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## DARK-SPORED AGARICS—V

### PSILOCYBE

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*Atylospora* and *Psathyrella*, discussed in the last article in this series, are characterized by a slender, cartilaginous stipe, adnate or adnexed lamellae, and a straight, appressed margin. The genus here treated differs from them in having the margin of the pileus incurved at first.

PSILOCYBE (Fries) Quél. Champ. Jura Vosg. 116. 1872

*Agaricus* § *Psilocybe* Fries, Syst. Myc. 1: 289. 1821.

This difficult genus differs from *Atylospora* in having the margin of the pileus incurved when young, and from *Campanularius* in having purplish-brown instead of black spores. See *Mycologia* for January, 1918, where four species occurring in tropical America are described. None of our temperate species seem to grow in tropical regions.

Pileus about 0.5–1 cm. broad.

Surface reddish-brown, becoming alutaceous on drying.

Surface dull-brownish, then pallid with yellowish spots.

Pileus about 1–2.5 cm. broad.

Stipe 1–2.5 cm. long.

Surface pallid.

Surface brown or yellowish-brown.

Plants gregarious or solitary on dead wood.

Plants densely cespitose on manure and compost.

1. *P. phyllogena*.

2. *P. submaculata*.

3. *P. limophila*.

4. *P. campitopoda*.

5. *P. caespitosa*.

[MYCOLOGIA for November (14: 297–350) was issued November 13, 1922.]

- Stipe 2.5-5 cm. long.  
 Pileus yellow; stipe pallid or yellowish. 6. *P. sabulosa*.  
 Pileus dark-ochraceous; stipe reddish-brown. 7. *P. squalidella*.  
 Pileus whitish with reddish-yellow center,  
 then darker or brown; stipe white. 8. *P. polycephala*.  
 Pileus grayish or ochraceous-brown, pubes-  
 cent when young; stipe whitish. 9. *P. atomatoides*.  
 Pileus dark-brown or reddish-brown when  
 moist, often paler on drying.  
 Stipe white or whitish.  
 Stipe 1.5-2 mm. thick. 10. *P. arenulina*.  
 Stipe 3 mm. thick. 11. *P. agrariella*.  
 Stipe bluish. 12. *P. caerulipes*.  
 Stipe brown or reddish-brown.  
 Stipe 1-2 mm. thick.  
 Spores  $7 \times 5.5 \mu$ . 13. *P. latispora*.  
 Spores  $8-10 \times 4-5 \mu$ . 14. *P. castanella*.  
 Spores  $10-13 \times 6-8 \mu$ . 15. *P. obscura*.  
 Stipe 2-4 mm. thick. 16. *P. vialis*.  
 Stipe 5-12 cm. long.  
 Pileus yellow. 17. *P. elongatipes*.  
 Pileus light-grayish-tan; stipe pallid. 18. *P. Cokeri*.  
 Pileus dull-grayish-brown; stipe darker. 19. *P. panaeoliformis*.  
 Pileus dark-brown or reddish-brown when  
 moist; stipe mostly white or pallid.  
 Margin not striate. 20. *P. foenisecii*.  
 Margin striate.  
 Growing on dead wood. 21. *P. senex*.  
 Growing on muck soil. 22. *P. limicola*.  
 Pileus about 2.5-5 cm. broad.  
 Growing in soil or humus.  
 Stipe 2-4 mm. thick.  
 Stipe white above, darker below. 23. *P. conissans*.  
 Stipe white throughout.  
 Pileus alutaceous when moist. 24. *P. fuscofolia*.  
 Pileus pale-brown when moist. 25. *P. cystidiosa*.  
 Stipe 4-6 mm. thick.  
 Pileus gray to drab. 26. *P. subagraria*.  
 Pileus dark-brown.  
 Spores  $8-9 \times 4-5 \mu$ . 27. *P. spadicea*.  
 Spores  $12.5-16 \times 7-9 \mu$ . 28. *P. castaneifolia*.  
 Growing among mosses in swamps.  
 Stipe whitish. 29. *P. nigrella*.  
 Stipe pale above, ferruginous below. 30. *P. uda*.  
 Stipe pallid, becoming reddish-brown. 31. *P. dichroa*.  
 Growing on dead wood; stipe 10-18 cm. long. 32. *P. castaneicolor*.  
 Pileus about 5-15 cm. broad.  
 Stipe white, unchanging. 33. *P. larga*.  
 Stipe yellowish-brown, turning blue when cut. 34. *P. caerulescens*.

I. *PSILOCYBE PHYLLOGENA* Peck, Bull. N. Y. State Mus. 157: 99.  
1912

*Agaricus phyllogenus* Peck, Ann. Rep. N. Y. State Mus. 26: 60.  
1874.

*Agaricus (Hypholoma) modestus* Peck, Ann. Rep. N. Y. State  
Mus. 32: 29. 1879.

*Hypholoma phyllogenum* Sacc. Syll. Fung. 5: 1042. 1887.

*Psathyra conica* Peck, Ann. Rep. N. Y. State Mus. 54: 153. 1901.

*Psilocybe phyllogena modesta* Peck, Bull. N. Y. State Mus. 157:  
99. 1912.

Pileus thin, firm, conic or convex, sometimes umbonate, solitary or gregarious, 5-10 mm. broad; surface smooth, glabrous, hygrophanous and reddish-brown when moist, alutaceous or ochraceous when dry, margin incurved, whitened by the remains of a slight veil when young; lamellae adnate, usually with a decurrent tooth, plane, broad, crowded, pallid to purplish-brown, entire and pallid on the edges; spores top-shaped or turnip-shaped, smooth, sometimes apiculate, isabelline with a smoky-purplish-brown tint under the microscope, 6-7 x 5-6  $\mu$ ; stipe slender, equal, smooth, cartilaginous, silky-fibrillose, hollow, brownish, often expanding at the base into a flat disk, 2-3 cm. long, 1-2 mm. thick.

TYPE LOCALITY: Worcester, New York.

HABITAT: On dead leaves, sticks, and logs of deciduous or coniferous trees.

DISTRIBUTION: New England to the mountains of Virginia.

ILLUSTRATIONS: Ann. Rep. N. Y. State Mus. 54: *pl. H, f. 17-22*.

