star may be penetrated, its density determined, and its elements identified; and descending to terrestrial and trivial concerns, we may detect our grocer in the adulteration of his goods, and reveal the minutest blood stain upon the washed and renovated garments of the assassin.

Time fails to pursue this interesting subject further. Among the sublime and wonderful results of the study of nature, not the least absorbing and pleasurable will be found the phenomena of light.

REPORT OF THE COMMITTEE ON BOTANY.

THE MYCOLOGICAL FLORA OF MINNESOTA.

BY A. E. JOHNSON, M. D.

Mr. President:

Ever since "The Minnesota Academy of Natural Sciences" was organized, four years ago, it has had a standing committee on botany, composed of three members, myself being one for at least three years, and until now we have not had a report on this branch of the natural history of Minnesota.

At the close of the April meeting of the Academy, the Committee on Botany held a short conference, in which I believe it was agreed, that as I had given some attention to the Mycological flora of this locality, I should, if I chose to do so, pursue this branch of botany, and report the results of my investigations; and it was also understood that the other members of the committee were to collect, determine and list as far as possible the Phænogamous plants of the State, and report the results of their investigations in that branch
I have therefore to submit the following report on the Mycological flora of this locality, which embraces the counties of Hennepin, Ramsey, Wright and Anoka.

I have collected and determined 559 species all new to the State, two of which are new to science. These species are embraced in two divisions, six families, twenty orders, seventy-seven genera, and thirty-seven sub-genera.

The labor has not been small. I have gathered and examined more than ten thousand specimens. I have searched prairies, rich, sandy, barren, high and low. I have searched woods and thickets, hills, valleys and swamps; decaying woods of all kinds, stumps, logs, twigs, branches, leaves and herbs; I have found them on fences, posts, sidewalks and timber; on grasses, lichens, leaves of shrubs, living trees, and parasites on decaying fungi; on the excrements of animals, from the horse, cow, dog, cat, rabbit and fowl; on decaying fruits preserves, squashes, potatoes, and grains, and on the bodies of dead insects, beetles, spiders, &c.

I have studied closely the conditions of growth, and have noted in nearly every instance the substance on which the species was found to flourish. I have noted the month, in nearly every instance, in which the species was first found, and last seen, as also whether it occurred throughout the season, or for a certain number of months, which together with their habitat will be found of considerable use to those who may wish to investigate the Mycological flora of our State.

I must express my thanks to Prof. N. H. Winchell, our State Geologist, for the loan of his microscope, which was found an indispensable aid in diagnosing many species contained in this report.
Hymenium lamellæ or gills consist of two distinct membranes, applied one on either side to an intermediate stratum (trama), and produce minute reproductive bodies (spores) of various shapes and colors on their exterior surfaces. The lamella or gills are thin vertical plates, borne on the under surface of the pileus or hymenophorum radiating from a central point, usually the stem (stipe) which may be central or lateral, to the margin of the pileus. The gills may be attached to the stem, and decurrent or free, or terminate some distance from it (remote.) They may be arcuate, bent like a bow, uncinate or hook-like; edge serrated, set with little teeth, or notched near the inner extremity, where they are said to be emarginate. They may be venosed, venose connected, branching, groved, or splitting longitudinally or anastomosing.

The stem may be of the same diameter in every part (equal), or be thicker in the middle, tapering towards either extremity (ventricose), enlarged at the extremity (bulbose), incrassated above or below. It may be hollow (fistulose), or have its center of different texture from its exterior (stuffed), the center in such case being either cottony or spongy, or it may be of uniform texture throughout its diameter (solid). Its base may be coated or fringed with minute entangled filaments (mycelium), the immediate product of the spores, while toward its top there is often seen a flabby, lacerated, membranaceous ring (annulus) girding it. Sometimes the young plant is completely enveloped by a submembranaceous wrapper (volva), which it bursts as it increases in size, and in other cases the envelope may be only partial, and even composed of little flocks or fibers which are scarcely conspicuous. Both the stem and pileus may be wholly or partially sprinkled with fine, meal-like powder (farinaceous), or coated with little fibres (fibrillose), or rough, with distinct scales or scale-like tufts of fibres (squamose),
which are sometimes quite minute (squamulose). The surface of the pileus in some species is sticky to the touch (viscid), in others, it may be in moist weather, covered with a gelatinous substance (glutinous). The flesh of some, when moist, presents a more watery appearance, and a greater depth of coloring than when dry (hygrophanous), and in such species, in the moist state, fine, radiating, parallel lines may sometimes be seen on the margin (striatulate). Pileus may be, when matured, horizontal, campanulate, umbelliferous, umbonate, depressed and umbonate, infundibuliform, margin incurved or decurved, and it may be of various colours, often presenting many of these characters in succession as the plant advances from infancy to maturity.

The Agaricini comprise a vastly greater number of species, and are exceedingly more abundant than any other order of fleshy umbraculiform fungi. As a rule, individual specimens are short-lived, rapid in growth, and as rapid in decay. Some species germinate, grow, mature, die and decay from the setting of the sun to eight or ten o'clock next day. They are more abundant in August and September in our climate than in the beginning or end of the season, every day many new species appearing. They differ very much in abundance and in number of species as the season is wet or dry. Wet seasons and wet spells of weather are very favorable to their production. In dry seasons, and long dry spells, almost none can be picked except in shady marshes or damp woods. Open, cultivated districts are not favorable to their production.

None of the fungi, especially the agarics, are ever green. They present almost every variety of colour, from pure white, through ochraceous, to all tints of brown until nearly black, or through sulphury yellow to reds of all tints, deepening into crimson, or passing by various shades into purplish black. These are the predominating shades, but I have seen some blue as indigo, some mineral greens, passing into olive, but
no true chlorophyllous green. The nearest approach to this amongst fungi is found in the hymenium of some Boleti. Some agarics present bright colours, but we have none yet discovered with such brilliant hues as some mychologists describe. *Agaricus muscarius*, in our climate, is of a yellowish white colour. In New York it is described as being "red, yellow, or nearly white," in Europe as "crimson," and in Pennsylvania as "orange, scarlet, sometimes brownish," thus showing that colour is very little to be relied upon in diagnosing species. Some *Russulae* are gems of brilliant colouring. *Agaricus laccatus*, with its amethystine shades, is very beautiful. Peck remarks, "The great beauty and variety of their colours, their singular and manifold forms (all, however, variations of a single type), their strangely peculiar habits, perishable nature and remarkable properties, all combine to make them objects of great interest."

Some are poisonous, and some constitute elegant dishes of nutritious food.

The genus *Agaricus* is divided into five series, which are determined by the colour of their spores. Cut a fresh specimen and lay it on a plate of glass with the hymenium down, and in a short time, a few hours at most, spores will be deposited in great abundance. If they are found nearly or quite white, the specimen belongs to *Leucospori*, or series 1. If salmon-colored or rosy, to *Hyporhodii* series 2. If brown, or reddish or yellowish brown, or ferruginous, *Dermini*, or series 3. If purple, or brownish-purple, dark purple, or dark brown, *Pratella*, or series 4, or if the spores are black, or nearly so, and the gills never become purple or brown, the plant belongs to *Coprinarii*, or series 5. Each series is divided into several sub-genera, and each sub-genus contains many good species, which are characterized by one or more structural variations, which are diagnostic. There is but little difficulty in making out the sub-genus, but it is often times very perplexing to determine the species, notwithstand-
ing the help of the apparently well arranged key of an author prefixed to each sub-genus, and the help also of a more or less correct description of each species. This may in part be accounted for by difference in climate, locality and surrounding conditions of development, which must produce some difference in structure and colour, sufficient often to make species-diagnosing perplexing.

In making up the following list of Minnesota fungi, I shall give both the scientific and common name of each species, the habitat, and the month in which it is found. I shall give my own number without description, except new species, referring the reader to the authors I have taken for my guides for full descriptions of each species, hoping hereafter to write a full description of each plant here numbered, and also of each new one discovered from year to year.

DIVISION I. SPORIFERA.

FAMILY I. HYMENOMYCETES.

ORDER I. AGARICINI.

Series I. LEUCOSPORI. Spores white.

SUB-GEN. I. AMANITA. Pers.

1. AGARICUS (AMANITA) VAGINATUS. Bull. "Sleek Amanita."


In woods. August and September.


10. **Agaricus (Amanita) Asper.** Fr. "Rough Amanita." Cooke's Fungi. Our plant is reddish yellow. Bulb of stem not more than half the size given by M. J. B. of the Carolina plant. It is now and then observed in woods, from the last of June to September. Rarely if ever seen in October.
Veil universal and concrete with the cuticle of the pileus breaking up in the form of scales; pileus thin, loose in substance, soft and thread-like, distinct from the stem; stem distinct from the hymenophore, generally hollow, full of fine bis-soid fibers, not fleshy, but rather cartilaginous, different in texture from the flesh of the pileus, hence easily separated, leaving a cup or socket at its point of juncture with the pileus, furnished with an annulus, which is at first continuous with the cuticle of the pileus, often moveable, sometimes evanescent; no volva; gills free; not sinuate or decurrent. The beautiful variegated appearance of the pileus is due to its rough, scaly structure consequent on the breaking up of the cuticle with the concrete veil. *Lepiota* is readily recognized by its *free gills*, annulated stem, *without a volva*, and *generally scaly pileus*. Usually autumnal and edible.—*W.G.S.*

**HABIT.**—On the ground, mostly in rich, grassy places and more often in fields than woods.


In low damp woods, and dry woods. August—September. Very scarce hereabouts.

12. **AGARICUS (LEPIOTA) EXCORIATUS.** *Schaff.*

"Flaky Lepiota." *Cook's Fungi.*

In open woods. Occasionally seen from May—September. Esculent,

13. **AGARICUS (LEPIOTA) GRACILENTUS.** *Krombh.*

"Slender Lepiota." *Cooke's Fungi.*

In rich grassy plats, in woods and in pastures. September. Esculent.
14. **AGARICUS (LEPIOTA) ACUTESQUAMOSUS. ** _Wm._  
"Squarrose Lepiota." Cooke's Fungi.  
Stipe in our plant is shorter than Cooke makes the Cincinnati plant.  
Side of stumps. On the ground in open places. July 16.

15. **AGARICUS (LEPIOTA) CLYPEOLARIUS. ** _Bull._  
"Fragrant Lepiota." Cooke's Fungi.  
In woods. June 15th.

16. **AGARICUS (LEPIOTA) AMERICANUS. ** _Peck._  
Our plant is not so large or tall as the N. Y. plant.  
Amongst grass on prairies and roadsides. August and September.

17. **AGARICUS (LEPIOTA) CRISTATUS. ** _Fr._  
"Stinking Lepiota." Cooke's Fungi.  
Not remarkable for its odor, as stated in books.  
In woods and fields. August 30th.

18. **AGARICUS (LEPIOTA) NAUCINUS. ** _Fr._  
"Large spored Lepiota." Cooke's Fungi.  
In open woods. August and September.

19. **AGARICUS (LEPIOTA) GRANULOSUS. ** _Batsch._  
"Granular Lepiota." Cooke's Fungi.  
The umbo is dark reddish brown, and decidedly pileate.  
In Meeker forest. July.

20. **AGARICUS (LEPIOTA) POLYSTICTUS. ** _Berk._  
"Little brown Lepiota." Cooke's Fungi.  
Our plant answers M. J. B.'s description the best.  
In short grass in thin woods. July.
Veil partial, annular, attaching the edge of the pileus, in infancy, to the upper part of the stem, and often forming flocci on the pileus; pileus fleshy; stem homogeneous and confluent with the hymenophore, furnished with a ring, below which the veil is concrete with the stem, forming scales upon it like the scurfy scales on the pileus; gills broadly touching or running down the stem.

The species are few of this sub-genus. Thus far we have found but one.


"Honey-coloured Armillaria."

We have four varieties of this plant, not sufficiently differentiated to designate them as species.

On the ground and on stumps. August and September.


"Thick gilled Tricholoma." Cooke's Fungi.

In tamarack woods. September.


"Variegated Tricholoma." Peck's Reporter.

On the ground about old stumps in woods. June and July.
25. **Agaricus (Tricholoma) Sulfureus.** *Bull.*
   "Sulphury Tricholoma." Cooke's Fungi.
   In woods on decayed wood. Not common. July and August.

26. **Agaricus (Tricholoma) Gambosus.** *Fr.*
   "St George's Mushroom." Cooke's Fungi.
   In an old grassy, unused road. Taste pleasant. June.
   Esculent.

27. **Agaricus (Tricholoma) Melaleucus.** *P.*
   "Changeable Tricholoma." Cooke's Fungi.

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**SUB-GEN. 5. CLITOCYBE.** *Fr.* S.M. i. p. 78.

Pileus generally fleshy in the disc, obtuse, plane or depressed, hygrophanous, or not hygrophanous; stem confluent and homogeneous with the hymenophore, elastic, with a fibrous outer coat, covered with minute fibres; gills acutely adnate, or decurrent.—*Cooke's Fungi.*

The form of the pileus in this sub-genus is commonly that of an inverted cone, or from the depression of the center in the thin species, of a funnel. Stem destitute of an annulus. Seldom any veil.—*Peck's Report.*

28. **Agaricus (Clitocybe) Nebularis.** *Batsch.*
   "Clouded Clitocybe." Cooke's Fungi.
   In woods. On the ground. September.

