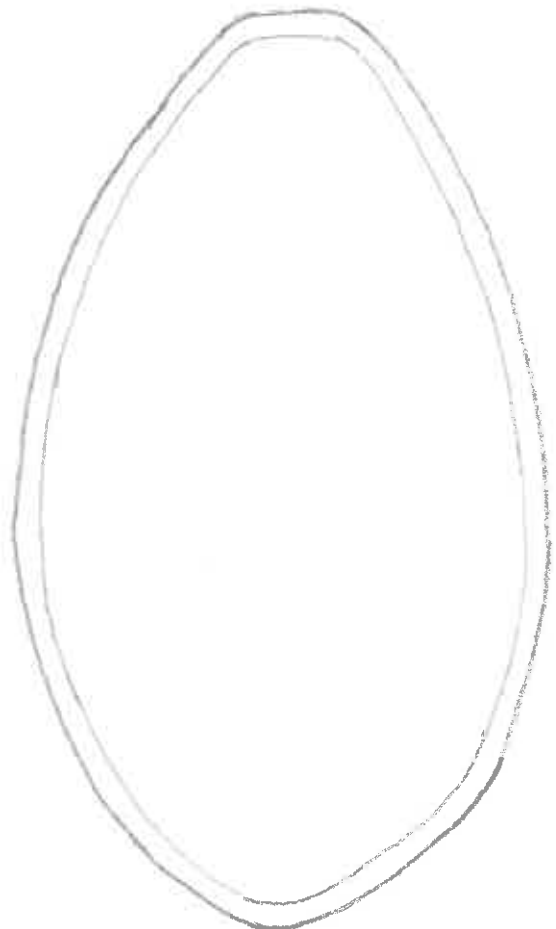
Ch x 1000



Pileus cuticle x 1000



Profile



Face

Spores x 8000

CONOCYBE MARTIANA (Berk. & Curt.) Singer

Sydowia 9:402. 1955

Agaricus martianus Berk. & Curt., *Jour. Fim. Soc.* 10:291. 1868  
Galera martiana (B. & C.) Sacc., *Syll. Fung.* 5:864. 1887.  
Type

Spores (5.5)6-7(8) x (4)4.3-5  $\mu$ , obscurely to not inequilateral in profile, ellipsoid in face view, warty, wall rather thin, deep rusty brown in 2% KOH, germ-pore <sup>small</sup> and not distinct (Singer, Sydowia 9:402. 1955, reports a small germ-pore).

No sections possible, and therefore other features not observed.

Singer (Sydowia 9:402) studied the type, and gives following:

Spores 7.2-8.3 x 4.5-5.3  $\mu$ , warts low, with a small distinct germ-pore, ellipsoid.

Collected in Cuba, on dead wood.

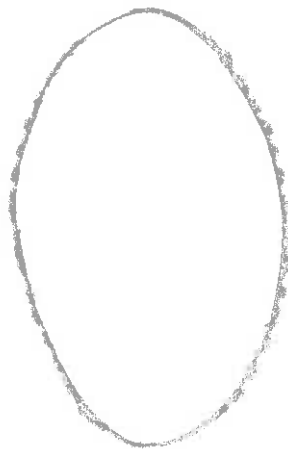
Singer (Sydowia 9:402) studied the Type of Agaricus martianus, + found the spores to be 7.2-8.3 x 4.5-5.3  $\mu$ , the exosporium forming low warts (as in Galerina), but with a germ-pore.

*Conwaybe martiana* (B. + C.) Singer

Type



Profile



Face

Spores x 8000

Galernula martipes (Karst.) Zeller

Mycologia 25: 380. 1933

Galera martipes Karst., Mich. Acad. Sci. Papers 5: 1925.  
~~1924.~~



Conocyte megalospora subsp. nivalis Sing.  
Revue de Mycologie 18:18. 1953

(see my reprint)

From the Argentine.

CONOCYBE MEXICANA (Murr.) comb. nov.

Galerula mexicana Murr., N. A. Flora 10:169. 1917.

Murrill's Description

Pileus 3 cm broad, subhemispheric, not umbonate, moist, uniformly ochroleucous (yellowish buffish), glabrous, not striate.

darker at maturity,  
Lamellae adnexed, isabelline, /subcrowded, broad, edges whitish and slightly wrenulate.

Stipe 11 cm long, 3 mm thick, stramineous, erect, equal, fistulose.

Notes on Type (by Hesler)

Spores 13-<sup>15</sup>~~14~~ x 8-9 $\mu$ , slightly inequilateral in profile, ellipsoid in face view, truncate, wall smooth, double(thick). Pl none; ch 16-22 x 5-9 $\mu$ , ~~isabelline~~ lecythiform. Pileus cuticle of subcuneate to subpyriform cells, 11-15 x 9-12 $\mu$ , in a palisade, dry. Stipe cuticle of repent, dry hyphae. Caulo 18-56 x 4-9 $\mu$ , ~~isabelline~~ similar to ch or ventricose to clavate or cylindrical.

Type Murrill-139, collected on roadside, at Jalapa, Mexico, December 12-20, 1909.

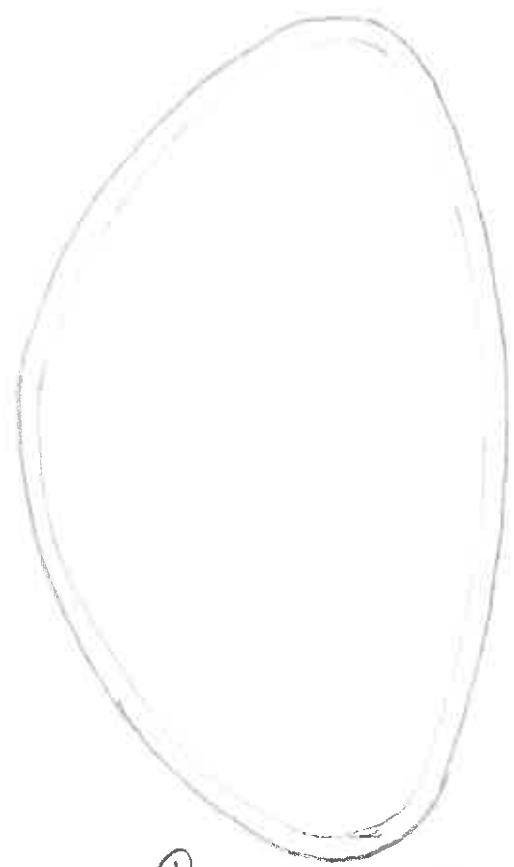
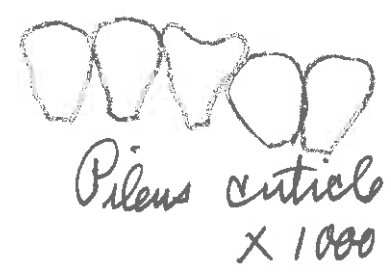
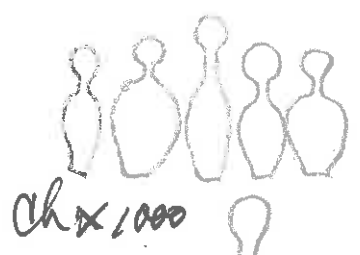
GALERULA MEXICANA Murr.

Notes on Type (by Hesler)

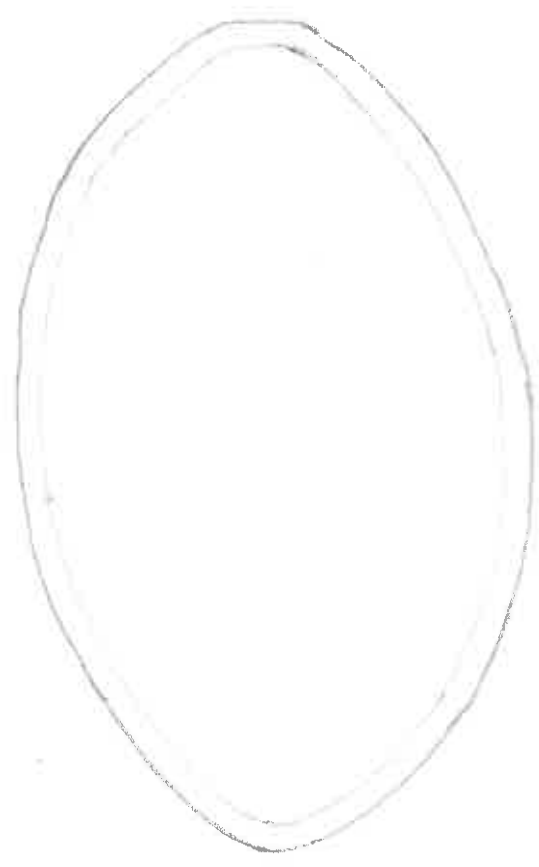
Spores 13-14.5 x 8-9  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, truncate, wall smooth, thick (double). Pleurocystidia none; cheilocystidia 16-22 x 5-9  $\mu$ , lecythiform. Pileus cuticle of subcuneate to subpyriform cells 11-~~7~~<sup>15</sup> x 9-12  $\mu$ , in a palisade, dry. Stipe cuticle of repent, dry hyphae. Caulocystidia 18-56 x 4-9  $\mu$ , some similar to cheilocystidia, others ventricose or clavate or even cylindrical-capitate.

a Conceybe.

*Conocybe mexicana* (Murr.) comb. nov.  
[*Gabruia mexicana* Murr.] - Type



Profile



Spores x 8000

Face

Conocybe pinguis Watling

Persoonia 6: 338. 1971

CONOCYBE PLICATELLA (Pk.) Kühner

Le Genre Galera, p. 137. 1935

Agaricus coprinoides Pk., Buffalo Soc. Nat. Sci. Bull. 1:53. 1872.  
(non A. coprinoides Corda)

Agaricus plicatellus Pk., N. Y. State Mus. Ann. Rept. 29:66. 1878.  
(Here Peck states that ~~this name~~ <sup>Coprinoides</sup> has been used in Europe, and he would therefore change the name to Agaricus plicatellus Pk.)

Galera coprinoides (Pk.) Sacc., Syll. Fung. 5:867. 1887.

Galera plicatella (Pk.) Earle, Torreyia 3:136. 1903.

Galerula plicatella (Pk.) Murr., N. A. Flora 10:164. 1917.

Galerella plicatella (Pk.) Singer,

Pileus 12 mm broad, soon expanded, yellowish inclining toward ocher, margin plicate-sulcate and often split. Context membranaceous.

Lamellae slightly rounded behind, concolorous, close.

Stipe about 2.5 cm long, 1 mm thick, white, minutely hairy-pruinose, equal, hollow.

Notes on Type of Agaricus coprinoides Pk. (by Hesler)

Spores (6.5)7-8.5 x 4.5-5.5(6)  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, wall smooth, only moderately thick, with a germ-pore, rusty brownish in 2% KOH. Basidia 18-23 x 7-8  $\mu$ , 4-spored, clavate, at times the apical portion broadly ellipsoid. Pleurocystidia none; cheilocystidia 44-62 x 8-12  $\mu$ , ventricose near the base, with a long neck, rather abundant. Pileus cuticle cellular, the cells more or less subclavate, sometimes appearing to be more or less gelatinous hyphae on the surface. Stipe cuticle of dry, repent hyphae.

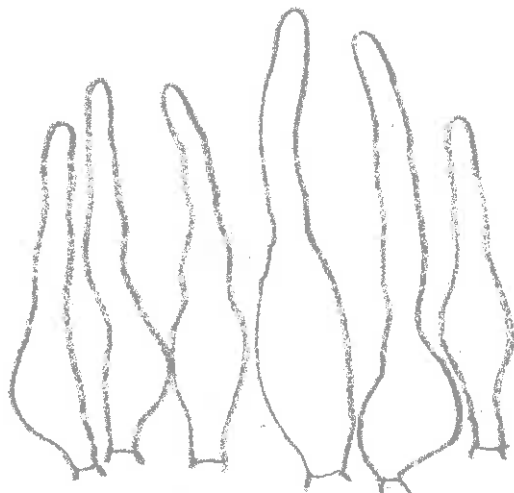
Watling, in a note attached to the "Type" packet states that this is a true Conocybe, as Kühner has so recognized (see above).

Type (of Agaricus coprinoides), on grassy ground, Sterling, New York,  
August.

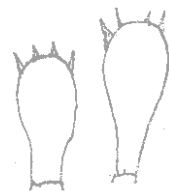
Peck comments that the pileus is suggestive of some of the smaller  
Coprini.

*Conocybe plicatella* (PK.) Kühner

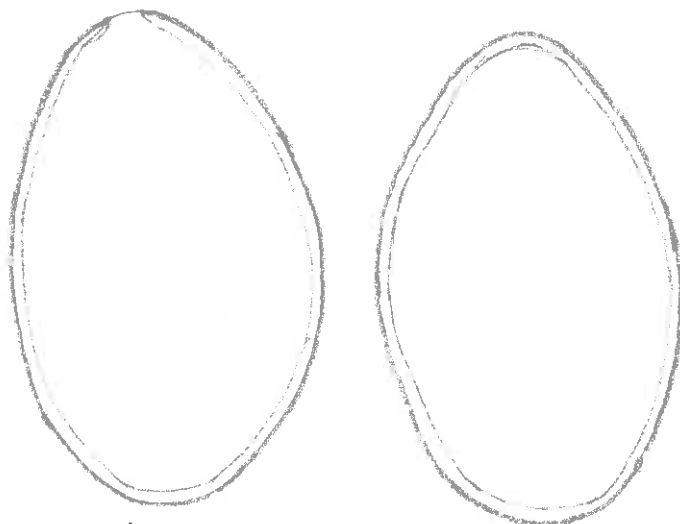
[Type of *Galera coprinoides* (PK.)  
(*Agaricus* (*Galera*) *plicatellus* PK.)]



Ch x 1000



Basidia  
x 1000



Profile

Face

Spores x 3000



*CONOCYBE PLUMBEBINCTA* (Atk.) Sing., Sydowia 4: ~~137~~ 1950.

*Galerula plumbeincta* Atk., Proc. Amer. Phil. Soc. 57: 372. 1918.

Pileus with a tinge of gray, especially when young, lubricous when young and moist, even or substriate when dry, glabrous, at first convex, then campanulate, always obtuse, 10-15 mm broad.

Lamellae ochraceous cinnamon, ventricose, rather broad, subdistant, adnate.

Stipe white, becoming dingy like the pileus, shining, mealy at apex, substriate below, straight or somewhat curved, hollow, equal.

Context white in pileus and stipe, subrigid, cartilaginous and rather tough in the stipe; odor not mentioned.

Spores 12-13.5 × 7.8-8.2 μ, mostly about 13 × 8 μ, very deeply rusty fulvous (well colored, N11,OH), with distinct truncate germ pore, ellipsoid.

Hymenium: Basidia 4-spored. Cystidia none; cheilocystidia on heteromorphous edge, 19.3-21.5 × 5-7.5 μ, varying from ampullaceous to capitate, many subcapitate, few truly capitate as in most species of *Conocybe* and few truly ampullaceous and non-capitate without any thickening in the apical region, hyaline.

Covering layer of the pileus consisting of a hymeniform layer of obpyriform cells, some of them with brownish lower portion, others entirely hyaline, 11.5-30.5 × 8.7-21.5 μ; dermatocystidia here none. On stipe numerous cystidioid bodies about the middle and also on apex of stipe, all vesiculose, some ampullaceous, none capitate; there are also numerous hyaline long hyphous hairs.

On dunghills in spring.

U. S. A.: Michigan, Cascade Glen, Ann Arbor, June 9, 1906, C. H. Kauffman 565, TYPE (CU).

The macroscopic description is copied from notes accompanying the type specimens and strictly identical with those indicated by Kauffman, who must have found this fungus in faded condition. This redescription proves that there are some minor differences between this and *C. ochracea* fa. *cinerascens* Sing., and they should be considered different species. Although non-capitate cheilocystidia can be found in *C. ochracea*, the large percentage of these in the type of *C. plumbeincta* seems to show that the two species are microscopically different. Besides, the tough character of the stipe emphasized by Kauffman who, even in his youth, was a keen observer, should not be neglected. Furthermore, it seems that the true color of the pileus and stipe is nearly white rather than gray, and consequently the species would become comparable with *C. siliginica* (sensu Bres.) rather than with *C. ochracea*, and should be compared particularly with the 4-spored form described by Kühner. But

this latter is not said to have toughish stipe, and its spores are smaller than those of *C. plumbeitincta*. The 4-spored form of *C. siliginea* described by Singer & Digilio has not only smaller spores but also different colors. And even if the Michigan species were conspecific with the 4-spored forms described by these authors, their conspecificity with *C. siliginea* fa. *bispora* (typica) remains extremely doubtful and has been assumed only tentatively by those who have collected them. Since a transference of *C. plumbeitincta* had already been made on the mistaken assumption that it is identical with *C. ochracea* Kühner (over which it would have considerable priority), it seems permissible to maintain the Michigan species as autonomous.

***Conocybe halophila* Sing. spec. nov.**

FIG. 11

Pileo quam in *C. ochracea* crassiore, griseolo-fusco, centro obscuriore. Stipite albello vel brunneo, fortiter longitudinaliter striato, basin versus attenuato, crassiusculo ad apicem. Sporis 8.5-11.5 × 5.7-7.2 μ; dermatocystidiis capitatis nullis in stipite.

Pileus grayish brown, in the center deeper colored, finely striate over most of the radius, not reticulate-rugose, campanulate, about 17 mm broad.

Lamellae rusty brown, wavy, subclose to close, adnexed.

Stipe whitish to brownish, strongly longitudinally striate, especially on the apex, fibrillose-pruinose all over, tapering downward to a non-bulbous base, 20-50 × 4 mm.

Context comparatively thick in pileus and stipe, not fragile.

Spores 8.5-11.5 × 5.7-7.2 μ, ellipsoid, smooth, with distinctly truncate broad germ pore, well pigmented in NH<sub>4</sub>OH and detergent, very deep rust-color in KOH.

Hymenium: Basidia 21.3-28 × 9.2-10 μ, 3-4-spored. Cystidia none; cheilocystidia as in *C. ochracea*. No needle crystals in ammonia mounts. Some pseudoparaphyses present at edge of lamellae.

Hyphae with clamp connections. Hyphae of stipe parallel, thin-walled.

Covering layers: Epicutis of pileus cellular-hymeniform. Dermatocystidia in the middle of the stipe all vesiculose to vesiculose-mucronate, but none with capitulum, hyaline, e. g. 10 × 5.7 μ, forming bunches (responsible for the pruina), and also some hair-like elements present, these thickened at the base and acute above, strongly awl-shaped.

On the ground in a salt meadow, spring.

Afghanistan: West of Butschak along the road from Kabul to Niula, 1740 m alt., 22-IV-1951. *Gilli* CXXXIII/10, TYPE (LIL).

This saline species of central Asia differs from the closely allied

CONOCYBE PLUMBEITINCTA (Atk.) Singer

Sydowia 4:131. 1950

Galerula plumbeitincta Atk., Proc. Amer. Phil. Soc.

57: 372. 1918.

(Singer's Account)

[in Mycologia 51:396. 1959.  
Probably taken from Sydowia 4:131]

Pileus 10-15 mm broad, convex then campanulate, obtuse, tinged gray especially when young, lubricous when young and young, even or substriate when dry. Context white cartilaginous, odor not mentioned.

Lamellae adnate, ochraceous cinnamon, subdistant, rather broad, ventricose.

Stipe white, becoming dingy like the pileus, shining, apex mealy, substriate below, straight or somewhat curved, hollow, equal, tough, cartilaginous, flesh white.

Spores 12-13.5 x 7.8-8.2  $\mu$ , mostly about 13 x 8  $\mu$ , ellipsoid, very deeply rusty fulvous (well colored in  $\text{NH}_4\text{OH}$ ), with a distinct truncate germ pore. Basidia 4-spored. Pleurocystidia none; cheilocystidia on heteromorphous edge, 19.3-21.5 x 5-7.5  $\mu$ , varying from ampullaceous to capitate, many subcapitate, few truly capitate as in most species of Conocybe, and few truly ampullaceous and non-capitate without any thickening in the apical region, hyaline. Pileus cuticle an hymeniform layer of subpiriform cells, some of them brown in their lower portion, others entirely hyaline, 11.5-30.5 x 8.7-21.5  $\mu$ , pileocystidia none. Caulocystidia

all vesiculose, some ampullaceous, none capitate, on about the middle and also on the apex of stipe; long hyphous hairs also present.

On dung hills, Cascade Glen, Ann Arbor, Michigan, June 9, 1906, Kauffman 565 (type, CU).

It is different from C. ochracea fa. cinerascens Sing. The tough character of the stipe should not be neglected. The true color of the pileus and stipe is not gray, but white.

4334

CONOCYBE PUBESCENS (Gill.) Kühner

Le Genre Galera (Quel.) Kühner. p. 85. 1935

On humus, under hemlock-laurel, Highlands, N. C., June 11, 1934

Pileus 1-2 cm broad, somewhat campanulate to conic-campanulate, reddish brown when wet, paler when dry, slightly rugulose, glabrous. Context thin.

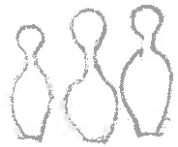
Lamellae narrowly attached, brownish, rather narrow, close to nearly so.

Stipe 4-6 cm long, 0.5-1.0 mm thick, pallid-brownish, minutely pubescent when fresh, slightly striate, dry.

Spores 10-13 x 5.5-7  $\mu$ , obscurely inequilateral in profile, ellipsoid to rather narrowly so in face view, smooth, truncate, reddish-brown in KOH. Basidia 24-27 x 10-11  $\mu$ , 2-4-spored. Pleurocystidia none; cheilocystidia 15-18 x 5-7  $\mu$ , lecythiform. Pileus cuticle cellular, the cells subglobose to subpyriform. Stipe cuticle of repent hyphae. Caulocystidia none found.

Singer (Sydowia 9: 401, 1955) states that this ~~is~~ appears to be a synonym of Conocybe umbellula (Mont.) Sing. (comb. nov. in Sydowia 9: 401) (= Agaricus umbellula Mont., see descr. Sydowia 9: 401).

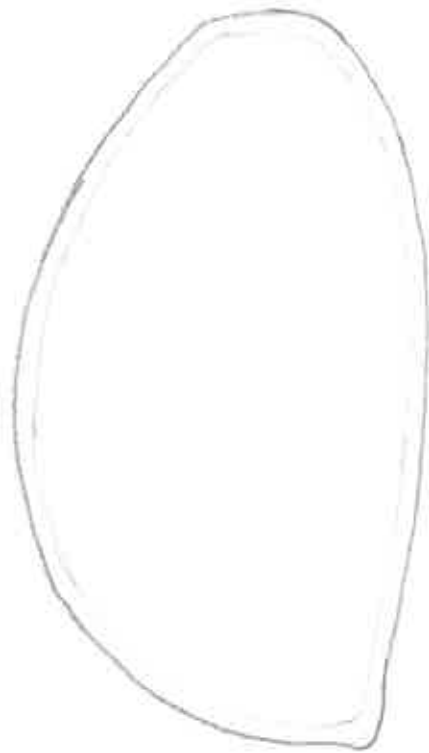
*Conocybe pubescens* (Gill.) Kühn.  
4334



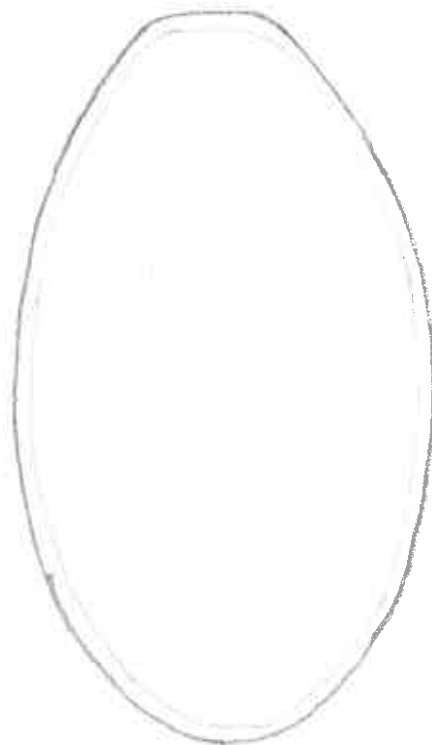
ch x 1000



Pileus cuticle



Profile



Face

Spores x 8000

Conocybe radicata Sing.

Revue de Mycologie 18:18. 1953

(from ~~Arg~~ Argentina)

CONOCYBE RETICULATA (Pk.) Watling (in ed.)

Galera reticulata Pk., New York State Mus. Ann. Rept. 54:150. 1901.

Galerula reticulata (Pk.) Murr., N. A. Flora 10:165. 1917.

Pileus 1-2.5 cm broad, hemispheric or campanulate, obtuse, hygrophanous, cinnamon color when moist, creamy yellow or buff when dry, rugosely reticulate. Context white or whitish, thin, fragile.

Lamellae ascending, yellowish, becoming bright ferruginous, close, narrow.

Stipe 2.5-6 cm long, 2-4 mm thick, white, pruinose, apex striate, equal, hollow.

Notes on Type (by Hesler)

Spores 7.5-8.5(9) x <sup>4-</sup>4.5(5)  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, smooth, truncate, wall rather thin. Pleurocystidia (Gill edges destroyed by an insect) and cheilocystidia none. Pileus cuticle a palisade of cuneiform cells, 15-18 x 7-10  $\mu$ . Pileocystidia scattered among the cuticular cells, cylindrical to subventricose, projecting conspicuously.

Type, on mossy soil, leg. George F. Atkinson, Ithaca, New York, November.

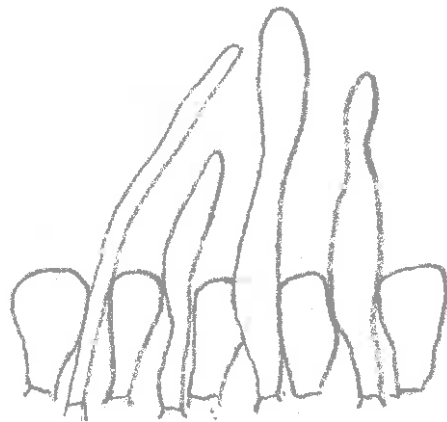
Peck comments that it is not dissimilar to Galera tenera, but is easily separated by its rugosely reticulate pileus, its more narrow lamellae, and its smaller spores. In G. pubescens, the pileus is reticulate, but its pileus and stipe are pubescent.

A note by Watling on the type packet states that this is a true Conocybe, close to C. pygmae-affinis.



*Galera reticulata* PK.

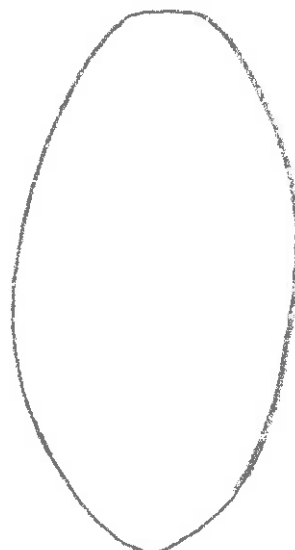
Type (= Conocybe)



Pileus cuticle  
x 1000



Profile



Face

Spores x 8000

23909

CONOCYBE RICKENII (J. Schaeff.) Kühner

On bare soil, Leiden, Netherlands, leg-det Bas, August 16, 1955

Galerula siliginea (Fr.) Quél.

Notes by Bas

Pileus 10-22 mm diameter, bluntly conical to convex, slightly hygrophanous, pale leather-colored or pale yellowish cafe-au-lait, glabrous, smooth, <sup>even.</sup> Context cream; odor faint, disagreeable.

Lamellae adnate, fairly crowded, narrow to rather broad, brownish cream at first, becoming orange-brown.