A very pretty little plant, specimens of which collected by Peck in July are still well preserved at Albany, attached to a sheet containing a sketch. The type specimens of *A. modestus* were collected by Peck at Sandlake in August; while those of *P. conica* were found by him on spruce logs at Floodwood early in September. The spores are quite peculiar, being very broad-shouldered or subtriangular in outline. I found the plant quite common on leaves in woods at Mt. Lake, Virginia, early in July, 1909, and made three collections of it (77, 91, 177). Earle got it at Redding, Connecticut, in July, 1902 (404); and Mrs. Delafield made notes and a colored sketch from specimens found by her (82) at Buck Hill Falls, Pennsylvania, August 15, 1921. In 1910 it

appeared especially early here in the Garden, having been found by me on sticks and trash on June 20.

2. *PSILOCYBE SUBMACULATA* Atk. Ann. Myc. 7: 375. 1909

Pileus convex, cespitose, 4–10 mm. broad; surface smooth, hygrophanous, dull-brownish, then dull-white with dark, watery and yellowish spots; margin at first incurved; lamellae adnate, emarginate, rather crowded, brownish with a purple tint, white on the edges; spores suboblong to subellipsoid, slightly inequilateral, purple-brown under the microscope; cystidia few; stipe fistulose, even, somewhat flexuous, subcartilaginous to fleshy, shining-white, white-mealy at the apex, with white mycelium at the base, 2–3 cm. long, 2–3 mm. thick.

TYPE LOCALITY: Ithaca, New York.

HABITAT: On very rotten wood in woods.

DISTRIBUTION: Known only from the type locality.

According to Kauffman, Atkinson reported this species from Michigan also. I have not seen any specimens.

3. *PSILOCYBE LIMOPHILA* (Peck) Sacc. Syll. Fung. 5: 1048. 1887

*Agaricus limophilus* Peck, Ann. Rep. N. Y. State Mus. 30: 42. 1878.

Pileus thin, convex becoming nearly plane, fragile, 1.5–2.5 cm. broad; surface atomaceous, radiately rugulose, whitish, often splitting on the margin, sometimes areolately cracking; lamellae rather broad, subdistant, whitish becoming purplish-brown; spores 10–12 x 5–6  $\mu$ ; stipe equal, striate and slightly mealy at the apex, hollow, short, white, 2–2.5 cm. long, 1.5–2 mm. thick.

TYPE LOCALITY: Green Island, Albany County, New York.

HABITAT: On muddy alluvial soil under willows.

DISTRIBUTION: Known only from the type locality.

4. *PSILOCYBE CAMPTOPODA* (Peck) Sacc. Syll. Fung. 5: 1057. 1887

*Agaricus camptopus* Peck, Ann. Rep. N. Y. State Mus. 31: 35. 1879.

*Psilocybe unicolor* Peck, Ann. Rep. N. Y. State Mus. 53: 845. 1900.

*Psilocybe cavipes* House, Bull. N. Y. State Mus. 205–206: 40. 1919.

Pileus thin, broadly convex, gregarious or solitary, 1–2 cm. broad; surface glabrous, hygrophanous, brown and striatulate on the margin when moist, whitish when dry; context white, with a slightly disagreeable taste; lamellae narrow, crowded, adnate or adnexed, whitish becoming brown; spores  $6 \times 4 \mu$ ; stipe equal, straight or curved, glabrous, slightly pruinose or mealy at the apex, paler than the pileus, 1.5–2.5 cm. long, 1–2 mm. thick.

TYPE LOCALITY: Catskill Mountains, New York.

HABITAT: On decorticated decaying logs in woods.

DISTRIBUTION: New York.

Three collections of *P. camptopoda* are at Albany, obtained by Peck at Big Indian, etc. *P. unicolor*, which proves to be the same thing, was collected by Peck in quantity at Savannah, New York, on decaying mossy logs of deciduous trees in October.

#### 5. *Psilocybe caespitosa* sp. nov.

Pileus convex to expanded, often with a broad nipple-like umbo, densely cespitose, 1–2.5 cm. broad; surface smooth, glabrous, hygrophanous to dry, striate over the lamellae when wet, brownish-isabelline to isabelline, the margin incurved and joined to the stipe in young stages by a slight, fibrillose, evanescent veil; context without characteristic odor or taste; lamellae adnate to sinuate, crowded, arcuate, colored like the pileus but with a smoky or purplish tint, beautifully notched on the edges; spores ovoid, smooth, pale-isabelline with a slight purplish tint under the microscope, smoky-purplish-brown in mass, about  $7 \times 5 \mu$ ; stipe subequal, concolorous or paler, darker at the base, shaggy-fibrillose to subglabrous and shining, cartilaginous, fistulose, 1–3 cm. long, 1–2 mm. thick.

TYPE LOCALITY: New York Botanical Garden, New York City.

HABITAT: On or near compost heaps and manure piles.

DISTRIBUTION: New York Botanical Garden.

Collected by W. A. Murrill, June 6, 1910 (*type*); also on June 18, 1911, and July 1 and 2, 1915. Found in abundance.

#### 6. *PSILOCYBE SABULOSA* Peck, Bull. Torrey Club 24: 144. 1897

Pileus convex, subumbonate, 1.5–2.5 cm. broad; surface glabrous, yellow; lamellae broad, subdistant, ventricose, adnate, becoming purplish-brown, whitish on the edges; spores ellipsoid,  $12.5\text{--}15 \times 7.5 \mu$ ; stipe equal, hollow, pallid or straw-colored, 2.5–4 cm. long, 2 mm. thick.

TYPE LOCALITY: Rooks County, Kansas.

HABITAT: On sandy soil in pastures, often growing from clumps of living grass.

DISTRIBUTION: Rooks County, Kansas.

Type specimens were collected by Bartholomew (2246) on August 24. He has distributed specimens collected on October 7, 1902. Peck remarks that the umbo in some specimens is quite prominent, while in others it is wholly wanting. *P. arenulina* is said to differ in being hygrophanous and having smaller spores.

7. *PSILOCYBE SQUALIDELLA* Peck, Ann. Rep. N. Y. State Mus. 46: 55. 1893

*Agaricus squalidellus* Peck, Ann. Rep. N. Y. State Mus. 29: 40. 1878.

*Hypholoma squalidellum* Sacc. Syll. Fung. 5: 1041. 1887.

Pileus thin, convex, subconic or subcampanulate, expanded when old, gregarious or cespitose, 1–2.5 cm. broad; surface glabrous, hygrophanous, dark-ochraceous and striatulate on the margin when moist, pale-ochraceous or yellow when dry, spore-stained and squalid when old; lamellae broad, subdistant, rounded behind, adnexed, whitish becoming purplish-brown, with white edges; spores 9–12 x 5–8  $\mu$ ; stipe slender, stuffed, fibrous, subflexuous, reddish-brown, 2.5–5 cm. long, 2–2.5 mm. thick.