29. **Agaricus (Clitocybe) Adirondackensis.** *Peck.*
   "Smooth Clitocybe." Cooke's Fungi.
30. Agaricus (Clitocybe) candidans. Fr.
   "Whitish Clitocybe." Cooke's Fungi.
   Amongst leaves in woods. September.

31. Agaricus (Clitocybe) phyllophilus. Fr.
   "Leaf-loving Clitocybe." Cooke's Fungi.
   Amongst leaves in woods. September.

32. Agaricus (Clitocybe) dealbatus. P.
   "Ivory Clitocybe." Cooke's Fungi.
   In black-oak woods, damp soil. July.

33. Agaricus (Clitocybe) giganteus. Fr.
   "Giant Clitocybe." Cooke's Fungi.
   In woods. Not common. September.

34. Agaricus (Clitocybe) cyathiformis. Fr.
   "Cup-shaped Clitocybe." Cooke's Fungi.
   In grassy plats in thin woods. August—September.

35. Agaricus (Clitocybe) laccatus. Scop.
   "Waxy Clitocybe." Cooke's Fungi.
   Liable to be mistaken for other species, owing to change of color and variable size. Abundant; occurring almost everywhere. Very common in woods. June to October.

36. Agaricus (Clitocybe) cerussatus. Fr.
   "White-lead Clitocybe." Cooke's Fungi.
   Gills in our plant are not crowded. On decaying tamarack, railroad tie. May 21.

   Radiated Clitocybe.
   Pileus 10 to 15 lines broad, expanded, border inverted, slightly radiated to umbilicus, and a little in from border two
slight zones, umbilicated, coriaceous, umber-color, tomentose, appearing like velvet; gills yellowish, broad, crowded, slightly adnate, entire, crowding the stipe but not adherent; stipe 1 to 2 inches long, 1 to 2 lines thick, bulbous at the root, fibrous, tomentose and same color as pileus. Spores white.

June 4th. On decaying branches on the ground, and on stumps.

Finding no description answering in the books, I have thought it best to name the specimen in harmony with some of its characteristic features. If it should not prove to be a new species, the name will not be adopted. Other and more experienced Mycologists must be the critics.

**SUB-GEN. 6. PLEUROTUS.** Fr. Epicr. p. 129.

Veil evanescent, or none; pileus fleshy in the larger species, with a smooth or ragged margin from the remains of the veil; substance either compact, spongy, slightly fleshy, or membranaceous; stem mostly lateral or wanting, when present confluent and homogeneous with the hymenophore; gills with a sinus or broadly decurrent tooth.—*Cooke's Fungi.*

38. **Agaricus (Pleurotus) Ostreatus.** Jacq.

"Oyster Pleurotus."


39. **Agaricus (Pleurotus) Serotinus.** Schrad.

"Yellowish Pleurotus."

On prostrate decaying larch. May.

40. **Agaricus (Pleurotus) Mastrucatus.** Fr.

"Imbricated Pleurotus."

On prostrate decaying elm, in swamp. June 5th.
41. *Agaricus* (Pleurotus) atrocoeruleus. Fr.  
"Blue-black Pleurotus."  
On decayed patch of living maple, Meeker woods, July 14.

"Sulphur-yellow Pleurotus."  
On old logs in woods, ends of pine sidewalks, and decaying pine logs in pond. September.

"Woolly Pleurotus."  

*Sub-gen. 7. Collybia.* Fr.  Erier p. 81.

Pileus at first convex, with an involute margin; stem with a cartilaginous bark, of a different substance from the hymenophore, but confluent with it; gills adnate or slightly attached (not decurrent.)—Cooke’s *Fungi*.

42. *Agaricus* (Collybia) radicatus. Reilh.  
"Rooting Collybia."  
On the ground and on old stumps in Lake Harriet woods. July 5th.


44. *Agaricus* (Collybia) confluent. P.  "Confluent Collybia."  
45. **Agaricus (Collybia) cirrhatus.** Schum.  
"Cirrhate Collybia."
Amongst leaves in woods. June—September.

46. **Agaricus (Collybia) tuberosus.** Bull.  
"Tuberous Collybia."
On ground and dead *Russula*. August—October.

47. **Agaricus (Collybia) acervatus.** Fr.  
"Tufted Collybia."
On the ground in woods. August—October.

48. **Agaricus (Collybia) xanthopus.** Fr.  
"Yellow-stemmed Collybia."

49. **Agaricus (Collybia) dryophilus.** Bull.  
"Wood Collybia."
Amongst leaves, on decaying vegetable matter. Very common. June—October.

50. **Agaricus (Collybia) exsculptus.** Fr.  
"Sulphur-gill Collybia."
On the ground in open woods. September.

51. **Agaricus (Collybia) plexipes.** Fr.  
"Twisted Collybia."
On trunks.

52. **Agaricus (Collybia) stipitarius.** Fr.  
"Fibrillose Collybia."
Under trees, on twigs and leaves. July and August.
Pileus more or less membranaceous, generally striate, with the margin always straight, and at first pressed to the stem, never involute, expanded, campanulate, and generally umbonate (not depressed, as in Omphalia); stem externally cartilaginous, tubular, not stuffed when young, confluent with the hymenophore, but heterogeneous from it; gills never decurrent, though some species have a broad sinus near the stem.

HABIT. Mostly epiphytal.—Cooke's Fungi.


   In tamarack swamps on Sphagnum. June.

   Pileus translucent, finely striated, from margin to center, disc pale yellow, or lead color, stem thread-like, hollow, white; gills extremely narrow, regular. Pileus expanded, one to two lines broad; stem 1 to 1½ inches high. Found on the ground under an inverted tumbler. May.

   On tamarack cones, oak burs, &c.
   Edge of gills vary from light to dark red colour.
57. AGARICUS (MYCENA) PURUS.  P.  "Amethyst Mycena." Cooke's Fungi.
   Berkeley says its taste and odor are like radishes. Our plant has a fishy odor.
   In tamarack swamps and moist woods, amongst leaves. June and July.

58. AGARICUS (MYCENA) PAUPERCULUS.  Berk.
   "Little-stump Mycena."
   Inside of decayed stumps. July.

59. AGARICUS (MYCENA) SANGUINEOLENTUS.  A. & S.
   "Stinking Mycena." Cooke's Fungi.
   Our plant is found amongst moss at the base of trees, and amongst leaves in woods. June to October.

60. AGARICUS (MYCENA) CROCATUS.  Schrad.  "The Stainer."
   Stem yields a copious saffron-coloured juice. Amongst leaves in woods. Lake Harriet. June and July.

   "Yellow-stem Mycena."
   Gills bluish or lilac. Amongst ferns in woods. July and August.

62. AGARICUS (MYCENA) STYLOBATES.  P.  "Discoid Mycena."
   In woods and on decaying herbs. August.

63. AGARICUS (MYCENA) CORTICOLA.  Schum.
   "Bark Mycena.
64. **Agaricus (Mycena) Capillaris.** Schum.

"Capillary Mycena."

Abundant on dead leaves in woods. August.

**SUB-GEN. 9.** **Omphalia.** Fr. Epicr. p. 119.

Pileus generally from the first umbilicate, afterwards funnel-shaped, almost always membranaceous or sub-membranaceous and hygrophanous, margin incurved or straight; stem cartilaginous and tubular, when young often stuffed, confluent with the hymenophore, but heterogeneous from it; gills truly and considerably decurrent.

**Habit.** Generally epiphytal, and mostly peculiar to hilly regions, preferring a damp, woody situation, and a rainy climate.—*Cooke's Fungi.*

65. **Agaricus (Omphalia) Pyxidatus.** Bull. "Variable Omphalia."

Amongst grass on a hill south of Moulton's nursery. July. (Cooke says November.)

66. **Agaricus (Omphalia) Affricatus.** Fr.

"Hairy Bog Omphalia." Cooke's Fungi.

This is a British species, but clearly represented in Minnesota. Amidst grass in a ravine from Moulton's Nursery. July 25th.


68. **Agaricus (Omphalia) Umbelliferus.** L.

"Common Omphalia." Cooke's Fungi.


This is an English species, which proves a wide geographical range.

In a ravine from Moulton's Nursery. July 25th.


In tamarack swamps.

71. Agaricus (Omphalia) chryseus. Peck. "Yellow Omphalia."

On logs, Lake Harriet woods. August.


Amongst moss on the ground, in fields and groves. June—October.


Very small. Pileus 2 to 3 lines broad, stem 3 to 6 inches long. In marshy ground, on decaying stems of vegetables and oak burs. August.

74. Agaricus (Omphalia) integrellum. P. "Little-white Omphalia." Cooke's Fungi.

Very small. On decaying sticks in woods. August and September.
Series 2. HYPORHODII, Fr. Epicr. p. 138.—Spores pink or salmon-colour.

Spores regular in shape, oval or pip-shaped, pink or salmon-colour: veil universal, forming a perfect volva, distinct from the cuticle of pileus; stem distinct from the hymenophore; gills free, rounded behind, at first white, then pink, soft, liquescent.

HABIT. Gardens and hot houses, and in woods and on manured ground, growing on rotten wood and damp ground; one species in parasitic on Agaricus neubularis.—Cooke's Fungi.

Some species appear in spring and early summer, and others late in autumn. Allied to sub-gen. Amanita.—W.G.S.

75. AGARICUS (VOLVARIA) BOMBYCINUS. Schaff. “Silky Volvaria.”
On rotten wood and decaying sawdust. July and August.
This is a southern species.

76. AGARICUS (VOLVARIA) VOLVACEUS. Bull. “Stove Volvaria.”
On the ground by roadsides. July—August.

77. AGARICUS (VOLVARIA) TAYLORI. Berk. “Taylor's Volvaria.”
On the ground, decayed stumps, decayed logs, and decaying rushes. August and September.

78. AGARICUS (VOLVARIA) GLOIOCEPHALUS. Fr. “Umbonate Volvaria.”
On the ground. June.

(Psalliota, Fr. partly.)

Spores pale rose; stem distinct from the hymenophore, furnished with a fugitive ring; gills free. Corresponds in structure with Leptiot a and Psalliota.—Cooke’s Fungi.

79. AGARICUS (CHAMÆBOTA) CRETAŒUS. Fr. “Chalky Chamæota.”
In meadows. Rare. August.


Spores pink or salmon-coloured; pileus of the same nature with the stem and gills, smooth, silky, or wrinkled; stem ringless and without a volva, solid, distinct from the hymenophore; gills free, at first white, then yellowish, afterward pink, very crowded, almost cohering, sometimes subliquescent.

HABIT. The species almost always grow on, or close to, the trunks of trees.—Cooke’s Fungi.

The species of Pluteus appear in spring, early summer, or late in the autumn. They are tasteless, and none edible. —W. G. S.

80. AGARICUS (PLUTEUS) CERVINUS. Schäff.
“Fawn Pluteus.”
On the ground by decaying stumps. May to October.

81. AGARICUS (PLUTEUS) NANUS. P. “Mealy Pluteus.”
On decaying logs in woods. August.

82. AGARICUS (PLUTEUS) PETASATUS. Fr. “Broad-capped Pluteus.”
83. AGARICUS (PLUTEUS) LEONIUS. Schäff. "Yellow Pluteus."
On decaying wood. August—October.

84. AGARICUS (PLUTEUS) CHRYSOPHÆUS. Schäff. "Dingy Pluteus."
On decaying wood. Rare. July and August.

85. AGARICUS (PLUTEUS) PHLEBOPHORUS. Ditm. "Veined Pluteus."

Spores extremely irregular in shape, salmon-colour, pink, or more or less approaching bright-red or brown; pileus, margin at first incurved, never at first umbilicate, fleshy, or thin according to the species, viscid, smooth, hygrophanous, dry, silky, or flocculose; stem fleshy-fibrous, continuous with the hymenophore, and homogeneous with it; gills sinuated, almost free, or more or less adnate, sometimes parting from the stem.

HABIT. All are terrestrial.—Cooke's Fungi.
Besides corresponding with Tricholoma, Entoloma agrees in structure with Hebeloma and Hypholoma.—W. G. S.

86. AGARICUS (ENTOLOMA) STRICTIOR. Peck. "Grayish-brown Entoloma."
On the ground in borders of woods. September and October.

87. AGARICUS (ENTOLOMA) SINUATUS. Fr. "Large-waved Entoloma."
88. *Agaricus (Entoloma) Prunuloides*. Fr.
   "Plum-like Entoloma."
   On the ground in woods. September. Rare.

89. *Agaricus (Entoloma) Helodes*. Fr. "Moor Entoloma."
   On the ground in damp woods. September.


   Amongst grass in thin woods. September.

   In woods. August and September.

93. *Agaricus (Entoloma) Rhodopolius*. Fr.
   "Rosy Entoloma."
   In woods, on the ground. August and September.

   In thin woods, and prairies. September.

   "Papillated Entoloma."
   Swamps and sphagnous marshes. August.

   Spores salmon-colour, in some species very pale, almost white, irregular spheres, or altogether irregular; pileus pru-
Mycological Flora.

inose, dull white, cinereous, or brownish, generally fleshy; stem fleshy or fibrous, confluent with the hymenophore and homogeneous with it; gills decurrent, never sinuated.

HABIT. All are terrestrial.—Cooke's Fungi.

Peck says: "The decurrent gills enable the species of this sub-genus to be readily known."

96. **Agaricus (Clitopilus) Prunulus.** Scop.
   "Plum Clitopilus."
   Common in woods from August to October, and doubtless much earlier in the season, perhaps extending from May to October.