Stipe 3.8-6 cm long, 1-2.5 mm thick, apex cream or white, base brownish with a faint lilac tinge, rarely somewhat bulbous. Context pale yellowish brown, orange-brown at base.

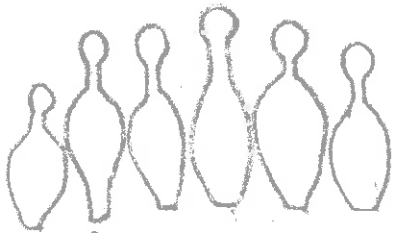
Notes by Hiesler

Spores 12-16 x 8-10  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, smooth, truncate, wall 0.4  $\mu$  thick, reddish-brown in 2% KOH. Basidia 25-40 x 7-10  $\mu$ , 1-2-spored (some 1-spored basidia at first suggest pleurocystidia). Pleurocystidia none; cheilocystidia 18-27 x 7-10  $\mu$ , lecythiform. Pileus cuticle cellular, the cells more or less pyriform to subspathulate, 24-32 x 9-12  $\mu$ , forming a palisade. No pileocystidia observed (present in 20421, scattered). Stipe cuticle of repent hyphae; caulocystidia not found.

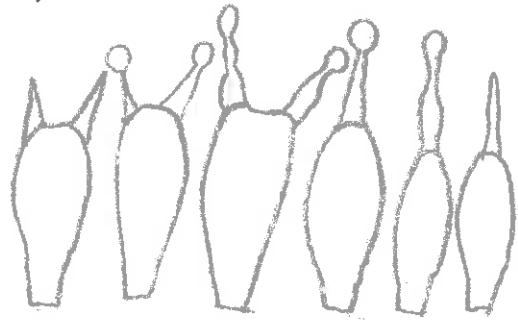
See Smith: Mich Acad. 21: 150. 1936, descr. under  
Galerula siliginea (Fr.) Sm.

*Conocybe rickenii* (J. Schaeff.) Kühner

Terre - 23909 (Bas.)



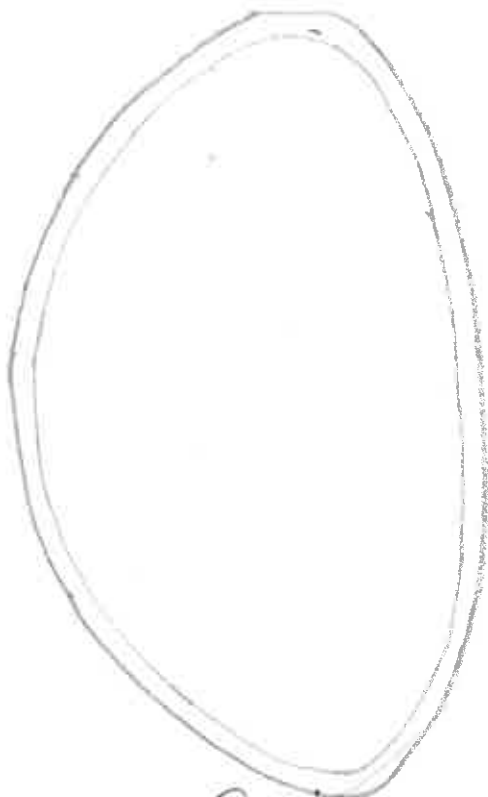
Ch x 1000



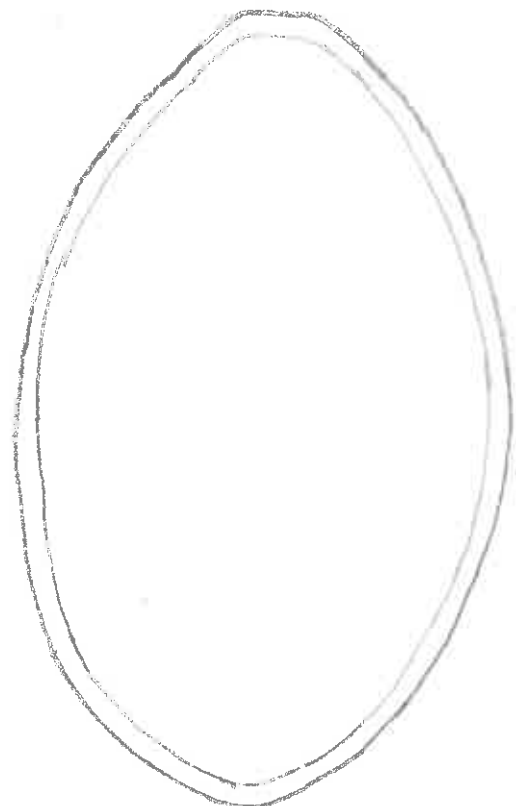
Basidia x 1000



Pileus cuticle x 1000



Profile



Face

Spores x 8000

20421 CONOCYBE RICKENII (J. Schaeff.) Kühner

On compost, abandoned horse-barn, Indian Gap, coll. L. R. Hesler,  
June 1, 1952, det. A. H. Smith (cf. L.R.H.).

Pileus 1.5-2 cm broad, conic, chalky-whitish with a tint of pale yellow, surface atomate and plush-like, faintly hygrophanous, margin even. Context thin, fragile; odor and taste mild.

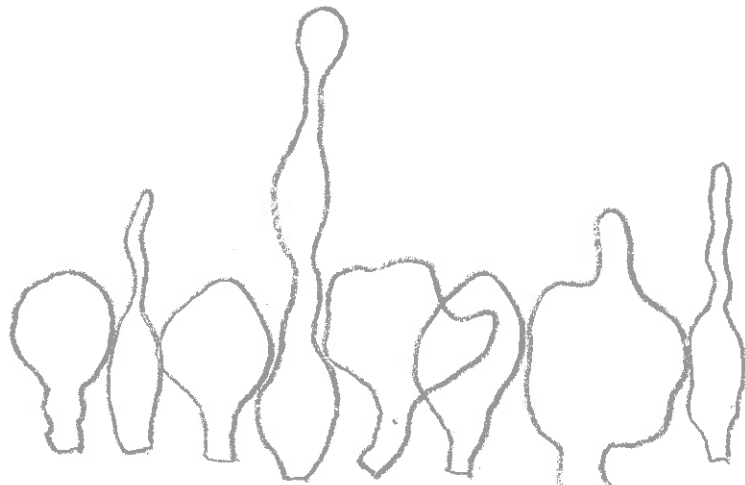
Lamellae adnate, almost subdistant, broad, at first pallid, at maturity "ochraceous tawny," edges fimbriate.

Stipe 4-8 cm long, 1.5-2 mm thick, whitish, shining, apex pruinose, elsewhere glabrous, equal, hollow.

Spores 11-17 x 8-10.5  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, smooth, germ-pore present, at times more or less truncate, reddish brown in 2% KOH. Basidia and cheilocystidia as in ~~2399~~ 23909. Pileus cuticle as in 23909, but also shows pileocystidia, 33-62 x 6-10  $\mu$ , somewhat ventricose below, with a long, slender neck.

*Conoclype mickenii* (J. Schaeff.) Kuhn.

20421



Pilus cuticle, with plicocystidia -  $\times 1000$

CONOCYBE RUGOSA (Pk.) comb. nov.

Pholiota rugosa Pk., New York State Mus. Ann. Rept. 50:102. 1898.

Pholiotina rugosa (Pk.) Sing., Michigan Acad. Sci., Arts and Letters.  
32:148. 1946. *8?*

Pileus 12-24 mm broad, conical or campanulate, becoming expanded and often umbonate, hygrophanous, yellow-red or ferruginous and margin striatulate when moist, pale yellow or buff and commonly rugose when dry. Context thin, concolorous; odor and taste not characteristic.

Lamellae adnexed, yellowish-white or cream colored, becoming ferruginous or brownish-ferruginous with age, edges white and minutely denticulate.

Stipe 2.5-5 cm long, 2-4 mm thick, apex pallid and pruinose or mealy, equal or slightly thickened below, fibrillose (the fibrils tawny) or sometimes squamulose below the annulus. Veil forming a white, persistent, membranous, median annulus, striate on upper side.

Notes on Type (by Hesler)

Spores 8-11 x (4)5-6(7)  $\mu$ , somewhat inequilateral in profile, ellipsoid in face view, wall smooth, rather thin (but appearing thinly double), germ-pore present, sometimes obscurely truncate, yellowish-brown in 2% KOH. Pleurocystidia none; cheilocystidia 20-24 x 4-5  $\mu$ , subcylindric, base sometimes subventricose, rare. Pileus cuticle of vesiculose to cuneiform cells, one to two layers thick. Stipe cuticle of dry, repent hyphae.

Type, on soil among decaying chips, Adirondack Mts., New York, September.

Peck remarks that it is close to P. togularis [Conocybe togularis (Fr.) Kühner], from which it is separated by its hygrophanous pileus and the adnexed lamellae.

Pholiotina rugosa (Pk.) Singer, Michigan Sci., Arts, & Letters

32:148. 1946. 8.

Type [= Gnocybe rugosa (Pk.) comb. nov.]

Spores 8-11 x <sup>(4)</sup> 5-6 (7) μ, somewhat inequilateral in profile, ellipsoid in face view, wall smooth, rather thin (but usually appears thin double), germ-pore present, apices sometimes obscurely truncate, other times not evidently truncate, yellowish brown in 2% KOH.

St. none; ch 20-24 x 4-5 μ, subcylindric, base at times subventricose, rarely and difficult to find.

Pileus cuticle of vesicular to cuneiform cells, one or two layers thick. Stipe cuticle of repent hyphae.

Some authors (Watling, K+R) place Pholiotina as a

subgenus

Gnocybe

others give it generic status (Singer).

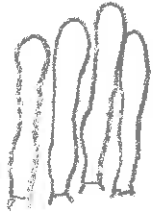
Mts. New York, 1

Type, on chip + soil, leg. Peck, Adirondack September.

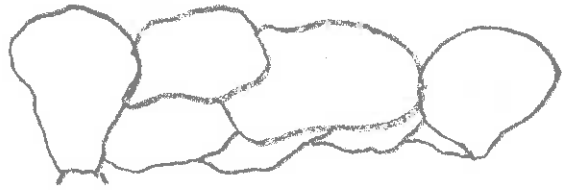
In my files, I list Agrocybe rugosa (Pk.) Harding, but without citation. As of now, I would hardly place it in Agrocybe.



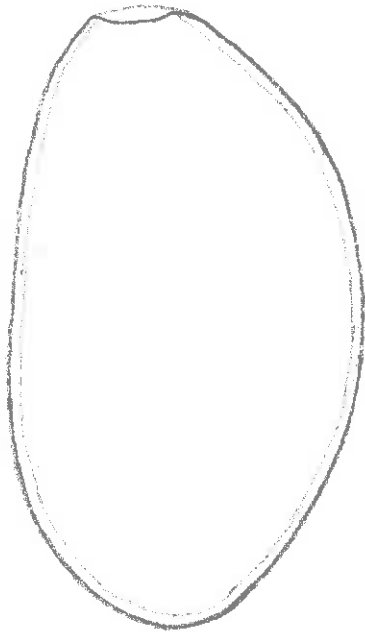
*Pholiota rugosa* PK.  
Fyp1 (Conocybe) ✓



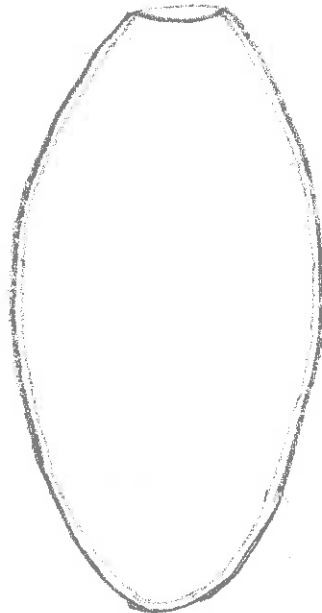
Ch x  
1000



Pileus cuticle x 1000



Profile



Face

Spores x 8000

*Conocybe*

PHOLIOTA RUGOSA Pk.

Type

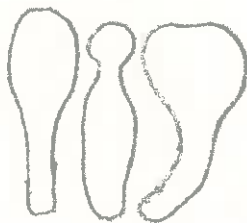
On chip dirt, Adirondact Mts., leg. Chas.H.Peck, Sept.

Spores 8.5-11 x 4.5-5.5(6)  $\mu$ , ellipsoid, smooth, falsely truncate, the inner wall truncate or even slightly indented, showing a large germ-pore. Basidia 22-26 x 6-7  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 24-26 x 6-13  $\mu$ , clavate, rare. Gill trama subparallel, hyphae 3-7(10)  $\mu$  broad. Pileus trama radial. Cuticle of pseudoparenchyma. Clamp connections present. Caulocystidia 36-100 x 5-8  $\mu$ , slender cylindrical, or clavate, few.

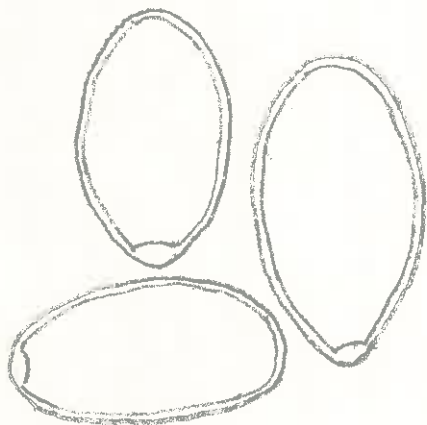
This is *Agrocybe rugosa* (Pk.) <sup>Harding</sup> ~~comb. nov.~~; Singer calls it *Pholiotina rugosa* (Pk.) Sing. (Mich. Acad. 32: 148. 1946.)

cf. *A. mycenoides* (Fr.) Pk. sensu Pk. and  
Agaricus (Pholiota) mycenoides Fr. (Systema Myc., 1: 246).

*Pholista rugosa* PK.  
*Agrocype*?  
Type



Ch - x 1200



Spores - x 4000



Cellular Cuticle - x 1000

Conocybe siennophylla (B. + Br.) Sing.

Sydowia 9: 402. 1955

Agaricus siennophyllus B. + Br.

Singer gives micro. description on p. 402.  
Type from Peradeniya, Ceylon. Watling (in a letter, Nov. 14, 1975) states that he plans to borrow the type (at Kew) & study it soon.

Conocybe stercoraria Nattwig

Persoonia 6: 334. 1971

CONOCYBE SUBCRISPA (Murr.) Singer  
*Sydowia* 4:139. 1950  
Galerula subcrispa Murr., Lloydia 5:148. 1942.

Murrill's Description

Pileus about 7 mm broad, conic, depressed in age, pallid, disc isabelline, glabrous, margin upturned with age, sulcate to the center. Context membranous, white; odorless.

Lamellae adnexed, white, narrow, rather distant, inserted.

Stipe 5-6 cm long, 0.5-1.5 mm thick, snow-white, tapering upward from a small rounded bulb, slightly fibrillose.

Notes by Hesler

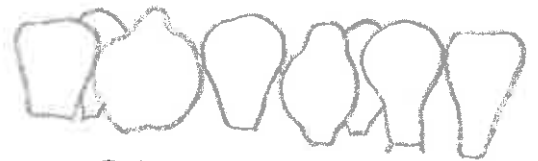
Spores 13-16 (<sup>18</sup>~~27~~) x 7.5-9 (<sup>11</sup>~~20~~)  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, smooth, germ-pore evident in many, at times  $\pm$  truncate, wall 0.4  $\mu$  thick, red-brown in KOH. Pleurocystidia none; cheilocystidia (none found)\*. Pileus cuticle of cuneiform to sub-spathulate cells. Stipe cuticle of repent hyphae. Caulocystidia none, but with thin tufts of epicuticular hyphal elements; Clamp connections on these hyphae.

Type on lawn, in grass, under longleaf pine, Gainesville, Fla., July 26, 1939, (F 19818.)

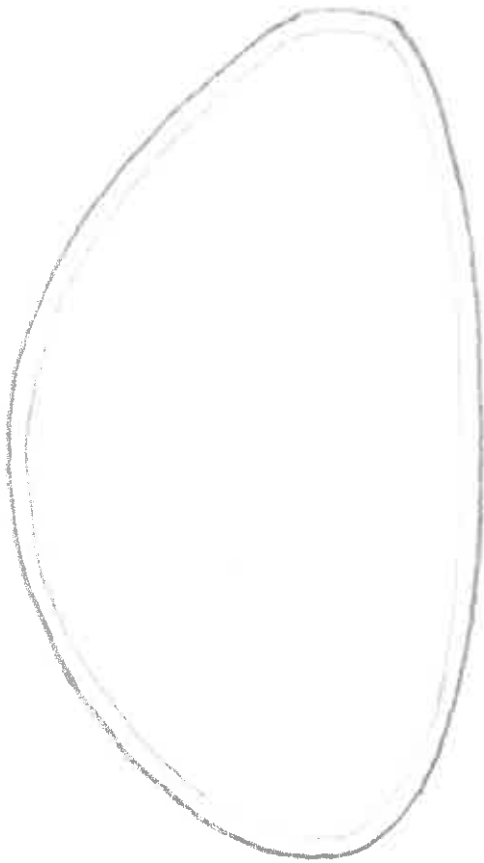
\* Singer, *Sydowia* 4:139. 1950, describes ch as 23-29 x 3.5-6.5  $\mu$ ; the species characterized by remarkably narrow ch.

*Conocybe subarvsa* (Murr.) Sing.  
(*Galerula*) Type: 719818

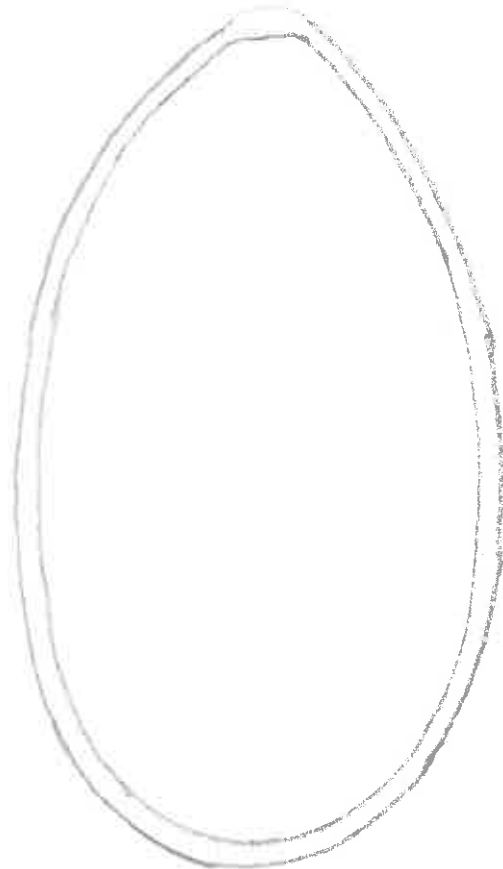
[Ch not found]



Pileus cuticle x 1000



Profile



Face

Spores x 8000

(Galera)  
AGARICUS/SULCATIPES Pk.

= Conocybe sulcatipes (Pk.) Watling (in det.)

New York State Mus. Ann. Rept. 35:132. 1884

Galerula sulcatipes (Pk.) Murr., N. A. Flora 10:166. 1917.

Type

Spores 7.5 - 9 x 4 - 5.5  $\mu$ , obscurely  
inequilateral in profile, ellipsoid in face view,  
smooth, ~~gym-~~ germ-pore present <sup>and</sup> sometimes  
 $\pm$  truncate, yellowish-brown in 2% KOH. PP  
none; Ch 25 - 36 x 5 - 8  $\mu$ , ~~at~~ ventricose to  
flask-shaped ~~or filamentous~~, ~~widely scattered~~ rarely  
obscurely capitate. Pileus cuticle a palisade of  
cuneiform to ventricose or rectangular cells,  
18 - 36 x 7 - 12  $\mu$ . Pileocystidia flask-shaped to  
filamentous, widely scattered, projecting.

Type, on buckwheat chaff, East Berne,  
New York, leg. C. H. Peck, August.

Note by Watling in specimen box states that  
"This is a true Conocybe closely related to Conocybe  
Coprophila Kühn.



CONOCYBE SULCATIPES (Pk.) Watling (in ed.)

Agaricus (Galera) sulcatipes Pk., New York State Mus. Ann. Rept.  
35:132. 1884.

Galera sulcatipes (Pk.) Sacc., Syll. Fung. 5:866. 1887.

Galerula sulcatipes (Pk.) Murr., N. A. Flora 10:166. 1917.

Pileus 10-16 mm broad, ovate then conical or subcampanulate, hygrophanous, chestnut-colored and generally striatulate on margin when moist, paler when dry. Context thin.

Lamellae adnate, ascending, whitish, becoming ferruginous-cinnamon, sometimes becoming white on edges; subdistant.

Stipe 3.5-7.5 cm long, 2 mm thick, white, base often tinged blue or green, straight or flexuous, equal, striate-sulcate, silky, floccose-pruinose toward the base, hollow.

Notes on Type (by Hesler)

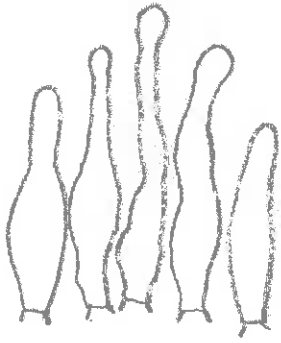
Spores 7.5-9 x 4-5.5  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, smooth, germ-pore present, sometimes more or less truncate, yellowish-brown in 2% KOH. Pleurocystidia none; cheilocystidia 25-36 x 5-8  $\mu$ , ventricose to flask-shaped, rarely obscurely capitate. Pileus cuticle a palisade of cuneiform to ventricose or rectangular cells, 18-36 x 7-12  $\mu$ . Pileocystidia flask-shaped to filamentous, projecting, widely scattered.

Type, on buckwheat chaff, East Berne, New York, leg. C. H. Peck, August.

Note by Watling in this box states that this is a true Conocybe, closely related to C. coprophila Kühner.

Murrill gives spore size as 6-7.5 x 4 $\mu$ .

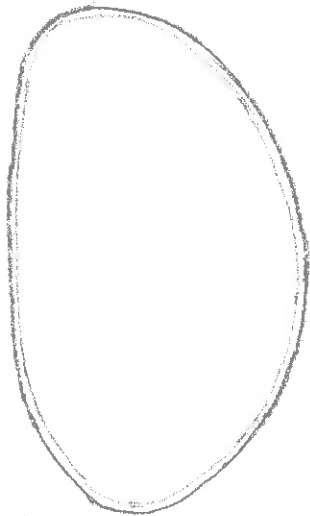
*Agaricus (Galera) sulcatipes* PK  
Type (= *Gnocybe*)



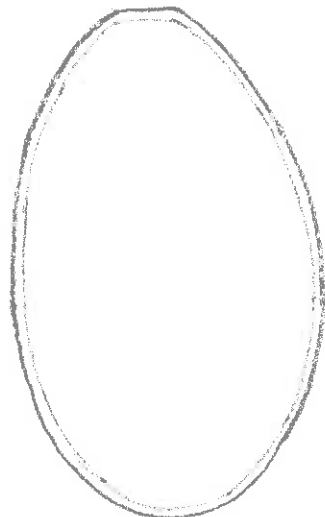
Ch x 1000



Pileus cuticle with piles - x 1000



Profile



Face

Spores  
x 8000

Galera tenera var. subovalis Kühner

Pileus 1.5-2 (4) cm., conic then conic-campanulate, glabrous, atomate, plush-like, dry, pellicle separable part-way, hygrophanous, "yellow ochre," "chamois" to "honey yellow," often with a greenish tint, striatulate. Flesh thin, white; odor and taste mild. Lamellae adnate, white or pallid, finally "buckthorn brown," narrow, close, edge minutely rough. Stipe 3-8 cm. x 1-3 mm., fibrillose-striatulate, glabrescent, apex mealy, tawny, base white, equal above a sub-bulbous base, dry, hollow.

Spores 10-<sup>13</sup>~~12~~ x 6-8  $\mu$ , ellipsoidal, yellowish-brown (under 'scope), smooth. Pleurocystidia none; cheilocystidia clustered, bottle-shaped-capitate, 16-20 x 8-9  $\mu$ .

Stipe with hairs, - caulocystidia.

On lawn, Lyons View, Knox County, Tennessee, October.

19488 CONOCYBE TENERA var. SUBOVALIS Kuhner PHOTO  
Le Genre Galera, p. 69. 1935

On lawn, Lyons View, Knoxville, leg. A. J. Sharp, det.

A. H. Smith, Oct. 22, 1949

Pileus 1.5-2(4) cm broad, conic then conic-campanulate, glabrous, atomate, plush-like, dry, pellicle separable part-way, hygrophanous, "yellow ochre," "chamois" to "honey yellow," often with a greenish tint, striatulate. Context thin, white; odor and taste mild.

Lamellae adnate, white or pallid, finally "buckthorn brown," narrow, close, edge minutely rough.

Stipe 3-8 cm long, 1-3 mm thick, brownish, base white, fibrillose-striatulate, glabrescent, apex mealy, tawny, equal above a sub-bulbous base, dry, hollow.

10-13

Spores ~~5-10~~ x 6.5-8  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, germ-pore present, at times somewhat truncate, reddish brown in 2% KOH, wall smooth, 0.3  $\mu$  thick. Pleurocystidia none; cheilocystidia 15-27 x 5-9  $\mu$ , lecythiform. Gill trama a narrow zone, hyphae slender, slightly interwoven. Pileus cuticle a palisade of pyriform to subspathulate cells, with pileocystidia of two types: a) lecythiform, b) subfusoid with brown pigment. Stipe cuticle of repent hyphae. Caulocystidia in mounds (tufts), lecythiform, 18-28 x 3-7  $\mu$ , abundant.

19488

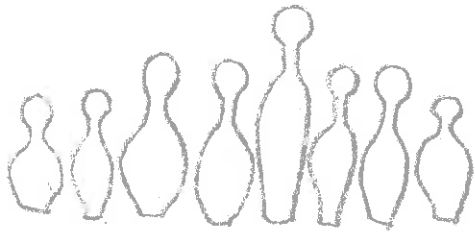
C. tenera var. subovalis - 2

Smith identified it as C. tenera var. subovalis, and Murrill stated (notes) that it is near Galera ovalis.

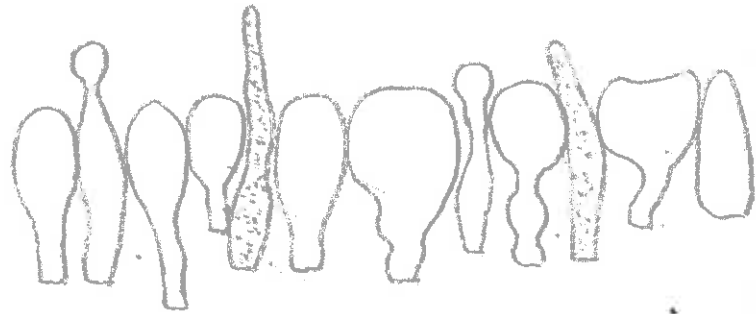
Kühner (1935) gives Galera ovalis Bres. a synonym (Iconographia, pl. 808).

