

New Species of Fungi

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Lepiota coerulescens

Pileus thin, convex, obtuse or slightly umbonate, squamulose, whitish, the squamules and the center brownish, flesh and surface of the pileus becoming blue in drying; lamellae thin, close, free, white, becoming blue in drying; stem slender, equal, brownish, annulate, the annulus membranous, persistent, externally tinged with blue when dry; spores elliptic, $7\ \mu$ long, $5\ \mu$ broad.

Pileus 1.5–2 cm. broad; stem 3–5 cm. long, 2 mm. thick. Ohio. C. G. Lloyd.

The species is closely allied to *Lepiota cristata*, from which it is easily separated by its assuming blue tints in drying.

Lepiota gracilis

Pileus thin, convex or campanulate, somewhat umbonate, white, the center and the scales formed from the ruptured cuticle blackish brown; lamellae close, ventricose, free, whitish; stem long, slender, floccose or fibrillose, blackish brown, the annulus membranous, persistent, conspicuous, blackish brown on the lower surface; spores broadly elliptic, $6\text{--}7\ \mu$ long, $4\ \mu$ broad.

Pileus 6–10 mm. broad; stem about 2.5 cm. long, scarcely more than 1 mm. thick.

Black humus in woods, Elmsdale, Canada. September. J. Dearness.

A small, graceful species which when young is probably wholly covered by the blackish brown cuticle, but by the expansion of the pileus this soon ruptures, except in the center or on the umbo, revealing the white surface beneath and forming spot-like scales.

Tricholoma piperatum

Pileus rather thin, firm, dry, convex, obtuse or subumbonate, virgate with innate brownish fibrils, varying in color from grayish brown to blackish brown, sometimes with greenish or yellowish tints, flesh white or whitish, taste acrid; lamellae broad, close, rounded behind, adnexed, whitish or yellowish; stem generally short, equal, solid, silky, slightly mealy or pruinose at the top, white or slightly tinted with yellow; spores elliptic, $6\text{--}7\ \mu$ long, $5\ \mu$ broad.

Pileus 4-7 cm. broad; stem 5-7 cm. long, 6-12 mm. thick.

Woods, Massachusetts, G. E. Francis; Pennsylvania, Charles McIlvaine.

The central part of the pileus is sometimes a little darker than the rest. The peppery or acrid taste is very distinct and remains in the mouth many minutes. This and the innately fibrillose character of the pileus are distinguishing characters of the species. The plants appear from September to November.

Hygrophorus Morrisii

Pileus thin, convex, obtuse or umbonate, covered by a viscid separable pellicle, even, grayish brown or blackish brown, flesh whitish; lamellae subdistant, adnate or slightly decurrent, often slightly eroded or uneven on the edge, white; stem rather slender, equal or slightly tapering downward, solid, straight or flexuous, flocculently furfuraceous, pallid or brownish; spores elliptic or oblong, 10-12 μ long, 5 μ broad.

Pileus 1.5-2.5 cm. broad: stem 4-6 cm. long, 3-5 mm. thick.

Under pine trees, Waltham, Mass. November. G. E. Morris.

This species is closely related to *H. pustulatus* Fr., but differs from it in the entire absence of pustules or papillae from the uniformly colored pileus and in having a solid stem which, though somewhat scurfy, is not rough or scabrous with black points. The presence of concolorous papillae on the pileus and of black points on the stem of *H. pustulatus* is given by Fries special emphasis in his description of this species. In *Icones* he describes the lamellae as very entire (integerrimae) which character is not applicable to our plant. These differences seem to me too important to be disregarded and I take pleasure in dedicating this interesting American species to Mr. George E. Morris, who sent me numerous specimens of it in fine condition.

Volvaria umbonata

Pileus thin, campanulate, becoming convex or nearly plane, prominently umbonate, distinctly striate, slightly viscid when moist, silky when dry, white; lamellae moderately close, free, not extending beyond the margin of the pileus, pale flesh color; stem equal or slightly thickened at the base, glabrous, solid, white, the ruptured membranous white volva persistent, irregularly split or lobed on the margin and forming a shallow cup

at the base of the stem; spores broadly elliptic, uninucleate, variable in size, 5-7 μ long, 4-5 μ broad.

Pileus 2-3 cm. broad; stem 5-6 cm. long, about 4 mm. thick.

Lawns and grassy places, Ohio, Lloyd.