TYPE LOCALITY: Shokan, New York.

HABITAT: On damp ground in woods.

DISTRIBUTION: New York.

According to Peck, this species is abundant on damp, mucky soil in the Adirondack region. It is also quite variable in color and in the shape of the pileus. When moist the latter may be yellow, reddish-yellow, or brown; and when dry either tawny or ochraceous. It is either hemispheric or convex, with the lamellae broad and nearly plane or ventricose. Type specimens of the species and its two varieties, as preserved at Albany, seem quite distinct. Variety *macrosperma* has spores measuring 12–15 x 7–8  $\mu$ , and variety *umbonata* has a decided conic umbo. With fresh material at hand, other differences would probably appear.

8. *PSILOCYBE POLYCEPHALA* (Paulet) Peck, Bull. N. Y. State Mus. 157: 55. 1912

*Hypophyllum polycephalum* Paulet, Traité Champ. pl. III, f. 1, 2; hyponym. 1812-35.

*Agaricus polycephalus* Fries, Epicr. Myc. 226. 1838.

*Psilocybe spadicea polycephala* Sacc. Syll. Fung. 5: 1053. 1887.

Pileus fleshy but thin, subcampanulate to convex or nearly plane, densely gregarious or cespitose, 1-3 cm. broad; surface glabrous, even, hygrophanous, at first whitish with a reddish-yellow center, then darker or brown and striatulate on the margin while moist, paler or whitish when dry; context with a mild taste; lamellae thin, narrow, crowded, adnexed or nearly free, whitish, becoming purplish-brown; spores ellipsoid, purplish-brown, 7-8 x 4-5  $\mu$ ; stipe equal, straight or flexuous, hollow, glabrous, mealy or pruinose at the apex, white, 2.5-5 cm. long, 2-4 mm. thick.

TYPE LOCALITY: France.

HABITAT: In woods either on the ground about the base of trees or on dead wood.

DISTRIBUTION: New York; also in Europe.

ILLUSTRATIONS: (Paulet & Lév.), Ic. Champ. pl. III, f. 1, 2; Peck, Bull. N. Y. State Mus. 157: pl. 127, f. 1-9.

9. *PSILOCYBE ATOMATOIDES* (Peck) Sacc. Syll. Fung. 5: 1048. 1887

*Agaricus atomatoides* Peck, Ann. Rep. N. Y. State Mus. 29: 41. 1878.

Pileus thin, fragile, convex or subcampanulate becoming nearly plane, solitary or gregarious, 1.5-2.5 cm. broad; surface rugose, atomate, slightly and evanescently white-floccose, slightly hygrophanous, grayish or ochraceous-brown, sometimes with a pinkish tint; context mild, cinereous; lamellae moderately broad, subventricose, rounded behind, adnexed, cinereous becoming dark-brown; spores blackish-brown, 7-8 x 4-5  $\mu$ ; stipe equal, hollow, minutely flocculent when young, pruinose at the apex, whitish, 3-5 cm. long, 2 mm. thick.

TYPE LOCALITY: West Albany, New York.

HABITAT: On the ground and on decaying wood under pine trees.

DISTRIBUTION: New York, New Jersey, Pennsylvania, and Alabama.

The type specimens were collected by Peck in June. There are two other collections at Albany. I have it from Fort Lee, New Jersey, collected by Earle (1405) on September 15, 1902; from Buck Hill Falls, Pennsylvania, collected twice in August by Mrs. Delafield; from Whitestone, Long Island, collected on September 28 by Mrs. Irving; and from near Bronx Park, collected by myself on September 26. The spores in these last specimens are narrowly ellipsoid, smooth, dark-bay under the microscope, opaque, about  $9 \times 5 \mu$ . The species seems to lie on the border line between *Psilocybe* and *Psathyrella*.

Specimens collected by Earle, March 9, 1900, on burned ground in pine woods at Auburn, Alabama, scarcely differ from recent New York specimens except in having somewhat smaller spores. They may be described as follows:

Pileus convex, not umbonate and not fully expanding, gregarious, 1-2 cm. broad; surface light-brown, reminding one of a mixture of milk and coffee, smooth and subshining at maturity, clothed when young with long, white hairs that extend downward to the edge, forming a sort of veil, disappearing at an early stage from the disk but remaining until maturity on the incurved margin as a sort of fringe; lamellae adnate, subcrowded, rather narrow, whitish or pallid, becoming dark-brown, with white, entire edges; spores ellipsoid, sometimes curved, rounded at both ends, smooth, dark-purplish-brown under the microscope, about  $7 \times 3.5 \mu$ ; stipe equal, pallid, paler than the pileus, hollow, clothed with white hairs when young and usually fibrillose-scaly, about 3 cm. long and 2-3 mm. thick.

Specimens collected by me, July 9, 1915, on a rotten deciduous stick in the New York Botanical Garden and colored by Miss Eaton were pale-fumose with long, dense, shaggy-fibrillose scales of the same color on pileus and stipe; spores dark-bay, about  $9 \times 5.5 \mu$ ; spore-print almost black. The plant was very delicate and fragile, and the fibrils mostly collapsed soon after picking.

10. *PSILOCYBE ARENULINA* (Peck) Sacc. Syll. Fung. 5: 1057.  
1887

*Agaricus arenulinus* Peck, Ann. Rep. N. Y. State Mus. 30: 42.  
1878.

Pileus convex becoming plane or centrally depressed, rarely umbonate, gregarious, 1-3 cm. broad; surface glabrous, hygroph-anous, dark-brown and coarsely striate on the margin when moist, dingy-white when dry; lamellae crowded, adnate, cinnamon-brown,



becoming darker or purplish-brown; spores ellipsoid, smooth, purplish-brown,  $10-12 \times 5-6 \mu$ ; stipe slightly tapering upward, hollow, often radicate and somewhat clavate at the base, whitish, 3-5 cm. long, 1.5-2 mm. thick.

TYPE LOCALITY: West Albany, New York.

HABITAT: In sandy soil.

DISTRIBUTION: New York and Michigan.

The type specimens and also some from Karner are to be seen at Albany. Peck has written on the sheet "Perhaps *ammophilus*," but gives reasons for keeping it distinct. Kauffman reports it from Michigan and remarks that it is near *P. ammophila* Mont., but that his plants were not like those figured by Hard on page 330 of his book.