*Conocephala tenera* var. *subovalis* Kühner

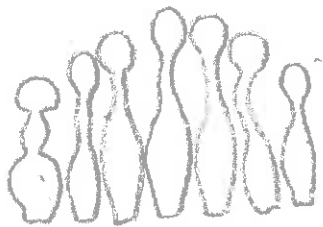
19488



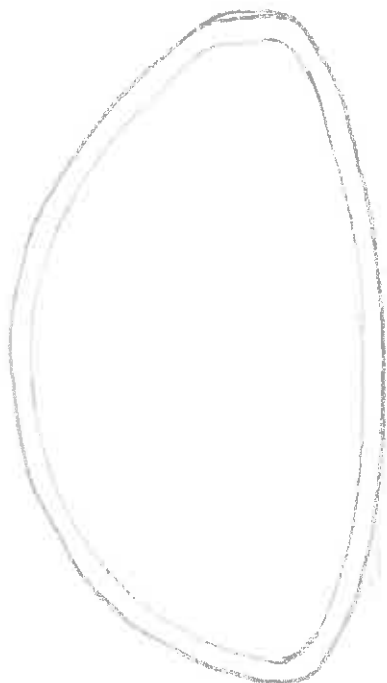
Ch x 1000



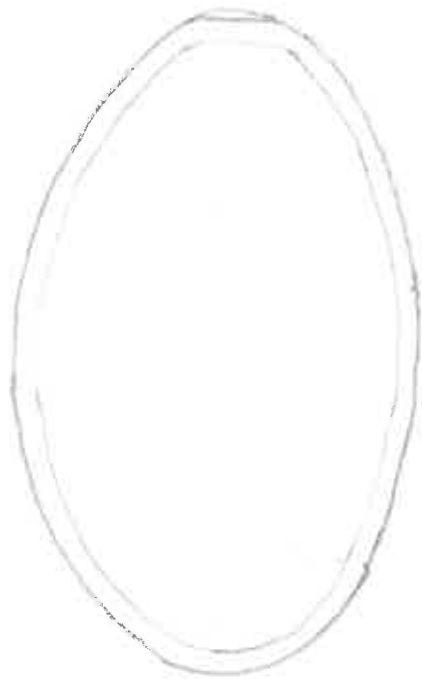
Pileus Cuticle + Piles  
x 1000



Caule x 1000



Profile



Face

Spores x 8000



19488 - *Galera tenera* var. *suboralis* Kühner

24155      CONOCYBE TENERA var. SUBOVALIS Kuhner

On lawn, Knoxville, leg. Tom Campbell, October 1960

Pileus 1.5-4 cm broad, conic then conic-campanulate, "yellow ocher" to "honey yellow," hygrophanous, striatulate. Context thin, pallid.

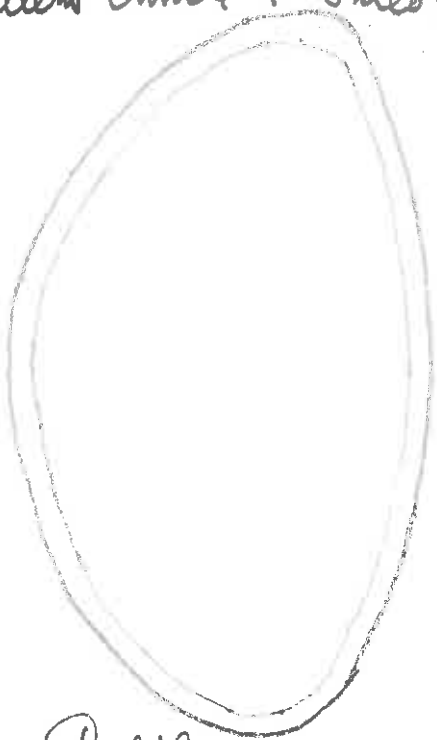
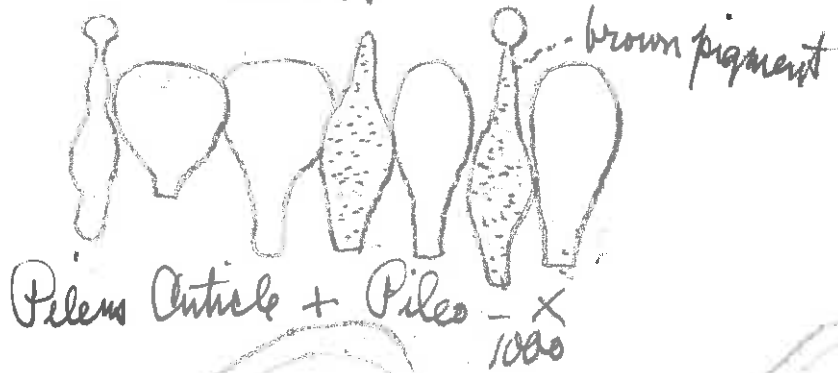
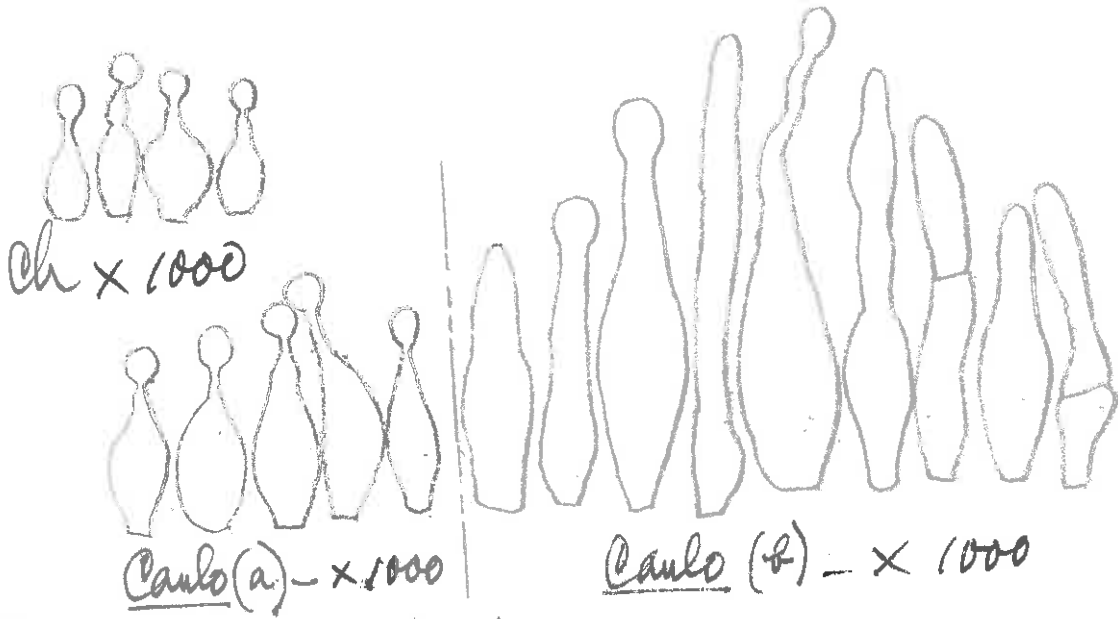
Lamellae adnate, pallid, then brown, narrow, close.

Stipe 3.5-7 cm long, 1.5-3 mm thick, brownish, striatulate, base subbulbous.

Spores "verona brown" in deposit, 10-12 x 6-7.5(8)  $\mu$ , obscurely inequilateral in profile, ellipsoid in face, smooth, truncate, wall 0.3  $\mu$  thick, reddish brown in 2% KOH. Pleurocystidia none; cheilocystidia 17-24 x 6-10  $\mu$ , lecythiform. Gill trama a narrow zone, hyphae slender, slightly interwoven. Pileus cuticle a palisade of cuneiform, clavate to subspathulate cells, interspersed with occasional pileocystidia of two types: a) lecythiform, b) ventricose with a neck, both types colorless or with a rusty brown pigment. Stipe cuticle of repent hyphae, with caulocystidia of two types: a) lecythiform, 25-32 x 6-10  $\mu$ , b) ventricose, large, 36-65 x 6-15  $\mu$ , both types in tufts or gregarious.

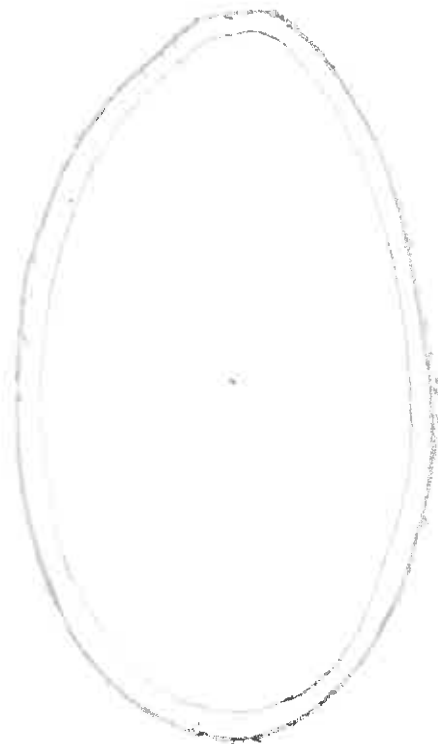


*Conocybe tenera* var. *suborvalis* Kühner  
24155



Profile

Spore x 8000



Face

16323 CONOCYBE TENERA f. TENELLA J. Lange

On lawn, Park Headquarters, GSMNP, leg. S. A. Cain,

June 15, 1944

Pileus 10-16 mm broad, conic-campanulate, "light ochraceous buff," indistinctly or not at all, striate, glabrous. Context thin.

Lamellae narrow, nearly close *to subdistant.*

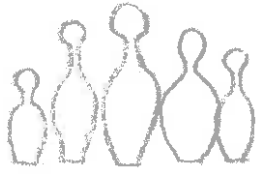
Stipe 4-6.5 cm long, 0.5-1.0 mm thick, pale buff, striate, tapering slightly upward from a small bulb.

Spores 10-14 x 7.5-8.5(9)  $\mu$ , slightly inequilateral in profile, ellipsoid to rather broadly or subovoid in face view, truncate, smooth, reddish-brown in 2% KOH. Pleurocystidia none; cheilocystidia 12-20 x 5-8  $\mu$ , lecythiform. Pileus cuticle of cuneiform cells. Stipe cuticle of repent hyphae. Caulocystidia 16-23 x 5-7  $\mu$ , lecythiform to irregularly so.

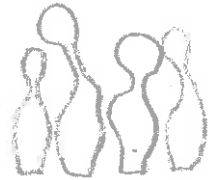
This seems to be C. tenera, near Lange's forma tenella.

Conocybe tenera f. tenella J. Fange

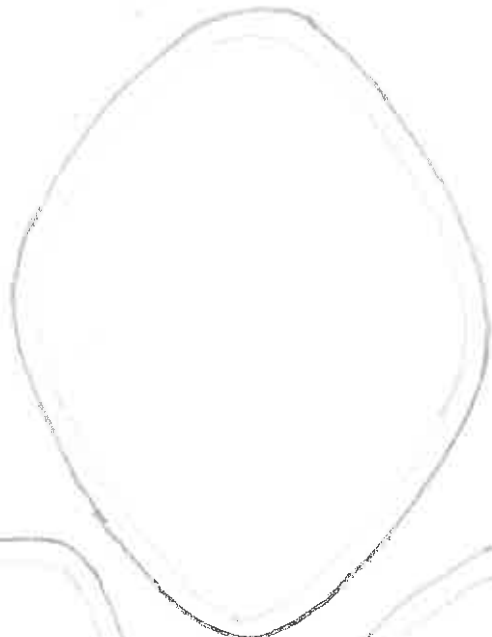
16323



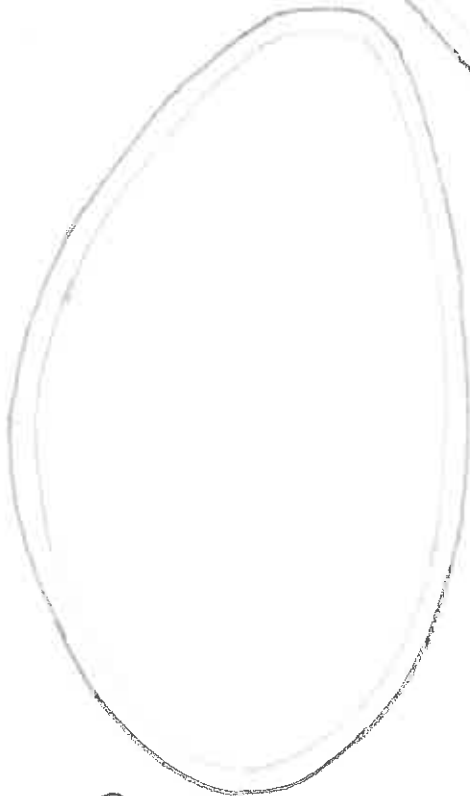
Ch x 1000



Caulo  
x 1000



Face



Profile



Face

Spores x 8000

20808            CONOCYBE TENERA f. TENELLA J. Lange            PHOTO

On lawn, Tobler Rd., Knox Co., leg. A. J. Sharp, May 5,  
1953

Pileus 5-7 mm broad, conic, pale gray and shining (not matched), glabrous, margin exceeded by overhanging lamellae, faintly striate to disc. Context thin, fragile, pallid.

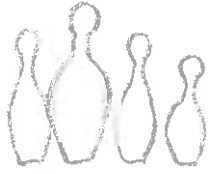
Lamellae ascending-adnate, rather broad, ventricose, nearly subdistant, "sage brown," edges paler.

Stipe 3-4 cm long, 0.3-0.5 mm thick, filiform, fragile, collapsing, ~~light~~ dingy to pallid brownish, glabrous.

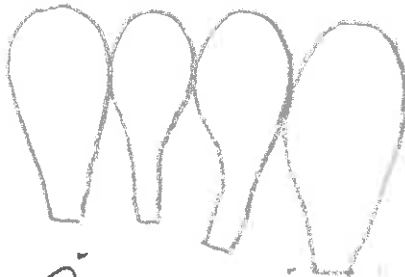
Spores 10-13 x 6.5-7.5(8)  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, wall 0.3  $\mu$  thick, truncate, smooth, reddish brown in KOH. Pleurocystidia none; cheilocystidia 14-22 x 5-8  $\mu$ . Gill trama a narrow zone. Pileus cuticle of pyriform cells, 24-32 x 9-14  $\mu$ . Stipe cuticle of repent hyphae. Caulocystidia not found.

*Conocybe tenera* f. *tenella* Ramage

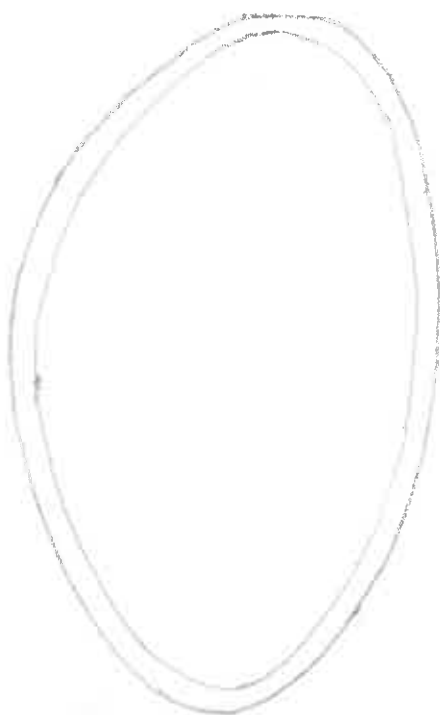
20808



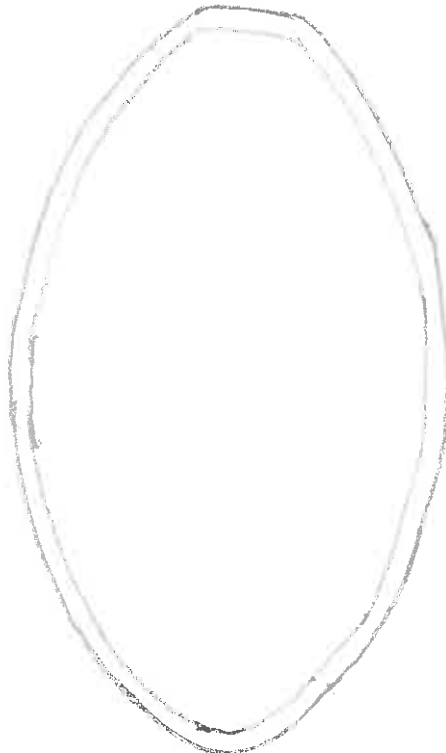
Ch x 1000



Pileus cuticle  
x 1000



Profile



Face

Spores x 8000



20808 - *Galera tenera* Fr. f. *tenella* Ränge

20874

CONOCYBE TENERA (Fr.) Kühner *v. tenera* PHOTO

On lawn, Knox Co., near Knoxville, leg. Fred Norris,

June 24, 1953

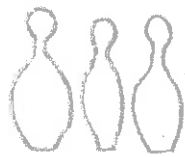
Pileus 18-35 mm broad, campanulate-convex, subviscid, umbonate, "light buff," umbo "honey yellow" and rather acute, delicately fibrillose, atomate, finely striate to disc. Context thin, white.

Lamellae narrowly adnate, close, "sage brown," (young gills not observed), very narrow, marcescent, edges serrulate.

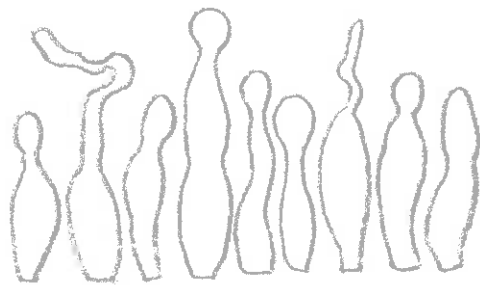
Stipe 7-9 cm long, 1-3 mm thick, shining white to pale yellow, scattered-pruinose, fragile, hollow.

Spores 11-15 x 7.5-8.5(9)  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, smooth, wall 0.3  $\mu$  thick, truncate, reddish brown in 2% KOH. Pleurocystidia none; cheilocystidia 16-19 x 6-8  $\mu$ , sparse, lecythiform. Pileus cuticle of cuneiform cells, mostly pushed out of position. Stipe cuticle of repent hyphae. Caulocystidia 24-42 x 4-8  $\mu$ , versiform: some more or less lecythiform, others obclavate-subcapitate, subcylindric and with a neck, in small tufts.

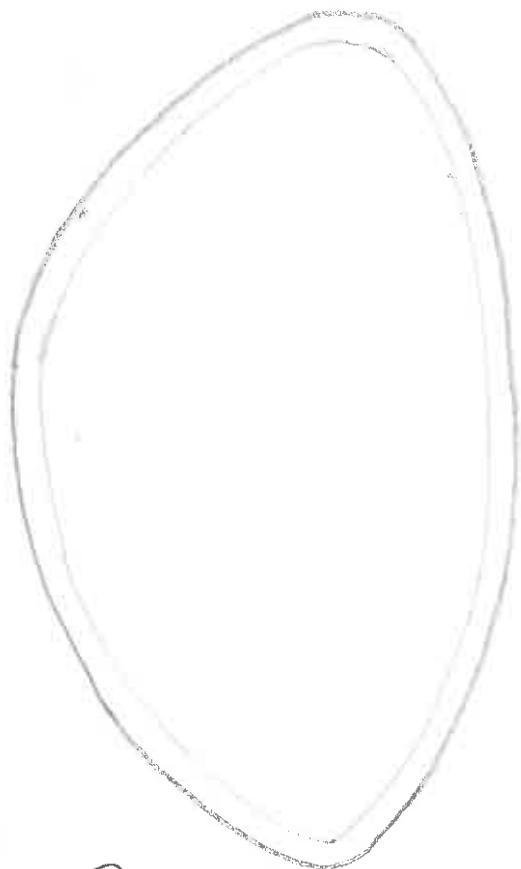
*Conocybe tenera* (Fr.) Kühner  
20874 v. *tenera*



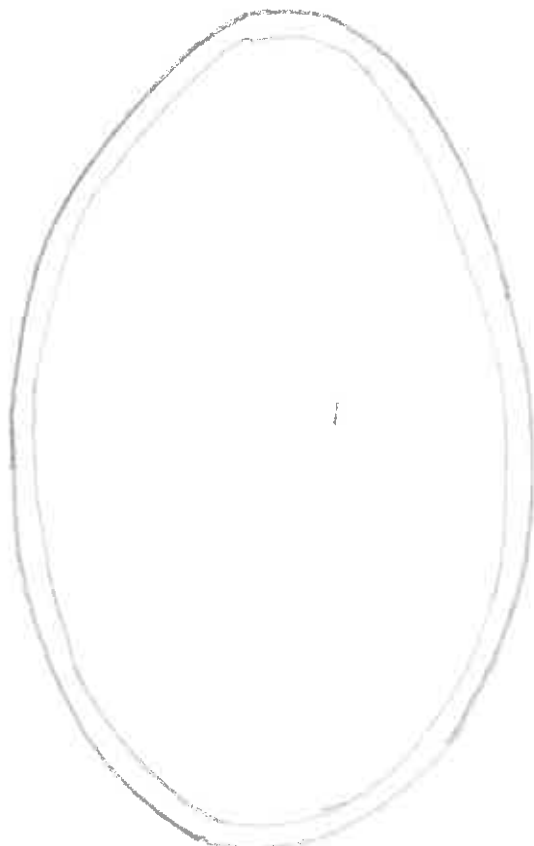
Ch  $\times 1000$



Caules (tuft)  $\times 1000$



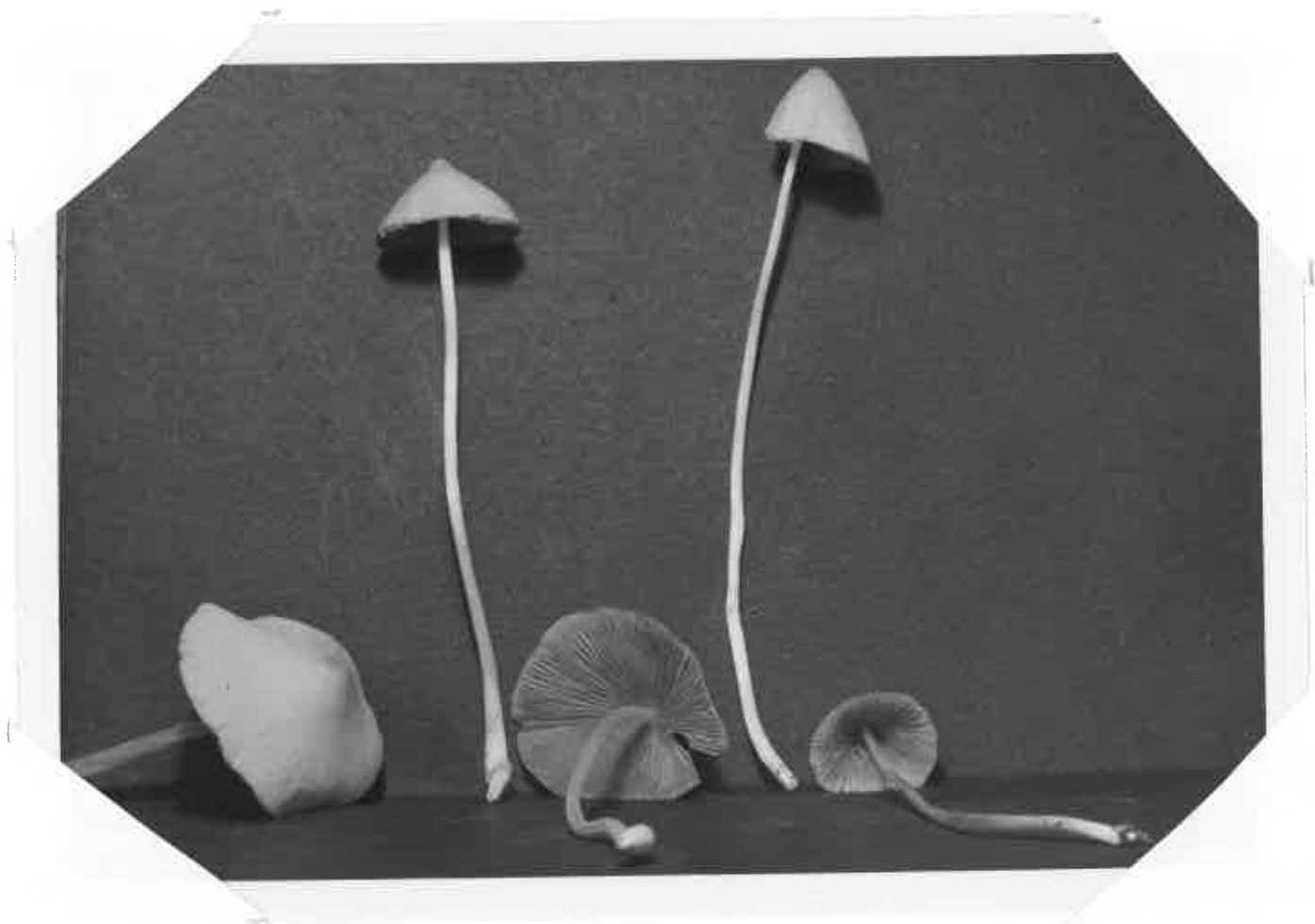
Profile



Spores  $\times 8000$

Face





20874 - *Conocybe tener* (Fr.) Kühner v. *tenera*

39201

CONOCYBE TENERA (Fr.) Kühner *var tenera*

On soil, in grass, in mixed pine, oak, leg. Ron Petersen,  
Rich Mt., May 11, 1974

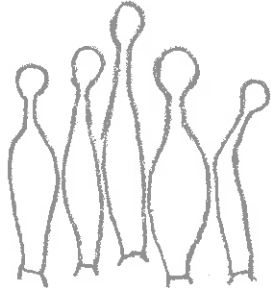
Pileus 1-1.5 cm broad, conic-campanulate, not expanding, hygrophanous, reddish brown or "amber brown" and atomate, when dry, "chestnut" when wet, glabrous, coarsely short striate when wet. Context reddish brown, thin, fragile; odor and taste mild.

Lamellae adnexed, at first pallid, finally "mahogany red," rather broad, close, ascending, lamellulae alternating with lamellae, not deliquescent.

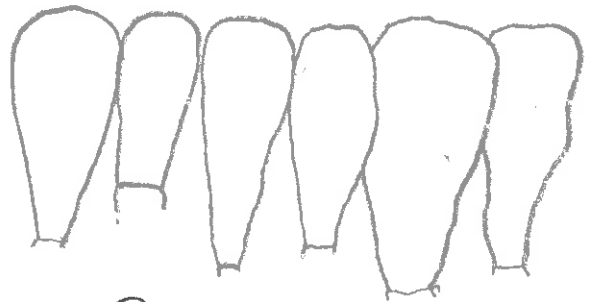
Stipe 4-8 cm long, 1.5-2 mm thick, very pale reddish, apex pruinose, elsewhere glabrous, fragile tubular, base white-mycelioid. Veil none.

Spores in deposit near "cinnamon brown," (9.5)10-13(14) x (5.5)6-7  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, smooth, truncate, rusty reddish-brown in 2% KOH. Basidia 25-28 x 10-12  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia ventricose, abruptly capitate, 26-33 x 3-8  $\mu$ . Gill trama a narrow zone of slender, somewhat interwoven hyphae. Pileus cuticle a palisade, dry layer of cuneiform to subclavate cells, 22-35 x 9-13  $\mu$ . Stipe cuticle of pale grayish, more or less angular, thick-walled hyphae.

