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Illustrations of the Fleshy Fungi of Iowa III. The Black-Spored Agarics

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ILLUSTRATIONS OF THE FLESHY FUNGI OF IOWA

III. The Black-spored Agarics

JOSEPH C. GILMAN

This paper is the third of a series intended to present the common fleshy fungi of the state. The purple-brown- and white-spored groups of the gilled mushrooms were previously presented in 1940 and 1941, respectively. The mushrooms that are characterized by black spores comprise the forms described and illustrated in this paper.

Using the same criteria as in the previous papers, i.e., frequency

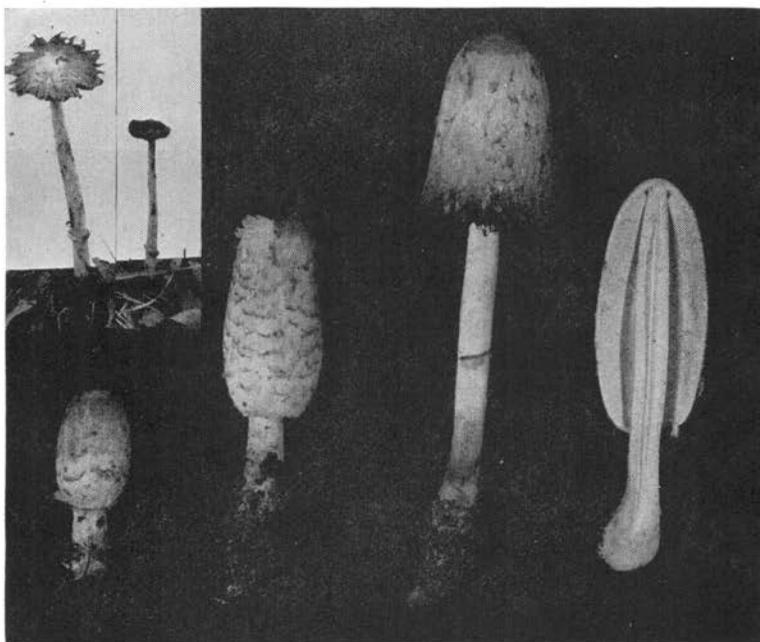


Figure 1. *Coprinus comatus* Fr. Shaggy mane

Cap 7-10 cm. high, cylindrical, then more or less expanded, at first even, the cuticle becoming torn into broad adpressed scales, pale ochraceous, becoming darker in age, interstices whitish. Gills up to 12 mm. broad, almost free, white, crowded, then pinkish, at length black. Stem 10-15 cm. long, 12-17 mm. thick, sub-equal, slightly attenuated upwards, white, even, hollow, more or less bulbous, bulb solid, ring movable. Spores almost black, elliptical, 13-18 x 7-8 microns.

Gregarious. In lawns and fields, very common in autumn, occasionally in spring. Edible.

of occurrence and ease of identification, only two genera, *Coprinus* and *Panaeolus*, are included: the former with four and the latter with one species.

The genus *Coprinus* is characterized by the fact that its gills deliquesce loosing the spores into a liquid that they cause to be inky black. Hence the name "inky-caps." Beside the four species described here, which are the large and conspicuous forms, many others, most of them smaller and very delicate, are known. Although all four species illustrated usually are considered edible, a few cases of an allergic type of poisoning have been noted in the literature for both *C. comatus* and *C. atramentarius*. With this fact in mind it would be well to test the individual's reaction to these forms by partaking sparingly before indulging in them.

The descriptions given follow those of Kauffman, Agaricaceae of Michigan.