#### 11. *PSILOCYBE AGRARIELLA* Atk. Ann. Myc. 7: 374. 1909

Pileus thin, convex to expanded, gregarious, 1-2.5 cm. broad; surface hygrophanous, pellucid, striate when moist or slightly rugose, pale-reddish-brown or pale-rufous, drying pale-subochraceous to buff or pinkish-buff; lamellae adnate, dull-purplish-brown, with white edges; spores subellipsoid, smooth, purplish-brown under the microscope,  $7-9 \times 4-5.5 \mu$ ; cystidia lanceolate,  $50-65 \times 12-15 \mu$ ; stipe flexuous, mealy, hollow, rather fragile, concolorous below, shining-white above, whitish-mycelioid at the base, 4-6 cm. long, about 3 mm. thick.

TYPE LOCALITY: Ithaca, New York.

HABITAT: On the ground in woods.

DISTRIBUTION: New York and Michigan.

Kauffman reports this species from two localities in Michigan and says that it differs from *P. cernua* in having a slight veil when young. I have not seen his specimens or the types.

#### 12. *PSILOCYBE CAERULIPES* (Peck) Sacc. Syll. Fung. 5: 1051. 1887

*Agaricus caerulipes* Peck, Ann. Rep. N. Y. State Mus. 38: 89.  
1885.

Pileus thin, subcampanulate becoming convex, obtuse or obtusely umbonate, cespitose or solitary, 1-2 cm. broad; surface glabrous, hygrophanous, slightly viscid, brown and striatulate on the margin when moist, yellowish or subochraceous when dry, the

center sometimes brownish; lamellae at first ascending, crowded, adnate, grayish-tawny becoming rusty-brown, whitish on the edges; spores 8-10 x 4-5  $\mu$ ; stipe slender, equal, flexuous, tenacious, hollow or containing a separable pith, slightly fibrillose, pruinose at the apex, bluish, sometimes whitish above, 2.5-4 cm. long, 1-1.5 mm. thick.

TYPE LOCALITY: South Ballston, New York.

HABITAT: On decaying wood.

DISTRIBUTION: New York.

Specimens are to be seen at Albany from two or three New York localities, all agreeing with the types.

### 13. *Psilocybe latispora* sp. nov.

Pileus convex to expanded, obtuse or umbonate, gregarious, 1-1.5 cm. broad; surface glabrous, hygrophanous, dark-fuscous and substriate on the margin when moist, becoming ochraceous on drying; context concolorous, with mild but mawkish taste; lamellae adnate, subcrowded, broad, pallid to dark-fuscous; spores very broadly ovoid to subglobose, smooth, pale-smoky-purplish-brown under the microscope, about 7 x 5.5  $\mu$ ; stipe equal, fuscous, pruinose at the apex, fibrillose below, fistulose, 2-3 cm. long, 1-2 mm. thick.

TYPE LOCALITY: New York Botanical Garden, New York City.

HABITAT: Along roadsides.

DISTRIBUTION: Known only from the type locality.

Type collected by F. S. Earle (1462) on June 25, 1903. This species has unusually broad spores for the genus.

### 14. *PSILOCYBE CASTANELLA* Peck, Bull. N. Y. State Mus. 1<sup>2</sup>: 7. 1888

Pileus thin, convex or subconic becoming plane or slightly depressed in the center, gregarious or subcespitose, 8-16 mm. broad; surface glabrous, hygrophanous, chestnut or umber-brown and striatulate on the margin when moist, pale-alutaceous when dry; context paler than the surface; lamellae crowded, adnate or slightly rounded behind, pale-brown becoming purplish-brown; spores ellipsoid, purplish-brown, 8-10 x 4-5  $\mu$ ; stipe equal, flexuous, hollow or stuffed with a whitish pith, slightly silky-fibrillose, brownish or subrufescent with white mycelium at the base, 2.5-5 cm. long, 1-2 mm. thick.

TYPE LOCALITY: Sandlake, New York.

HABITAT: In rich grassy ground by roadsides.

DISTRIBUTION: Known only from the type locality.

The type specimens are well preserved at Albany.

15. *PSILOCYBE OBSCURA* Peck, Bull. Torrey Club 24: 144. 1897

Pileus thin, convex, 1–2 cm. broad; surface hygrophanous, striate, more or less flecked or scurfy with a white, floccose tomentum, brown or reddish-brown; lamellae broad, subdistant, adnate, brown, becoming almost black, whitish-flocculent on the edges; spores ellipsoid, 10–13 x 6–8  $\mu$ ; stipe slender, hollow, a little paler than the pileus, whitish-tomentose at the base, 2.5–4 cm. long, 2 mm. thick.

TYPE LOCALITY: Kansas.

HABITAT: On rich leaf-mold in woods.

DISTRIBUTION: Known only from the type locality.

The type specimens were collected by Bartholomew.

16. *Psilocybe vialis* sp. nov.

Pileus thin, convex to expanded, gregarious to cespitose, 1–3 cm. broad; surface glabrous, hygrophanous, dark-brown when moist, becoming light-brown when dry, the margin at length striate; context brown with somewhat unpleasant taste; lamellae adnate, crowded, plane, rosy-isabelline to dark-brown; spores ovoid, tapering at both ends, smooth, often guttulate, pale-yellowish under the microscope, about 7–8 x 3.5–4.5  $\mu$ ; stipe equal, hollow, subfibrillose, concolorous, 4–6 cm. long, 2–4 mm. thick.

TYPE LOCALITY: New York Botanical Garden, New York City.

HABITAT: Along roadsides.

DISTRIBUTION: Known only from the type locality.

Type collected by F. S. Earle (725) on July 27, 1902.

17. *PSILOCYBE ELONGATIPES* (Peck) Sacc. Syll. Fung. 5: 1046.  
1887

*Agaricus elongatipes* Peck, Ann. Rep. N. Y. State Mus. 29: 40.  
1878.

Pileus thin, convex becoming nearly plane, gregarious, 1–2.5 cm. broad; surface glabrous, moist, yellow; lamellae broad, subdistant, ventricose, yellowish becoming brown, usually whitish on the edges; spores ellipsoid, 10–12 x 6–8  $\mu$ ; stipe elongate, fragile, flexuous, stuffed or hollow, slightly silky-fibrillose, pallid or reddish, 7–12 cm. long, 1.5–2 mm. thick.

TYPE LOCALITY: Greig, New York.

HABITAT: Among sphagnum in marshes and wet places in woods.

DISTRIBUTION: New York.

Plenty of New York material may be seen at Albany. Karner is one of the localities.