97. **Agaricus (Clitopilus) Cretatus.** Berk.
   "Chalky Clitopilus."
   Quite common in woods. August and September.

98. **Agaricus (Clitopilus) Novuboracensis.** Peck.
   "Dingy white Clitopilus."
   In woods. August.

99. **Agaricus (Clitopilus) Woodianus.** Peck.
   "Yellowish white Clitopilus."
   On the ground near stumps, and on old logs in woods. September.

100. **Agaricus (Clitopilus) Undatus.** Fr.
   "Waved Clitopilus."
   In woods on decaying wood. August and October.


Spores pink, or pale lilac; stem lateral or none. when present confluent and homogeneous with the hymenophore; gills sinuate or decurrent.

HABIT. On wood or the ground.—Cooke's Fungi.
"Tarragon Claudopus."
On elm stumps. June. Western Avenue woods.

"Ground Claudopus.
On the ground in open woods. September.

Sub-gen. 16. Leptonia. Fr. S.M. i., p. 201.

Spores salmon-colour, irregular in shape; pileus less campanulate than Nolanea, and never truly fleshy, cuticle always torn into scales, disc umbilicate, and often darker than margin, which is at first incurved; stem rigid, with a cartilaginous bark, often dark blue, confluent with the hymenophore, but heterogeneous from it; gills not decurrent, but often with a small tooth or sinus, separating from the stem, variable in colour, at first dirty white, yellowish, greenish-grey, or blue.

Habit. Dry hills, and sometimes marshy places and prairies in wet weather. August.—Cooke's Fungi.

The almost membranous pileus, torn and scaly cuticle, and the never decurrent gills, render the species of this sub-genus comparatively easy of recognition.

103. Agaricus (Leptonia) chalybeus. P.
"Steel-blue Leptonia."
On prairies, from July to September. Usual after showers.

104. Agaricus (Leptonia) incanus. Fr. "Hoary Leptonia."
Mycolocical Flora.

SUB-GEN. •.7. NOLANEA. Fr. S.M. i. p. 204.

Spores salmon-colour; pileus submembranaceous, sub-campanulate, and papillose, not umbilicate, at first straight and pressed to the stem, not incurved as in Leptonia; stem cartilaginous, fistulose, sometimes stuffed, confluent with but heterogeneous from the hymenophore; gills not decurrent.

HABIT. Generally terrestrial, growing on grassy hills, and in wet places in woods.—Cooke's Fungi.

105. AGARICUS (NOLANEA) PASCUS. P. "Pasture Nolanea."
On low, wet, pastured prairies. June.

106. AGARICUS (NOLANEA) RUFO-CARNEUS. Berk.
"Red-brown Nolanea."
On marshes. August and September.

107. AGARICUS (NOLANEA) BABINGTONII. Blox.
"Babbington's Nolanea."
In poplar woods. Hilly ground. September.

108. AGARICUS (NOLANEA) CONICUS. Peck. "Conical Nolanea."
On rotten wood, overgrown with moss, in swamps August.

109. AGARICUS (NOLANEA) DELICATULUS. Peck.
"Delicate Nolanea."
On moss in tamarack swamps. August.

110. AGARICUS (NOLANEA) CLINTONIANUS. Peck.
"Clinton's Nolanea."
In tamarack swamps. August.
Spores various shades of reddish-brown, brown, red, or yellowish-brown.
In this series there are no species with the hymenophore free from the stem, neither are any furnished with a volva — Cooke's Fungi.

**SUB-GEN. 19. PHOLIOTA. Fr. S.M. i. p. 240.**

Spores sepi-a-brown, bright yellowish-brown, or light red; stem furnished with a ring, persistent, friable, fugacious.

**HABIT.** Stumps and ground, principally in damp, mossy places.—Cooke's Fungi.

111. **AGARICUS (PHOLIOTA) PRÆCOX. P.** "Spring Pholiota."

Common on the prairie south of Sand Lake. May.

112. **AGARICUS (PHOLIOTA) COMOSUS. Fr.** "Hairy Pholiota."

On decaying trunks. August.

Found by Miss Rosenia A. Johnson.

113. **AGARICUS (PHOLIOTA) SQUARROSUS. Mull.** "Scaly Pholiota."

On fallen decaying trunks, in woods. August.

Found by Miss R. A. Johnson.

114. **AGARICUS (PHOLIOTA) FLAMMANS. Fr.** "Yellow scaly Pholiota."

In grass by roadside. June.

115. **AGARICUS (PHOLIOTA) TAMNOPHYLLUS. Peck.** "Brownish Pholiota."

Amongst grass by roadside. June and July.
Mycological Flora.

SUB-GEN. 20. HEBELOMA. Fr. S.M. i. p. 249.

Spores for the most part clay-coloured, or in Inocybe ferruginous brown; veil of a different texture from the pellicle of the pileus, or in Inocybe homogeneous with the fibres of the pileus; pileus fleshy, pelliculose, damp subviscid, or (in Inocybe) fibrous, ringless; gills sinuato-adnate.

HABIT. All terrestrial.—Cooke’s Fungi.

116. AGARICUS (HEBELOMA) PUNCTATUS. Fr.

“Punctuate Hebeloma.”
In woods. September. Common.

117. AGARICUS (HEBELOMA) CRUSTULINFORMIS. Bull.

“Ring Hebeloma.”
In woods. September. Common.

118. AGARICUS (HEBELOMA) FASTIBILIS. Fr.

“Ochrey Hebeloma.”
In woods. July—October. Very common.

119. AGARICUS (HEBELOMA) STELLATOSPORUS. Peck.

“Stillate Hebeloma.”
Ground, in woods, and small groves. September.

120. AGARICUS (HEBELOMA) GRISLOSCABROSUS. Peck.

“Rough Hebeloma.”
In poplar groves. West of Sand Lake. September.

121. AGARICUS (HEBELOMA) ILLICITUS. Peck.

“Smooth Hebeloma.”
In poplar groves. West of Sand Lake. September.

122. AGARICUS (HEBELOMA) ASCOPHORUS. Peck.

“Viscid Hebeloma.”
On a spot where brush heaps had been burned, in poplar groves. West of Sand Lake. September.
123. **Agaricus (Hebeloma) mutatus.** *Peck.*

"Changeable Hebeloma."

Moore's woods, in low ground, beneath poplars. July and August.

124. **Agaricus (Hebeloma) pyriodorus.** *P.*

"Pear-scented Hebeloma.

In woods. Very common. September.

125. **Agaricus (Hebeloma) obscurus.** *P.* "Violet Hebeloma."

On the ground. M. C. Feeley's pastures. July.

Remarkable for its violet colour throughout its structure.

126. **Agaricus (Hebeloma) flocculosus.** *Berk.*

"Flocculose Hebeloma."

Amongst grass, and on naked soil by roadsides. September. Not very common.

127. **Agaricus (Hebeloma) deglubens.** *Fr.*

"Peeling Hebeloma."

Common in woods. August and September.

128. **Agaricus (Hebeloma) fastigiatus.** *Fr.*

"Peaked Hebeloma."

In woods, but very rare. July.

129. **Agaricus (Hebeloma) rimosus.** *Bull.*

"Cracked Hebeloma."

In woods, and along roadsides, in bushes. June to September.

130. **Agaricus (Hebeloma) trechisporus.** *Berk.*

"Rough-spored Hebeloma."

Amongst fern, on border of woods. August.
131. **Agaricus** (Hebeloma) auricomus. *Batsch.*

"Golden-haired Hebeloma."

In woods. Lake Harriet. July.

132. **Agaricus** (Hebeloma) flocculentus. *Poll.*

"Woolly Hebeloma."

On open ground. July.

**Sub-Gen. 21. Flammula. Fr. S.M. i. p. 250.**

Spores bright, ferruginous; veil if present filamentous; stem fleshy, fibrous; gills adnate, acutely adnate, or decurrent.

**Habit.** On the ground, or decaying wood.

133. **Agaricus** (Flammula) polychrous. *Berk.*

"Reddish Flammula."


134. **Agaricus** (Flammula) gummosus. *Lasch.*

"Viscid Flammula."


135. **Agaricus** (Flammula) sapineus. *Fr.*

"Bright-spored Flammula."

In woods, round burned heaps, and on decaying pine planks and logs. August and September.

**Sub-Gen. 22. Crepidotus. Fr. S.M. i. p. 272.**

Spores dark, or yellowish-brown; veil none; pileus excentric, dimidiate, or resupinate; flesh soft; stem lateral, or wanting.

**Habit.** Most of the species grow on wood, a few on moss.—*Cooke’s Fungi.*
136. **Agaricus (Crepidotus) Mollis.** Schaff.

"Soft Crepidotus."


Of the eight species in this sub-genus, *mollis* is the only one I have discovered.


Spores various shades of brown; veil absent, or attached in minute flakes to the edge of the pileus; stem cartilaginous, sometimes marked by a slight spore-stained bunch.

137. **Agaricus (Naucoria) Semi-orbicularis.** Bull.

"Half-round Naucaria."

Lawns and pastures, on horse-manure, trodden into the ground. Spores carbo-ferruginous. June.

138. **Agaricus (Naucoria) Vernalis.** Peck.

On rotten wood, in woods. June.

139. **Agaricus (Naucoria) Lignicola.** Peck.

On old decaying logs, in woods. June.

140. **Agaricus (Naucoria) Erinaceus.** Fr.

"Hedgehog Naucoria."

On cuticle of dead oak branches, on the ground. November. Rare.


Spores bright or ochraceo-ferruginous; pileus more or less campanulate, margin straight, at first depressed to the stem; stem externally subcartilaginous, fistulose; gills adnate, or with a decurrent tooth.

**Habit.** Mostly terrestrial.
141. **Agaricus (Galera) ovalis.** Fr. "Oval Galera."

142. **Agaricus (Galera) tener.** Schäff. "Slender Galera."
Common.

143. **Agaricus (Galera) sparteus.** Fr. "Meadow Galera."
Amongst moss, in M. C. Teeley’s pasture. June.

144. **Agaricus (Galera) hypnorum.** Batsch.
"Moss-loving Galera."
Amongst moss in wet places. July—September.

145. **Agaricus (Galera) sphagnorum.** Pers.
"Bog-moss Galera."
In marshes, especially tamarack, among Sphagnum.
July—September.

**Sub-gen. 25. Tubaria.** Smith. Jour., 1870.
Pileus generally depressed, at first with an incurved margin; stem cartilaginous, hollow; gills decurrent.—*Cooke’s Fungi*.

146. **Agaricus (Tubaria) inquilinus.** Fr. "Little Tubaria."
In tamarack swamps, on rotten wood. June—Sept.

147. **Agaricus (Tubaria) furfuraceus.** P.
"Mealy Tubaria."
On decaying chips. Western Avenue woods. July.
Not common.
Mycological Flora.


Spores various shades of brownish purple, dark purple, or intense brown. Veil fixed to the stem, forming a ring. Pileus is generally white or yellowish; the gills at length brown or blackish; stipe stout, fleshy.


Spores dark brownish-purple, dead brown, reddish-purple, pale slate or pinkish; veil universal, concrete with the cuticle of the pileus, and fixed to the stem, forming a ring; pileus fleshy; stem distinct from the hymenophore, furnished with a ring; gills free, and rounded behind, at first white, then pink, afterward intense purple-brown.

Habitat. All the species are terrestrial, mostly growing in rich pastures and on manured ground.—Cooke's Fungi.

148. Agaricus (Psalliota) Campestris. L.

"Common Mushroom."

In rich, mucky ground. Esculent. August.


Var. Silvicola. Vitt. Pileus smooth, shining; stem longer than in campestris, and slightly bulbous. In rich woods, Ramsey and Wright counties. August and September. Some regard this a distinct species.


"Wood Psalliota."


On rich pastured grass-plats, in woods. September.
Mycological Flora.

**SUB-GEN. 27. PILOSACE. Fr.**

Agrees in structure with *Pluteus*; stem ringless.—*Cooke’s Fungi*.

151. **AGARICUS (PILOSACE) EXIMIUS.** Peck.

On decayed basswood logs, in woods. September. Very rare. There are no British species. Peck is the author of *eximius* in this country. Owing to its close structural analogy with *Pluteus*, it is a difficult plant to determine.

**SUB-GEN. 28. STROPHARIA. Fr. Monog-Hymen. i. p. 409.**

Spores intense bright purple-brown, brown, or slate-colour; veil, if present, universal, superficial, scaly, or viscid; stipe annulated; gills adnate.

152. **AGARICUS (STROPHARIA) STERCORARIUS. Fr.**

"Dung Stropharia." *Cooke’s Fungi*.


153. **AGARICUS (STROPHARIA) SEMIGLOBATUS.** Batsch.

"Semiglobose Stropharia."

**SUB-GEN. 29. HYPHOLOMA. Fr. S. M. i. p. 287.**

Spores brownish-purple, sometimes intense purple, almost black; veil woven into a spidery fugacious web, which adheres to the margin of the pileus, but does not form a stipal ring; pileus with an inseparable pellicle. Most of the species are gregarious, and not edible, but closely allied to *Tricholoma*, *Entoloma*, and *Hebeloma*.

**HABIT.** Generally on stumps.—*Cooke’s Fungi*.

154. **AGARICUS (HYPHOLOMA) SUBLATERITIUS. Fr.**

"Brick-red Hypholoma."

On and about old stumps, in woods. September.
"Tufted yellow Hypholoma."
On and about old stumps, in woods. Common. September and October.