The species is most closely allied to *Volvaria media* (Schum.) Fr., from which it is distinguished by its larger spores and the striate margin of the pileus. In our plant the striations sometimes extend to the umbo. *Volvaria emendatior* (B. & C.) is described as having a white umbonate pileus with striate margin, but it is a much larger plant with the lamellae extending beyond the margin of the pileus and with cymbiform spores 12 μ long.

Clitopilus irregularis

Pileus thin, irregular, sometimes eccentric, nearly plane, glabrous, reddish brown, flesh white; lamellae rather broad, subdistant, decurrent, whitish becoming tinged with flesh color; stem short, solid or spongy within, externally fibrous, colored like the pileus, usually caespitose; spores pale flesh color, elliptic, 6-7 μ long, 3-4 μ broad.

Pileus about 2.5 cm. broad; stem about 2.5 cm. long, 2-4 mm. thick.

Manured ground, London, Canada. October. Dearness.

Leptonia aeruginosa

Pileus thin, convex, umbilicate or centrally depressed, striate, aeruginous; lamellae broad, subdistant, adnate, aeruginous, tinged with flesh color when mature; stem slender, glabrous, hollow, colored like the pileus; spores angular, 7.5-10 μ long, generally containing a single large nucleus.

Pileus 1.5-2.5 cm. broad; stem about 2.5 cm. long, 2 mm. thick.

Shaded places in woods, Oxbow river, Canada. August. Dearness.

This small mushroom is quite conspicuous by reason of its peculiar and unusual verdigris color. This fades with age to an ashy green hue.

Flammula aliena

Pileus thin, flexible, broadly convex, umbilicate, dry, glabrous, slightly striate on the margin when old, grayish or pale grayish-brown, flesh white, fibrous; lamellae thin, subdistant, arcuate, de-

current, ochraceous brown; stem firm, fibrous-striate, solid, slightly tapering upward, colored like the pileus, covered at the base with a dense white tomentum; spores ferruginous-brown, globose, $5\ \mu$ broad.

Pileus 3–5 cm. broad; stem 5 cm. long, 4–6 mm. thick.

Gregarious on partly buried anthracite coal, Mt. Gretna, Pa. September. C. McIlvaine.

The species is peculiar in its color and habitat. In the dried specimen the lamellae have assumed a brown color with no ochraceous tint. Mr. McIlvaine remarks that it is an edible species, dries well and is excellent when cooked. Its relationship is with *F. anomala* Pk., but it is a larger plant with darker color and a different habitat.

Galera capillaripes

Pileus subcampanulate, obtuse, a little broader than high, even, glabrous, hygrophanous, faintly striatulate and pale ferruginous when moist, paler or buff color when dry; lamellae rather broad, distant, adnate, pale ferruginous; stem very slender, flexuous, glabrous, colored like the pileus; spores elliptic, 8–12 μ long, 6–7 μ broad.

Pileus 4–6 mm. broad; stem 2–3 cm. long, less than 1 mm. thick.

Lawns and grassy places, Ohio. May and June. Lloyd.

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

Crepidotus latifolius

Pileus very thin, submembranous, sessile, suborbicular, 3–6 mm. broad, hygrophanous, striatulate when moist, white and slightly pubescent when dry, flesh white; lamellae very broad, suborbicular, 5 or 6 times as wide as the thickness of the flesh, subdistant, extending beyond the margin of the pileus, white becoming pale ferruginous with age; spores globose, 5–6 μ broad.

Gregarious on much decayed wood, Ohio, Lloyd.

Agaricus maritimus

Pileus very fleshy, firm, at first subglobose, then broadly convex or nearly plane, glabrous, sometimes slightly squamose with appressed spot-like scales, white becoming dingy or grayish brown when old, flesh whitish, quickly reddening when cut, taste agree-

able, odor distinct, suggestive of the odors of the seashore; lamellae narrow, close, free, pinkish becoming purplish brown with age, the edge white; stem short, stout, firm, solid, equal, sometimes bulbous, white, the annulus delicate, slight and easily obliterated; spores broadly elliptic, purplish brown, 7-8 μ long, 5-6 μ broad.

Pileus 5-20 cm. broad; stem 2.5-5 cm. long, 1.5-2.5 cm. thick.

Sandy soil near salt water, Lynn, Nahant and Marblehead, Mass. June to December. R. F. Dearborn.