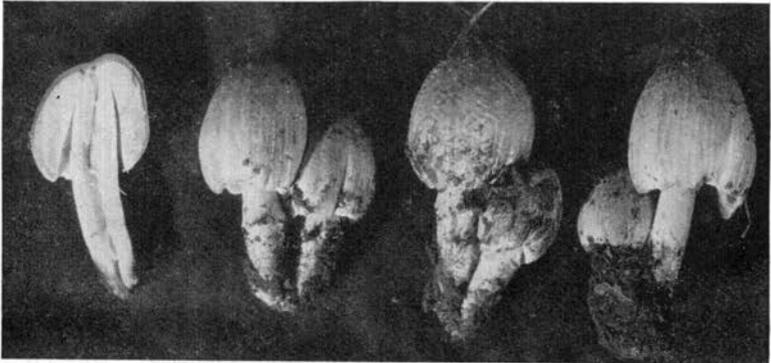


Figure 2. *Coprinus atramentarius* Fr. Gray cap

Cap 5-8 cm. broad when expanded, ovate then expanded, firm, often lobed and plicate, grayish, silky fibrous, or minutely mealy, apex brownish, often minutely squamulose. Flesh thin. Gills crowded, broad, ventricose, free, white then black, often with a purplish tinge. Stem 10-15 cm. high by 1-2 cm. thick, white, silky shining, hollow, ring basal, very evanescent. Spores 11-12 x 5.5-6 microns. Cystidia numerous, large, subcylindrical.

Common, gregarious or densely caespitose, about stumps or on rich soil but not on dung. Edible.



Figure 3. *Coprinus micaceus* Fr. Inky cap

Cap 4-6 cm. across, submembranaceous, elliptical then campanulate, coarsely striate, disk even, margin usually more or less repand, ochraceous-tan, disk darker when young densely covered with minute glistening particles which usually soon disappear. Gills sub-crowded, lanceolate, adnexed, whitish, then brown, finally nearly black. Stem 5-7 cm. long. 4-6 mm. thick, equal, even, hollow, silky white. Spores 7-8 x 4-5 microns, dark brown in mass.

Very common, generally densely caespitose about stumps or trees, or growing from decaying wood buried in the earth. Edible.

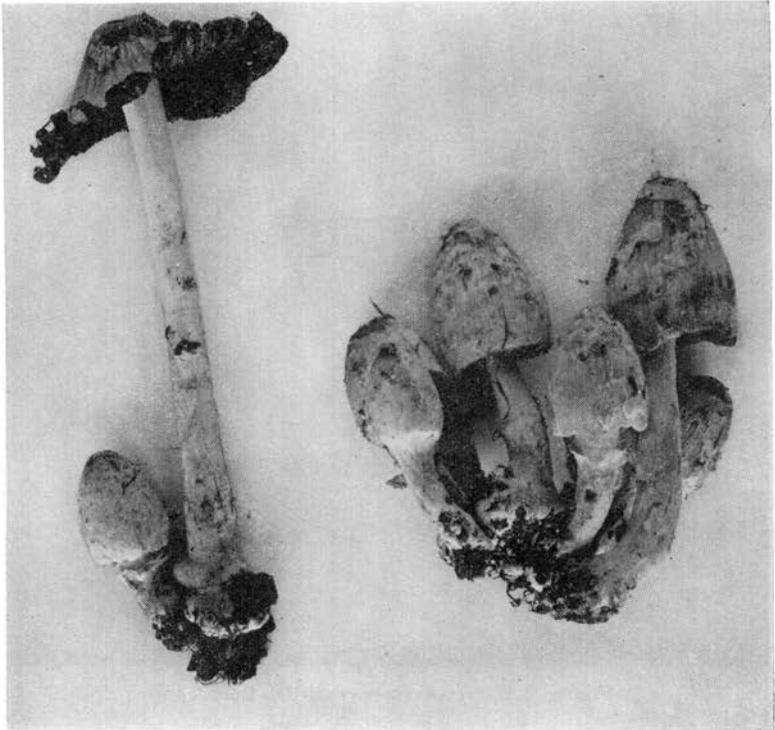


Figure 4. *Coprinus ebulbosus* Pk.

Cap 5-7 cm. broad, thin, bell-shaped, somewhat striate, grayish brown, margin at length revolute, torn, cuticle breaking into broad superficial persistent whitish scales. Gills narrow, thin, crowded, free, slate-colored becoming black. Stem 7-15 cm. long, 10-15 mm. thick, equal, with abruptly swollen base, hollow, white. Spores 7.5-10x5 microns, elliptical.

Caespitose near or upon decaying trees or stumps. Not uncommon.