156. Agaricus (Hypholoma) Lacrymabundus. *Fr.*
"Weeping Hypholoma."
On decaying trunks and the ground, in woods. July—November.

157. Agaricus (Hypholoma) Velutinus. *P.*
"Velvety Hypholoma."

On the ground, about old stumps, in open places. Common. September.

Common in July, on fallen leaves in woods. It has a disc-like base of attachment, which renders it easily recognizable.

Spores purple, purple-brown, or slate-colour; veil obsolete, or in a few species fugacious; pileus glabrous, at first incurved; stem cartilaginous, ringless.
The species are almost all gregarious, cespitose inodorous, with fugitive colouring, and not edible. *Psilocybe* corresponds with *Collybia, Leptonia,* and *Naucoria.*—Cooke's Fungi.

Habit. Mostly on the ground, some on decaying wood, in open fields, rich pastures and woods.

On damp muck, in Meeker woods. August and Sept.
161. **Agaricus (Psilocybe) spadiceus.** *Schaaff.*

"Bay Psilocybe."


Cooke: On dead stumps, ground, &c., in woods.

162. **Agaricus (Psilocybe) cernuus.** *Mull.*

"Nodding Psilocybe."

About old stumps, in woods. September.


163. **Agaricus (Psilocybe) fœniscii.** *P.* "Brown Psilocybe."


**Sub-gen. 31. Psathyra.** *Fr.* *Epiot.* p. 231.

Spores dark purple-brown, approaching slate-colour; pileus submembranaceous, conical or campanulate, margin at first straight and adpressed to the stem; stem fistulose, ringless, cartilaginous, fragile.—*Cooke's Fungi.*

Habit. Ground and rotten wood.

164. **Agaricus (Psathyra) mastiger.** *Berk. & Br.*

"Peaked Psathyra."

Amongst short grass on roadsides. August and Sept.

165. **Agaricus (Psathyra) corrugis.** *P.*

"Wrinkled Psathyra."


Observed soon after heavy rain.

166. **Agaricus (Psathyra) obtusatus.** *Fr.* "Obtuse Psathyra."

On the ground. June.

SUB-GEN. 33. PANÆOLUS. Fr. Epicr. p. 234.

Veil, when present, interwoven, sometimes wanting; spores black; pileus somewhat fleshy, viscid when moist; shining when dry, never striated, the margin exceeding the variegated gills; gills clouded, never becoming purple or brown.

HABIT. Almost all grow on dung, summer and autumn.

Sect. 1. Pileus viscid, shining when dry.

167. AGARICUS (PANÆOLUS) SEPARATUS. L.
"Ochrey Panæolus."

168. AGARICUS (PANÆOLUS) LEUCOPHANES. B. & Br.
"Shiny-white Panæolus."
Dung and rich muck. May—August.

169. AGARICUS (PANÆOLUS) FIMIPUTRIS. Bull.
"Dark-grey Panæolus."
On horse dung, in pastures. June—August.

Sect. 3. Pileus dry, smooth, shining, without zone.

170. AGARICUS (PANÆOLUS) CAMPANULATUS. L.
"Campanulate Panæolus."
On mucky soil and rotted manure. June—August.

171. AGARICUS (PANÆOLUS) PAPILIONACEUS. Bull.
"Butterfly Panæolus."
On dung in fields. June and July.

172. AGARICUS (PANÆOLUS) SOLIDIPES. Peck.
Sect. 4. Pileus dry, smooth, zoned at the margin.

On dung-heaps, and on dung in pastures. June.

Sub-gen. 34. Psathyrella. Fr. Epicr. 237.
Spores black, oval, smooth, or echinulate; veil generally absent; pileus membranaceous, striated, margin straight, adpressed to the stem, not exceeding the gills; gills adnate or free.

Sect. 1. Stem straight, smooth.

"Slender Psathyrella."
On manure in pastures. September. The stem is slender, and very tall. Pileus conical. A very beautiful species.

Sect. 2. Stem flexuous, pruinose above.

175. Agaricus (Psathyrella) Pronus. Fr.
"Stooping Psathyrella."
Amongst grass in woods. September.

176. Agaricus (Psathyrella) Atomatus. Fr.
"Sprinkled Psathyrella."
On manure, in grassy ground. June and July.

177. Agaricus (Psathyrella) Disseminatus. Fr.
"Clustered Psathyrella."
On naked soil, about stumps, and on decaying sticks, in open places and in woods. July—September.
About manure heaps, in farm-yards. May and June.
Has a faint odor like *Sambucus pubens.*—Michx.


Spores black; gills free, at first coherent, and sprinkled with a micaceous scurf, soon deliquescing into a black fluid; margin of pileus at first adpressed to the stem.—Cooke’s *Fungi.*

The ephemeral and fragile nature, together with the lamellae soon dissolving into an inky, sticky fluid, render the species of this genus readily known.

Many of the large species are used in catsup.

Habit. Manure, earth mixed with manure, decaying wood, fat and rank places.


179. *Coprinus comatus.* Fr. “Shaggy Coprinus.”
In rich lanes, and around decaying stumps, in open ground. September. Edible.

On decaying chips and horse-manure. June and July.
Found by Prof. N. H. Winchell.

On fallen, decaying elm trunks. June and July.

182. *Coprinus Picaceus.* Fr. “Magpie Coprinus.”
On roadsides, front of J. A. Davis. September. Very rare this season.
On fallen decaying trunks. September

184. **COPRINUS FIMETARIUS.** Fr. "Shaggy dung Coprinus."
June—July.

185. **COPRINUS TOMENTOSUS.** Fr. "Downy Coprinus."
Steaming dung-heaps. May and June.

186. **COPRINUS NIVEUS.** Fr. "Snowy Coprinus."

187. **COPRINUS MICACEUS.** Fr. "Glistening Coprinus."
Observed on a decaying railroad tie, side of track, last September; this year in the same place, in May, and again in June and September; also on dung-heaps, and about old stumps. Common.

188. **COPRINUS DELIQUESENS.** Fr. "Deliquescent Coprinus."

189. **COPRINUS LAGOPUS.** Fr. "Hare's-foot Coprinus."
On dung, in woods. Not common. July. Its dense cottony-coated stem once observed will be remembered.

190. **COPRINUS RADIATUS.** Fr. "Delicate Coprinus."
191. COPRINUS EPHEMERUS. Fr. "Ephemeral Coprinus."

192. COPRINUS INSIGNIS. Peck.
   About the roots of trees in woods, and in the city. July and August. Two, and sometimes three, successions on the same spot in one season.

193. COPRINUS ANGULATUS. Peck.
   On the ground in woods. August and September. Not common this season.

194. COPRINUS Plicatilis. Fr. "Plaited Coprinus."
   In rich pastures. June and July.

195. COPRINUS HEMEROBIUS. Fr. "Collared Coprinus."

196. COPRINUS SILVATICUS. Peck.
   On muck, in Meeker woods. September.

197. COPRINUS SEMILANATUS. Peck.
   Pileus strongly revolute; stem five inches high, attenuated upwards, fistulose, white, the lower half covered with a sort of bissoid material which is easily moved.


Spores not black, but brown, rusty brown or salmon-colour; pileus various shades of yellow, becoming moist; stem hollow, some shade of yellow, or white, slender, attenuated, sometimes striate, or shining, or minutely pruinose;
gills may be adnexed, or free, pallid, fleshy-brown, brown or salmon-coloured.

*Bolbitius* resembles *Coprinus* in its mode of growth, habitat, and ephemeral existence.

HAB. Manure and rich soil.

198. **BOLBITIUS BOLTONI.** Fr. "Bolton's Bolbitius."
   On dung, on prairies and in pastures. June to Sept.

199. **BOLBITIUS FRAGILIS.** Fr. "Fragile Bolbitius."
   On rotting chips and dung. May—August.

200. **BOLBITIUS TITUBANS.** Fr. "Wavering Bolbitius."
   Amongst grass in open woods and pastures. June—October.

201. **BOLBITIUS APICALIS.** Smith. "Two-coloured Bolbitius."
   Amongst grass by roadsides. June and July.

   On ground. Western Avenue woods. September. Gregarious. A very fine species. Rare.

**Genus 4. CORTINARIUS, Fr.** Epier. p. 255.

Spores rusty-ochre, resembling in colour peroxide of iron; veil universal, of a different texture to the pileus, and consisting of arachnoid threads; stem confluent with the hymenophore; gills adnate, membranaceous, persistent, cinnamon-coloured and powdery; trama floccose.—*Cooke's Fungi.*

*Cortinarius* contains many closely related species, which
vary in colour and size, according to different conditions of life, as weather and locality. The prevailing colour of the plants is some shade of yellow or ochre; stem may be bulbous, annulate or not annulate.

HAB. Woods and fields. Most of the species grow in woods and shaded places.

SUB-GEN. 1. PHLEGMACIUM. Fr. Epier. p. 256.

Pileus with a continuous pellicle, viscid when moist; veil, and stem from which it springs, dry. A dry stem and viscid pileus characterize greatly this sub-genus.

203. CORTINARIUS (PHLEGMACIUM) VARIUS. Fr.
"Variable Cortinarius."

204. CORTINARIUS (PHLEGMACIUM) CYANIPES. Fr.
"Blue-stemmed Cortinarius."
July and August. In Moore's woods.

205. CORTINARIUS (PHLEGMACIUM) RUSSUS. Fr.
"Ruddy Cortinarius."
In woods. Common. September.

206. CORTINARIUS (PHLEGMACIUM) COLORATUS. Peck.
Amongst moss under tamaracks. September. Lamellae striated transversely. Pileus reddish-yellow or orange.

207. CORTINARIUS (PHLEGMACIUM) COMMUNIS. Peck.
In woods. September. Common. Our plant only differs from the N. Y. species by its pileus not being "tinted with red," or at least I have not noticed any with this peculiarity of colour.
208. CORTINARIUS (PHLEGMACIUM) MULTIFORMIS. *Fr.*
   "Multiform Cortinarius."
   In woods. September.

209. CORTINARIUS (PHLEGMACIUM) GLAUCOPUS. *Fr.*
   "Brown-zoned Cortinarius."
   In woods, beneath poplar trees. September.

210. CORTINARIUS (PHLEGMACIUM) CALLOCHROUS. *Fr.*
   "Tawny viscid Cortinarius."
   In poplar woods. August and September. Easily distinguished by the bulb of stem, and colour.

211. CORTINARIUS (PHLEGMACIUM) CÆRULESCENS. *Fr.*
   "Azure-blue Cortinarius."
   Beneath oaks by roadsides. September. Dark blue gills distinguish it very easily.

212. CORTINARIUS (PHLEGMACIUM) TURBINATUS. *Fr.*
   "Top-shaped Cortinarius."
   In Moore’s forest. July—September.

213. CORTINARIUS (PHLEGMACIUM) SCAURUS. *Fr.*
   "Club-footed Cortinarius."
   In woods. September. Peculiar for its “tiger-spotted” pileus.

214. CORTINARIUS (PHLEGMACIUM) CORRUGATUS. *Peck.*
   In woods. June.

**SUB-GEN. x. MYXACIUM. *Fr.***
   Pileus glutinous; veil, and consequently the stem, viscid, but polished when dry.—Cooke’s Fungi.
215. **Cortinarius (Myxacium) collinitus.** Fr.  
"Smeared Cortinarius."
In woods. Common. September.

216. **Cortinarius (Myxacium) sphærosporus.** Peck.
In woods. September. Spores globose, hence probably the specific name.

**Sub-Gen. 3. Inoloma.** Fr. Epier. p. 278.
Pileus fleshy, dry, compact, not viscid, silky, with scales, or innate fibres; stem bulbous.

217. **Cortinarius (Inoloma) violaceus.** Fr.
"Violet Cortinarius."
In woods. August. Esculent. Easily recognized by its catmint odor.

218. **Cortinarius (Inoloma) camphoratus.** Fr.
"Strong scented Cortinarius."
On the ground, in poplar woods. September. Remarkable for its fetid odor.

219. **Cortinarius (Inoloma) callisteus.** Fr.
"Stout Cortinarius."
In woods. August.

220. **Cortinarius (Inoloma) pholideus.** Fr.
"Scaly Cortinarius."
In woods. September.

221. **Cortinarius (Inoloma) sublanatus.** Fr.
"Woolly Cortinarius."
In woods. Last of September. The downy character of the stem is a ready distinguishing feature of this species from any other of this sub-genus.
222. **CORTINARIUS (INOLOMA) LILACINUS.** *Peck.*

In woods, on low grounds. September. Peculiar for the bulb of the stem being larger than the pileus, in the young plant.

223. **CORTINARIUS (INOLOMA) SQUAMULOSUS.** *Peck.*

Scaly Cortinarius.

In damp woods. August and September. Not so large as the N. Y. species. The very large, subventricose bulb of the stem makes the plant conspicuous.

224. **CORTINARIUS (INOLOMA) ASPER.** *Peck.*

In newly cleared places. Gregarious. September.

*SUB-GEN. 4. DERMOCYBE.* *Fr.* Epicr. p. 283.

Pileus thin, but fleshy, with no viscid pellicle, entirely dry, at first clothed with a superficial down, then glabrous; stem thin, somewhat stuffed, equal or attenuated, not bulbous; gills changeable in colour.—*Cooke's Fungi.*

The changeable colour of the gills renders the species of this sub-genus difficult to define.

225. **CORTINARIUS (DERMOCYBE) ANOMALUS.** *Fr.*

"Thin-capped Cortinarius."