This is a very interesting and an excellent mushroom. Dr. Dearborn writes that he has used it on the table for fourteen years and that it is the only mushroom that he has ever eaten in which the stem is as good as the cap. He considers it the most hearty and satisfying of all the numerous species that he has ever eaten. Both its taste and odor is suggestive of the sea. The latter is quite strong, and perceptible by one riding along the road by whose side the mushrooms are growing. They sometimes grow in semicircles and attain a larger size in warm weather than in the colder weather of autumn. They are most abundant in August. The flesh when cut or broken quickly assumes a pink or reddish hue on the freshly exposed surface. This is a very distinctive character and with the maritime habitat makes the species easy to recognize. Another species, *Agaricus haemorrhoidarius* Kalchb. exhibits a similar change of color in its wounded flesh, but it is of very rare occurrence with us, does not, so far as ascertained, grow near the sea, has a darker cap and a longer hollow stem. The stem in the maritime mushroom is short and solid. Its collar is very slight and easily destroyed.

Agaricus magnificus

Pileus fleshy, thick, convex, becoming nearly plane or centrally depressed, glabrous, often wavy and split on the margin. white or whitish, often brownish in the center, flesh 1.5-2 cm. thick in the center, thin on the margin, white, unchangeable; lamellae numerous, rather broad, close, free, ventricose, white becoming dark purplish brown with age, never pink; stem firm, stuffed with cottony pith, bulbous or thickened at the base, fibrillose, striate, minutely furfuraceous toward the base, annulate, pallid or whitish, the annulus thin, persistent, white; spores small, elliptic, 5-6 μ long, 3-4 μ broad.

Pileus 5-15 cm. broad; stem 10-15 cm. long, about 2.5 cm. thick.

Gregarious or cespitose; thin woods, Mt. Gretna, Pa. August. McIlvaine.

A large fine species distinguished from its near allies by the absence of pink hues from the gills. Mr. McIlvaine remarks that it has an anise-like flavor and odor and that when young the whole fungus is tender and high-flavored but when full grown only the caps are edible.

Agaricus argenteus Braendle *in litt.*

Pileus thin, convex becoming nearly plane, slightly silky or glabrous, pale grayish white or grayish brown, shining with a silvery luster when dry, the margin sometimes striate, at first incurved, often revolute when old, flesh whitish, becoming blackish where cut; lamellae close, free, at first brownish, becoming blackish brown or black with age; stem short, glabrous, solid, often narrowed toward the base, the annulus slight, evanescent; spores broadly elliptic, 7-10 μ long, 6 μ broad.

Pileus 2.5-5 cm. broad; stem 2.5-4 cm. long, 4-8 mm. thick.

Lawns and grassy places in rich soil. Often associated with *Stropharia bilamellata* Pk. After rains from April to November. Washington, D. C., F. J. Braendle.

This is a small mushroom, peculiar in having the young lamellae of a dark color and in the absence of any pink hues. The lamellae sometimes become moist and manifest a tendency to deliquesce. The drying specimens emit a strong but not unpleasant odor. Mr. Braendle says that their edible quality is excellent and that it is not impaired by drying.

Psathyra microsperma

Pileus ovate or subhemispherical, becoming deeply convex or subcampanulate, obtuse, even, hygrophanous, brown when moist, paler when dry, slightly floccose when young, flesh brownish; lamellae thin, close, adnate, brown; stem equal, hollow, fibrillose; spores brown, elliptic, 5-6 μ long, 3-4 μ broad.

Pileus 1-2.5 cm. broad; stem 2.5-3 cm. long, 2-3 mm. thick.

Cespitose about old stumps, Ohio. April. Lloyd.

The white floccose tufts of the pileus and the white fibrils of the stem are easily destroyed in handling the specimens. The species is similar in the ornamentation of the pileus to *Psilocybe senex* Pk.

Coprinus laceratus

Pileus thin, at first ovate and covered with a white separable floccose coat which soon separates into scales or patches and

finally disappears, then campanulate, striate nearly to the center, much torn or lacerated on the margin, pale buff becoming darker with age; lamellae thin, close, free, white when young, becoming black; stem equal or slightly thickened at the base, striate, hollow, white; spores elliptic, 12-15 μ long, 8-10 μ broad.

Pileus 2.5-4 cm. broad; stem 5-7.5 cm. long, about 4 mm. thick.

Cespitose on manure mixed with shavings, Ohio, Lloyd.

The glabrate mature specimens resemble very pale forms of *C. micaccus* Fr. Young plants resemble *C. quadrifidum* Pk., but the mature plants do not split to the center as in that species, and the spores are larger than in it.

Polyporus admirabilis

Pilei tufted, large, more or less imbricated, nearly entire centrally depressed or subinfundibuliform, glabrous, white or slightly tinted with pale yellow or cream color; pores minute, rotund, whitish, with thin dissepiments; spores flattened, orbicular, 5-6 μ broad.