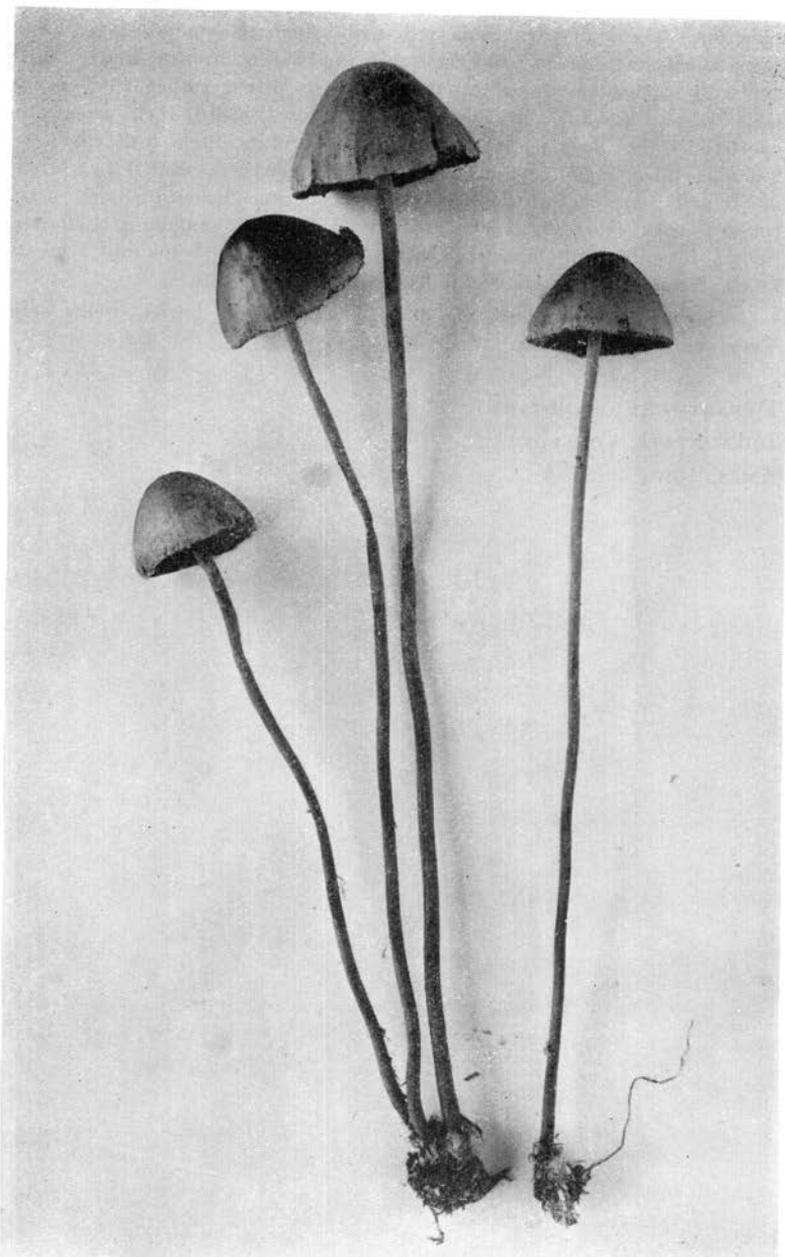


Figure 5. *Panaeolus retirugis* Fr.

Cap 1-3 cm. broad, rather firm at first elliptic-oval, then campanulate-hemispherical, obtuse, glabrous, *dark smoky when young and wet*, becoming paler, or in dry weather grayish, pale clay color, or creamy-white, *shining micaceous* when dry, surface usually *reticulate-veined* on disk,

sometimes even, margin connected with stem in young stage by a *floccose-submembranous, ring-like veil*, veil soon broken and margin markedly appendiculate in expanded pileus. Flesh rather thin, equal. Gills adnate-seceding *broad, ventricose, close, white then variegated-spotted by the black spores, edge white flocculose*. Stem 5-16 cm. long, 2-6 mm. thick, equal, cylindrical, sometimes flexuous, whitish, *rufescent or tinged purplish within and without, darker below, hollow, often covered with frost-like bloom*, sometimes minutely rimulose, bulbilate. Spores broadly oval-elliptical, ventricose, 15-18 x 9-11 microns, smooth black. *Sterile cells* on edge of gills, narrow subcapitate.

Gregarious or scattered on dung-hills, manured lawns, fields, etc. Very common. Suspected.

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