In woods. Common. September and October.

226. **CORTINARIUS (DERMOCYBE) SPILOMEUS.** *Fr.*

"Scaly-stemmed Cortinarius."

In woods. September. In growing, the narrow, bluish-lilac gills are diagnostic

*SUB-GEN. 5. TELAMONIA.* *Fr.* Epicr. p. 291.

Pileus moist, hygrophanous, at first glabrous, or sprinkled with the arachnoid superficial fibres of the veil, thin or moderately compact in the disc; stem peronate, and annulate from an inferior veil.—*Cooke's Fungi.*
227. **Cortinarius (Telamonia) bulbosus.** Fr.
   “Bulbous Cortinarius.”
   Common in woods. August and September.

228. **Cortinarius (Telamonia) lignarius.** Peck.

229. **Cortinarius (Telamonia) limonius.** Fr.
   “Lemon Cortinarius.”

230. **Cortinarius (Telamonia) hinnuleus.** Fr.
   “Fawn Cortinarius.”

231. **Cortinarius (Telamonia) psammecophalus.** Fr.
   “Little Tawny Cortinarius.
   In woods. August and September.

232. **Cortinarius (Telamonia) ileopodiis.** Fr.
   “Tan-coloured Cortinarius.”
   In woods. First of June to November. In consequence of being subjected to the changeable influences of nearly a whole season, is liable to lead to species-making.

**SUB-GEN. 6. HYGROCYBE.** Fr. Epix. p. 303.

Pileus generally thin, glabrous, hygrophanous, but not viscid; cuticle rigid, not fibro-lacerate; stem rigid, subcartilaginous without, never annulated or scaly.—Cooke’s Fungi.

233. **Cortinarius (Hygrocybe) Armeniacus.** Fr.
   “Peach Cortinarius.”
   In woods.
234. **Cortinarius** (Hygrocybe) *vernalis*. Peck.  
Spring Cortinarius.  

235. **Cortinarius** (Hygrocybe) *castaneus*. Fr.  
"Chestnut Cortinarius."  
In woods. Common, September. Esculent.

236. **Cortinarius** (Hygrocybe) *Reedii*. Berk.  
"Reed's Cortinarius."  
Amongst moss, on shore of Rice lake. May and June.

237. **Cortinarius** (Hygrocybe) *leucopus*. Fr.  
"White-stemmed Cortinarius."  
In woods. May.

238. **Cortinarius** (Hygrocybe) *decipliens*. Fr.  
"Deceptive Cortinarius."  
In woods. September. Not common.


Spores, as well as the whole plant, dirty white; pileus with an involute margin gradually increasing indefinitely; stem continuous with the horny hymenophore; gills fragile, persistent, decurrent, anastomosing behind or branching, membranaceous, entire, with a sharp edge, supported by a horny trama.—Cooke's Fungi.

**Hab.** All the species are terrestrial.

239. **Lepista nuda.** Bull. "Amethyst Lepista."  
In thin woods, and on prairies. August and September.

240. **Lepista personata.** Fr. "Purple-stemmed Lepista."  
In woods, and on pastured prairies. August and Sept.
Spores, as well as the whole plant, ferruginous; pileus with an involute margin, and gradually increasing indefinitely; stem continuous with the hymenophore; gills tough, soft, persistent, decurrent, anastomosing behind, or branching, membranaceous, entire, with a sharp edge, separating from the horny or furrowed hymenophore; trama absent.—*Cooke's Fungi.*

**HAB.** Epiphytal and terrestrial.

241. **Paxillus involutus.** *Fr.* "Involute Paxillus."
On the ground, in woods. August and September.

On the ground, amongst fallen leaves in woods. Sept.


Spores white; veil, when present, universal; stem confluent with the hymenophore; gills sharp-edged; trama similar in substance to that of the pileus.—*Cooke's Fungi.*

This genus is recognized by the hymenophore being changed into a waxy mass, and at length detached from the trama. Many species are sapid and edible.—*W.G.S.*

The pileus is viscid or moist; the gills are generally distant, adnate and decurrent, filled with a watery juice, and of a waxy nature. Few only of the species appear as early as August; mostly in autumn, and late.

**HAB.** Terrestrial. In woods and open ground.

243. **Hygrophorus eburnenus.** *Fr.* "Ivory Hygrophorus."
In Moore's woods. September and October, 1875.
244. **Hygrophorus cossus.** *Fr.* "Goat-moth Hygrophorus."
   In woods. September and October.

245. **Hygrophorus cerasinus.** *B.* "Waxy Hygrophorus."
   In woods. Last of September, and October.

246. **Hygrophorus aromaticus.** *B.* "Aromatic Hygrophorus."
   In woods. September. Of a cinnamon-colour, with a pleasant aromatic odor. Very scarce.

247. **Hygrophorus mesotephrus.** *B. & Br.*
   "Brown-disc Hygrophorus."
   In woods. August and September.

248. **Hygrophorus hypothejus.** *Fr.* "Pine-wood Hygrophorus."
   On sandy soil, in woods, not necessarily pine. Sept.

249. **Hygrophorus olivaceo-albus.** *Fr.* "Olive Hygrophorus."
   In woods. September.

250. **Hygrophorus leporinus.** *Fr.* "Hare-coloured Hygrophorus."
   On sandy prairies, and sandy soil in woods. September.

251. **Hygrophorus pratensis.** *Fr.* "Pasture Hygrophorus."
   In mossy places. Borders of marshes and woods. August—October.

   In woods, and open places. September and October.

254. *Hygrophorus miniatus*. Fr. "Vermillion Hygrophorus."
   In woods. August and September. A fine, showy plant before it changes colour. Small.

   In old pastures, and on the ground in woods. August—October. The colour is variable. I have observed it sulphur-yellow, red and scarlet. In drying, it becomes dark-coloured, almost black.

256. *Hygrophorus nitidus*. B. & R.
   Amongst moss, in wet places. August and September.


Spores large, greenish-grey, becoming black, fusiform; veil universal, glutinous, terminated on the stem by a floccose annulus; pileus continuous with the stem, fleshy, convex, at length top-shaped; stem with a floccose annulus, confluent with the hymenophore; gills strongly decurrent, somewhat branched, soft, mucilaginous, often spreading in a continuous membrane.—Cooke's Fungi.


On hickory and basswood stumps, in woods. August. Cooke, and I believe all who have described the species of this sub-genus, make their habitat on the ground. Our plant grows on wood, and will probably prove a new species.


Spores white or very pale yellow, generally echinulate; pileus fleshy, floccose vesiculose in texture, at length depressed in the middle, margin at first involute; stem fleshy, not corticate, often hollow when old, confluent with the hyomenophore; gills milky, in nearly all the species at first white, often changing to sulphur-colour, red or violet on exposure to the air; subdecurrent, unequal, with an acute edge. The more or less copious excretion of milk is characteristic, and distinguishes Lactarius from its near relative Russula. They vary in taste, some are mild, some aromatic, bitter, acrid, and burning. Some of the species are excessively poisonous.—Cooke’s Fungi.

HAB. Nearly all on the ground, some on buried wood. Chiefly in woods.

258. Lactarius torminosus. *Fr.* “Wooly Lactarius.”

On the ground, in woods. August—October.

259. Lactarius cilicioides. *Fr.* “Tomentose Lactarius.”

On the ground, in thin woods. September.


On clay soil amongst grass, in woods. July.
261. **Lactarius pubescens.**  
*Schrad.* "Pubescent Lactarius."
In thin woods, and pastured prairies, about thin woods.  
August and September.

262. **Lactarius zonarius.**  
*Fr.* "Zoned Lactarius."
In thin woods. August to October. Common.

263. **Lactarius blennius.**  
*Fr.* "Slimy Lactarius."
In woods. Common. August and September.

264. **Lactarius pyrogalus.**  
*Fr.* "Pear-scented Lactarius."
On the ground, in grassy places in woods. August to October.

265. **Lactarius plumbeus.**  
*Fr.* "Lead-coloured Lactarius."
In woods. August and September. Not common.

266. **Lactarius chrysorrhæus.**  
*Fr.* "Yellow-juiced Lactarius."
On the ground, in Marr's woods. July and August.

267. **Lactarius piperatus.**  
*Fr.* "Peppery Lactarius."
In woods. July to September. Very common.  
Cooke says it is poisonous. Peck says it is edible.

268. **Lactarius vellereus.**  
*Fr.* "Woolly-white Lactarius."

269. **Lactarius deliciosus.**  
*Fr.* "Delicious Lactarius."
On the ground, in woods. August to October. Dayton and St. Anthony. Esculent by Cooke.

270. **LACTARIUS PALLIDUS.** *Fr.* “Pallid Lactarius.”
On the ground, in woods. August and September.

271. **LACTARIUS THEIOGALUS.** *Fr.* “Sulphur-juiced Lactarius.”
On the ground, in low woods. August.

272. **LACTARIUS CYATHULA.** *Fr.* “Cup-like Lactarius.”
In woods. August and September.

273. **LACTARIUS GLYCIOSMUS.** *Fr.* “Scented Lactarius.”
On the ground, in oak-openings. August to October.
Very faint aromatic odor.

274. **LACTARIUS SERIFLUUS.** *Fr.* “Thin-juiced Lactarius.”
In woods. Common. September.

275. **LACTARIUS FULGINOSUS.** *Fr.* “Dingy Lactarius.”
In Marr's woods. July to October.

276. **LACTARIUS AFFINIS.** *Peck.* Viscid Lactarius.
In woods. September and October.

277. **LACTARIUS VOLEMUS.** *Fr.* “Orange-brown Lactarius.”
278. **Lactarius platophyllus.** *Peck.*
   In woods. August and September.

279. **Lactarius sordidus.** *Peck.*
   On sandy ground, beneath oak trees. September.

280. **Lactarius griseus.** *Peck.*
   In woods, on low ground. August.

**Genus 10. Russula, Fr. Gen. Hymen.**

Spores very white or pale yellow, generally echinulate; veil none; pileus fleshy, convex, then expanded, and at length depressed; stem stout, polished, not corticate, generally spongy within, confluent with the hymenophore; gills nearly equal, milkless, rigid, brittle, edge acute, and sometimes dropping water.

Gills of *Russula* are brittle, nearly equal, milkless-points of difference from *Lactarius*. Most of the species are odorless, a few are edible, but most are poisonous.—*Cooke, and W. G. S.*

**Hab.** Terrestrial, usually in late summer, and autumn.

281. **Russula nigricans.** *Fr.* "Blackish Russula."
   The gills when bruised become red, brown, black; flesh bruised becomes brown, then perfectly black; when old and drying the whole plant is intensely black. When roasting smells like burned meat, when cool like baked apples.

282. **Russula adusta.** *Fr.* " Scorched Russula."
   In woods. September and October. Well distinguished from *nigricans* by its thin gills, and scorched, sooty-gray appearance.
283. RUSSULA DELICA. *Fr.* "Whitish Russula."
In woods. August. Distinguished from both of the above by being perfectly white.

284. RUSSULA FURCATA. *Fr.* "Forked Russula."
Common in woods. September. Its forked, white gills, and white stem, distinguish it from the three preceding.

285. RUSSULA SANGUINEA. *Fr.* "Blood-red Russula."
In woods only. July. Its acrid, peppery taste, firm, cheesy, white flesh, and polished, blood-red pileus, diagnose it from the preceding species.

286. RUSSULA ROSACEA. *Fr.* "Rosy Russula."
In woods. July. Its viscid pileus, variegated with spots, serves as a ready mark of distinction from all the preceding species.

287. RUSSULA SARDONIA. *Fr.* "Changeable Russula."
On the ground, in woods. July. Largely consumed by the *Tamias Tysteri*. Its changing colour and viscid adnate cuticle, differentiate it from the preceding.

288. RUSSULA DEPALLENS. *Fr.* "Bleached Russula."
In thin woods. July. Known from all the preceding by its slightly striate margin.

289. RUSSULA VIRESCENS. *Fr.* "Greenish Russula."
In woods. July to September. Esculent. Differentiated from all the preceding by the pileus being innate, flocculose, or oreolated or warted.
290. **RUSSULA LEPIDA. Fr.** "Scaly Russula."

In woods. July and August. Esculent. It has a wide geographical range, being found in the Carolinas. Known easily from all the preceding by the pileus being rosy-red, polished, silky, rimoso-squamose, and becoming whitish on the disc.

291. **RUSSULA RUBRA. Fr.** "Red Russula."

In woods. July and August. Its dimidiate gills, generally reddish appearance, and acrid, bitter taste, differentiate it from all the previous named species.

292. **RUSSULA FOETENS. Fr.** "Foetid Russula."

In woods. July to September. Distinguished from all the preceding by the widely membranaceous, tuberculoso-sulcate margin, bollate pileus, and guttate gills, anastomosing by veins.

293. **RUSSULA EMETICA. Fr.** "Emetic Russula."

In woods. July to October. Known from all the preceding by its very acrid taste and free gills, between which and the stem is a distinct channel.

294. **RUSSULA FRAGILIS. Fr.** "Fragile Russula."

Common in woods. July to August. Its opaque cuticle, tuberculoso-striate margin and stuffed, then hollow, shining, striate stem, may differentiate it from all the foregoing.

295. **RUSSULA INTEGRA. Fr.** "Entire Russula."

In woods. July and August. Distinguished by its ventricose, white stem, sulcate and tuberculate margin, and its at first white gills, gradually becoming a pale, dirty yellow hue.
296. **RUSSULA DECOLORANS.** Fr. "Discolored Russula."