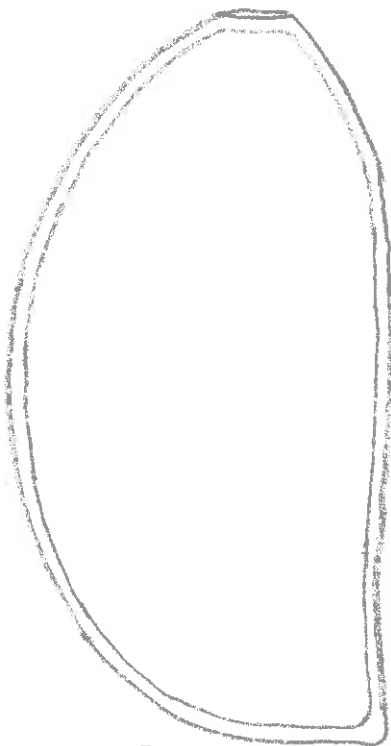
*Conocybe tenera* (Fr.) Kühner v. *tenera*  
Termin - 39201



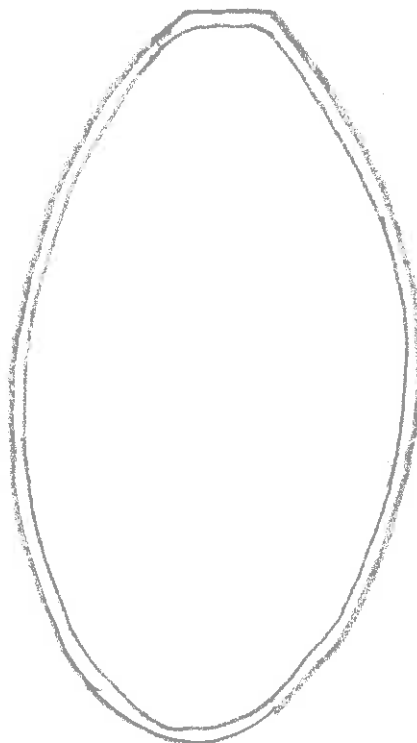
Ch x 1000



Pileus cuticle x 1000



Profile



Face

Spores x 8000

12445

CONOCYBE ~~TENERA~~ v. *tenera*

On lawn, Hesler's, June 5, 1967

Pileus "light buff," disc "antimony yellow," atomate, striatulate, not deliquescing. Context thin; odor and taste mild.

Spores 10-15 x 7-9  $\mu$ , ellipsoid, truncate, smooth, wall double. Cuticle of pseudoparenchyma.

14225

CONOCYBE TENERA (Fr.) Kühner var. *tenera*

On lawn, Park Headquarters, Gatlinburg, Tenn., GSMNP,

det. A. H. Smith, leg. Haun Ford, June 14, 1942

*Ann. Sci. Nat. Sér.* 7, 9: 357. 1889.

Pileus 15-25 mm broad, conic, umbonate, expanding somewhat, subviscid, "warm buff," umbo slightly darker, atomate, glabrous, striatulate to disc.

Context thin, fragile; odor and taste mild.

Lamellae nearly free, thin, narrow, linear, close, "ochraceoustawny," edges even.

Stipe 4-10 cm long, 1.5-2.0 mm thick, whitish, fragile, pruinose to floccose-mealy, dry, hollow, subbulbous. Spores ~~11~~<sup>11</sup>-16 x 7.5-9.5  $\mu$ , ellipsoid in face view, slightly inequalteral in profile, smooth, truncate. Pleurocystidia none; cheilocystidia 14-18 x 6-8  $\mu$ , lecythiform. Pileus cuticle of cuneiform cells, pushed somewhat out of position. Stipe cuticle repent. Caulocystidia not found.

= C. lactea J. Rånge, who gives *resiculus* paraphyses.

17807

CONOCYBE TENERA (Fr.) Kühner *var. tenera*

On lawn, Park Headquarters, GSMNP, leg. LRH, September 11, 1947

Pileus conic, 1-2 cm high, not expanding, 1-2.5 cm broad, "pale olive buff" to near "light buff," atomate, glabrous, margin striatulate. Context very thin, delicate, soon soft; odor and taste mild or none.

Lamellae narrowly adnate, somewhat seceding, narrow ( $\phi$  up to 2 mm broad), linear, "buckthorn brown," edges even, soon softening and somewhat deliquescing.

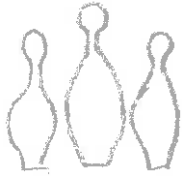
Stipe 4-8 cm long, 1.5-2 mm thick, white, striate, glabrous, flaccid, equal, hollow.

Spores 10-15 x (7)8-9(10)  $\mu$ , "buckthorn brown" in deposit, obscurely inequilateral in profile, ellipsoid to subovoid in face view, smooth, truncate, reddish brown in 2% KOH.

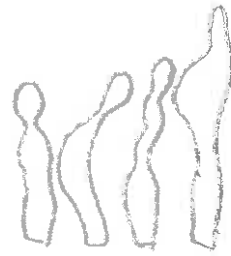
Pileus cuticle of cuneiform cells. Stipe cuticle of repent hyphae. Caulocystidia 20-33 x 4-6  $\mu$ , some slightly lecythiform, others irregularly shaped, in tufts.

Conocybe tenera (Fr.) Kühner v. tenera

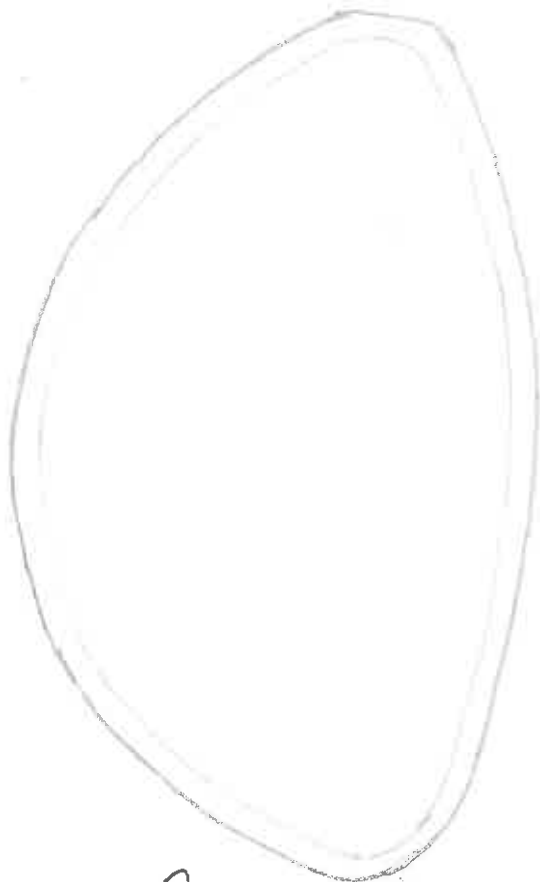
17807



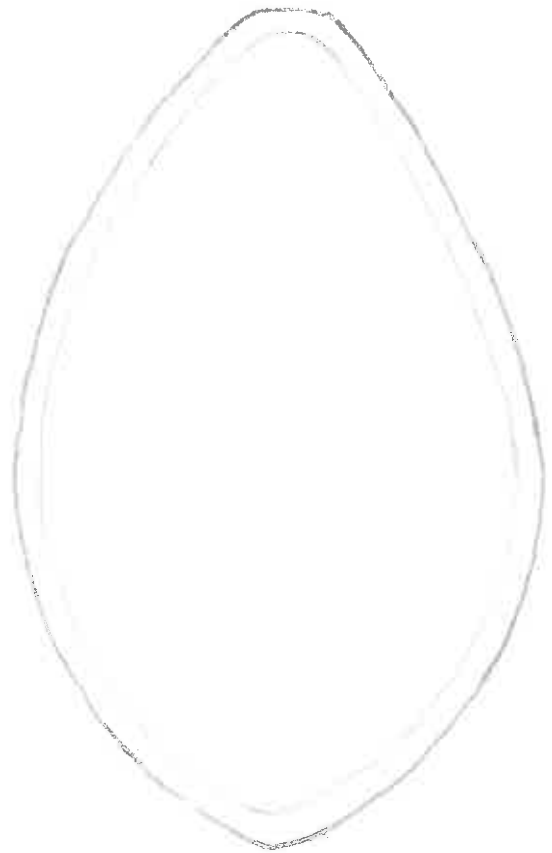
Sp  $\times 1000$



Spores  $\times 1000$



Profile



Spores  $\times 8000$

Face

CONOCYBE TENERELLA (Atk.) comb. nov.

Galera tenerella Atk., Ann. Myc. 7:369. 1909.

Galerula tenerella (Atk.) Murr., North Amer. Flora 10:164.  
1917.

Notes by Atkinson

Pileus 3-4 mm broad, ochraceous, campanulate, covered with a thin, delicate filamentous bloom.

Lamellae adnexed, edges whitish, narrow, subelliptical, concolorous with the pileus.

Stipe 4-5 cm long, 0.5-1.0 mm thick, <sup>equal</sup>~~even~~, pruinose above, and overall when young and fresh.

Notes by Hesler (Type: CU-19724)

Spores 11-15 x 8.5-10  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, wall 0.5  $\mu$  thick, smooth, more or less obscurely truncate, reddish brown in KOH. Basidia 20-27 x 10-12  $\mu$ , 1-4-spored, often 2-spored. Pleurocystidia none; cheilocystidia 9-18 x 5-7  $\mu$ , flask-shaped, with a short neck and a globose capitellum (Conocybe-type). Pileus cuticle a palisade of clavate or pyriform cells, 14-28 x 7-20  $\mu$ . Stipe cuticle of repent, dry hyphae. Caulocystidia none. Clamp connections none.

In Atkinson's notes, he gives the basidia as 2-spored, 28-30 x 10-12  $\mu$ , spores 14-16 x 8-10  $\mu$ , cystidia none on sides, on edges capitate. He speaks of the outer layer of the pileus trama of capitate cells through which here and there slender filaments project.



Type (CU-19724), on dung, in palm house, Conservatory, Ithaca, New York, April 1, 1906.

Atkinson reports what appear to be pileocystidia which project through the pileus cuticular elements.

He apparently accepts Karsten's generic name Galerula; for, in Amer. Phil. Soc. Proc. 57:373, 1918, he uses Galerula tenerella (Atk.) Murr., giving Galera tenerella Atk. as a synonym. In a footnote, p. 357, he points out that Galera Blume, Bydr., p. 415, 1925, is employed for a genus of orchids (see remainder of footnote).

CONOCYBE TENERELLA (Atk.) comb. nov.

Galera tenerella Atk., Ann. Myc. 7:369. 1909.

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1917.

Notes by Atkinson

Pileus 3-4 mm broad, ochraceous, campanulate, covered with a thin, delicate filamentous bloom.

Lamellae adnexed, edges whitish, narrow, subelliptical, concolorous with the pileus.

Stipe 4-5 cm long, 0.5-1.0 mm thick, even, pruinose above, and overall when young and fresh.

Notes by Hesler (Type: CU-19724)

Spores 11-15 x 8.5-10  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, wall 0.5  $\mu$  thick, smooth, more or less obscurely truncate, reddish brown in KOH. Basidia 20-27 x 10-12  $\mu$ , 1-4-spored, often 2-spored. Pleurocystidia none; cheilocystidia 9-18 x 5-7  $\mu$ , flask-shaped, with a short neck and a globose capitellum (Conocybe-type). Pileus cuticle a palisade of clavate or pyriform cells, 14-28 x 7-20  $\mu$ . Stipe cuticle of repent, dry hyphae. Caulocystidia none. Clamp connections none.

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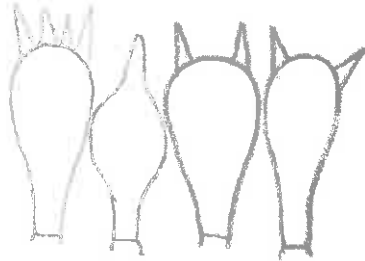
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*Conocybe Galera tenerella* Atk.

Type (CU-19724)



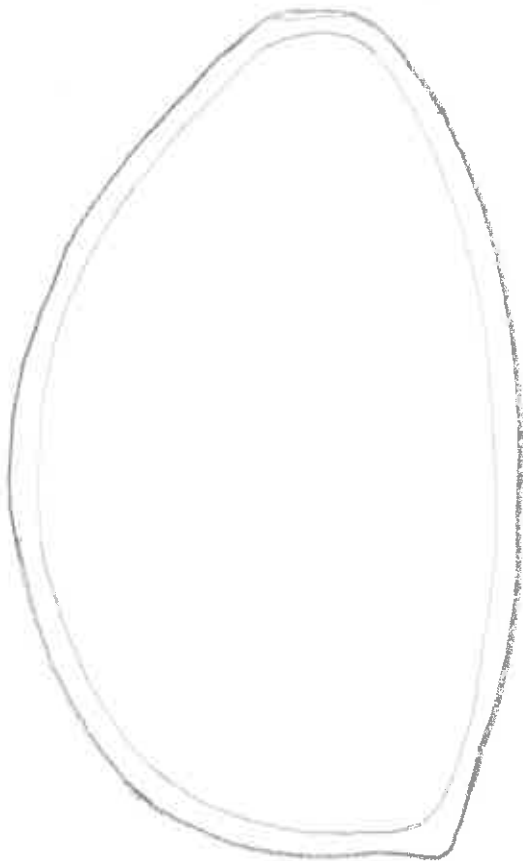
Basidia x 1000



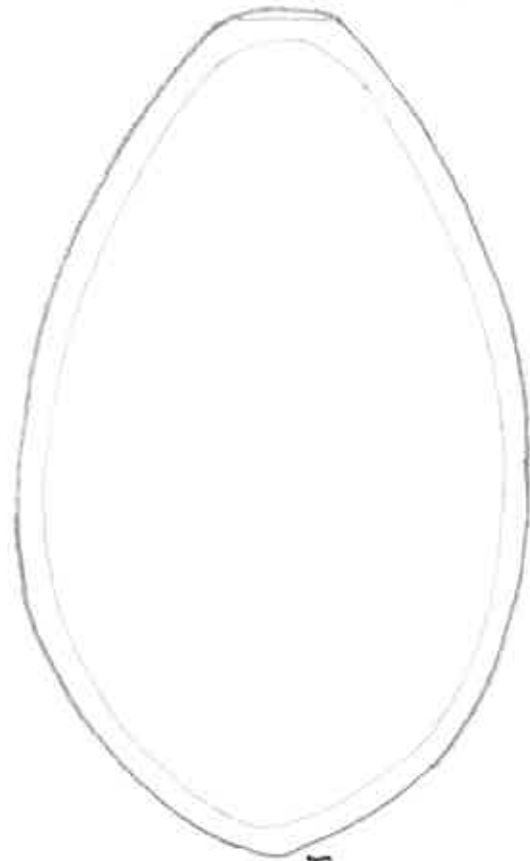
Ch x 1000



Pileus cuticle x 1000



Profile



Face

Spores x 8000

CONOCYBE TENEROIDES (Pk.) Watling (in ed.)

Agaricus teneroides Pk., New York State Mus. Nat. Hist. Ann. Rept.  
29:39. 1878.

Galera teneroides (Pk.) Sacc., Syll. Fung. 5:861. 1887.

Galerula teneroides (Pk.) Murr., N. A. Flora 10:166. 1917.

Pileus 16-24 mm broad, campanulate or expanded, hygrophanous, brownish-cinnamon and striatulate when moist, paler when dry. Context thin.

Lamellae yellowish-cinnamon, close, narrow.

Stipe 2.5-4 cm long, 1mm thick, concolorous with the pileus, straight, equal, hollow.

Notes on Type (by Hesler)

Spores 6-8 x 4-4.5  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, with a rather obscure germ-pore, sometimes faintly truncate, smooth, wall thin, yellowish to pale yellowish-brown in 2% KOH. Pleurocystidia none; cheilocystidia 16-25 x 6-8  $\mu$ , capitellum 4-5  $\mu$  diam., lecythiform, moderately abundant. Pileus cuticle of subcuneiform to vesiculose cells. Stipe cuticle of repent, dry hyphae, apical region bearing clusters of caulocystidia, 22-28 x 3-7  $\mu$ , ventricose to irregularly crooked or constricted, non-capitate.

Type, on soil in woods road, leg. C. H. Peck, Grieg, New York, September.

Peck comments that it is closely related to A. tener, from which it differs in its more expanded pileus, more narrow lamellae, shorter stipe, and smaller, paler spores. Its color is nearly the same as A. tener.

= *Gnocybe teneroides* (Pk.) Watling (in ed.)

AGARICUS TENEROIDES Pk.

New York State Mus. Nat. Hist. Ann. Rept. 29:39. 1878

*Galera teneroides* (Pk.) Sacc., Syll. Fung. 5:861. 1887.

*Galerula teneroides* (Pk.) Murr., N. A. Flora 10: 166. 1917.

*Conocybe teneroides* (Pk.) Watling (in ed.)

Type

Spores 6-8 x 4-4.5  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, with an obscure germ-pore, <sup>at times very obscurely truncate,</sup> smooth wall rather thin, yellowish to pale yellow-brown in 2% KOH.

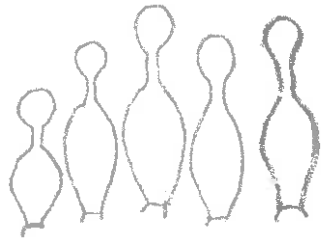
Pl none; ch 16-25 x 6-8  $\mu$ , ~~branching~~ lecythiform, moderately abundant, the Capitellum about 4-5  $\mu$  diameter. Pileus cuticle of subcuneiform to vesiculate cells. Stipe cuticle of repent, <sup>dry</sup> hyphae, the apical region bearing clusters of canocystidia, 22-28 x 3-7  $\mu$ , ventricose to irregularly-crooked or constricted, non-capitate.

Type, leg. Chas. H. Peck, from Grieg, Lewis County, New York, September. A note by Watling, in type-specimen box states that this is a true Conocybe and should be

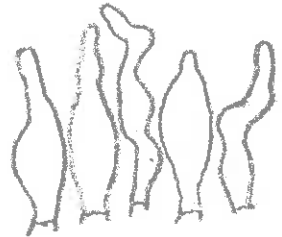
over

transferred to that genus; further, he says it is  
not a member of the subgenus Conocybe, sect.  
Conocybe in its non-capitate ~~non~~ caulocystidia.

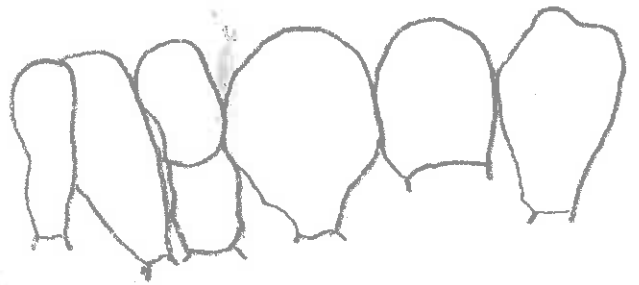
*Galera teneroides* PK.  
Type



Ch x 1000



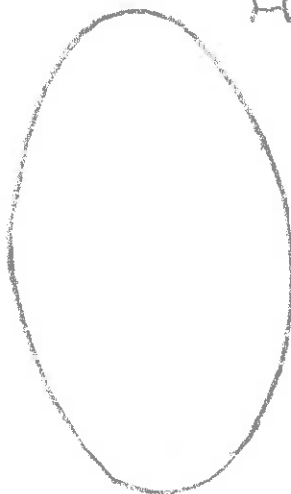
Cauds x 1000



Pilous cuticle - x 1000



Profile



Face

Faces x 8000



3688

CONOCYBE TENEROIDES (Pk.)

*Waking (in ed.)*  
~~comb. nov.~~

On lawn, West Knoxville, leg. Ruby Rice, June 9, 1934

Pileus 7-10 mm broad, conic-campanulate, reddish-brown, hygrophanous, striatulate when wet, even when dry. Context thin.

Lamellae adnexed, narrow, crowded, brownish.

Stipe 27-40 mm long, 0.3-0.5 mm thick, tinged reddish brown, equal above an obscure bulb.

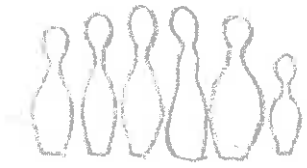
Spores 7.5-9.5 x 4.5-5.5  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, smooth, germ-pore present, at times more or less truncate, slightly reddish brown in 2% KOH. Basidia 4-spored, 22-25 x 7-8  $\mu$ . Pleurocystidia none; cheilocystidia 12-20 x 4-7  $\mu$ , lecythiform. Gill trama a narrow zone of slender, slightly interwoven hyphae. Pileus cuticle of subpyriform cells, mostly pushed out of position. Stipe cuticle of repent hyphae. Caulocystidia none found (*see Type*)

Lange (Fl. Agar. Dan. IV:33) reports cystidia numerous on stipe.

Cf. The Type.

*Conocybe teneroides* (Pk.) Natting

3688



Ch x 1000



Basidium  
x 1000



Profile



Face

Spores x 8000

11983

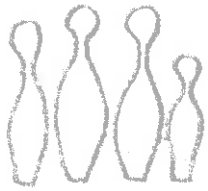
CONOCYBE TENEROIDES (Pk.) <sup>Matting</sup> ~~comb. nov.~~

On soil, pasture, U.T. Farm, Knoxville, April 2, 1939

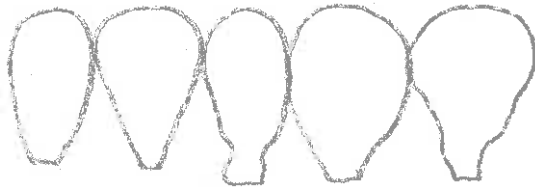
Macro characters as in 3688.

Spores (7.5)8-9(10) x 4.5-5.5  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, smooth, germ-pore present, at times more or less truncate, slightly reddish brown in 2% KOH. Pleurocystidia none; cheilocystidia 16-22 x 4-7  $\mu$ , lecythiform. Gill trama a narrow zone. Pileus cuticle of subpyriform to cuneiform cells. Stipe cuticle of repent hyphae. Caulocystidia not found (see *Fyp*)

*Conocybe teneroides* (Pk) <sup>Natting</sup> ~~comb. nov.~~  
11983



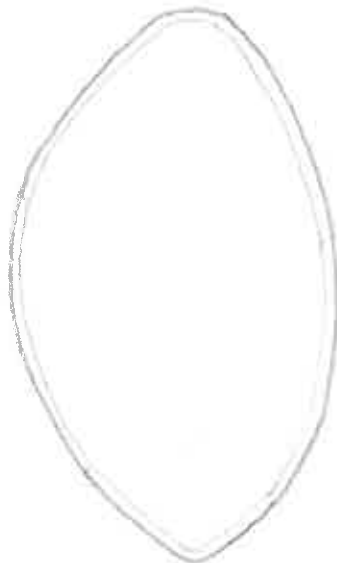
ch x 1000



Pileus cuticle - x 1000



Profile



Face

Spores x 8000

2792

CONOCYBE

On lawn, Timberlake Rd., Knoxville, July 4, 1951

Pileus 6-10 mm broad, conic-campanulate, scarcely expanding, hygrophanous, "cinnamon-rufous," when wet, buff when dry, glabrous, dry, striatulate to the disc. Context very thin.

Lamellae narrowly attached, brownish, edges pallid, close to subdistant, medium broad.

Stipe 2.7-3.5 cm long, 0.2-0.3 mm thick, almost hair-like, pallid-brownish, glabrous except the pruinose apex, dry, equal.

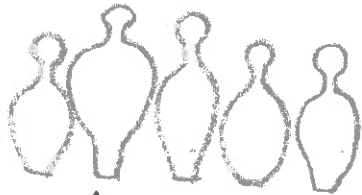
Spores 11-14 x <sup>6.5</sup> 8  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, with a germ-pore, often more or less truncate, smooth, reddish brown in 2% KOH. Basidia 22-27 x 9-11  $\mu$ , 2-4-spored. Pleurocystidia none; cheilocystidia 17-22 x 7-11  $\mu$ , lecythiform, sometimes rather numerous. Gill trama a narrow zone of slender, subparallel hyphae. Pileus cuticle cellular, cells 16-24 x 12-20  $\mu$ , pyriform to irregularly subglobose. Stipe cuticle of repent hyphae, with scattered lecythiform caulocystidia. Clamp connections not found.

This may be near Conocybe capillaripes (Pk.)

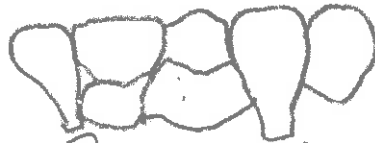
I do not recall having observed lecythiform caulocystidia before. These were found well below the point of gill-attachment, and were clearly on the stipe-cuticle.

Conocybe

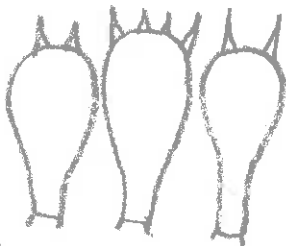
2792



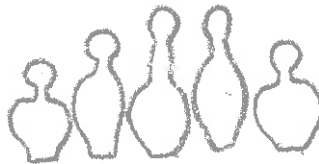
Sp. x 1000



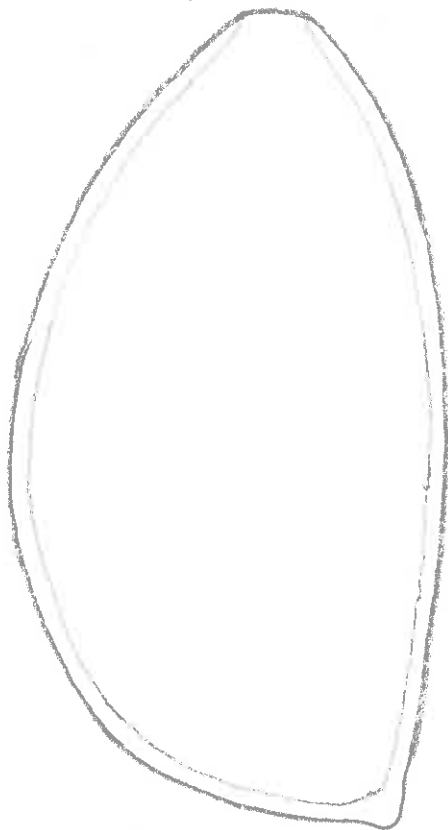
Pileus cuticle



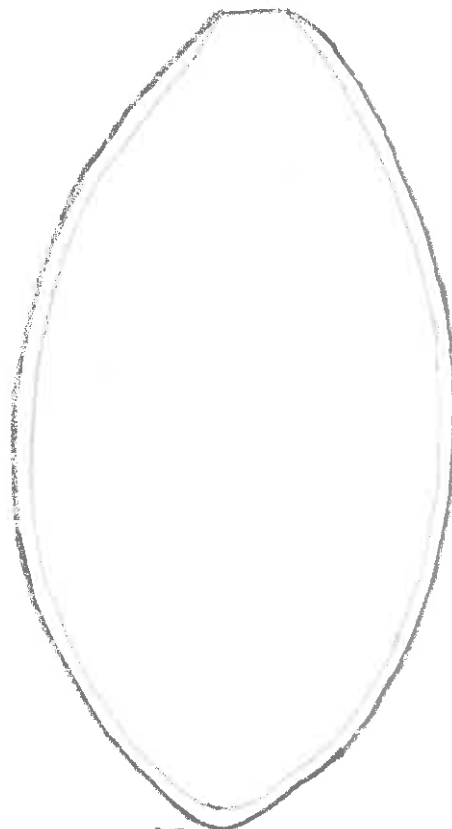
Bardia x 1000



Caulis x 1000



Profile



Face

Spores x 8000

3660

CONOCYBE

On soil, rich pasture, rich with cow-manure, New Market,  
Virginia, leg. H. R. Milliken, May 3, 1959

Notes by Milliken

Pileus 1-2.7 cm broad, conic, "Naples yellow" when young, then tawny to light brown, viscid when wet, smooth, margin even.

Lamellae adnexed, young gills creamy, mature gills brownish pink to rusty brown, lamellulae numerous, close, medium narrow.

Stipe 4.5-8 cm long, 0.3-0.6 mm thick, equal, pallid brownish, striatulate. Veil none.

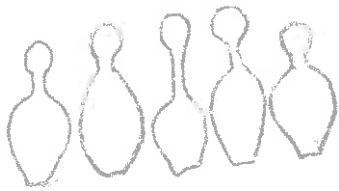
Notes by Hesler

Spores 12-17 x 7.5-9(10)  $\mu$ , obscurely inequialteral in profile, ellipsoid in face view, smooth, truncate, wall 0.4  $\mu$  thick, reddish brown in 2% KOH. Pleurocystidia none; cheilocystidia 16-20 x 6-9  $\mu$ , lecythiform. Pileus cuticle a palisade of cuneiform cells, 18-30 x 6-15  $\mu$ , resting on a subcuticular, gelatinous zone of irregularly shaped cells, the zone 100-150  $\mu$  thick. Stipe cuticle of repent hyphae, bearing mounds of small caulocystidia, 15-25 x 3-6  $\mu$ , clavate or ventricose with a neck.