### 18. *Psilocybe Cokeri* sp. nov.

Pileus convex to campanulate, not fully expanding, solitary to gregarious, reaching 2.5 cm. broad; surface glabrous, light-grayish-tan, slightly striate on the margin, which is incurved in young stages; lamellae adnate, rather broad, subcrowded, smoky-brown, becoming darker with age; spores ellipsoid, smooth, purplish-brown in mass,  $7-8 \times 4 \mu$ ; stipe equal, smooth, subcartilaginous, hollow, whitish to dirty-pallid-flesh-colored, 5-7 cm. long, 2-3 mm. thick.

TYPE LOCALITY: Chapel Hill, North Carolina.

HABITAT: In low, moist soil mixed with humus.

DISTRIBUTION: Known only from the type locality.

The specimens were collected on October 24, 1912, by W. B. Cobb and studied by Dr. Coker (621), who sent them to me for determination. When they were a day old, they appeared somewhat deliquescent, suggesting *Coprinus*.

### 19. *Psilocybe panaeoliformis* sp. nov.

Pileus strongly convex or subcampanulate, only partly expanding with age, solitary to cespitose, reaching 2.5 cm. broad; surface dry, slightly fibrillose to glabrous, dull-grayish-brown; lamellae strongly sinuate or adnexed, sometimes nearly free, ventricose, broad, crowded, dark-gray or tawny to blackish; spores broadly ellipsoid to ovoid, pointed at both ends at times, smooth, olivaceous with a purplish tint under the microscope, about  $9 \times 7 \mu$ ; stipe very slender, equal, slightly fibrillose to glabrous, cartilaginous, hollow, darker than the pileus, 5-10 cm. long, 1-2 mm. thick.

TYPE LOCALITY: Biloxi, Mississippi.

HABITAT: On manure or manured ground.

DISTRIBUTION: Mississippi and Alabama.

The type specimens were collected by Mrs. F. S. Earle on September 2, 1904. Also collected by F. S. Earle at Auburn,

Alabama, October 14, 1900. The aspect of the plant is that of *Panaeolus*, but the spores are very distinct.

20. *PSILOCYBE FOENISECII* (Pers.) Quél. Champ. Jura Vosg. 117.  
1872

*Agaricus foenisecii* Pers. Ic. Descr. Fung. 42. 1800.

Pileus conic or campanulate to convex, solitary or gregarious, 1-2.5 cm. broad; surface glabrous, hygrophanous, smoky-brown or reddish-brown, paler when dry, often variegated; context thin, dingy-pallid, without characteristic odor or taste; lamellae adnate or somewhat sinuate, ventricose, broad, not crowded, purplish-fuscous or fuscous-brown, variegated, whitish on the edges; spores ovoid or broadly ellipsoid, smooth or very slightly tuberculate, umbrinous under the microscope, apiculate, about  $12 \times 7 \mu$ , often reaching  $17.5 \times 12 \mu$ , very variable in size; stipe slender, equal, hollow, fragile, glabrous or slightly pruinose, pallid to brownish, 5-8 cm. long, 2 mm. thick.

TYPE LOCALITY: Germany.

HABITAT: On lawns or among grass in fields.

DISTRIBUTION: New England to Alabama and west to Wisconsin; also in Europe.

ILLUSTRATIONS: Berk. Outl. Brit. Fungol. *pl.* 11, *f.* 5; Bull. N. Y. State Mus. 75: *pl.* 86, *f.* 1-11; Cooke, Brit. Fungi *pl.* 608 (590); Gill. Champ. Fr. *pl.* 592 (133); Hard, Mushr. *f.* 267; Hussey, Ill. Brit. Myc. 1: *pl.* 39, *f.* 3; Mycologia 3: *pl.* 40, *f.* 5; Pers. Ic. Descr. Fung. *pl.* 11, *f.* 1; Ricken, Blätterp. Deutschl. *pl.* 66, *f.* 8.

21. *PSILOCYBE SENEX* Peck, Ann. Rep. N. Y. State Mus. 41: 70.  
1888

Pileus thin, hemispheric, obtuse, 1-2 cm. broad; surface hygrophanous, dark-brown and striatulate on the margin when moist, pale-cinereous and shining when dry, slightly squamulose with superficial, subfasciculate, whitish fibrils, the margin sometimes appearing slightly and fugaciously appendiculate with these fibrils; lamellae broad, subdistant, adnate, grayish or cinereous, becoming brown or blackish-brown, white on the edges; spores brown,  $8 \times 5 \mu$ ; stipe slender, hollow, fragile, floccosely pruinose, white, 3-7 cm. long, 2 mm. thick.

TYPE LOCALITY: Catskill Mountains, New York.

HABITAT: On decaying wood in woods.

DISTRIBUTION: New York and Pennsylvania.

The type specimens collected by Peck are attached to a herbarium sheet and are rather scanty. I found the species in August, 1917, at Delaware Water Gap.

22. *PSILOCYBE LIMICOLA* (Peck) Sacc. Syll. Fung. 5: 1054. 1887

*Agaricus limicola* Peck, Ann. Rep. N. Y. State Mus. 24: 70. 1872.

Pileus thin, convex becoming nearly plane, gregarious or cespitose, 1.2–5 cm. broad; surface glabrous, hygrophanous, dark-brown and striatulate on the margin when moist, pale-ochraceous-brown and rugose when dry; lamellae crowded, rounded behind, adnexed, cinnamon-brown, darker when old; spores ellipsoid, 10–12 x 6–8  $\mu$ ; stipe slender, equal, brittle, silky, hollow above, stuffed below, whitish, 3–8 cm. long, 1.5–3 mm. thick.

TYPE LOCALITY: Greig, New York.

HABITAT: On damp, muck soil in woods.

DISTRIBUTION: New York.

ILLUSTRATION: Ann. Rep. N. Y. State Mus. 24: pl. 2, f. 9–13.

Excellent type specimens are to be seen at Albany, collected by Peck in September. Other specimens are from Horse Shoe Pond.

23. *PSILOCYBE CONISSANS* Peck, Bull. N. Y. State Mus. 122: 131.

1908

*Clitopilus conissans* Peck, Ann. Rep. N. Y. State Mus. 41: 64. 1888.