Common in woods. September. Distinguished by its elongated, solid stem, and its adnexed gills, thin, crowded, white, then yellowish, and forked behind.

297. **RUSSULA VETERNOSA.** Fr. "Sleepy Russula."

On the ground, in woods and open places. Known by its straw-coloured gills, and rose-coloured or flesh-coloured pileus, which soon becomes whitish or yellowish on the disc.

298. **RUSSULA NITIDA.** Fr. "Shining Russula."

In woods, and their borders. September. Its viscid condition when moist, its furrowed and tuberculous margin, and its venous connected gills, serve to identify it.

299. **RUSSULA ALUTACEA.** Fr. "Tan-coloured Russula."

In woods. July and August. Esculent. Its thin, at length striate, tuberculose margin, its pink, livid, or olive-coloured pileus, and its gills being broad, equal, sometimes slightly forked, ventricose, free, and connected by veins, are diagnostic characters.

300. **RUSSULA LUTEA.** Fr. "Yellow Russula."

On moist ground, beneath oak. August. Its egg-yellow gills, viscid cuticle, and white flesh may serve as marks of distinction from other species.

301. **RUSSULA CHAMELEONTINA.** Fr. "Chameleon Russula."

In woods. September. Not common. Its crowded, even, furcate, yellow gills, hollow, white stem, and rosy-red or purplish-lilac pileus, may serve to mark it from other species.
302. RUSSULA MARLÆ. Peck.

On dry, elevated ground, in woods. July and August. Its minutely pulverulent, bright pink-red pileus, with a darker disc, its first white then yellowish gills, and its equal stem, solid, coloured like the pileus, except the extremities, which are usually white, will serve to distinguish it from other species.

**GENUS II. CANTHARELLUS, Adams. Fung. Ord. V.**

Hymenophorum inferior, confluent with the floccose trama. Gills thick, swollen, more or less branched. Edge obtuse.—Berk. Outl.

Spores white; veil entirely absent; pileus fleshy or membranaceous; stem confluent with the hymenophore, or absent; gills dècurrent.—Cooke's Fungi.

This genus holds an intermediate place between *Agaricus* and *Craterellus*, some species being close to one, some to the other genus. Some are said to be poisonous, others edible. —W. G. Smith.

The species of this genus are easily separated from all others by the obtuse edge of the narrow, more or less branching or anastomosing gills.—Peck.

All resemble inverted cones, with the up-turned base more or less depressed or funnel-shaped.

**HAB.** Terrestrial and epiphytal.

303. CANTHARELLUS CIBARIUS. Fr. "Edible Chantarelle."


304. CANTHARELLUS AURANTIACUS. Fr. "False Chantarelle."
On moist ground, beneath oaks, in woods. August. Dark orange; gills repeatedly forked, orange or yellow.

305. **CANTHARELLUS UMBONATUS.** *P.* "Umbonate Chantarelle."

In open woods, mossy ground. July. Pileus flocculose, blackish-cinereous, flesh soft, and white, becoming reddish when wounded, are differentiating characters.

306. **CANTHARELLUS TUBÆFORMIS.** *Fr.* "Tubæform Chantarelle."

On the ground, in woods. July to September. Gregarious.

307. **CANTHARELLUS INFUNDIBULIFORMIS.** *Fr.* "Funnel-shaped Chantarelle."

On leaves, in woods. Sometimes amongst grass, on the ground, in woods. July and August.

308. **CANTHARELLUS MINOR.** *Peck.*

On the ground, in woods. July and August.

309. **CANTHARELLUS DICHOTOMUS.** *Peck.*


Veil universal, floccoso-pruinose; pileus fleshy, pruinose or pulverulent; stem confluent with the hymenophore; gills broad, simple, unequal, thick, fleshy, juicy, or subgelatinous, edge obtuse, not descending on the stem.—*Cooke's Fungi.*

HAB. Parasitic on other Agarics.
310. **Nyctalis Asterothora.** Fr. "Star-bearing Nyctalis."


**Genus 13. Marasmius, Fr.**

Spores white, sub-elliptical; pileus tough, fleshy, or membranaceous; stem central (in one species it is absent), confluent with the hymenophore, but of a different texture; gills thick, tough, and coriaceous, confluent at the base, generally distant, and rarely decurrent, with a sharp, entire edge.

—Cooke's Fungi.

This genus is closely allied to *Collybia*, and commences the series of Agarics that are not putrescent, but which dry up with drought, and revive with rain. This is not only an important biological character, but a diagnostic character which determines the genera and species. The tough, sub-coriaceous texture of the plant, and the dry, continuous hymenium, assimilating death in drought and reviving in moisture, are the chief generic characters. The species are mostly small; and their tough texture distinguishes them from all the foregoing. Some are edible. The majority are not.

**Hab.** Epiphytal, growing on decaying leaves, twigs, and grass; or terrestrial, in woods and open places.

311. **Marasmius Oreades.** Fr. "Fairy-ring Champignon."

In thin woods, and on pastured prairies. May to October. Common. Esculent.

312. **Marasmius Fusco-purpureus.** Fr. "Purple-brown Marasmius."

Amongst decaying leaves, and twigs, in woods. June and July.
On decaying leaves, in wet places, in woods. June and July.

314. **Marasmius Erythropsus.** Fr. “Pallid Marasmius.”
Amongst leaves, near stumps, and on buried decaying limbs in woods. July.

315. **Marasmius Terginus.** Fr. “Clustered Marasmius.”
In woods, on decaying wood. June.

316. **Marasmius Alliaceus.** Fr. “Onion-scented Marasmius.”
In woods, on buried rotten wood. July and August.

317. **Marasmius Rotula.** Fr. “Collared Marasmius.”
On the ground, in woods. June to October.

318. **Marasmius Androsaceus.** Fr. “Black-stemmed Marasmius.”
On decaying leaves and sticks, in woods. June to Sept.

319. **Marasmius Insititius.** Fr. “Horny-stemmed Marasmius.”

320. **Marasmius Epiphyllus.** Fr. “Leaf Marasmius.”
On leaves, in woods. June to October. Common.

On dead leaves and twigs, in woods. June and July. Rare.


On dead oak, elm, and maple twigs. June to Sept.


Common in woods. June to August.


On dead leaves, in woods. August to October.


On dead leaves, in woods. August.


On decaying branches, in woods. June.


Amongst fallen leaves, in woods. August to October.


In woods, amongst leaves. July to September.


On sticks and leaves, in woods. July.
Spores white; pileus fleshy, coriaceous, tough, hard, and dry; stem hard and often obsolete, when present continuous, and the same with the hymenophore; gills tough, simple, unequal, thin, edge acute, generally toothed; trama none.—Cooke's Fungi.

HAB. Generally on wood-posts, telegraph poles, railroad ties, stumps, dead trees, logs, sidewalks, &c. Rarely on the ground.

On railroad ties, and tamarack posts. June to October. Not numerous.

332. Lentinus Dunalii. Fr. "Dunal's Lentinus."
On ash railroad ties, and ash trees. June to September. Rare.

333. Lentinus Lepideus. Fr. "Scaly Lentinus."
On tamarack telegraph poles. June and July.

Close to the ground, on pine slab-posts. June and July.

On a dead standing trunk of Populus tremuloides.—Michx. May to August.

Spores white; pileus unequal-sided or lateral, tough, fleshy, at length coriaceous, but not woody, drying up, but
reviving with moisture; stem the same in structure as the hy-
menophore; gills thinner than in the last genus, tough, at
length coriaceous, unequal, with an entire acute edge; trama
flocose.—Cooke's Fungi.

HAB. Epiphytal. Stumps.

336. PANUS TORULOSUS. Fr. "Twisted Panus."
On decaying stumps. September.

337. PANUS CONCHATUS. Fr. "Shell Panus."
On stumps. Not common. May to October.

338. PANUS SALICINUS. Peck.
On trunks of Salix discolor.—Muhl. September and
October.

339. PANUS STRIGOSUS. B. & C.
On decaying wood of deciduous trees. August. Re-
markable for the dense, hairy covering of the pileus and
stem.


Spores white; pileus submembranaceous, soft, tough,
flaccid, but very dry, flexible, reviving; gills venose, fold-like,
forked, edge longitudinally channelled or crisped; texture
fibbllose.—Cooke's Fungi.

In our species, and the only British species, the gills are
not channelled.

340. TROGIA CRISPA. Fr. "Crisped Trogia."
On fallen dead branches of oak, in woods. September.
Genus 17. SCHIZOPHYLLUM, Fr. Obs. i. p. 103.

Spores white; pileus not fleshy, dry, sessile; gills coriaceous, branched, split longitudinally at the edge, with the two divisions revolute or spreading, joined to the pileus by a tomentose pellicle.

HAB. Rotten wood.—Cooke's Fungi.

341. SCHIZOPHYLLUM COMMUNE. Fr. "Common Schizophyllum."
On dead ash and oak. Quite common throughout the season.


Spores white; pileus coriaceous, dimidiate, sessile; gills coriaceous, firm, unequal, simple, or branched, and anastomosing behind, edge obtuse or acute; trama floccose; often spuriously porous.—Cooke's Fungi.

HAB. On stumps, dead trunks, and branches.

342. LENZITES BETULINA. Fr. "Birch Lenzites."
Common on stumps. Perennial.

343. LENZITES FLACCIDA. Fr. "Flaccid Lenzites."
On stumps. September and October. Gills never anastomosing.
ORDER II. POLYPOREI.

Hymenium lining the cavity of tubes or pores, which are sometimes broken up into teeth or concentric plates.—Fr. Berk. Out. p. 229.

Pores sometimes broken up into wavy or labyrinthiform, concentric, not radiating, laminae, or teeth.—Cooke's Fungi.

Genus 19. BOLETUS, Fr.

Hymenium quite distinct from the smooth hymenophore; trama none, the tubes easily separating from the hymenophore, and from each other; fleshy, putrescent, terrestrial fungi, having central stems.—Cooke's Fungi.

A genus, with many beautiful species, easily recognized; some poisonous; many esculent. Spores ochraceous, brown, yellowish-brown, greenish-brown, roseate, salmon, subferruginous, or white.

344. BOLETUS ELEGANS. Schum. "Elegant Boletus."

In mixed woods. June to October. Generally on high grounds.

345. BOLETUS FLAVUS. With. "Bright-yellow Boletus."

In woods. July. Common. Cooke gives this plant as a distinct species. Fries regards it as a variety of Boletus elegans.

346. BOLETUS BADIUS. Fr. "Bay Boletus."

In woods. Monticello. August. Flesh turns partially blue when bruised.

347. BOLETUS STRIÆPES. Sec. "Striate Boletus."

Amongst grass, in oak woods. Meeker hills. August.
348. **BOLETUS CHRYSENTERON. Fr.** "Red-cracked Boletus."
   On banks of roads, and in woods. September.

349. **BOLETUS SUBTOMENTOSUS. L.** "Yellow-cracked Boletus."
   In woods. August. Our plant is scarcely tomentose; flesh white, when bruised becomes reddish.

350. **BOLETUS PACHYPUS. Fr.** "Thick-stemmed Boletus."
   In woods. August and September. Scarce in this section.

351. **BOLETUS EDULIS. Bull.** "Edible Boletus."

352. **BOLETUS ÀÆSTIVALIS. Fr.** "Early Boletus."
   In the border of woods, and woodland pastures. Esculent.

353. **BOLETUS PURPUREUS. Fr.** "Purple Boletus."
   In woods. August. Not common.

354. **BOLETUS SCABER. Fr.** "Shaggy Boletus."

355. **BOLETUS ALUTARIUS. Fr.** "Tan-coloured Boletus."
   In grassy woods. Monticello. August.

356. **BOLETUS FELLEUS. Bull.** "Bitter Boletus."
   In woods. Rare. September.
357. **Boletus cyanescens.** Bull. "Sibthorp's Boletus."

Marr's woods. August.

**Genus 20. POLYPORUS, Fr. Gen. Hymen.**

Hymenophore descending into the trama of the pores, which are not easily, if at all, separable, and changed with them into a distinct substance.—*Cooke's Fungi.*

Fungi of various forms, growing indefinitely, the central genus of the *Polyporei*. The sections of this genus are founded on structural characters; the genus may be divided according to the colour of the spores.

358. **Polyporus leptoccephalus.** Fr. "White-pored Polyporus."

On fallen, decaying branches, in woods. June and July.

359. **Polyporus perennis.** Fr. "Perennial Polyporus."

On the ground, stumps, ash heaps, in woods. August to October.

360. **Polyporus Rostkovii.** Fr. "Rostkovius's Polyporus."


361. **Polyporus elegans.** Fr. "Elegant Polyporus."

On trunks, and fallen branches, in woods. July.

362. **Polyporus quercinus.** Fr. "Oak Polyporus."

On old oaks. Rare. June.
On decaying logs, stumps and posts. June to Sept.

At the base of trunks, and stumps. June to Sept.

On the ground, under oaks. Buffalo lake. August.

On willows. July to November.

On roots of stumps, overgrown with moss, in moist woods. August.

On denuded pine logs. July to October.

On larch, and the ground. July to September.

On fallen branches, in woods. June.

On stumps, and decaying trunks.
372. **Polyporus hispidus.** *Fr.* "Hispid Polyporus."

373. **Polyporus spumeus.** *Fr.* "Oozing Polyporus."
On trunks and branches. July. Not common. Oozes out from the tree in a soft mass, which hardens in a day, and if it dries favorably, the pileus becomes hispid.