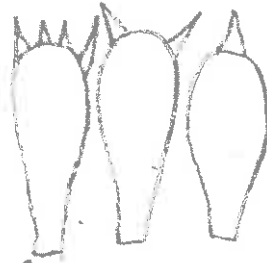
Cf. C. tenera (Fr.) Fayod.

Conocybe

3660



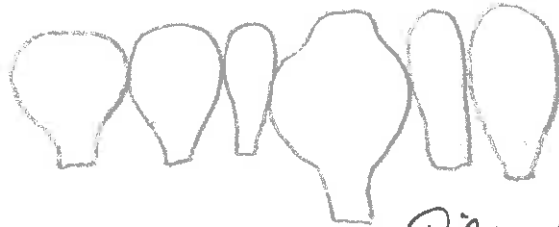
Ch x 1000



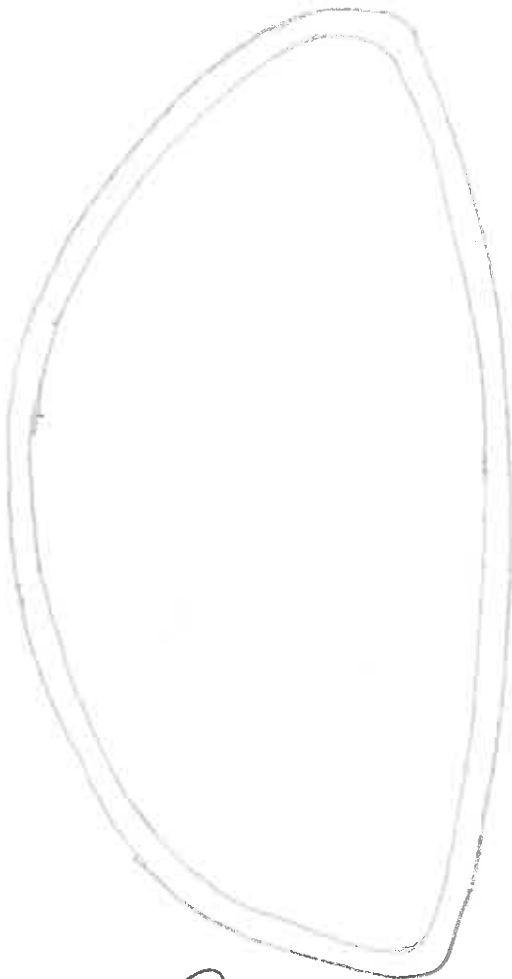
Basidia x 1000



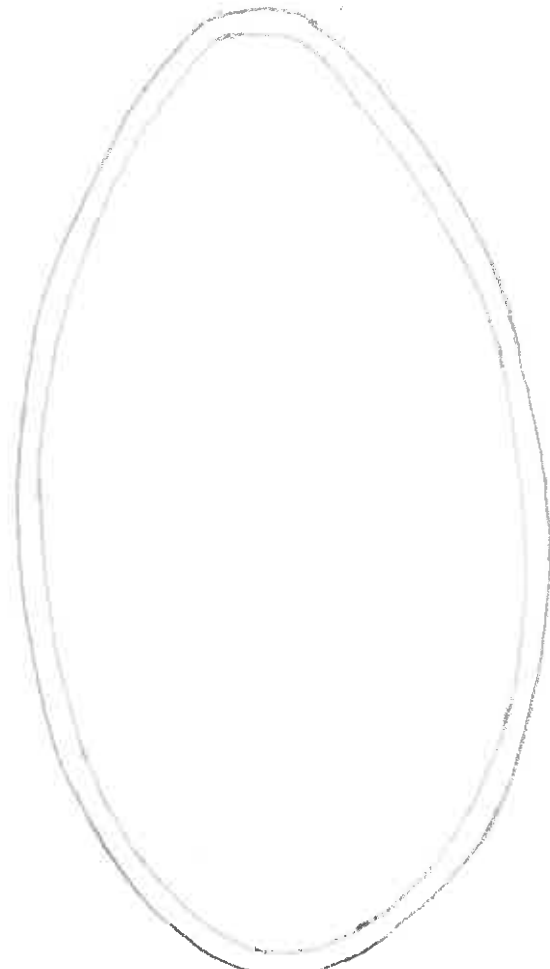
Caulo x 1000



Pileus Cuticle x 1000



Profile



Face

Spores x 8000



same as 2792

10395

CONOCYBE

On sandy soil, in woods, Elkmont, Tenn., GSMNP, June 8, 1937

Pileus 7-10 mm broad, at first conic (about 5 mm high), becoming campanulate, striate to disc, "cinnamon rufous," glabrous but appearing plush-like under lens, dry. Context thin.

Lamellae close, rather narrow, brownish-ferruginous, edges whitish.

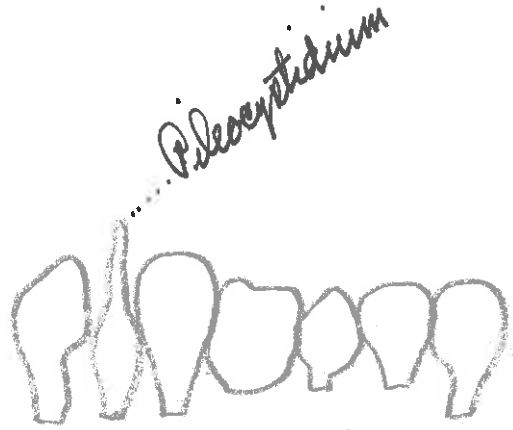
Stipe 4-5 cm long, 0.5 mm thick, reddish brown, dry, slightly striate, apex with slight "mounds," otherwise glabrous, equal.

Spores 11-15 x 6-8.5  $\mu$ , slightly inequilateral in profile, ellipsoid (often rather slender) in face view, smooth, wall 0.4  $\mu$  thick, truncate, reddish brown in 2% KOH. Pleurocystidia none; cheilocystidia 10-23 x 4-6  $\mu$ , lecythiform, rather inconspicuous. Gill trama a narrow zone of slender, slightly interwoven hyphae. Pileus cuticle of somewhat variable cells: pyriform, subclavate, irregularly globose, with an occasional pileocystidium, ventricose with a neck. Stipe cuticle of repent hyphae with widely scattered "mounds" of small clavate caulocystidia, 7-9 x 2-3  $\mu$ , and also few widely scattered lecythiform, 9-12 x 4-5  $\mu$ .

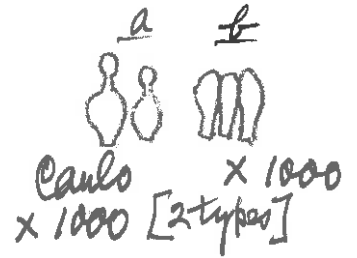
Conocephala  
10395



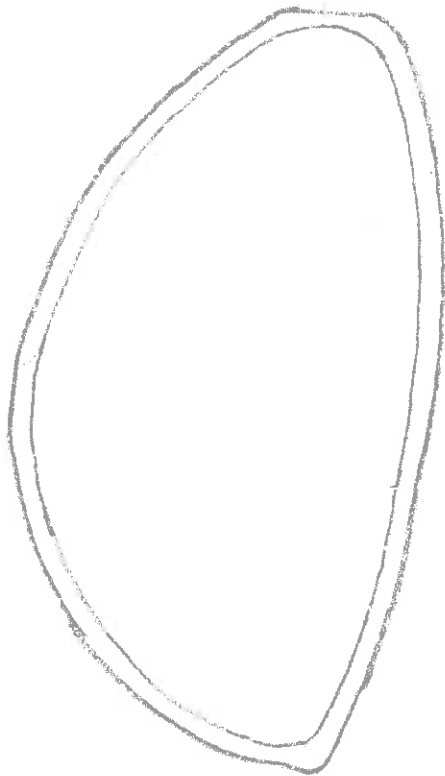
Ch x 1000



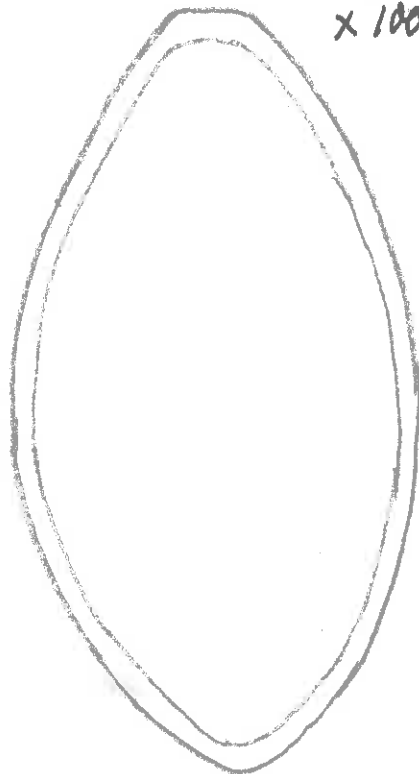
Pileus cuticle - x 1000



Caules x 1000 [2 types]



Profile



Face

Spores x 8000

10452

CONOCYBE

On humus, flower-bed, Timberlake Rd., Knoxville, June 6, 1957

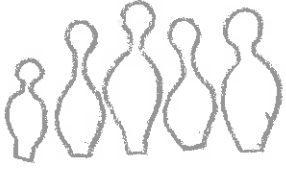
Pileus 14-20 mm broad, conic-campanulate, atomate, hygrophanous, appearing glabrous (wet) and fibrillose (dry), "sayal brown" (wet), "pinkish buff" (dry), striatulate. Context thin, brownish, fragile; odor and taste slight.

Lamellae emarginate-uncinate, close, broad, "sayal brown," edges minutely rough.

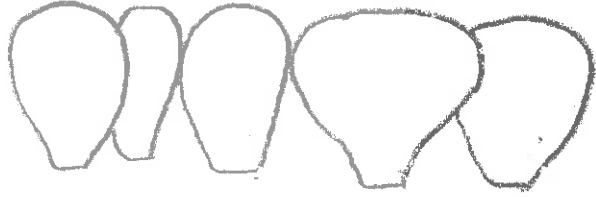
Stipe 5-7 cm long, 1.5-2.0 mm thick, fragile, dingy-whitish, apex mealy, elsewhere with few fibrils, equal, hollow, faintly striate.

Spores in deposit: "sayal brown" to "snuff brown," 8-10.5 x 5-5.5(6)  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, smooth, truncate, wall 0.3  $\mu$  thick, reddish-brown in KOH. Pleurocystidia none; cheilocystidia 12-18 x 5-8  $\mu$ , lecythiform. Pileus cuticle of cuneiform cells. Stipe cuticle of repent hyphae. Caulocystidia a) filamentous, crooked, 28-60 x 1.5-2  $\mu$ ; b) more or less lecythiform; few.

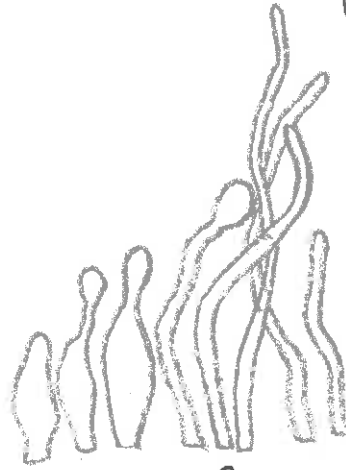
Conybe  
10452



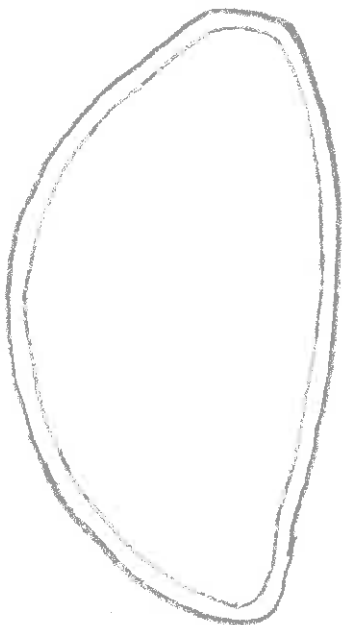
ch x 1000



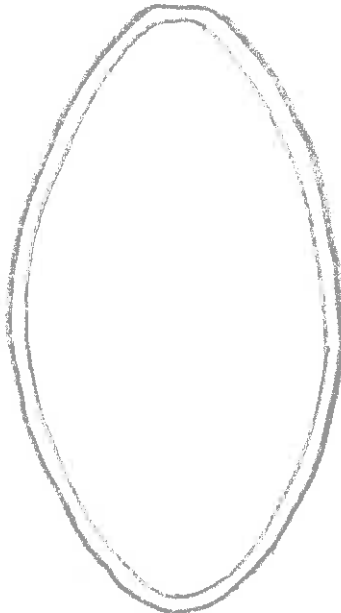
Pileus Cuticle - x 1000



Caulo x 1000



Profile



Face

Spores x 8000

12445

CONOCYBE

On lawn, Hesler's, Knox Co., June 5, 1967

Pileus 1.5-2 cm broad, conic, "light buff," disc "antimony yellow," atomate, striatulate, not deliquescing. Context thin; odor and taste mild.

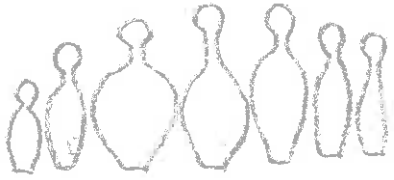
Lamellae close, medium broad, not deliquescing.

Stipe 5-6 cm long, 0.4-1.0 mm thick, pallid brown, obscurely or not at all striatulate, equal above a small bulb.

Spores 12-16 x 8-9.5  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, smooth, truncate, wall 0.4  $\mu$  thick. Pleurocystidia none; cheilocystidia 12-20 x 4-11  $\mu$ , lecythiform. Gill trama a slender zone, hyphae somewhat interwoven. Pileus cuticle of cuneiform cells, with scattered pileocystidia among cells, ventricose. Stipe cuticle of repent hyphae. Caulocystidia in mounds, 12-20 x 4-12  $\mu$ , clavate to ventricose.

At first labelled C. tenera (Fr.) Fayod.

Conocybe  
12445



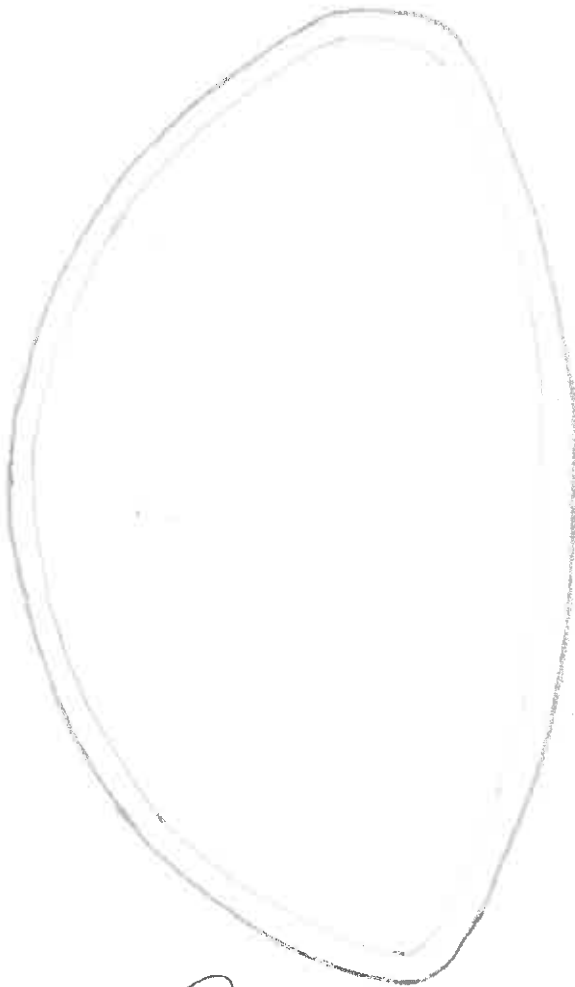
Spores x 1000



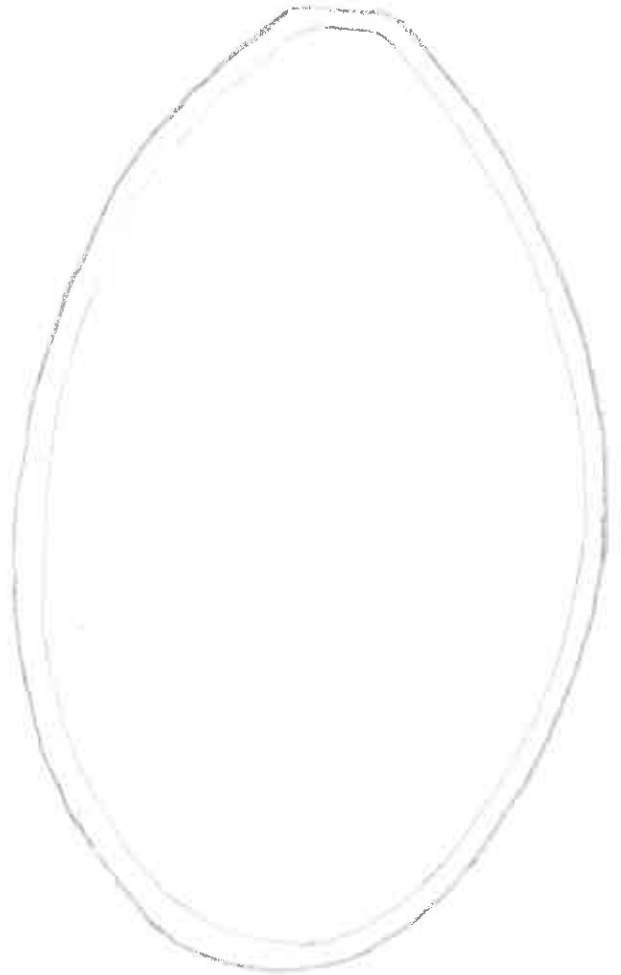
Pileus cuticle + Pileo.  
x 1000



Conidia x 1000



Profile



Face

Spores x 8000

13378

CONOCYBE

On horse dung, University Farm, Knoxville, developed in the laboratory, S. L. Meyer, February 24, 1941

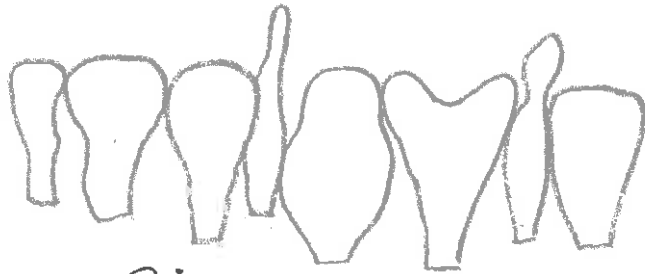
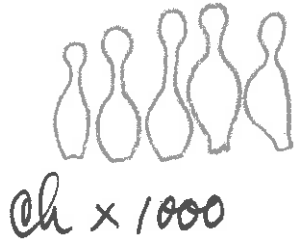
Pileus 3-4 mm broad, convex-cylindric, "russet," with fine white hairs, subhygrophanous, margin even. Context thin, concolorous. Lamellae narrowly adnate, ventricose, close, pale cinnamon, edges even and paler.

Stipe 10 mm long, 1 mm thick, dingy whitish, pruinose, striate, hollow, equal, base slightly enlarged.

Spores 12-16 x (7.5)8-9  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, wall 0.4  $\mu$  thick, smooth, truncate, reddish brown in KOH. Pleurocystidia none; cheilocystidia 15-20 x 4-7  $\mu$ , lecythiform, rather numerous. Gill trama a narrow zone of slender, slightly interwoven hyphae. Pileus cuticle a palisade of cuneate cells, with widely scattered pileocystidia, 26-28 x 4-5  $\mu$ , subventricose. Stipe cuticle of repent hyphae, bearing small mounds of caulocystidia, 15-18 x 3-5  $\mu$ , subventricose.

Conway

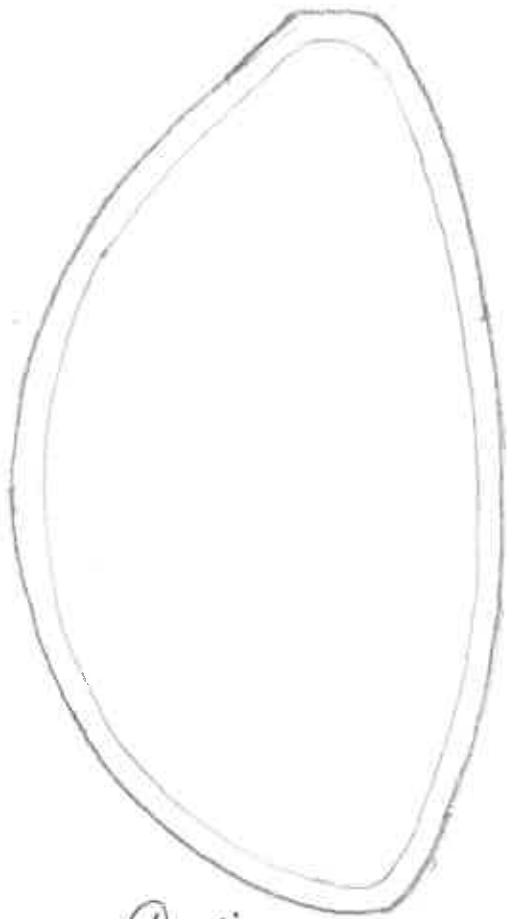
13378



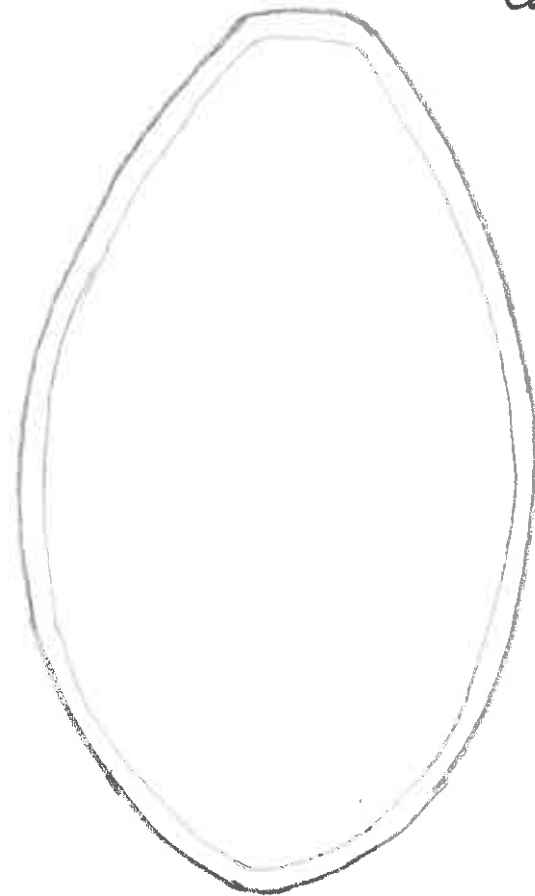
Pileus cuticle  
x 1000



caulis  
x 1000



Profile



Face

Spores x 8000



Same as 18043

13380

CONOCYBE

On horse dung, Knoxville (developed in lab.), coll. S. L. Meyer, February 24, 1941

Pileus 8-18 mm broad, hemispheric-convex to conic-campanulate, hygrophanous, "mikado brown" (when young), "light buff" (mature, dry), "Prouts brown" to "saya brown" (mature, moist), disc often blackish, white pubescent, atomate, slightly to distinctly striate to disc (wet), even (dry). Context thin, brownish.

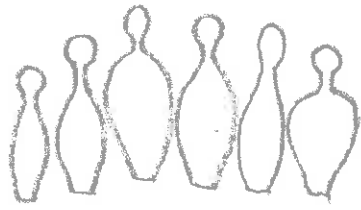
Lamellae emarginate or uncinata, <sup>medium broad,</sup> ~~ventricose,~~ close to subdistant, "cinnamon brown" to rusty brown (paler when young), edges crenate.

Stipe 3-13 cm long, 0.5-2 mm thick, striate, white-pubescent, white then brownish, hollow, equal, base sometimes sub-bulbous, fragile.

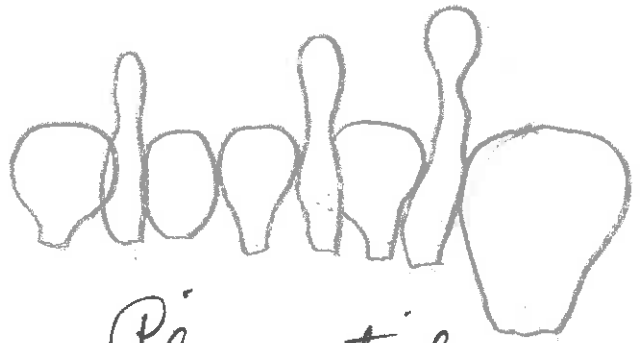
Spores 12-17 x 8-10  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, smooth, truncate, red-brown in 2% KOH. Basidia 27-30 x 12-15  $\mu$ , 2-spored. Pleurocystidia none; cheilocystidia 16-22 x 4-7  $\mu$ , lecythiform. Pileus cuticle a palisade (of one layer) of more or less pyriform cells, with scattered pileocystidia, 25-35 x 5-6  $\mu$ , somewhat ventricose, subcapitate. Stipe cuticle of repent hyphae, with small tufts of caulocystidia, 28-35 x 2-4  $\mu$ , somewhat hyphoid.

Lange reports a form of C. pubescens on horse droppings with spores 15-17 x 8-10  $\mu$ .

Conocyte  
13380



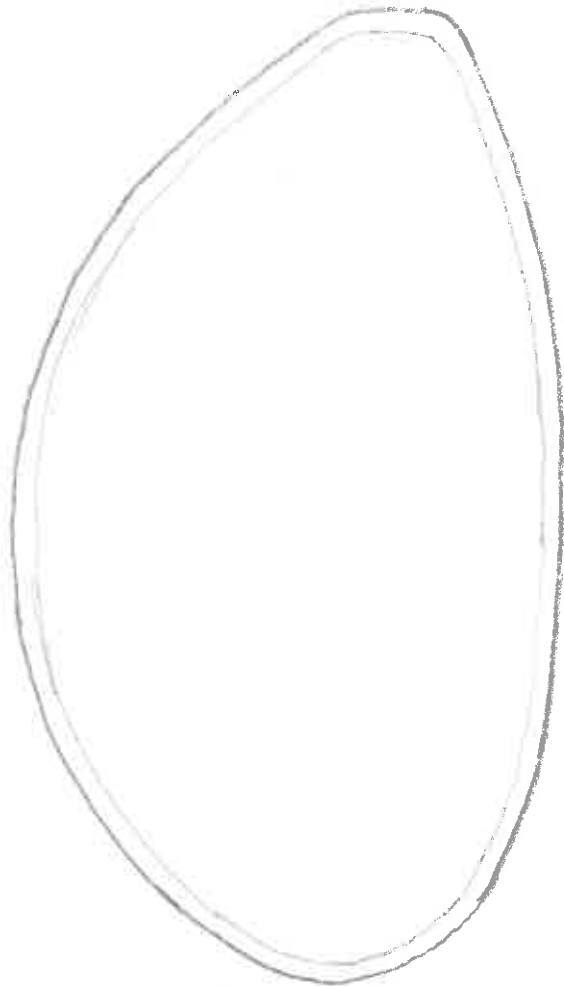
ch x 1000



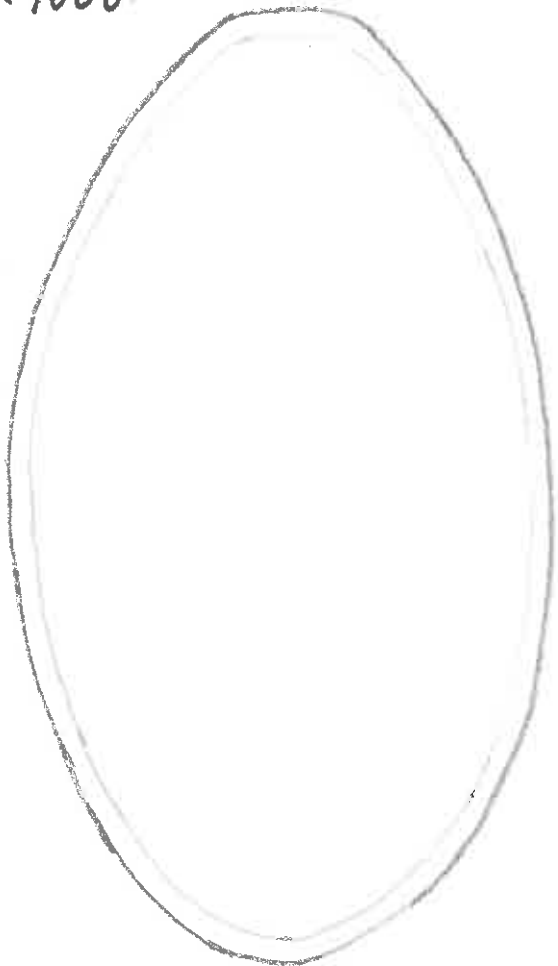
Pilars articles  
+ pilos. x 1000



Caul tuft  
x 1000



Profile



Face

Spores x 8000

14156a

CONOCYBE

On horse dung, developed in the Laboratory, Knoxville,  
April 16, 1942

Pileus 9-15 mm broad, campanulate, buff colored,  
glabrous, dry, margin even. Context thin.