Pileus fleshy but thin, broadly convex becoming nearly plane, cespitose, 2.5–5 cm. broad; surface glabrous, hygrophanous, pale-chestnut or ferruginous and striatulate on the margin when moist, pale-alutaceous or pale-buff and sometimes slightly rugose when dry; context thin, whitish, mild; lamellae thin, crowded, rounded behind, adnexed or rarely adnate, bay verging to dark-purple or liver-colored; spores ellipsoid, smooth, hyaline with a reddish tint under the microscope, brick-red or vinaceous in mass, 8–10 x 4–5  $\mu$ ; stipe equal, rather slender, firm, cartilaginous, glabrous, hollow, curved or flexuous, white and somewhat floccose above, darker below, 2.5–5 cm. long, 2–4 mm. thick.

TYPE LOCALITY: Catskill Mountains, New York.

HABITAT: In humus, especially at the base of trees.

DISTRIBUTION: Maine, New York, Pennsylvania, and Michigan.

Peck found his plants growing in a cluster at the base of an apple tree; Earle got the species at the base of an oak in the New York Botanical Garden; and Miss White found it in Maine at the foot of a maple. I have specimens also from Chappaqua, New York, collected by Mrs. Murrill, and from Buck Hill Falls, Pennsylvania, collected by Mrs. Delafield. It is a very attractive and interesting plant—one never forgets the color of the gills. Peck placed it first in *Clitopilus*, but thought it suggested *Hypholoma* or *Psilocybe*, and afterwards transferred it to the latter genus. The spores are almost hyaline under the microscope—a very peculiar character for *Psilocybe*—but brick-red or purplish in mass, and the general appearance of the hymenophore is much more like *Psilocybe* than *Clitopilus*.

24. PSILOCYBE FUSCOFOLIA Peck, Bull. N. Y. State Mus. 157:  
100. 1912

Pileus fleshy, thin, conic or hemispheric, becoming convex-plane or centrally depressed, solitary, gregarious or cespitose, 2.5–5 cm. broad; surface glabrous, hygrophamous, alutaceous when moist, subochraceous and rugose when dry; margin even, incurved; context whitish or yellowish; lamellae narrow, thin, crowded, adnate, sometimes forked, pale-brown becoming reddish-brown; spores ellipsoid, brown, 6–8 x 3–4  $\mu$ ; stipe equal, slender, hollow, silky-fibrillose, white, thickened or subbulbous and whitish-mycelioid at the base, 2.5–4 cm. long, 2–4 mm. thick.

TYPE LOCALITY: New York City.

HABITAT: On soil or on decaying wood in woods or in open places.

DISTRIBUTION: Vicinity of New York City.

25. PSILOCYBE CYSTIDIOSA Peck, Bull. N. Y. State Mus. 167: 46.  
1913

Pileus thin, convex or subconic, solitary or cespitose, 2–4 cm. broad; surface hygrophamous, glabrous, pale-brown when moist, yellowish-drab with a brownish center and sometimes obscurely striate on the margin when dry, becoming lacerate at times when expanded; context white with a nutty taste; lamellae adnate, crowded, thin, whitish becoming purplish-brown; spores ellipsoid, purplish-brown, 8–10 x 5–6  $\mu$ ; cystidia 60–80 x 12–20  $\mu$ ; stipe

equal or slightly tapering upward, hollow, pruinose at the top, white, often with a subglobose mass of earth adhering to the base, 4-5 cm. long, 2-4 mm. thick.

TYPE LOCALITY: Minneapolis, Minnesota.

HABITAT: On the ground.

DISTRIBUTION: Known only from the type locality.

26. *PSILOCYBE SUBAGRARIA* Atk. Ann. Myc. 7: 375. 1909

Pileus convex to expanded, sometimes subumbonate, 3-5 cm. broad; surface silky, gray to drab; lamellae elliptic, adnexed, emarginate, white, then rose to gray, and finally brown with a purple tint, white on the edges; spores suboblong to subellipsoid, slightly inequilateral, smooth, purplish-brown, 8-10 x 4-5  $\mu$ ; cystidia hyaline, clavate, 45-55 x 12-15  $\mu$ ; stipe fibrous-striate, white with a gray tint, fistulose, subcartilaginous to fleshy, soft, shining, pruinose or silky-fibrillose, 6-8 cm. long, 4-5 mm. thick.

TYPE LOCALITY: Ithaca, New York.

HABITAT: On the ground in woods.

DISTRIBUTION: Known only from the type locality.

I have not seen the type specimens.

27. *PSILOCYBE SPADICEA* (Schaeff.) Quél. Champ. Jura Vosg. 239.  
1872

*Agaricus spadiceus* Schaeff. Fung. Bavar. Ind. 27. 1774. Not  
*A. spadiceus* Scop. 1772.

Pileus fleshy, rigid, convex becoming nearly plane, obtuse, commonly cespitose, 2.5-6 cm. broad; surface scabrous, even, hygroph-anous, bay or bay-brown when moist, pallid when dry; lamellae crowded, rounded behind, adnexed, dry, whitish becoming pinkish-brown; spores brown, 8-9 x 4-5  $\mu$ ; stipe equal, rather tough, glabrous, hollow, even at the apex, whitish, 5-8 cm. long, 4-6 mm. thick.

TYPE LOCALITY: Bavaria.

HABITAT: On the ground among fallen leaves or on and about the base of trees.

DISTRIBUTION: Eastern United States as far south as North Carolina; also in Europe.

ILLUSTRATIONS: Cooke, Brit. Fungi *pl.* 606 (610); Ricken, Blätterp. Deutschl. *pl.* 66, *f.* 7; Schaeff. Fung. Bavar. *pl.* 60, *f.* 4-6.



The name used above is preoccupied by *A. spadiceus* Scop., and it will require considerable time to find a synonym that is tenable. Several New York collections at Albany, from Ampersand and elsewhere, agree fairly well with specimens collected by me at Norrköping, Sweden, and named by Romell; while other specimens so named by Peck seem quite distinct and are more like what I found at Kew under this name.

28. *Psilocybe castaneifolia* sp. nov.

Pileus fleshy, rather thick, convex, not fully expanding, gregarious, 2-4 cm. broad; surface strongly hygrophanous, often rugose, dark-fuliginous when moist, pale-ochraceous and somewhat zoned when dry, margin even and incurved; context fuliginous when moist, pallid when dry, with rather strong odor and unpleasant taste; lamellae adnexed, broad, triangular or ventricose, not crowded, pallid to dark-fuscous or castaneous with whitish edges; spores ellipsoid, granular, apiculate, pale-bay under the microscope, dark-smoky-purplish-brown in mass,  $12.5-16 \times 7-9 \mu$ ; stipe slightly tapering downward, pruinose, subconcolorous to pale-ochraceous, cartilaginous, fistulose, 4-6 cm. long, 4-6 mm. thick.