374. **Polyporus nigricans.** *Fr.* "Black-hoof Polyporus."
On living birch. Rare. Finn's glen.

375. **Polyporus annosus.** *Fr.* "Imbricated Polyporus."
On stumps of larch. Marked with strong, vaulted zones, which arise from each annual growth.

376. **Polyporus connatus.** *Fr.* "Connate Polyporus."
On old trunks of crab trees in my garden. Found by Miss R. A. Johnson.

377. **Polyporus hirsutus.** *Fr.* "Bristly Polyporus."

378. **Polyporus versicolor.** *Fr.* "Common Zoned Polyporus."
Common, on stumps and branches. Persistent.

379. **Polyporus abietinus.** *Fr.* "Whitish Fir Polyporus."

381. Polyporus ferruginosus. Fr. "Rusty Polyporus."

On the bark of larch, forming broadly effused patches. June.


384. Polyporus violaceus. Fr. "Violet Polyporus."


386. Polyporus obduces. Fr. "Incrusting Polyporus."
On rotten wood. Composed of strata, each representing an annual growth.
387. **Polyporus vulgaris.** *Fr.* "Common-effused Polyporus."
On dead wood, and fallen branches. Common.

388. **Polyporus vaporarius.** *Fr.* "Creeping Polyporus."
On fallen branches. Common.

389. **Polyporus glomeratus.** *Peck.*

390. **Polyporus gordoniensis.** *B. & Br.* "Gordon's Fir Polyporus."
On decaying wood. September.

**Genus 21. Trametes, Fr.**

Hymenophore descending into the trama of the pores without any change, which are permanently concrete with the pileus. Pores entire.—*Cooke’s Fungi.*
Corky or woody fungi; arboreal, always dimidiate, at first generally fragrant.

391. **Trametes pinicola.** *Fr.* "Fir-trunk Trametes."
On pine trunks. Perennial.

392. **Trametes odorata.** *Fr.* "Small-pored Trametes."
On willows. Rare.

**Genus 22. Daedalea, Fr. Epicr.**

Hymenophore descending into the trama without any change; pores, when fully formed, torn, toothed, or labyrinthiform.—*Cooke’s Fungi.*
393. **Dædalea unicolor.**  *Fr.*  "One-coloured Dædalea."

On stumps, trunks, &c. Common.

394. **Dædalea latissima.**  *Fr.*  "Effused Dædalea."

On dead fallen branches.

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**Genus 23. Merulius, Fr. Syst. Myc.**

Hymenium soft, waxy, forming porous, reticulate, or sinuous, toothed folds.—*Cooke's Fungi.*

395. **Merulius tremellosus.**  *Schrad.*  "Tremellose Merulius."

On decaying stumps. September.

396. **Merulius corium.**  *Fr.*  "Leathery Merulius."

On dead trunks. Common.

397. **Merulius molluscus.**  *Fr.*  "Thin Merulius."

On dead wood.

398. **Merulius rufus.**  *P.*  "Rufous Merulius."

On fallen dead oak branches.

399. **Merulius serpens.**  *Fr.*  "Creeping Merulius."

On dead wood. June to September.

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**Genus 26. Porothelium, Fr. Obs.**

Hymenophore arachnoid, covered with distinct papillae, at first closed, then open like pores.—*Cooke's Fungi.*

400. **Porothelium friesii.**  *Mont.*  "Fries' Porothelium."

On pine wood. Rare.
Order III. Hydnei.

Hymenium inferior, or amphigenous, at first definitely protruberant, spread over persistent spines, bristles, teeth, tubercles, or papillæ.—Fr. Epicr. p. 504.

Genus 28. Hydnum, Linn.

Hymenium inferior, aculeate; spines at first papillæform, awl-shaped, or compressed, distinct at the base.—Fr. Epicr. p. 505.

401. Hydnum repandum. L. "Spreading Hydnum."
On the ground, in woods. August to September.

In woods, on the ground. September.

403. Hydnum tomentosum. L. "Tomentose Hydnum."
On the ground, in woods. July. Rare.

On dead spots on living oaks. September and October.

405. Hydnum Niveum. P. "Snowy Hydnum."
On dead wood and leaves. September.

406. Hydnum Farinaceum. P. "Mealy Hydnum."
On decayed wood. July to September.
ORDER IV. AURICULARINI.

Hymenium confluent with the hymenophore, at first even, or rarely veined, and commonly remaining even.—Cooke's Fungi.


Hymenium unchangeable, carnoso-membranaceous, distinct, smooth, even, or at length rugose. Fleshy. Putrescent when old.—Cooke's Fungi.

407. CRATERELLUS CORNUCOPIOIDES. Fr. "Horn-like Craterellus."
On the ground, amongst leaves in woods. Very rare.


408. THELEPHORA CAESIA. P. "Ash-grey Thelephora."
Abundant on the ground, in woods.

409. THELEPHORA SEBACEA. Fr. "Waxy Thelephora."
On the ground, incrusting grass and leaves. Common.

410. THELEPHORA ARIDA. Fr. "Dry Thelephora."
On decayed pine wood.

Genus 38. STEREUM, Fr.

411. STEREUM PURPUREUM. Fr. "Purple Stereum."
On fallen trunks, especially poplar. Perennial.
412. **STEREUM HIRSUTUM.** *Fr.* “Hairy Stereum.”

413. **STEREUM ACERINUM.** *Fr.* “Maple Stereum.”
On living maple trunks. Common.

**Genus 39. HYMENOCHÆTE, Lev.**

414. **HYMENOCHÆTE RUBIGINOSA.** *Lev.* “Rubiginous Hymenochæte.”
On posts and stumps. Common.

**Order V. CLAVARIEI.**

Hymenium scarcely distinct from the hymenophore, vertical, amphigenous, reaching to the very apex, even, or at length wrinkled.—*Fr. Epier. p. 570.*

**Genus 45. CLAVARIA, L.**


415. **CLAVARIA AMETHYSTINA.** *Bull.* “Amethyst Clavaria.”
In mossy places, in woods. Rare. September. Said to be esculent.

416. **CLAVARIA FASTIGIATA.** *D. C.* “Fastigate Clavaria.”
In thin woods. Last of August to Sept. Common.

417. **CLAVARIA CORALLOIDES.** *L.* “White coral Clavaria.”
In woods. August and September.
418. **CLAVARIA UMBRINA.** Berk. "Umber Clavaria."
On mossy patches, in woods. August and September.

419. **CLAVARIA CINEREA.** Bull. "Cinerous Clavaria."
In woods. Common. September.

420. **CLAVARIA CRISTATA.** Holmsk. "Crested Clavaria."
On sandy soil, in thin woods. September.

421. **CLAVARIA RUGOSA.** Bull. "Wrinkled Clavaria."
Common in woods. September.

422. **CLAVARIA KUNZI.** Fr. "Kunze's Clavaria."
In woods. September.

423. **CLAVARIA AUREA.** Schäff. "Golden Clavaria."
In open woods. September.

424. **CLAVARIA FORMOSA.** Pers. "Beautiful Clavaria."
In woods. August to October.

425. **CLAVARIA CROCEA.** P. "Saffron-yellow Clavaria."
On decaying wood. May.

426. **CLAVARIA PURPUREA.** Mull. "Purple Clavaria."
On the ground, amongst grass, in woods. September.

427. **CLAVARIA INÆQUALIS.** Mull. "Unequal Clavaria."
On the ground, in woods. September.
428. **CLAVARIA VERMICULATA.** *Scop.* "White-tufted Clavaria."

Amongst short grass, borders of woods. August and September.

429. **CLAVARIA FRAGILIS.** *Holmsk.* "Brittle Clavaria."

In thin woods. September.

430. **CLAVARIA CONTORTA.** *Fr.* "Contorted Clavaria."

On fallen branches, in woods. August.

**Genus 46. CALOCERA, Fr.**

Gelatinous; sub-cartilaginous when moist, horny when dry; hymenium viscid.—*Cooke's Fungi.*

431. **CALOCERA GLOSSOIDES.** *Fr.* "Soft Calocera."

On decayed oak stumps. September.

**ORDER VI. TREMELLINI.**

Whole plant gelatinous, with the exception occasionally of the nucleus. Sporophores large, simple or divided. Spicules elongated into threads.—*Berk. Outl. p. 286.*

**Genus 49. TREMELLA, Fr.**


432. **TREMELLA FIMBRIATA.** *Pers.* "Fringed Tremella."

433. **TREMELLA FRONDOSA.** Fr. "Large pale Tremella."

On the ground, beneath living trees. Often attains a very large size; of a pale pinkish-yellow, or pallid-yellow. August to October.

434. **TREMELLA FOLIACEA.** P. "Foliaceous Tremella."

On old stumps, in woods. August to October. Flesh-coloured or violet, sometimes deep reddish-brown.

435. **TREMELLA LUTESCENS.** Fr. "Yellowish Tremella."

On old stumps, August and September. Lobes crowded, white, then yellowish.

436. **TREMELLA MESENTERICA.** Retz. "Orange Tremella."

Common on sticks, in woods. August to October.

437. **TREMELLA VESICARIA.** Bull. "Bladdery Tremella."

On the ground, in woods. Quite common. August and September. Bladdery, very viscid within.

438. **TREMELLA ALBIDA.** Hud. "Whitish Tremella."


439. **TREMELLA INTUMESCENS.** Sow. "Contorted Tremella."


440. **TREMELLA INDECORATA.** Somm. "Dingy Tremella."

On standing dead willows. Rare. August.
441. **TREMELLA TUBERCULARIA.** Berk. “Horny Tremella.”
On fallen branches. September and October.


443. **TREMELLA EPIGEA.** B. & Br. “Ground Tremella.”
On the ground. September.

**Genus 50. EXIDIA, Fr.**

444. **EXIDIA GLANDULOSA.** Fr. “Witches’ Butter Exidia.”

**Genus 51. HIRNEOLA, Fr.**

On elm and fallen branches. Not common.

**Genus 53. DACRYMYCES, Nees.**

446. **DACRYMYCES STILLATUS.** Nees. “Orange Dacrymyces.”
On pine logs.

**Genus 54. APYRENIUM, Fr.**

447. **APYRENIUM LIGNATILE.** Fr. “Wood-loving Apyrenium.”
On rotten wood, in woods.
FAMILY II. GASTEROMYCETES.

Hymenium more or less permanently concealed, consisting in most cases of closely-packed cells, of which the fertile ones bear naked spores on distinct spicules, exposed only by the rupture or decay of the investing coat or peridium.—Berk. Outl. p. 292.

ORDER VII. HYPOGAEI.


Under trees. September and October.

In woods. July to September.

In woods. August and September.

ORDER VIII. PHALLOIDEI.

Volva universal, the intermediate stratum gelatinous. Hymenium deliquescent.—Berk. Outl.

Genus 63. Phallus, Linn.

451. Phallus Impudicus, Linn, "Common Stinkhorn,"
ORDER IX. TRICHOGASTRES.

Peridium single or double. Hymenium at length drying up into a dusty mass of threads and spores.—Berk. Outl. p. 298.

GENUS 67. TULOSTOMA, Pers.

452. TULOSTOMA MAMMOSUM. Fr. "Nippled Tulostoma."
On the ground, on river bluffs.

GENUS 68. GEASTER, Mich.

453. GEASTER FORNICATUS. Fr. "Vaulting Geaster."
On the ground, beneath scrub oaks. Sept. and Oct.

454. GEASTER STRIATUS. D.C. "Striate Geaster."
Amongst sand. Near Sand lake.

455. GEASTER BRYANTII. Berk. "Bryant's Geaster."
On sandy soil, beneath trees.

456. GEASTER HYGROMETRICUS. P. "Hard-coated Geaster."
On mucky ground, in woods. October.
Found by Miss R. A. Johnson, 1875.

457. GEASTER LAGENIFORMIS. Vitt. "Flask-like Geaster."
On clay soil, in thin oak woods. October.

GENUS 69. BOVISTA, Dill.

Peridium papyraceous, persistent; bark distinct, continuous, at length shelling off. Capillitium sub-compact, equal, adnate to the peridium on all sides; spores pedicellate.—Berk. Outl.
458. **BOVISTA NIGRESCENS.** *P.*  "Blackish Bovista."

On pastured prairies. May. Almost snow-white, as they first appear.

459. **BOVISTA PLUMBEA.** *P.*  "Lead-coloured Bovista."

In pastures, on prairies. Common.

460. **BOVISTA AMMOPHILA.** *Lev.*  "Rooting Bovista."

In Moore’s woods. September.

**Genus 70. Lycoperdon, Tourn.**

Peridium membranaceous, vanishing above, or becoming flaccid; bark adnate, subpersistent; breaking up into scales or warts. Capillitium soft, dense, adnate to the peridium, and sterile base.—Fr S.M. iii. and Berk. Outl.

461. **LYCOPERDON GIGANTEUM.** *Batsch.*  "Giant Puff-Ball."

In pastures, meadows, and on prairies. October. Not common. Esculent when growing. Peck says: "The edible qualities of this magnificent fungus, though highly extolled, have been by no means overestimated. It affords a most palatable and nutritious diet; it is free from the attacks of insects, grows to a large size, and is easily known by its brown surface cracking into rather large angular areas. It should be procured for the table while the flesh is yet white. It is to be regretted that it is not more common, and it is desirable that efforts should be made to cultivate it."