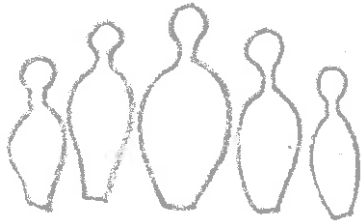
Lamellae adnate to adnexed, brown, edges paler, close  
to nearly subdistant, medium broad.

Stipe 7-12 cm long, 1-2 mm thick (apex), tapering  
upward slightly (about 2 mm at base, but not bulbous,  
pallid brownish, dry, striate, apex pruinose.

Spores 11-16(18) x 8-9  $\mu$ , obscurely inequilateral in  
profile, ellipsoid in face view, smooth, truncate, red-  
brown in KOH. Basidia 27-32 x (7)9-11  $\mu$ , (2)4-spored.  
Pleurocystidia none; cheilocystidia 18-25 x 7-12  $\mu$ ,  
lecythiform, at times abundant. Pileus cuticle of  
subglobose to pyriform cells, 16-18 x 9-15  $\mu$ . Stipe  
cuticle of repent hyphae, apical region with numerous tufts  
of caulocystidia, 36-72 x 2-5  $\mu$ , filamentous (hyphoid), the  
base often slightly enlarged. Lactifers present in pileus  
trama, 6-10  $\mu$  broad.

Conoceph

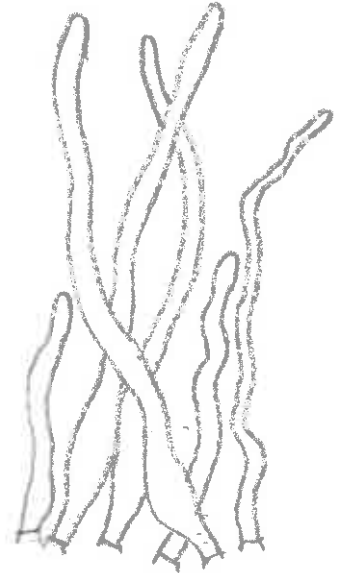
14156a



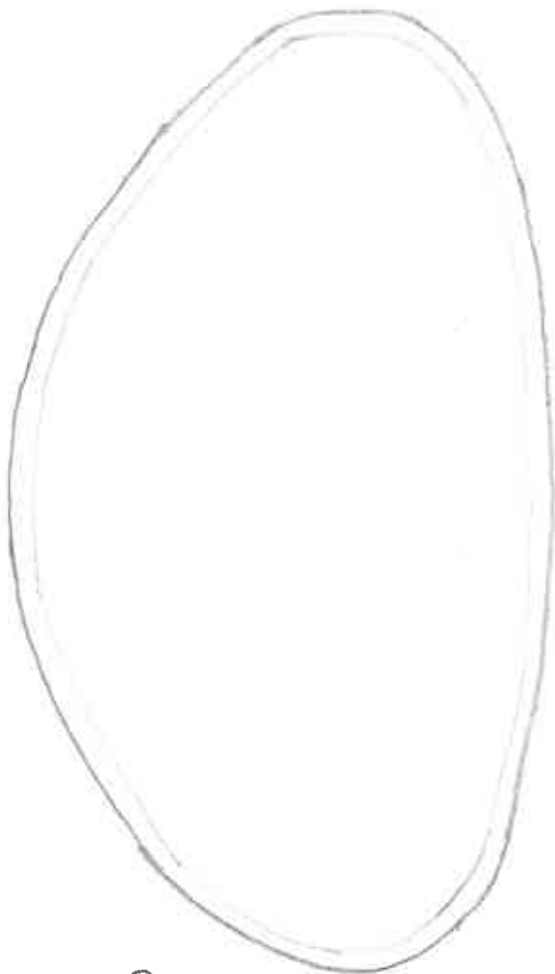
Ch x 1000



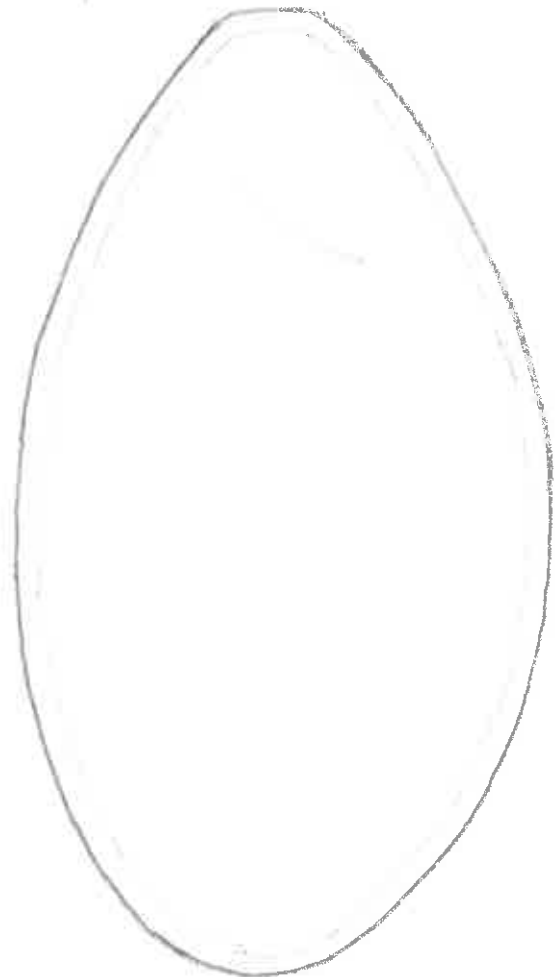
Basidium  
x 1000



Caulo x 1000



Profile



Face

Spores x 8000

14440

CONOCYBE

On soil, lawn, University Main Campus, Knoxville, leg.

Haun Ford, July 13, 1942 (originally labelled

Naucoria tabacina)

Pileus 4-10 mm broad, convex, expanding somewhat, fulvous-brown, glabrous, margin striate, dry. Context very thin.

Lamellae adnexed, brownish, broad, medium close.

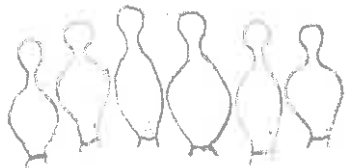
Stipe 1-2 cm long, hair-like (0.25-0.5 mm thick), pallid, equal, dry, hollow.

Spores 7-8.5 x 4-5  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, rusty brown ~~in 2%~~ in 2% KOH, smooth, truncate. Basidia 16-20 x 6-7  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 14-18 x 5-7(8)  $\mu$ , lecythiform (flask-shaped, pin-beaded), the neck very short, the capitellum rather abruptly enlarged at the neck-apex, scattered but not abundant. Gill trama of large cells. Pileus trama of large cells. Pileus cuticle more or less a palisade of dry, subglobose to pyriform cells, 18-25 x 9-18  $\mu$ . Stipe cuticle of dry, repent hyphae; no caulocystidia found. Clamp connections not found.

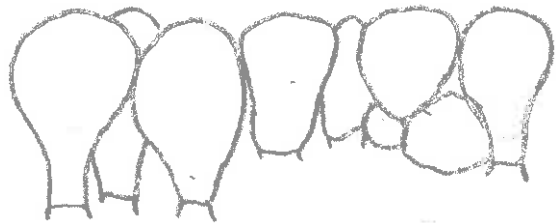
Cf. Conocybe teneroides (Pk.), and Galera pilosella.

Conococye

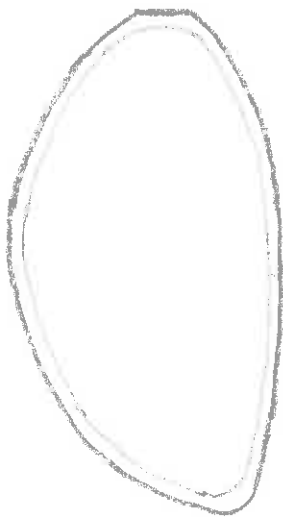
Term - 14440



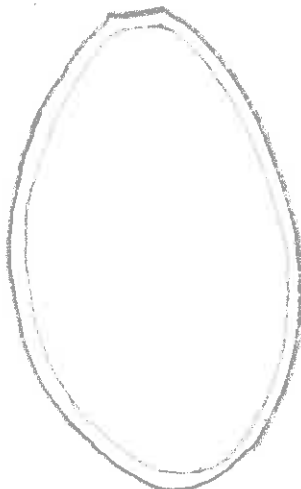
Ch x 1000



Pileus cuticular palisade  
x 1000



Profile



Face

Spores x 8000

Same as 20398

16338

CONOCYBE

On lawn, Park Headquarters, Gatlinburg, Tenn, leg.

Stanley A. Cain, June 15, 1944

Pileus 4-10 mm broad, campanulate-convex, brown, glabrous, striate to disc. Context thin.

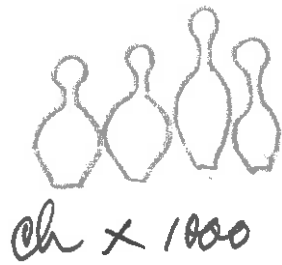
Lamellae narrowly adnate, close, rather narrow, brown.

Stipe 2-4 cm long, 0.2-0.3 mm thick, hair-like, pallid brownish to reddish-brown, not striate, equal (not bulbous).

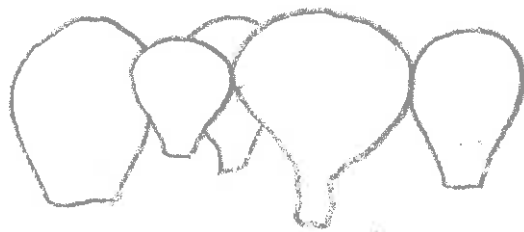
Spores 8-10 x 4.5-5.5  $\mu$ , obscurely to not at all inequilateral in profile, ellipsoid in face view, truncate, brown (not red-brown) in 2% KOH, smooth. Pleurocystidia none; cheilocystidia 15-20 x 6-10  $\mu$ , lecythiform. Pileus cuticle cellular, cells 15-28 x 12-24  $\mu$ , cuneiform to subspathulate. Stipe cuticle of repent hyphae; caulocystidia hyphoid to ventricose, 10-22 x 2-7  $\mu$ , in scattered tufts.

Cf. 20398.

Conocybe  
16338



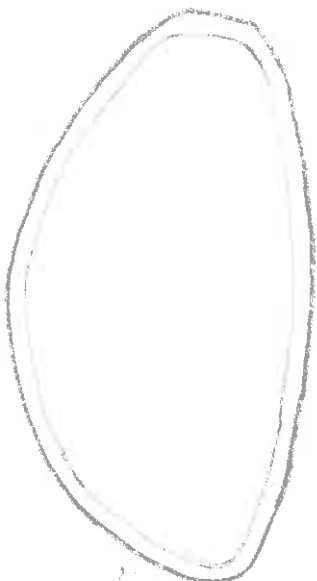
ch x 1000



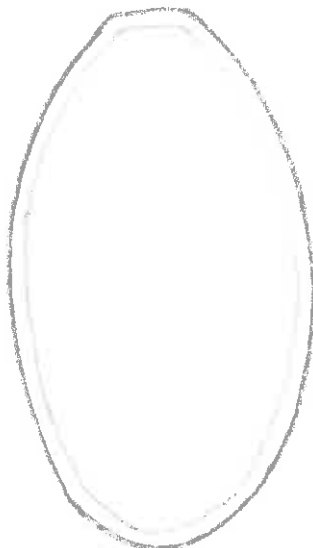
Pileus cuticle



Caulo x 1000



Profile



Face

Spores x 8000



17187

CONOCYBE

On horse dung, Cades Cove, September 15, 1945

Pileus 7-15 mm broad, ovoid-conic then conic-campanulate, not expanding, "tawny olive," disc "sayaal brown," glabrous, margin even. Context thin.

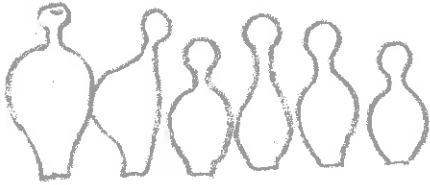
Lamellae narrowly adnate to adnexed, "sayaal brown," edges whitish, close, medium broad.

Stipe 5-10 cm long, 0.4-0.6 mm thick, pallid brown, in age reddish brown, apex pruinose, not striate, equal.

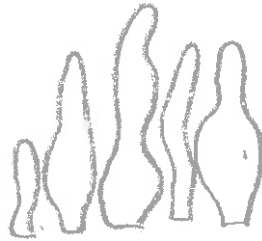
Spores 11-14(16) x 7-8.5(9)  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, smooth, truncate, wall 0.3  $\mu$  thick, reddish-brown in KOH. Pleurocystidia none; cheilocystidia 16-22 x 7-11  $\mu$ , lecythiform. Pileus cuticle cellular, cells subglobose to cuneiform, with scattered hyphoid pileocystidia. Stipe cuticle of repent hyphae, with scattered tufts of caulocystidia, of two types: hyphoid, 12-24 x 2-3  $\mu$ ; ventricose, 23-27 x 6-8  $\mu$ , with more or less of a neck.

Conoeybe

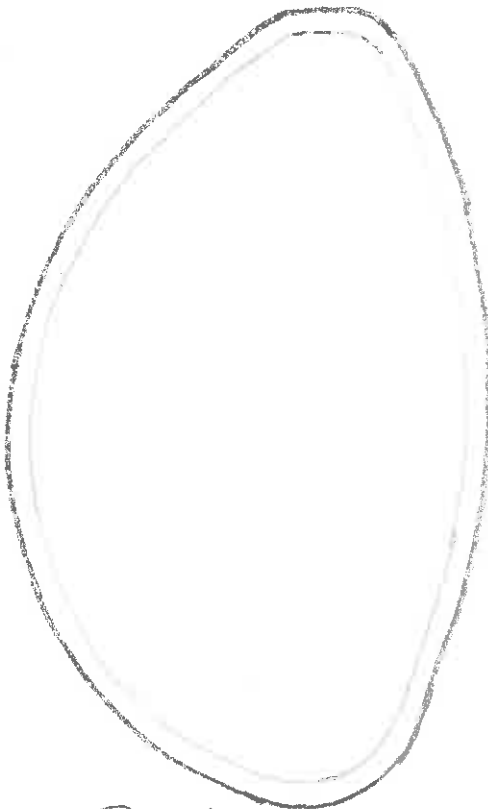
1718M



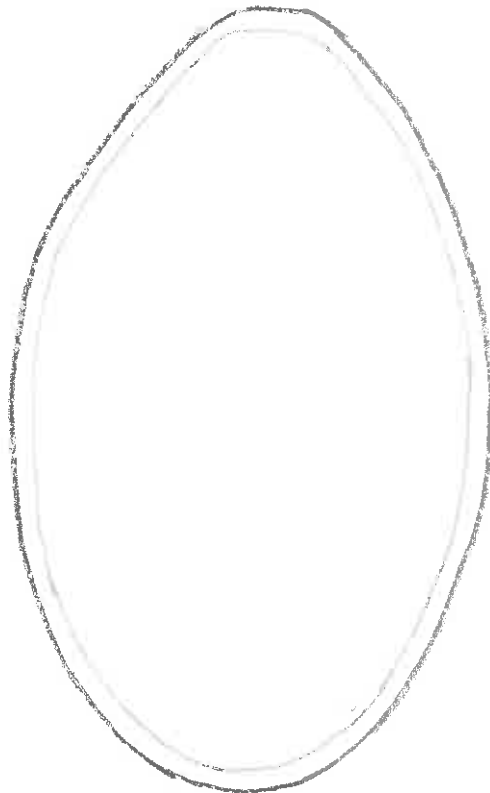
ch x 1000



Caubs x 1000



Profile



Face

Faces x 8000

NAME 11 13380

18043

CONOCYBE

On horse dung, Indian Creek, GSMNP, near Bryson City,  
N. C., August 16, 1947

Pileus 2-4 cm broad, conic-campanulate, "argus brown"  
to "verona brown," canescent, obscurely striatulate.  
Context fragile, watery brown.

Lamellae narrowly attached, close, narrow, white at  
first, then "snuff brown" to "argus brown."

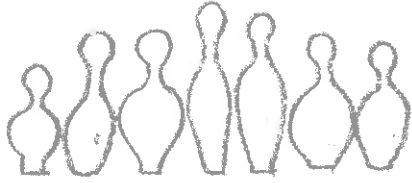
to medium broad,

Stipe 7-10 cm long, 2-3 thick, white at first, then  
tinged brown, striate, pubescent.

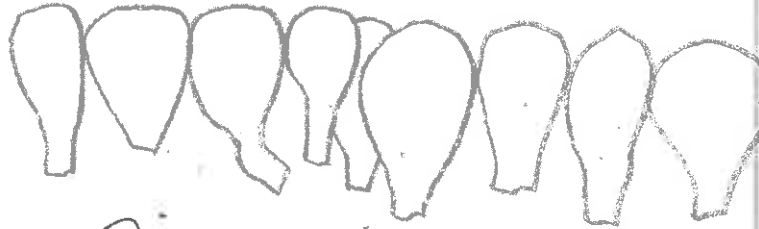
Spores 10-15 x (6.5)7-<sup>9</sup>~~8-10~~ μ, obscurely, inequilateral  
in profile, ellipsoid in face view, smooth, truncate,  
reddish brown in KOH. Basidia 24-28 x 10-13 μ, (2)-4-spored.  
Pleurocystidia none; cheilocystidia 14-23 x 5-9 μ,  
lecythiform, sometimes abundant. Gill trama a narrow zone  
of slender, slightly interwoven hyphae. Pileus cuticle a  
palisade of cuneiform to subspathulate cells, 22-25 x 8-15 μ,  
Stipe cuticle of repent hyphae, with scattered, hyphoid  
caulocystidia, 44-50 x 2 μ, flexuous, and also with scattered  
small mounds of cells, 12-18 x 5-9 μ.

with pleurocystidia

Conway  
18043



Ch x 1000

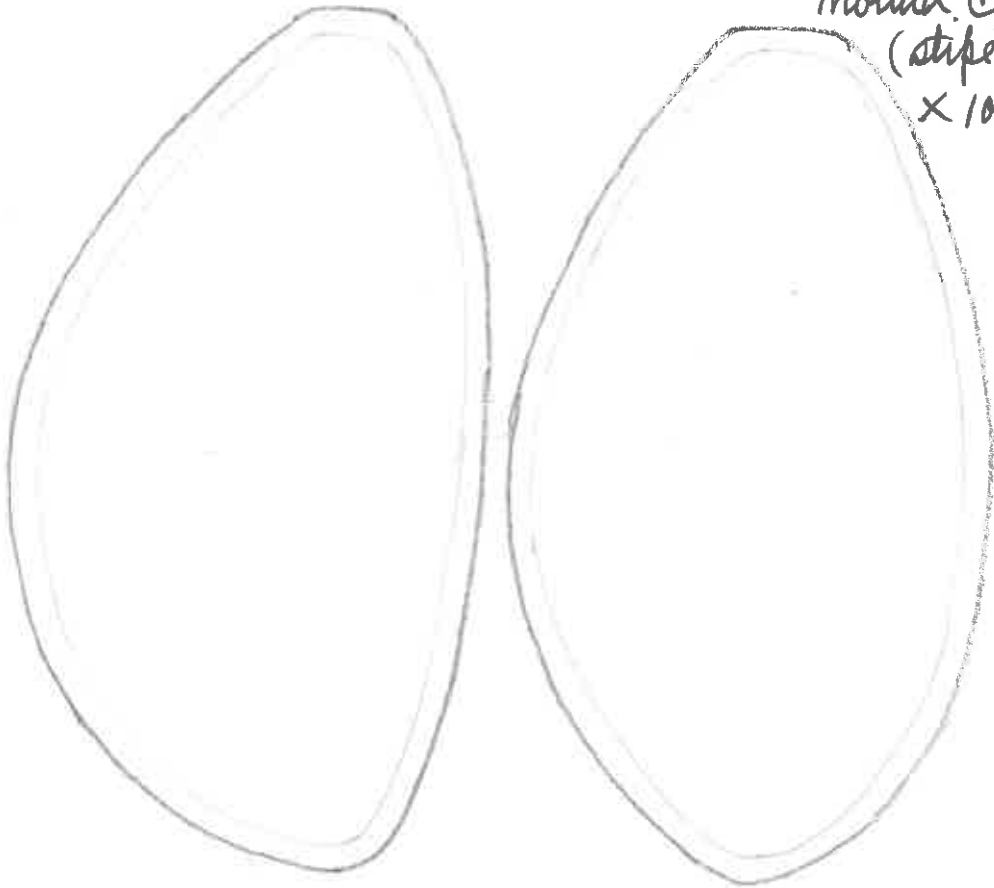


Pileus cuticle x 1000



mound cells  
(stipe apex)

x 1000 Caulo (scattered)  
x 1000



Same as 16338

20398

CONOCYBE

On lawn, Timberlake Rd., Knoxville, May 21, 1952

Pileus 5-12 mm broad, conic-campanulate, brownish, glabrous, striatulate to obscurely so to disc.

Lamellae narrowly attached, brown, rather close, medium broad.

Stipe 2-3 cm long, 0.2-0.25 mm thick, filiform, brownish, not striate, equal.

Spores 8-10 x 4.5-5  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, smooth, truncate, brown (not red) in KOH. Pleurocystidia none; cheilocystidia 12-18 x 5-8  $\mu$ , lecythiform. Pileus cuticle of cells, some rather large (30-50 x 24-28  $\mu$ ), others smaller, cuneiform, 1-2 layers deep; no pileocystidia seen. Stipe cuticle of repent hyphae, with mounds of small cystidioid cells, 8-20 x 2-5  $\mu$  (caulocystidia).

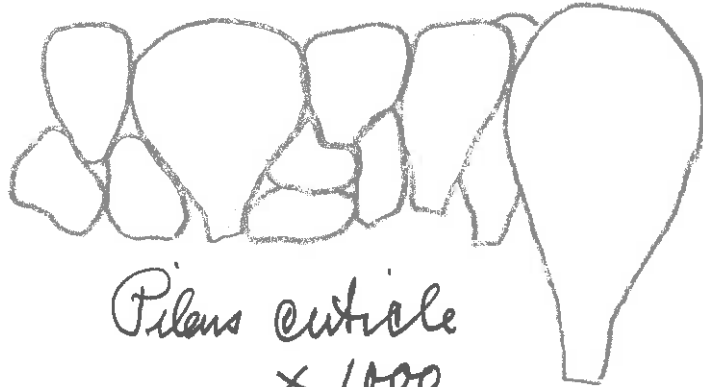
Cf. 16338.

Conoeybe

20398



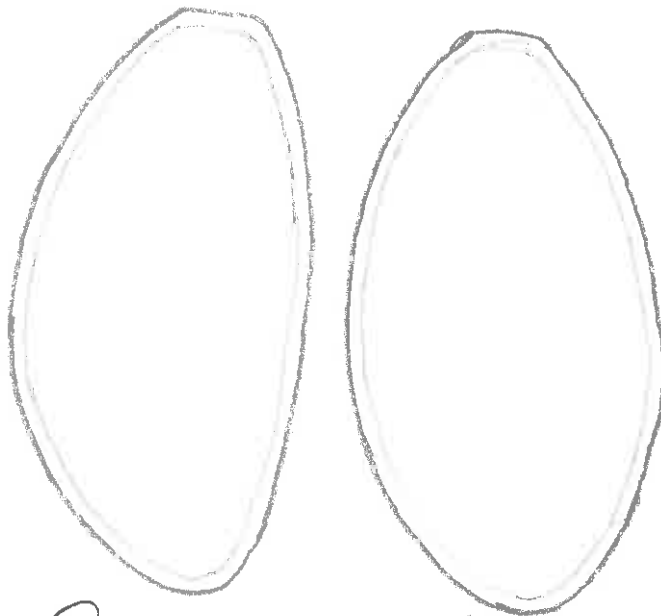
Ch  
x 1000



Pilans cuticle  
x 1000



Carlo tuft  
x 1000



Profile

Face

Spores x 8000

20409

CONOCYBE

On moist soil, woods road, Cades Cove, Tennessee,  
May 27, 1957

Pileus 7-12 mm broad, conic-campanulate, pallid buff, atomate, striatulate to disc. Context thin.

Lamellae adnexed, brownish, close, medium broad, edges whitish.

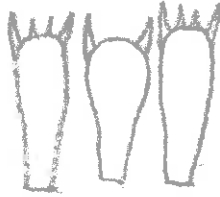
Stipe 3-4 cm long, hair-like (0.1-0.3 mm thick), pallid-brownish, not striate, apex slightly pruinose.

Spores (7.5)8-10 x 4-5(5.5)  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, smooth, truncate, reddish brown in 2% KOH. Basidia 20-20 x 7-8  $\mu$ , 2-4-spored. Pleurocystidia none; cheilocystidia 16-20 x 6-7  $\mu$ , lecythiform, scattered, inconspicuous. Gill trama a rather broad zone of hyphae which are composed of cells, 18-30 x 10-16  $\mu$ . Pileus cuticle cellular, cells sub-spathulate to subglobose. Stipe cuticle with mounds of cells--caulocystidia, 12-25 x 3-6  $\mu$ , ventricose, often with more or less a neck, at times capitate.