TYPE LOCALITY: New York Botanical Garden, New York City.

HABITAT: On roadsides and in grassy fields.

DISTRIBUTION: New York City.

Type collected by F. S. Earle (1442) on June 14, 1903, and studied in the fresh condition. The dried specimens have chestnut-colored lamellae, which character distinguishes it at once from plants like *Psilocybe spadicea* and from species of *Stropharia* having spores of this size.

29. *PSILOCYBE NIGRELLA* Peck, Bull. N. Y. State Mus. 139: 28.

1910.

Pileus thin, broadly convex becoming nearly plane, slightly umbonate, scattered or gregarious, 2.5-4 cm. broad; surface hygrophanous, seal-brown, shining and even or obscurely striate on the margin when moist, raw-umber or mummy-brown when dry; lamellae thin, rather crowded, rounded behind, adnexed, purplish-brown or seal-brown, whitish on the edges; spores ellipsoid, dark-purplish-brown, almost black,  $10-12 \times 6-8 \mu$ ; stipe firm, rigid, equal, stuffed with a slender white pith, silky-fibrillose, whitish, 3.5-7 cm. long, 2.5 mm. thick.

TYPE LOCALITY: Karner, New York.

HABITAT: On damp, mossy ground in swamps.

DISTRIBUTION: New York and Massachusetts.

ILLUSTRATION: Bull. N. Y. State Mus. 139: *pl. 3, f. 7-11*.

Plants labeled *Naucoria nigrella*, collected by Morris at Natick, Massachusetts, October 13, 1909, appear to be this species. The spores are ellipsoid, tapering at both ends, smooth, purplish-brown under the microscope, 8-10 x 5-6  $\mu$ .

30. PSILOCYBE UDA (Pers.) Gill. Champ. Fr. 586. 1878

*Agaricus udus* Pers. Syn. Fung. 414. 1801.

Pileus fleshy, thin, convex becoming plane, gregarious, 2-3 cm. broad; surface rugulose, at least when dry, tawny-bay becoming yellowish; lamellae subdistant, adnexed, ventricose, whitish becoming purplish-brown; spores purplish-brown, 16-20 x 7-9  $\mu$ ; stipe equal, elongate, thin, tough, fibrillose, hollow, straight, sometimes slightly wavy, pale above, ferruginous below, 5-8 cm. long, 2-3 mm. thick.

TYPE LOCALITY: Europe.

HABITAT: Among sphagnum and other mosses or grasses.

DISTRIBUTION: Northeastern United States; also in Europe.

ILLUSTRATION: Cooke, Brit. Fungi *pl. 569 (594)*.

Peck's specimens, taken from a sphagnum swamp in New York, and Morris's specimens collected at Natick, Massachusetts, in October, 1907, appear to agree well with specimens from Bresadola and some recently collected by Romell in Sweden. See Kauffman's book, p. 277, for notes on variety *elongata*.

31. PSILOCYBE DICHROA (Pers.) P. Karst. Bidr. Finl. Nat. Folk  
32: 504. 1879

*Agaricus dichrous* Pers. Syn. Fung. 343. 1801.

*Psilocybe fuscofulva* Peck, Bull. N. Y. State Mus. 1<sup>2</sup>: 7. 1888.

Pileus thin, fleshy, conic or campanulate becoming convex, subumbonate, solitary, 2-3.5 cm. broad; surface glabrous, subviscid, subshining, striatulate on the margin, brown or bay-brown, subalutaceous in dry weather; lamellae broad, subcrowded, adnate or adnexed, ventricose, pallid becoming purplish-brown, whitish on the edges; spores purplish-brown, 10-12 x 6-8  $\mu$ ; stipe equal or slightly thickened downward, hollow, silky, pallid becoming red-

dish-brown, 4-7 cm. long, 2-4 mm. thick.

TYPE LOCALITY: Northern Europe.

HABITAT: In marshes and wet places; often among sphagnum.

DISTRIBUTION: New York; also in Europe.

A sheet of specimens bearing this name is at Albany, collected by Peck at Karner in October. Another sheet with somewhat smaller plants collected by Peck in sphagnum at Karner (Center) is the basis of Peck's *Psilocybe fuscofulva*.

### 32. *Psilocybe castaneicolor* sp. nov.

Pileus campanulate, not fully expanding, gregarious, 2-4 cm. broad; surface glabrous, hygrophanous, bright-chestnut when fresh and moist, ochraceous when dry, the margin even or faintly striate with age; context brownish with mild taste; lamellae adnate, crowded, plane, rosy-isabelline to purplish-brown; spores ellipsoid, rounded at one end and slightly flattened but not apiculate at the other, smooth, dark-bay under the microscope, about 14-14.5 x 9  $\mu$ ; stipe equal, glabrous, white, rigid-fragile, hollow, 10-18 cm. long, 4-5 mm. thick.

TYPE LOCALITY: West Park, New York.

HABITAT: On decayed sticks in wet woods.

DISTRIBUTION: Known only from the type locality.

Type collected on August 8, 1903, by F. S. Earle (1806), who made notes from the fresh specimens and assigned the plant to *Psilocybe*. The margin of even the youngest plants among the dried specimens is perfectly straight, as in the genus *Atylospora*.

### 33. *PSILOCYBE LARGA* Kauffm. Agar. Mich. 279. 1918

Pileus fragile, ovoid-campanulate at first, at length expanded to plane, and radiately cracked or split on the margin, gregarious or cespitose, 4-14 cm. broad; surface hygrophanous, bay-brown to ochraceous-brown and even when moist, whitish-tan and radiately rugulose when dry, at first dotted with scattered, small, snow-white, floccose, superficial scales, and quickly denuded, often only with a white-silky margin; context rather thin, white when dry, scissile, homogeneous, with large cells, with no odor or taste; lamellae adnate, rounded behind, rather broad, crowded to sub-distant, white at first, then pale-fuscous, finally umber, minutely white-fimbriate on the edges; spores ellipsoid, smooth, obtuse, purplish-brown under the microscope, umber in mass, 8-9.5 x 4-5  $\mu$ ; cystidia abundant on the sides and edges of gills, subventricose

to subcylindric, narrow-stalked, obtusely rounded above, 70–80 x 12–15  $\mu$ ; stipe stout, equal or tapering upward, soon hollow, terete or compressed, rather firm, usually striate to sulcate, furfureous but glabrescent, then shining, white, cortex subcartilaginous, 5–10 cm. long, 5–15 mm. thick.