462. **LYCOPERDON CAELATUM.** *Fr.*  "Collapsing Puff Ball."

563. **Lycoperdon atropurpureum.** Vitt. "Purple-spored Puff Ball."
On the ground, in woods. Rare. July and August.

464. **Lycoperdon pusillum.** Fr. "Little Puff Ball."
On prairies. June and September. A small species, often not larger than a robin's egg.

465. **Lycoperdon saccatum.** Vahl. "Elongated Puff Ball."
In thickets. July.

266. **Lycoperdon gemmatum.** Fr. "Warted Puff Ball."
In meadows, and on prairies. Common. August.

467. **Lycoperdon pyriforme.** Schaff. "Pear-shaped Puff Ball."

**Genus 71. Scleroderma, P.**

Peridium firm, with an innate bark, bursting irregularly; floci adhering on all sides to the peridium, and forming distinct veins in the central mass; spores large, granulated.— Berk. Outl.

468. **Scleroderma vulgare.** Fr. "Common Scleroderma."
On borders of woods. August. This species has a very wide geographical range, extending from the Gulf States to Minnesota, and from Minnesota to Maine.
469. **Scleroderma bovista.** Fr. "Thin-coated Scleroderma."
On sandy prairies. June.

On prairies. August and September.

**Genus 72. Polysaccum, D.C.**

Peridium simple, rigid, bursting irregularly; internal mass divided into distinct cells, filled with peridiola; spores mixed with the threads.—Berk. Outl.

471. **Polysaccum olivaceum.** Fr. "Olive Polysaccum."
On the ground, in woods. August. Very rare.

**Order X. Myxogastres.**

Plant at first pulpy, at length filled with flocci and dust-like spores.—Berk. Outl.
Whole plant at first gelatinous. When mature, consisting of one or more membranes, inclosing, a dry mass of threads, flocci, and spores. Generally bursts.

**Genus 74. LycoGala, Mich.**

Peridium composed of a double membrane, papyraceous, persistent, bursting at apex, externally warty or furfuraceous. —Berk. Outl.
472. **LYCOGALA EPIDENDRUM.** Fr. "Stump Lyco-gala."

**Genus 75. RETICULARIA, Bull.**

Peridium indeterminate, simple, thin, naked, bursting irregularly, fugitive.—Berk. Outl.

473. **RETICULARIA MAXIMA.** Fr. "Large Reticularia."
On trunks of fallen trees. Common.

474. **RETICULARIA ATRA.** "Black Reticularia."
On stranded pine logs, and pine bark, on the banks of the river. August.

475. **RETICULARIA UMBRINA.** Fr. "Umber Reticularia."
On stumps. Sometimes several inches broad. July and August. Not common,

**Genus 76. ÆTHALIUM, Link.**

Peridium covered externally by a floccose evanescent bark.—Berk. Outl.

476. **ÆTHALIUM SEPTICUM.** Fr. "Wood Æthalium."
In woods, on dead wood commencing to decay, and oak stumps, in open places. July and August.

**Genus 77. SPUMARIA, Fr.**

477. **SPUMARIA ALBA.** D.C. "White Spumaria."
On living grass. In its young state appearing like a mass of white froth, adhering to one or more blades of grass. Common. June.
PTYCHOGASTER ALBUS. Corda. "White Ptycho-
gaster."
Found on July 4th, by Miss Minnie Cole.

DIDERMA, P.
Peridium double, external distinct, crustaceous, smooth; internal delicate, evanescent, attached to the straggling flocci, with or without a columella.—Berk. Outl.

DIDERMA FARINACEUM. Peck.
Invests fern stems, in low woods. September. The fresh plant, pressed on white paper, turns it plumbeous.

DIDERMA MARLÆ-WILSONI. Clinton.
On sticks, in woods. August. Sessile, smooth, globose, white or pinkish, external peridium, like very thin shell of small eggs. Spores blackish-brown.

DIDERMA GLOBOSUM. Fr. "Globose Diderma."
On dead leaves. September.

DIDYMUM, Schrad
Peridium scaly or floccose, bursting irregularly.—Berk. Outl.

DIDYMUM MELANOPUS. Fr. "Black-stemmed
Didymium."
On dead sticks, in woods. August.

DIDYMUM CONNATUM. Peck.
On decaying Russula. September.
484. **Didymium furfuraceum.** Fr. "Scurfy Didymium."
   On rotten wood, sticks, and leaves. July and August.

485. **Didymium farinaceum.** Fr. "Mealy Didymium."
   On dead leaves. August.

486. **Didymium squamulosum.** A. & G. "Scaly Didymium."
   On dead leaves and bark. August.

487. **Didymium pertusum.** Berk. "Pierced Didymium."
   On the inner surface of dead bark of stumps. October.

   **Genus 81. Physarum, P.**

488. **Physarum pulcherripes.** Peck.

489. **Physarum caespitosum.** Peck.
   Brown or blackish-brown, in tufts or clusters, crowded, sessile. Spores ochraceous. On rotten wood. August.

490. **Physarum atrum.** Fr. "Black Physarum."
   On dead fallen oak branches. August.

   **Genus 82. Angioridium, Grev.**

   On dead stems of herbs. September.
Genus 84. Craterium, Trend.

492. Craterium mutabile. Fr. "Changeable Craterium."
On bark. July 5.

Genus 85. Diachæa, Fr.

On dead leaves. August.

Genus 86. Stemonitis, Glet.

On decaying Ulmus Americana.—L. (Pl. Clayt.) Willd.
June.

495. Stemonitis ferruginea. Ehrh. "Rusty Stemonitis."
On rotten Tilia Americana.—L. June.

496. Stemonitis ovata. P. "Ovate Stemonitis."
On rotten Linden. June.

497. Stemonitis obtusata. Fr. "Obtuse Stemonitis."
On rotten Linden. June. At first white, then reddish-brown.

Genus 90. Arcyria, Hfl.

Rotten wood. June.
Order XI. Nidulariacei. Tul.


On decaying stumps.

Family III. Coniomyctes.

Spores either solitary or concatenate, produced on the tips of generally short threads, which are either naked, or contained in a perithecium, rarely compacted into a gelatinous mass.—Berk. Outl.

Order XII. Sphaeronemaei.

Genus 104. Phoma, Fr.

500. Phoma ampelinum. B. & C.

On shoots of elder, in my garden. August.

On decaying acorns. September.

Genus 133. Discella, B. & Br.

ORDER XV. PUCCINIAE.

Parasitic on living plants; peridium none; spores mostly of two kinds, (1) simple, (2) septate, the latter producing on germination secondary spores.—Berk. Outl. p. 328.

Genus 165. PHEAGMIDIUM, Link.

504. PHRAGMIDIUM MUCRONATUM. Link. "Rose Brand."
On living rose leaves. Autumn. Quite common.

505. PHRAGMIDIUM GRACILE. Grev. "Raspberry Brand."
On raspberry leaves. Autumn.

506. PHRAGMIDIUM OBTUSUM. Link. "Strawberry Brand."
On leaves of barren strawberry. Autumn.

Genus 167. PUCCINIA, Pers.

507. PUCCINIA GRAMINIS. Pers. "Corn Mildew."
On leaves and culms of corn and grass. Autumn.

508. PUCCINIA STRIOLA. Link. "Sedge Mildew."
On rushes. Autumn.

509. PUCCINIA CORONATA. Corda. "Coronated Mildew."
On various grasses,
510. **Puccinia vaginalium.** *Link.* "Knot-grass Brand."
   On knot-grass. Autumn.

511. **Puccinia primulae.** *Grev.* "Primrose Brand."
   On leaves of primroses, June.

512. **Puccinia variabilis.** *Grev.* "Variable Brand."
   On dandelion leaves. July and August.

*Genus 168. Gymnosporangium, D.C.*

513. **Gymnosporangium juniperi.** *Lk.*
   On living branches of various trees.

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**Order XVI. Cæomacei.**

Parasitic on living plants; peridium absent; spores of one or two orders, simple.—*Cooke's Fungi.*

*Genus 170. Tilletia, Tul.*

514. **Tilletia caries.** *Tul.* "Bunt."
   On wheat, filling the grain. Autumn. Common.

*Genus 171. Ustilago, Link.*

515. **Ustilago carbo.** *Tul.* "Corn Smut."

516. **Ustilago antherarum.** *Fr.* "Anther Smut."
   On Lychnis, &c.
Genus 174. Urocystis, Cooke.

On leaves of violets. August.

On culms and sheaths of rye.

Genus 179. Uredo, L.

September.

On Rumex acetosella.—L. August—September.

Order XVII, Adeidiacei.

Peridium distinctly cellular.—Berk. Outl.


On the under surface of spurge leaves. May—June.

On leaves and stems of nettles, distorting them. June.
In my yard.
FAMILY IV. HYPOPHOMYCETES.

Filamentous. Fertile threads naked, for the most part free, especially above, or loosely compacted, simple or branched, bearing the spores at their apices, rarely more closely packed, so as to form a distinct common stem.—Berk. O. Ott.

ORDER XVIII. ISARIACEI.

Threads more or less compacted; plants assuming hyphomycetous forms.—Berk. O. Ott.

Genus 187. ISARIA, Fr.


ORDER XIX. STILBACEI.

Genus 195. TUBERCULARIA, Todt.

526. TUBERCULARIA GRANULATA. P. “Granulate Tubercularia.” On dead branches.
DIVISION II. SPORIDIIFERA. Spores in asci.

FAMILY VI. PHYSOMYCETES.

Threads free, or only slightly felted, bearing vesicles which contain indefinite sporidia.—Berk, Outl.

ORDEY XXIV. MUCORINI.

Threads free, bearing terminal or lateral sporangia.—Berk. Outl.

GENUS 265. ASCOPHERA, Tode.

527. ASCOPHERA ELEGANS. Corda. "Elegant Ascophera."
On fowls' dung.

GENUS 266. MUCOR, Mich.

528. MUCOR RAMOSUS. Bull. "Branched Mucor."
On fungi in decay. August—September.

529. MUCOR MUCEDO. L. "Common Mucor."
On decaying fruit, paste, &c.

530. MUCOR CANINUS. P. "Dog's-dung Mucor."
On dung of dogs.
FAMILY VII. ASCOMYCETES.

ORDER XXVIII. ELVELLACEI.

Genus 286. MORCHELLA, Dill.

   In woods. May—June.

Genus 288. HELVELLA, Linn.

532. HELVELLA GIGAS. Kromb. "Large Helvella."
   On the ground, in woods. Spring.

533. HELVELLA CRISPA. Fr. "Pallid Helvella."
   On the ground, in woods. Early summer.

534. HELVELLA SULCATA. Afs. "Sulcate Helvella."
   On the ground, in woods. October.

Genus 289. VERPA, Swarts.

   On decayed wood, in woods. May.

Genus 291. SPATHULARIA, P.

536. SPATHULARIA FLAVIDA. Pers. "Yellow Spathularia."
   In woods, on wet ground. July.
537. **Leotia Lubrica.** Pers. "Slimy Leotia."
In woods, on clay soil. September.

**Genus 294. Geoglossum, P.**

538. **Geoglossum Viride.** P. "Green Geoglossum."
In woods, on decayed wood.

539. **Geoglossum Glutinosum.** P. "Glutinous Geoglossum."
Grassy places, in woods, near stumps.

**Genus 296. Peziza, Link.**

540. **Peziza Macropus.** Pers. "Long-stemmed Peziza."
On the ground, in woods. June—July.

541. **Peziza Badia.** P. "Large brown Peziza."

542. **Peziza Aurantia.** Fr. Orange Ground Peziza.
On the ground, in woods. June.

543. **Peziza Luteo-nitens.** B. & Br. "Bright-Yellow Peziza."
On bare ground.

544. **Peziza Fibrillosa.** Curr. "Woolly Orange Peziza."
On the ground, in woods. October, 1875.
545. **PEZIZA REPANDA.** Wahl. "Spreading Peziza."
On the ground. June.

546. **PEZIZA TRACHYCARPA.** Curr. "Rough-spored Peziza."
On burnt soil, in woods.

547. **PEZIZA LEIOCARPA.** Curr. "Smooth-spored Peziza."
On burnt soil.

548. **PEZIZA CUPULARIS.** L. "Scalloped Peziza."
On decayed bark. June.

549. **PEZIZA SUBHIRSUTA.** Schum. "Hirsute Peziza."
On the ground, in woods.

550. **PEZIZA HUMOSA.** Fr. "Ground Peziza."
On the ground, in woods.

551. **PEZIZA SCUTELLATA.** L. "Shield-like Peziza."
On sticks, barks, stumps. May—September

552. **PEZIZA UNICISA.** Peck.
On the ground, in woods. September—October.

553. **PEZIZA ECHINOSPERMA.** Peck.
On damp ground, in woods. June.

554. **PEZIZA RUBRA.** Peck.
On burnt ground. June.

555. **PEZIZA TILIAE.** Peck.
On dead branches of *Tilia Americana.*—L. July.
556. **PEZIZA COCCINEA.** Jacq. "Carmine Peziza."
    On decaying, buried oak branch, in woods. November.
    Found by J. Roberts.

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**Order XXXI. SPHÆRIACEI.**

**Genus 351. VALSA, Fr.**

557. **VALSA PULCHELLA.** Fr. "Beautiful Valsella."
    On branches of cherry and birch.

I will say, in concluding this report, that with three or four exceptions, the species have all been collected by the author.

Respectfully submitted,

A. E. JOHNSON.

*Minneapolis, January 2nd, 1877.*