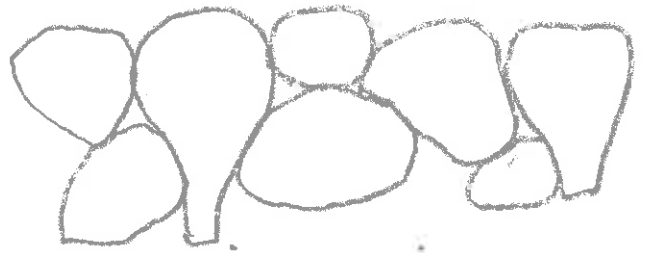
Concybe  
20409



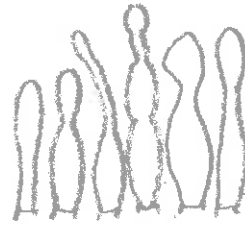
Ch x 1000



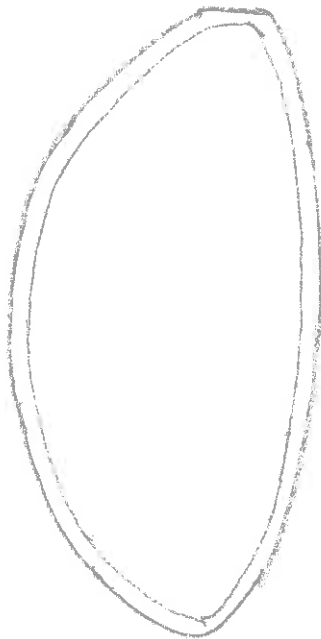
Basidia  
x 1000



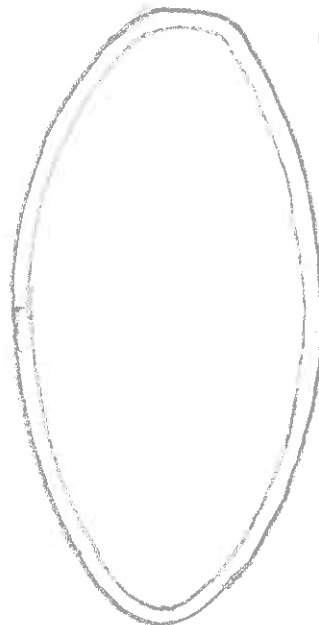
Pileus cuticle x 1000



Caulo  
x 1000



Profile



Face

Spores x 8000



20441

CONOCYBE

Photo

On grassy soil, Indian Gap, GSMNP, North Carolina,  
July 10, 1952

Pileus 10-15 mm broad, conic, hygrophanous, "mikado brown," when wet, plush-like and paler when dry, margin even. Context thin, brownish; odor and taste mild.

Lamellae narrowly adnate, medium close, "mikado brown."

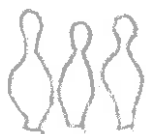
Stipe 5-7 cm long, 1-2 mm thick, apex pruinose, elsewhere glabrous, pale brownish, hollow, equal.

Spores 10.5-13 x (5.5)6-7  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, smooth, rather narrowly truncate, reddish brown in 2% KOH, wall 0.3  $\mu$  thick. Pleurocystidia none; cheilocystidia 13-15 x 4-6  $\mu$ , lecythiform, scattered, inconspicuous. Pileus cuticle of ventricose to irregularly-shaped or brick-shaped cells. Stipe cuticle repent; caulocystidia 23-27 x 2-7  $\mu$ , crooked-filamentous to ventricose and with a neck, more rarely capitate.

Smith says: "Conocybe Sm-23930."

Conocybe

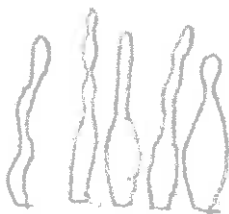
20441



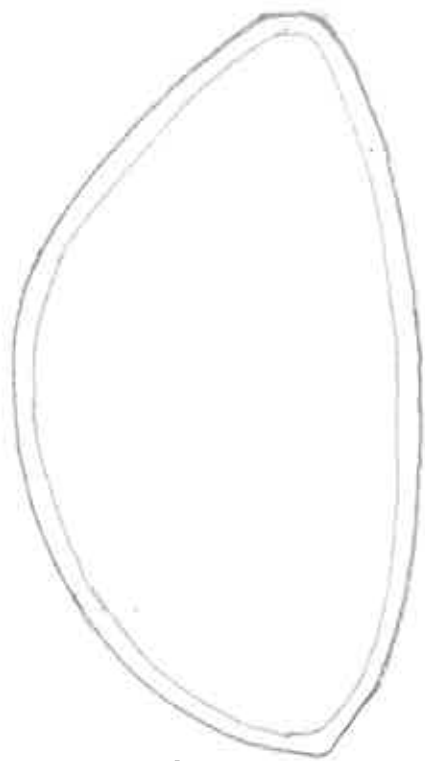
ch x 1000



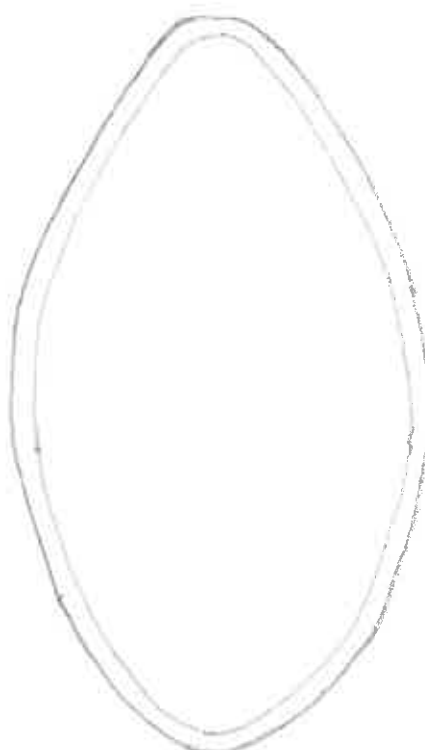
Pileus cuticle



Caulo x 1000



Profile



Face

Spores x 8000



20441 - ~~Galeria Conocybe (Kicker)~~  
Conocybe (Sm. 23930.?)

CONOCYBE NO. 20837

(=Gonocybe Sm-12093)

Pileus 1-1.5 cm. broad, conic, not expanding, atomate, "sayaal brown," shining, glabrous, faintly striate. Flesh thin, fragile, dingy. Lamellae adnate, ascending, broad, close, "cinnamon brown," edges fimbriate. Stipe 3-4 cm. x 1-1.3 mm., delicate, soon collapsing, apex pruinose, striate, equal, dry.

Spores ellipsoidal, 10-16 x 7-8  $\mu$ . Pleurocystidia none; cheilocystidia bottle-shaped, capitate, 20-25 x 7-9  $\mu$  (neck 1.5  $\mu$ , head 3-4  $\mu$ ). Cuticle of pileus composed of a palisade of pyriform to ellipsoidal cells, 24-32 x 20-24  $\mu$ .

Habitat and Distribution. - On lawn, Tennessee, May.

Smith says it is near C. tenera.

20837

~~20873~~

CONOCYBE

On lawn, Timberlake Rd., Knox Co., May 9, 1953

Pileus 1-1.5 cm broad, conic, not expanding, atomate, "syal brown," shining, glabrous, faintly striate. Context thin, fragile, dingy.

Lamellae adnate, ascending, broad, close, "cinnamon brown," edges fimbriate.

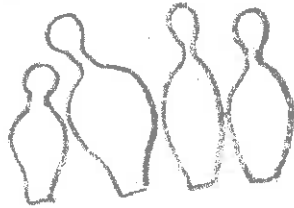
Stipe 3-4 cm long, 1-1.3 mm thick, delicate, soon collapsing, apex pruinose, striate, equal, dry.

Spores 11-15 x 6-7(7.5)  $\mu$ , rather slender, obscurely inequilateral in profile, ellipsoid in face view, smooth, truncate, reddish brown in 2% KOH. Basidia 18-27 x 9-11  $\mu$ , 2-spored. Pleurocystidia none; cheilocystidia 17-25 x 7-11  $\mu$ , lecythiform, capitellum 3-4  $\mu$  diameter. Pileus cuticle of cuneiform cells. Stipe cuticle of repent hyphae. Caulocystidia 14-16 x 5-6  $\mu$ , lecythiform, very widely scattered, inconspicuous.

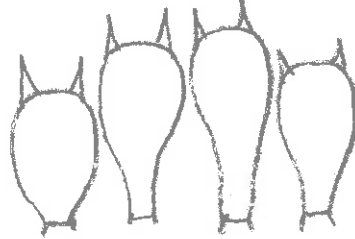
Smith: it is close to Sm-12093, and near C. tenera.

Conocephale

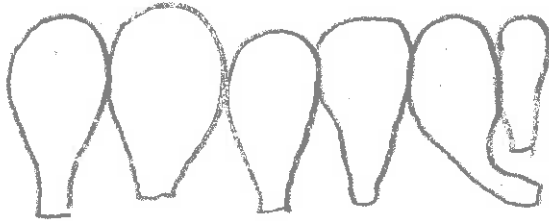
20837



Ch x 1000



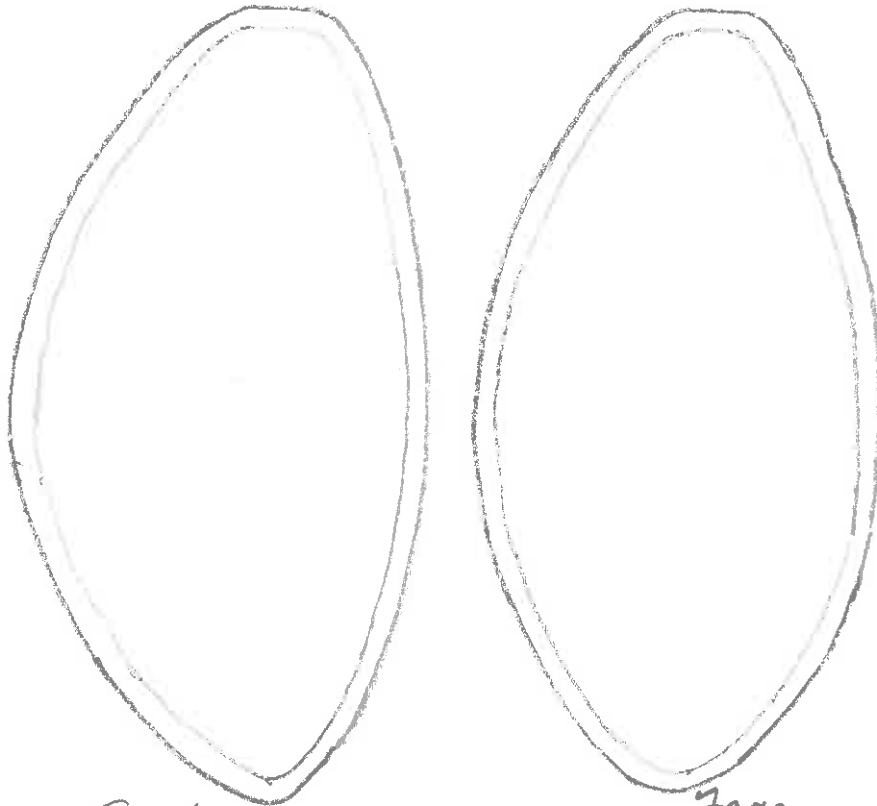
Basidia



Pileus cuticle x 1000



Caulo  
x 1000



Profile

Face

Spores x 8000

20838

CONOCYBE

Pileus 6-10 mm broad, hemispheric-campanulate, expanding convex, pale ochraceous buff (not matched), margin faintly striate.

Lamellae adnate, ascending, close, medium broad, edges fimbriate.

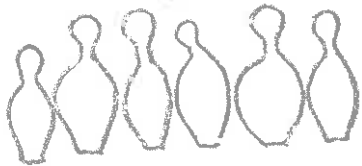
Stipe 4-6 cm long, 1-1.5 mm thick, apex pruinose, elsewhere scattered-fibrillose, equal, dry.

Spores 9-11 x 5.5-7  $\mu$ , slightly inequilateral in profile, ellipsoid to ovoid in face view, smooth, truncate, reddish brown in 2% KOH, wall 0.4  $\mu$  thick. Pleurocystidia none; cheilocystidia 16-20 x 6-8  $\mu$ , lecythiform. Pileus cuticle of <sup>a paliade of</sup> subglobose to cuneiform or subspathulate cells. Stipe cuticle of repent hyphae. Caulocystidia not found.

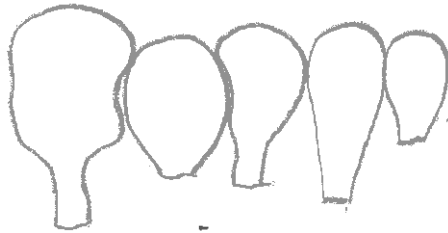
Although Smith thought this the same as Sm-12093, they have different spores.

*Conocybe*

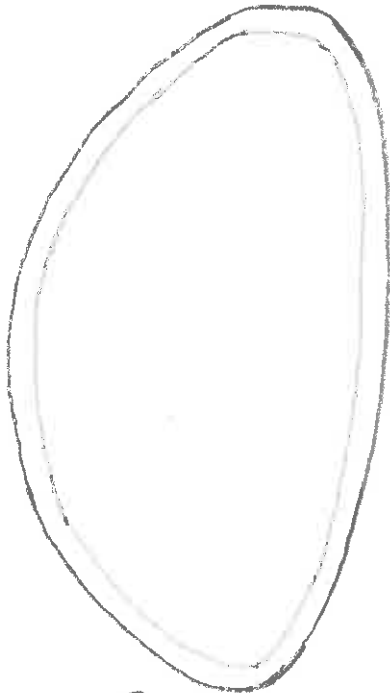
20838



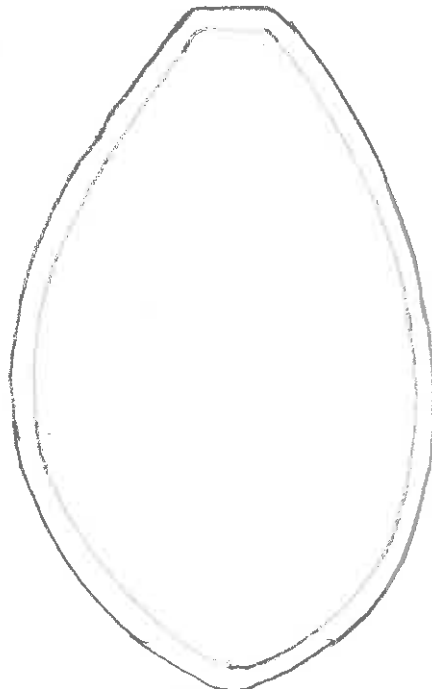
ch x 1000



Pileus cuticle  
x 1000



Profile



Face

Spores x 8000



20860

CONOCYBE

PHOTO

On lawn, Timberlake Rd., Knox Co., June 16, 1953

(cf. 21022)

Pileus 6-10 mm broad, convex-campanulate, "tawny olive," glabrous, faintly striatulate to disc when wet. Context thin.

Lamellae adnexed, brown, narrow, <sup>not very close, ~~rather~~</sup> rather <sup>edges</sup> whitish.

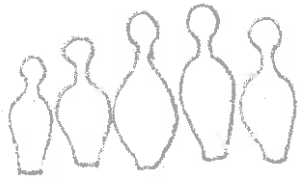
Stipe 3-4 cm long, 0.2-<sup>0.3</sup>~~0.15~~ mm thick, brownish, striate, becoming twisted, equal.

Spores "verona brown" in deposit, 10-15.5 x 6-7.5  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, frequently slender-ellipsoid to oblong, smooth, wall 0.3  $\mu$  thick, truncate, reddish brown in KOH. Pleurocystidia none; cheilocystidia 14-22 x 7-10  $\mu$ , lecythiform. Gill trama a narrow zone. Pileus cuticle of subpyriform to cuneiform cells. Stipe cuticle of repent hyphae. Caulocystidia similar to cheilocystidia, lecythiform, 10-24 x 5-6  $\mu$ , more or less gregarious.

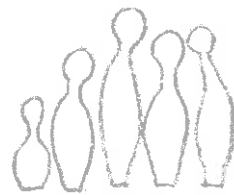


20860 - ~~Galera tenuis Fr.~~  
Conocybe

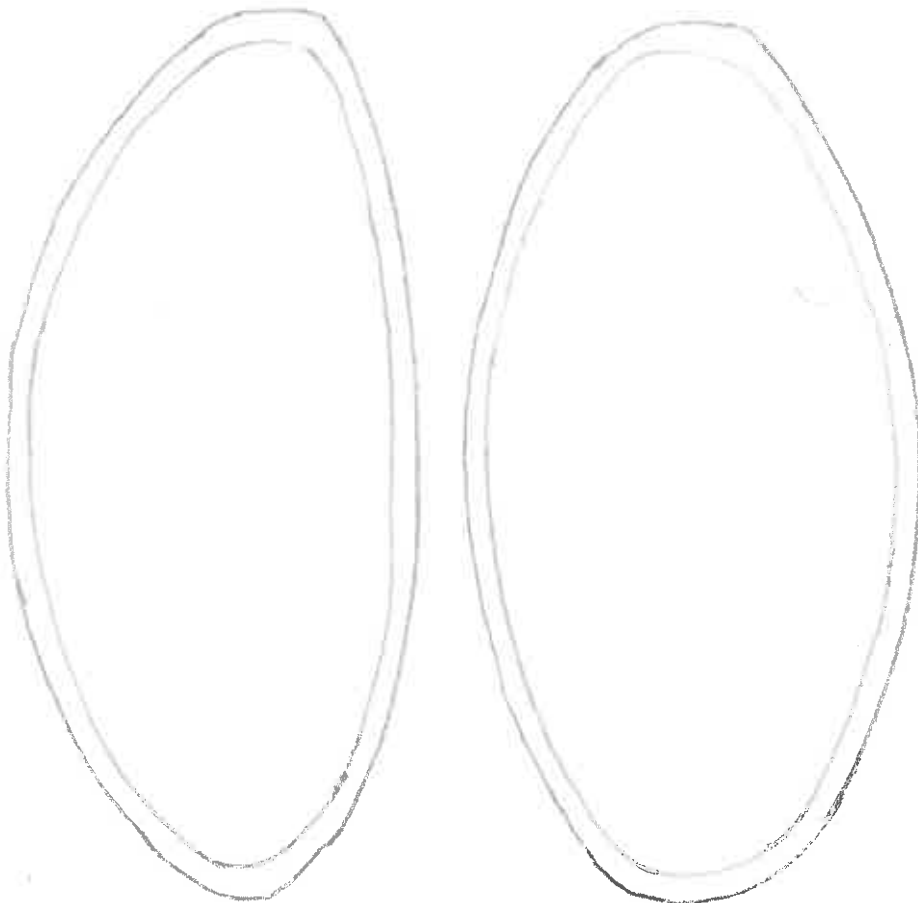
Conoclype  
20860



Ch x 1000



Caulo x 1000



Profile

Face

Spores x 8000

21022

CONOCYBE

On humus, edge of woods, Highlands, N. C., September 11, 1953

Pileus 1.5-2 cm broad, conic-campanulate, hygrophanous, rusty brown (wet), paler (dry), glabrous, plush-like, margin even when dry, striate when wet. Context thin, rusty brown, fragile; odor and taste mild.

Lamellae adnate, ascending, broad, rusty-cinnamon, nearly subdistant, edges rough.

Stipe 4-9 cm long, 1-1.5 mm thick, fragile, rusty (concolor to pileus), silky-striate, equal, hollow.

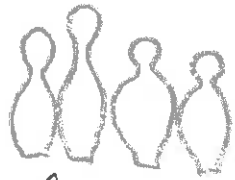
Spores 11-13 x 5.5-6(7)  $\mu$ , slender, slightly inequilateral in profile, ellipsoid in face view, smooth, truncate, reddish-brown in 2% KOH, wall 0.3  $\mu$  thick. Basidia 22-25 x 10-11  $\mu$ , 2-4-spored. Pleurocystidia none; cheilocystidia 16-22 x 6-7  $\mu$ , lecythiform. Pileus cuticle of cuneiform cells. Stipe cuticle of repent hyphae. Caulocystidia 12-18 x 6-8  $\mu$ , lecythiform or some lacking a capitellum, widely scattered, inconspicuous.

Similar to 20837 (and to Sm-12903).

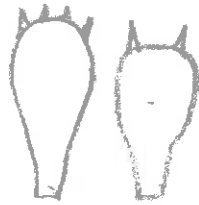
*long, rather narrow spores distinctive!*

Conocybe

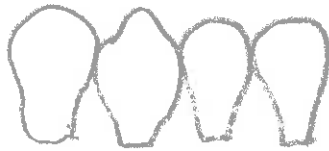
21022



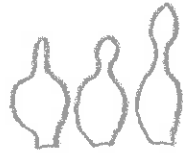
Ch x 1000



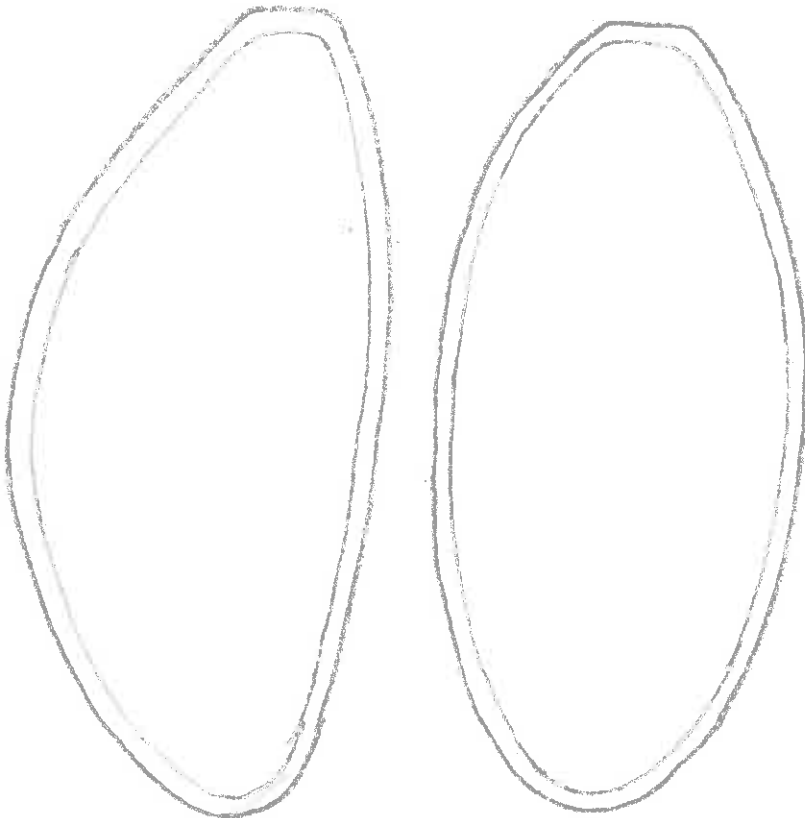
Basidia x 1000



Pileus cuticle  
x 1000



Caulo  
x 1000



Profile

Face

Spores x 8000

24342

CONOCYBE

On soil, near saw-dust, in deciduous woods, Cashiers, near  
Highlands, N. C., June 15, 1961

Pileus 1.5-3.5 cm, conic, umbonate, glabrous, moist,  
hygrophanous, "walnut brown," fading to "Kaiser brown,"  
disc darker ("burnt umber") and not fading, striatulate.  
Context thin, reddish-brown, fragile; odor and taste mild.

Lamellae rounded and nearly free, moderately close,  
ventricose, medium broad, whitish then pale brown,  
finally "Kaiser brown," edges even, many lamellulae.

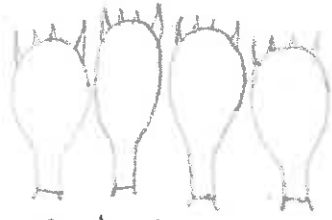
Stipe 6-9 cm long, 2-3 mm thick, fragile, brownish,  
more or less twisted, pruinose above or over-all, shining,  
hollow, equal. Veil none.

Spores 9-13 x 5.5-7  $\mu$ , slightly inequilateral in  
profile, ellipsoid to narrowly so in face view, smooth,  
truncate, reddish-brown in 2% KOH. Basidia 20-24 x 8-10  $\mu$ ,  
short-stalked, subglobose to subpyriform above, (2)4-spored,  
tending to become more elongate-clavate in age. Pleuro-  
cystidia none; cheilocystidia 22-25 x 6-8  $\mu$ , <sup>lecythiform,</sup> ~~ventricose~~  
~~with a short neck and an abrupt capitellum.~~ Gill trama of  
subparallel, rather closely septate hyphae (3-6  $\mu$  broad).  
Pileus cuticle a single layer of rather large, pyriform,  
clavate, spathulate or goblet-shaped cells, 20-43 x 10-20  $\mu$ ,  
usually stipitate, no gelatinization. Stipe cuticle repent,  
bearing more or less scattered, small caulocystidia, 22-26  
x 4-6  $\mu$ , flask-shaped, clavate, rarely even similar to  
cheilocystidia.

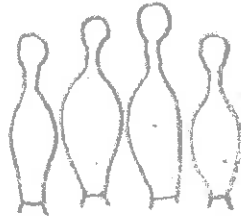
Not or same as 39224

# Conocybe

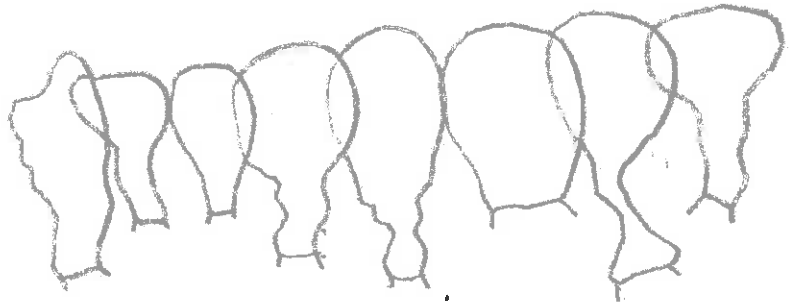
Tenn-24342



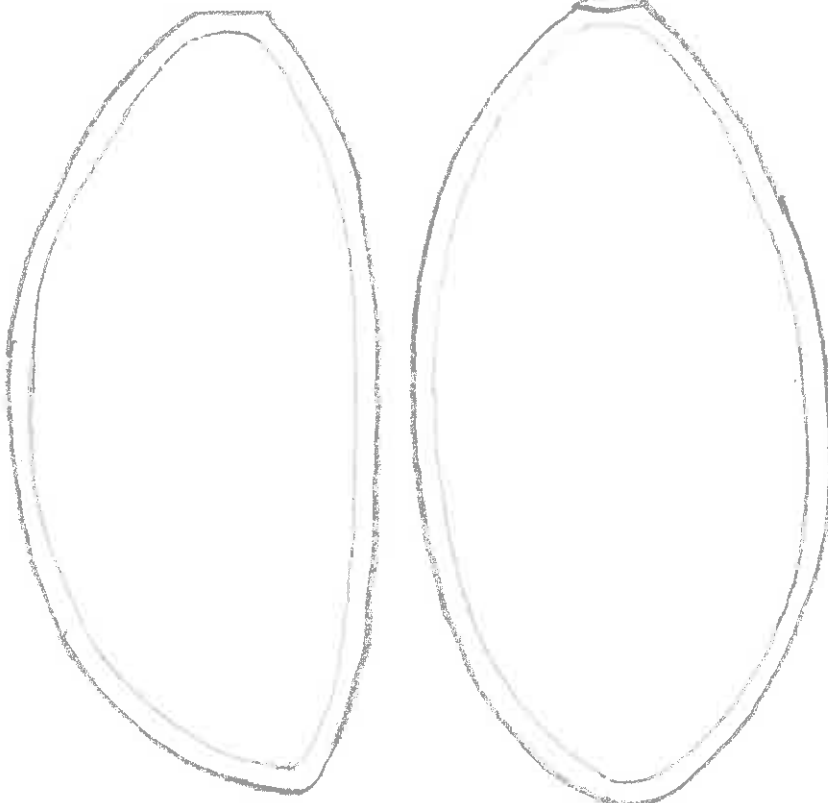
Basidia  
x 1000



Ch x 1000



Pileus cuticle - x 1000



Profile

Face

Spores x 8000



Caulo x 1000

25525

CONOCYBE

In cellar, Sharp's, Knoxville, May 30, 1963

Pileus 4.5 cm broad, densely covered with "snuff brown" fibrils which are appressed and form a net-work on the surface, soft and velvety to the touch. Context white, thick, soft; odor and taste mild.