TYPE LOCALITY: Ann Arbor, Michigan.

HABITAT: About stumps in grassy clearings or woods.

DISTRIBUTION: Vicinity of Ann Arbor, Michigan.

ILLUSTRATION: Kauffm. Agar. Mich. *pl.* 57.

Kauffman found this large and striking species not infrequent in elm swamps or clearings from May to September, but especially in the spring. The stipe seems very thick for this genus, but it is described as subcartilaginous. Specimens were kindly sent me by Dr. Kauffman some time after these studies were completed.

#### 34. *Psilocybe caerulescens* sp. nov.

Pileus convex, slightly umbonate, gregarious or cespitose, 5–7 cm. broad; surface glabrous, slightly viscid when wet, becoming radially striate on the margin, light-dirty-yellowish-brown with a metallic luster suggesting some alloy of brass, darker on the disk, bluish when bruised or handled; context white, tough, unchanging, continuous with the stipe, with a farinaceous odor when cut, and no characteristic taste; lamellae sinuate-adnexed, light-yellow at first, dark-purplish-brown at maturity; spores broadly ovoid or subglobose, smooth, avellaneous with a yellowish tint under the microscope, very distinctive both in color and in shape, about  $7 \times 5.5 \mu$ ; stipe flexuous, equal, pruinose, hollow, concolorous, white at the apex, turning blue when cut, reaching 9 cm. in length and 1 cm. in thickness.

TYPE LOCALITY: Montgomery, Alabama.

HABITAT: In rich soil mixed with humus on the shaded bank of a small stream.

DISTRIBUTION: Known only from the type locality.

The description is drawn from specimens and notes sent me by Dr. R. P. Burke, who found fifteen hymenophores growing in an area about eight feet square. The plant is larger, with thicker stipe, than most species of the genus, but the stipe is decidedly cartilaginous.

#### DOUBTFUL SPECIES

*Psilocybe ammophila* (Dur. & Lév.) Sacc. Syll. Fung. 5: 1050. 1887. Described from Algeria, growing in sand along the sea-

shore. I have not seen the type—only specimens from Cavara collected in Italy. Hard refers to this species, plants found in sandy soil during August and September near Columbus, Ohio, and photographed by Dr. Kellerman (see his figure 268).

*Psilocybe atrobrunnea* (Lasch) Gill. Champ. Fr. 586. 1878. Kauffman reports this species from Ann Arbor, Michigan, growing among sphagnum in tamarack bogs.

*Psilocybe canofaciens* Cooke, Grevillea 14: 1. 1885. Described from specimens collected in decaying straw in England by W. G. Smith. Cooke's illustration of this species is very characteristic and striking. Kauffman reports it as rare in Michigan, with the same variable spore characters as observed in England by Masee.

*Psilocybe cernua* (Vahl) Quél. Champ. Jura Vosg. 116. 1872. Described from Denmark. Placed in the genus *Atylospora* by Fayod. Reported by Kauffman as infrequent in Michigan during the autumn months, occurring in clusters at the base of trees. Peck's specimens doubtfully so named, collected on chips at Forestburg, New York, in September, remind me of *Atylospora umbonata*.

*Psilocybe clivensis* (Berk. & Br.) Sacc. Syll. Fung. 5: 1055. 1887. Described from England and reported from New York by Peck. The specimens attached to a sheet at Albany are too poor to be compared readily with other material.

*Psilocybe ericaea* (Pers.) Quél. Champ. Jura Vosg. 338. 1873. (*Agaricus ericaeus* Pers. Syn. Fung. 413. 1801.) Described from Europe and reported from New Richmond, Michigan, by Kauffman. I have not seen his specimens, but have several from Europe, including recent collections in Sweden by Romell.

*Psilocybe graveolens* Peck, Bull. N. Y. State Mus. 167: 47. 1913. Described as follows from specimens collected by Ballou in the Hackensack marshes, New Jersey. No measurements are given by Peck and I have not seen the specimens.

Pileus hemispheric to convex, cespitose; surface glabrous, varying in color from creamy-white to subalutaceous; context pallid, with a strong, persistent odor; lamellae crowded, subventricose, rounded behind, adnexed, brown when mature; spores subellipsoid,  $8-10 \times 5-6 \mu$ ; stipe equal, silky-fibrillose, stuffed or hollow, white.

*Psilocybe murcida* (Fries) P. Karst. Bidr. Finl. Nat. Folk 32: 507. 1879. (*Agaricus murcidus* Fries, Syst. Myc. 1: 299. 1821.) Described from specimens collected by Fries under beech trees in Sweden. Reported from Michigan by Kauffman as occurring in moist woods during May, June, and September. I have not seen his specimens.

*Psilocybe pulicosa* (Mont.) Sacc. Syll. Fung. 5: 1056. 1887. (*Agaricus pulicosus* Mont. Syll. Crypt. 124. 1856.) Described from specimens collected on the ground at Columbus, Ohio, by Sullivant. Type not seen.

*Psilocybe rhodophaea* (Mont.) Sacc. Syll. Fung. 5: 1050. 1887. (*Agaricus rhodophaeus* Mont. Syll. Crypt. 124. 1856.) Described from specimens collected among fallen leaves at Columbus, Ohio, by Sullivant. Type not seen.

*Psilocybe semilanceata* (Fries) Quél. Champ. Jura Vosg. 338. 1873. (*Agaricus semilanceatus* Fries, Obs. Myc. 2: 178. 1818.) Described from Europe, occurring on manured, grassy ground. Peck's specimens from Bethlehem doubtfully so named do not at all agree with excellent material from Bresadola, Romell, and others.

*Psilocybe subericaea* (Fries) Sacc. Syll. Fung. 5: 1045. 1887. Described from Sweden. There are several good collections from Alabama in the Garden herbarium and one at Albany bearing this name, but unfortunately they are not accompanied by notes. Although agreeing in a general way with the European species, I doubt if they are the same. The study of fresh plants will decide. I find the spores of the Alabama plants to be ellipsoid, smooth, pale-fulvous with a slight purplish tint under the microscope, purplish-brown in mass, about  $14 \times 9 \mu$ .

*Psilocybe Sullivantii* (Mont.) Sacc. Syll. Fung. 5: 1047. 1887. (*Agaricus Sullivantii* Mont. Syll. Crypt. 123. 1856.) Described from specimens collected on naked ground near Columbus, Ohio, by Sullivant. Said to be a very beautiful plant with pileus 11-12 cm. broad and stipe 10 cm. long. Type not seen.