Pilei 10-15 cm. broad, united at the base and forming tufts 30 cm. or more in diameter.

Wood of apple trees, Riverside, Maine. August and September. H. P. Burt.

This is a very beautiful and attractive species which is referable to the tribe Merisma. Mr. Burt remarks that the fresh tufts of clear white trumpet shaped pilei are suggestive of a cluster of giant calla lilies.

Craterellus corrugis

Pileus soft, fleshy, flexible, at first clavate, obtuse, flesh color-tinted with violet, soon obconic or turbinata, broadly convex or truncate, glabrous, somewhat irregular with an obtuse margin corrugated by the extension of the hymenial wrinkles, ochraceous buff or pale ochraceous when fresh and moist, somewhat rufescent when dry, sometimes leprously whitened in the center, flesh white, very soft, soon shrinking and leaving the pileus hollow, the hymenium colored like the pileus, conspicuously corrugated or wrinkled when fresh or moist, the wrinkles less conspicuous when dry; stem short, equal or tapering downward, colored like or a little paler than the pileus; spores white, 8-10 μ long; 4-5 μ broad.

Pileus 2.5-5 cm. broad; stem 1.5-2.5 cm. long, 6-8 mm. thick.

Thin oak woods, Massachusetts. September to November. G. F. Francis.

This species is closely related to *C. clavatus* (Pers.) Fr. from which it differs in its coloration, larger size and smaller spores. Sometimes the plants are united at the base, forming small clusters. The species is also liable to be confused with *Craterellus pistillaris* Fr. and *Clavaria pistillaris* L., unless the distinguishing characters are carefully observed.

Fistulina firma

Pileus fleshy, firm, flexible, dimidiate or reniform, convex, covered with a minute somewhat tufted tomentum, buff verging toward isabelline, flesh very white; tubes short, 1-2 mm. long, whitish, abruptly terminating at the stem; stem firm, solid, somewhat irregular, cinnamon brown above, paler below, white within; spores minute, subglobose, about $3\ \mu$ broad.

Pileus 6-7 cm. broad; stem 2.5 cm. long, 8-12 mm. thick.

Among fallen leaves, near Manchester, N. H. October. Mrs. A. M. Hadley.

This is evidently a very rare and very distinct species. Only two specimens were found and these were united at the base. They were apparently growing from the ground where it was covered with fallen leaves, but probably the base of the stem was connected with some root or piece of buried wood. Most of the described species have more or less red in the color of the pileus, but in this there are no red tints. The tomentum is of such a character as to give the pileus a pulverulent appearance, but it is not at all dusty nor easily separable. The flesh is pure white, of a uniform but firm texture and a slightly acrid flavor. The tubes are very minute and very short. The mass is rounded next the stem, ending abruptly and not at all decurrent.

Helvella nigra

Pileus irregular, cupular, 1.5-2 cm. broad, externally velvety with short few-celled blackish brown or black septate hairs, hymenium even, black; stem 1.5-2 cm. long, solid, deeply sulcate and lacunosely pitted, velvety, black; asci 8-spored, 150-200 μ long, 12-15 μ broad; spores elliptic, 15-20 μ long, 10-12 μ broad, usually containing a single large shining nucleus.

Ashes of an old camp fire, Mt. Katadin, Maine. September. F. L. Harvey.

This species is externally black and everywhere clothed with short thick black hairs except on the hymenium, but the inner sub-

stance is white. It is peculiar in having a cup-shaped though wavy and irregular ascomate or pileus. It is possible that this may become reflexed or deflexed with age, but I have seen no such specimens. The stem is rather long and conspicuously sulcate and lacunose, and on this account I have referred the species to the genus *Helvella* rather than to *Acetabularia*. The hymenium is sometimes suffused with a white pruinosity.

Microglossum obscurum

Clubs 8–12 mm. long, about 2 mm. broad, compressed, obtuse, glabrous, tapering below into a stem which is about as long as the club, olive brown or blackish brown; asci clavate, 100–112 μ long; spores fusiform, slightly curved, hyaline, 12–15 μ long, 4–5 μ broad.

Gregarious or cespitose in thickets, Canada. August. Dearness.

The whole fungus is scarcely more than 2 or 2.5 cm. long. It is smaller and more regular than *M. contortum* Pk., and its spores are more narrow. From the very variable *M. multiforme* (Henn.) Sacc. it is easily separated by its darker color.