Lamellae rounded-free or nearly so, "syal brown," close or crowded, broad, ventricose.

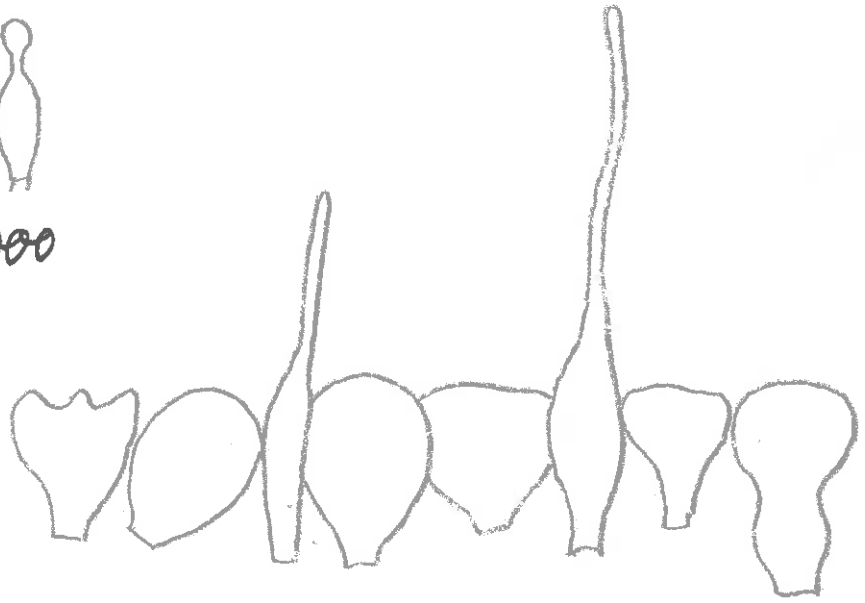
Stipe 5 cm long, 8 mm thick, white, glabrous, equal, base bearing brown fibrils (veil remnants?), solid.

Spores "amber brown" in deposit, red-brown in KOH, 5.5-8 x 4-5.5  $\mu$ , obscurely to not inequilateral in profile, ellipsoid in face view, some subtly truncate, wall smooth, 0.5  $\mu$  thick. Pleurocystidia none; cheilocystidia 16-23 x 5-10  $\mu$ , flask-shaped, with a short neck and abruptly capitate (typical Conocybe - cheilocystidia). Gill trama subparallel, hyphae 3-5  $\mu$  broad. Pileus cuticle cellular, the cells forming somewhat of a continuous layer but some cells pushed out of place (by razor?), subglobose, subpyriform, subcuneiform, with scattered pileocystidia, 50-73 x 5-10  $\mu$ , flask-shaped with a long neck, arising between cuticular cells.

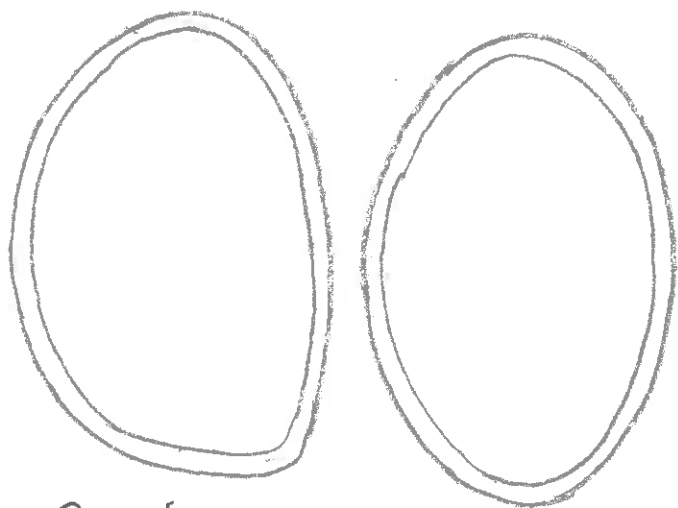
The cheilocystidia, pileus cuticle, and red (red-brown) spores in 2% KOH are characteristic (of all Conocybe-species?).



*Cenocycle*  
25525



*Pileus cuticle* x 1000



Profile

Face

Spore x 8000

26219

CONOCYBE

On soil, under pine, Cades Cove, GSMNP, June 3, 1964

Pileus 12-20 mm broad, bell-shaped, obtusely umbonate, velvety-micaceous, hygrophanous, "cinnamon brown," even. Context brown, thin, fragile; odor and taste mild.

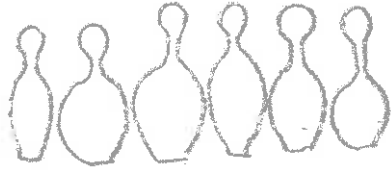
Lamellae narrowly attached, ascending, "cinnamon brown," broad, moderately close, edges obscurely fimbriate.

Stipe 6-10 cm long, 1.5-2 mm thick, strict, glabrous, shining, dingy brown, tubular, equal.

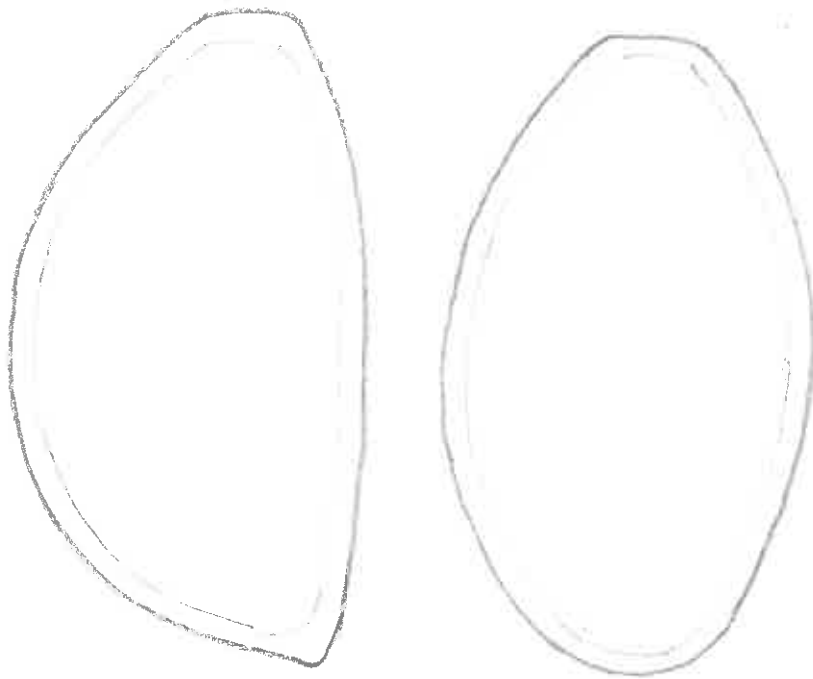
Spores 9.5-11 x 5.5-7  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, smooth, truncate, wall 0.3  $\mu$  thick, reddish brown in 2% KOH. Pleurocystidia none; cheilocystidia 12-20 x 5-9  $\mu$ , lecythiform. Pileus cuticle of cuneiform cells, 16-20 x 9-11  $\mu$ . Stipe cuticle of repent hyphae, with scattered hyphoid pileocystidia, 36-60 x 1-2  $\mu$ .

Concept

26219



Ch x 1000



Profile

Face

Face x 8000

27960

CONOCYBE

On leaf-mold, in mixed woods, Ekanetlee Trail, Cades Cove, GSMNP, leg. Petersen, May 25, 1965 (identified by Petersen as Galera bulbifers Kauff.)

Notes by Petersen

7-10 mm broad, subconic to convex,

Pileus<sup>^</sup> rufous chestnut, frosted with hyaline hyphae, striatulate, subcrenulate at margin. Odor and taste not distinctive.

Lamellae when young creamy, tinged ocher, when mature concolorous with cap and stem, close, medium broad.

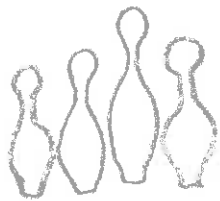
6-8 cm long, 0.3-0.7 mm thick,

Stipe<sup>^</sup> concolorous with pileus, base white-subtomentose.

Notes by Hesler

Spores 9-11.5 x 5.5-7  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, smooth, reddish-brown in 2% KOH, truncate. Pleurocystidia none; cheilocystidia 16-22 x 6-7  $\mu$ , lecythiform. Pileus cuticle of more or less pyriform cells, 18-24 x 9-16  $\mu$ . Stipe cuticle repent, with small tufts of caulocystidia, 10-22 x 4-5  $\mu$ , clavate, flask-shaped with a neck, subventricose.

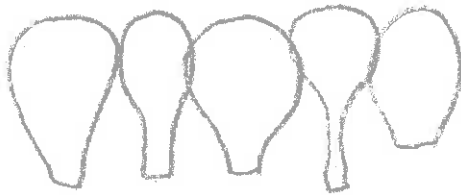
Conocybe  
27960



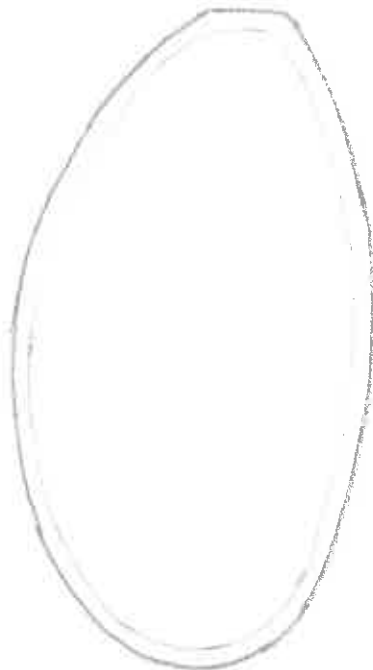
Sp. x 1000



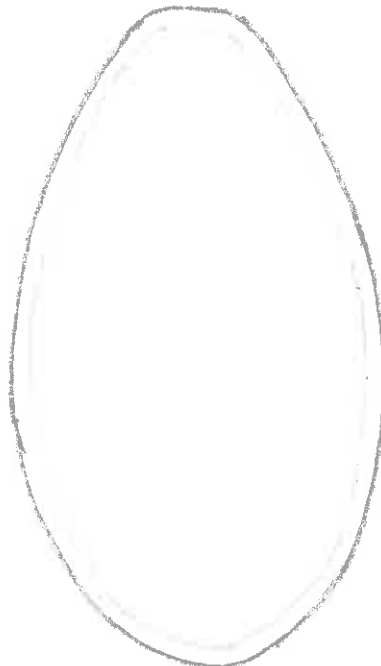
Basidium x 1000



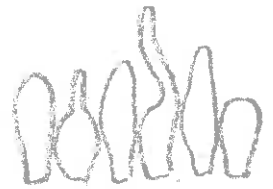
Gills cuticle x 1000



Profile



Face



Caulis x 1000

Spore x 8000

29010

CONOCYBE

On lawn, Sharp's, Knox Co., Tenn., leg. A. J. Sharp, May 28,  
1966

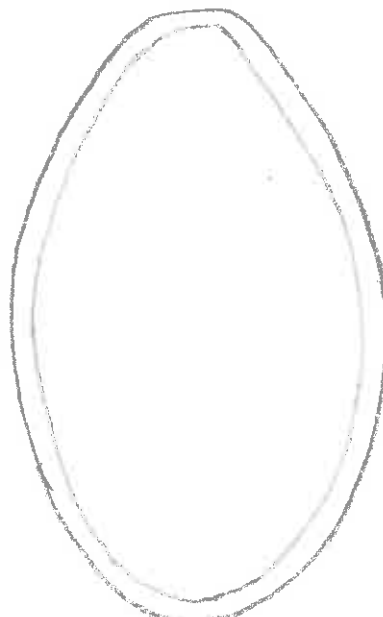
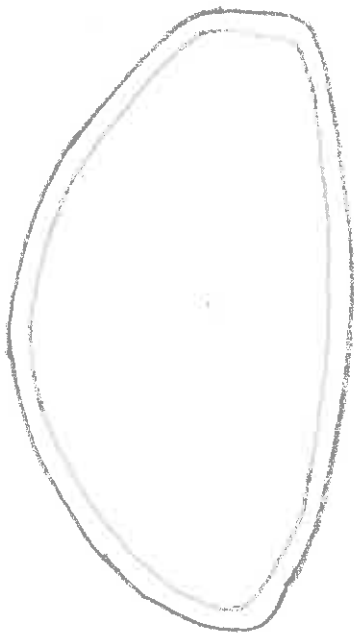
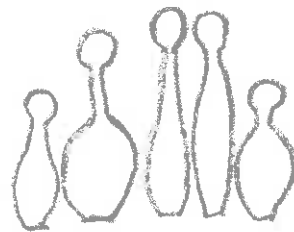
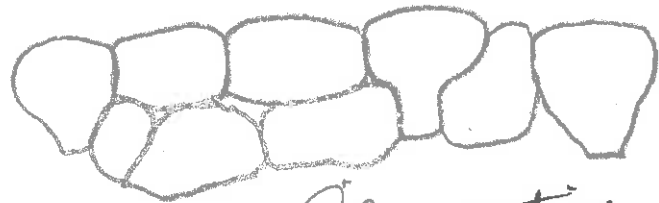
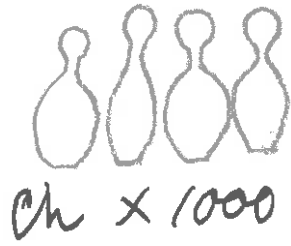
Pileus 1-2.5 cm broad, conic-campanulate, "ochraceous buff," glabrous, margin even. Context thin.

Lamellae adnexed, brown, close, rather broad.

Stipe 3.5-6 cm long, 1-1.5 mm thick, pallid then pallid-brownish, slightly striate, equal.

Spores 8.5-11 x 5.5-7  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, wall 0.3  $\mu$  thick, smooth, apex truncate, reddish brown in 2% KOH. Pleurocystidia none; cheilocystidia 16-20 x 6-9  $\mu$ , lecythiform. Pileus cuticle cellular, zone about 2 layers thick, mostly ellipsoid to irregular in shape, some cuneiform. Stipe cuticle of repent hyphae. Caulocystidia 17-28 x 5-7  $\mu$ , lecythiform, scattered to gregarious near the apex.

Conocybe  
29010



Profile

Face

Spores x 8000

29015

CONOCYBE

On lawn, Winnsboro, S.C., leg. Carolyn Lyles, No. 27,

May 18, 1966

Notes by Lyles

Pileus 3-8 mm broad, campanulate, tawny to grayish tawny, striate. Context very thin.

Lamellae adnate, rusty brown, close, rather narrow.

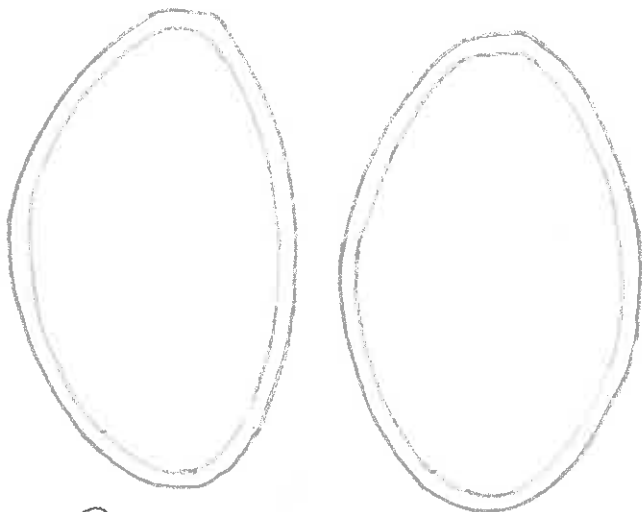
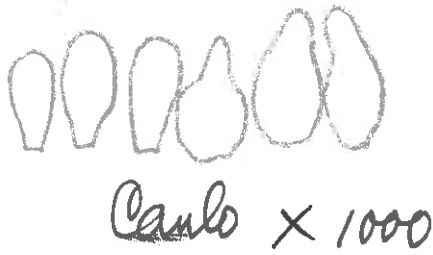
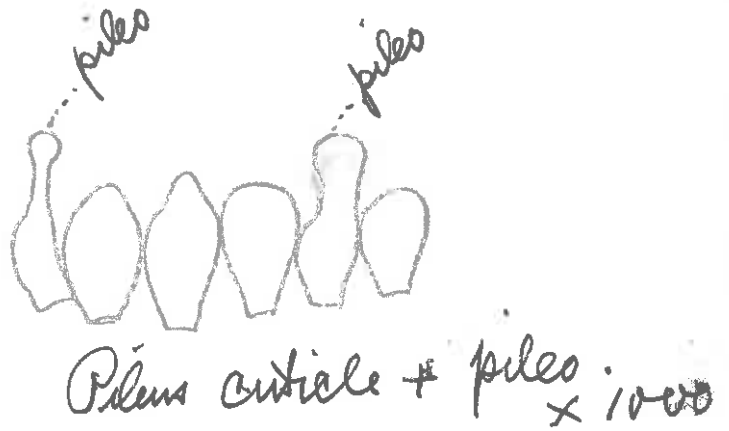
Stipe 23-40 mm long, 0.2-0.3 mm thick, equal, brownish, hollow, fragile.

Notes by Hesler

Spores 7-9 x 4.5-6  $\mu$ , obscurely inequilateral in profile, smooth, germ-pore present, often more or less truncate (not always distinct), reddish brown, wall 0.25  $\mu$  thick. Pleurocystidia none; cheilocystidia 12-23 x 5-7  $\mu$ , lecythiform. Pileus cuticle cellular.



Conway  
29015



Profile Face  
Spores x 8000

29016

CONOCYBE

On lawn, Winnsboro, S. C., leg. Carolyn Lyles, May 18, 1966

Notes by Lyles

Pileus 10-15 mm broad, conic (more or less acutely so) disc tawny-orange, elsewhere tawny, striate, somewhat rugulose, glabrous, margin straight. Context thin; taste none.

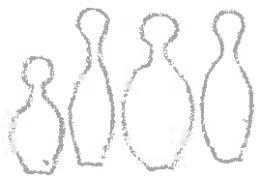
Lamellae free or nearly so, rusty brown, close, rather broad.

Stipe 3-5.5 cm long, 0.3-0.5 mm thick, pallid-brown, equal.

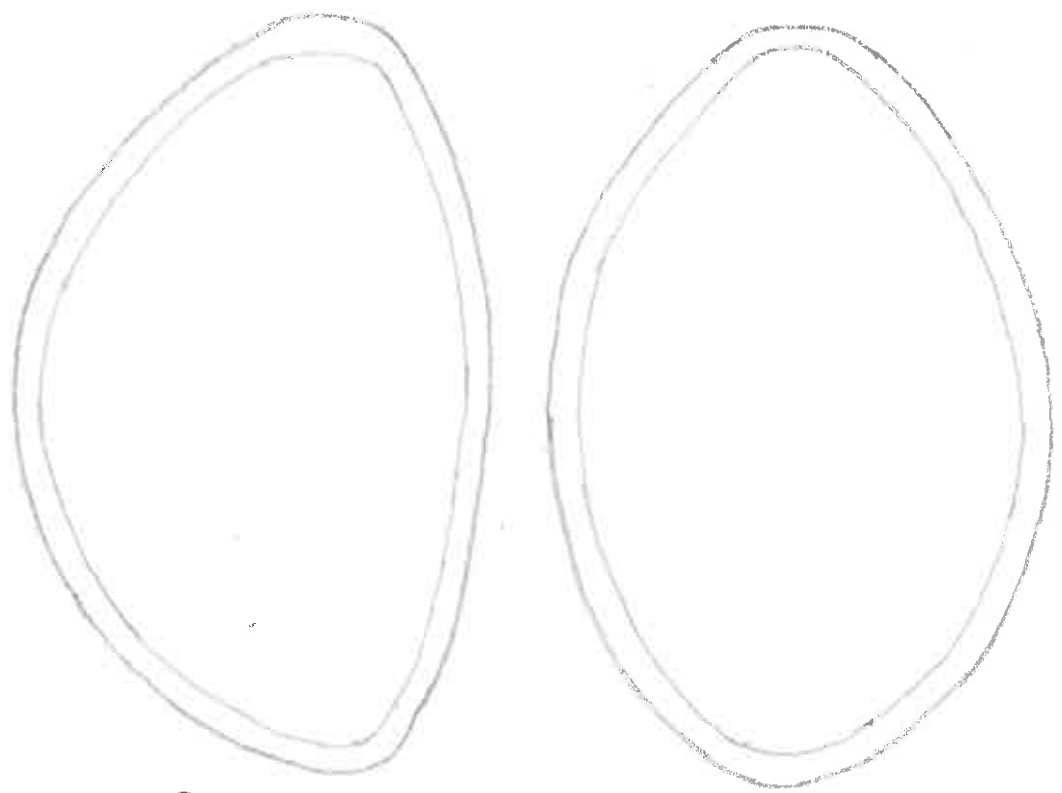
Notes by Hesler

Spores 10-14 x 7.5-9.5  $\mu$ , slightly inequilateral in profile, ellipsoid in face view, smooth, wall 0.4  $\mu$  thick, obscurely truncate, rarely distinctly so, reddish-brown in 2% KOH. Pleurocystidia none; cheilocystidia 15-22 x 5-9  $\mu$ , lecythiform. Pileus cuticle cellular, cells soon pushed out of position. Stipe cuticle of repent hyphae. Caulocystidia not found.

Conoaybe  
29016



ch x 1000



Profile Face  
Spores x 8000

39217

CONOCYBE

On soil, in pasture, Cades Cove, June 11, 1974

Pileus 14-18 mm, campanulate, disc darker than the rest which is dull-buff with a grayish tint, atomate, striatulate to disc.

Famellae narrow, crowded, brownish.

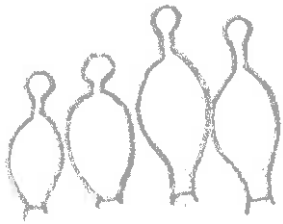
Stipe 5-8 cm long, 2-3 mm thick, white.

Spores (8.5) 9-13 x 7-9 $\mu$ , scarcely inequilateral in profile, ellipsoid in face view, obscurely truncate in some, smooth, red-brown in 2% KOH.

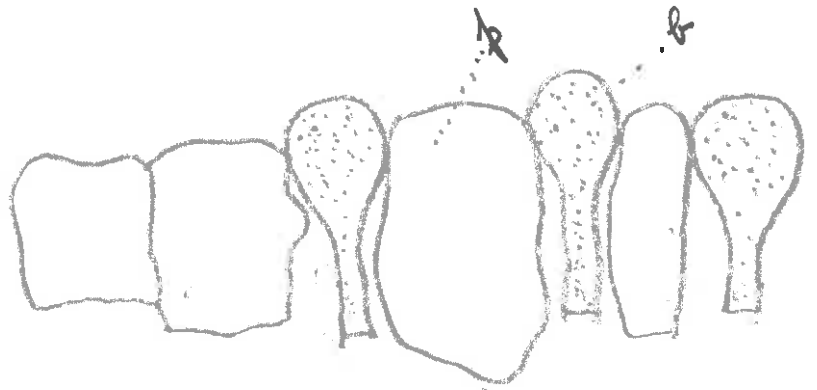
Pleurocystidia none; + vesiculose pseudoparaphyses, empty, numerous, 20-38 x 10-22 $\mu$ ; basidia clavate, granular, 27-32 x 11-14 $\mu$ ; Pileus cuticle of + <sup>ch 18-25 x 7-10 $\mu$ , lecythiform.</sup> 2- layers of cells, clavate, pyriform, ellipsoid or subglobose, 15-42 x 12-36 $\mu$ .

Conveybe

39217



ch x 1000



~~Plasma~~ Hymenium: with empty  
large-celled pseudoparaphyses (p),  
+ granular clavate basidia (b).

39224

CONOCYBE

On soil, woods, Cades Cove, GSMNP, leg. A. H. Smith,  
July 2, 1974

Pileus 1-2.5 cm broad, conic to sub-campanulate, more or less umbonate, hygrophanous, "Rood's brown" when wet, "hazel" when dry, disc slightly darker, striatulate, glabrous. Context thin, reddish-brown; odor and taste not distinctive.

Lamellae narrowly attached, usually rounded behind and nearly free, pallid then brown, medium broad to medium narrow, nearly close, edges even.

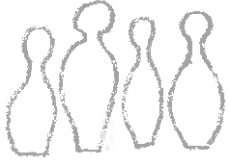
Stipe 7-10 cm long, 0.6-1.0 mm thick, brownish and tinged reddish, slightly twisted, striatulate, equal. Veil none.

Spores <sup>10-14</sup> ~~8.5-11.5~~ x (5.5)6-7.5  $\mu$ , obscurely inequilateral in profile, ellipsoid in face view, smooth, truncate, reddish brown in 2% KOH. Pleurocystidia none; cheilocystidia 17-20 x 5-7  $\mu$ , lecythiform. Pileus cuticle of cuneiform to pyriform or spathulate cells, 16-24 x 11-14  $\mu$ . Stipe cuticle of repent hyphae.

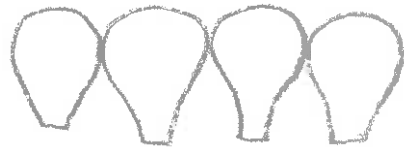
Near to or same as 24342.

Conocybe

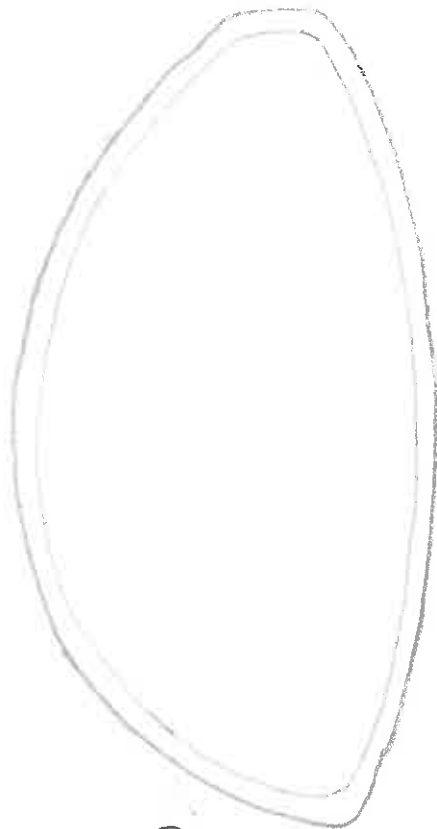
39224



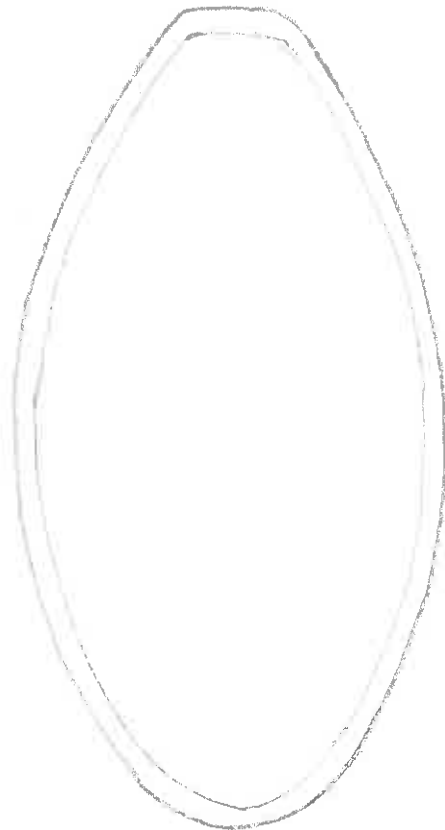
Ch x 1000



Pileus cuticle x 1000



Profile



Face

Spores x 8000