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Notes on Iowa Fungi - 1925

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NOTES ON IOWA FUNGI — 1925

G. W. MARTIN

1. *Further notes on Iowa Amanitas*

Amanita phalloides Fr. This species was reported by Macbride in 1888¹ as occurring in Iowa. In discussing the genus a year ago,² I reported that I had not collected it, but had found *A. bisporigera* and *A. mappa*, and was and still am inclined to believe that *bisporigera* was the species so reported. I included *phalloides*, however, in the list of Iowa Amanitas because of its known range and expressed the belief that it surely occurred. During the past season several typical specimens of *A. phalloides* from Johnson County have been added to the herbarium of the State University. The species is quite distinct from *A. bisporigera*, but several collections I have referred to *A. mappa* approach it rather closely.

Amanita spissa Fr. This, a clearly marked and distinct species, characterized by a thin, gray pileus with sooty disk, and an extremely friable, light mouse gray universal veil, is represented by one collection from Iowa City. This species is said by Kauffman to be rare in the United States.

Amanita cothurnata Atk. The dark form of this species was very abundant near Iowa City in the fall of 1925, in nearly every instance accompanied by the white form and exhibiting a complete series of intermediate phases. The young stages of the pileus are nearly always much darker than the expanded stages and have a superficial resemblance to dull specimens of *A. muscaria*. The older stages are always clearly distinguishable. The illustrations of expanded specimens of *A. pantherina* given by Ricken³ and by Cooke⁴ are even darker than our darkest forms, but unexpanded specimens are indistinguishable from the unexpanded form illustrated by Cooke. The probable identity of these two species has several times been suggested.

2. *Cortinarius anomalus with abnormal pileus*

A number of specimens of a handsome *Cortinarius* determined

¹ Bull. Lab. Nat. Hist. State Univ. Ia. 1:36. 1888.

² Trans. Iowa Acad. Sc. 31: 1924.

³ Die Blätterpilze, pl. 78, fig. 1.

⁴ Illustrations of British fungi, pl. 6.

as *C. anomalus* Fr. were collected in Johnson County in October, 1925. About a third of the specimens had peculiar pilei to which the adjective "morchelloid" may fittingly be applied (Fig. 1). The folds on top of the pileus bear a perfectly normal hymenium. Such teratological structures are not unfamiliar among the agarics and were formerly supposed to be due to parasitic attack. Boudier⁵ has described and illustrated a similar abnormality in *Cortinarius scutulatus* and was able to find no evidence whatever of any parasite. The not uncommon and somewhat similar condition in *Collybia dryophila* was originally described as a parasitic *Tremella*, then as an *Exobasidium*, but is now known to be merely an abnormal growth of the *Collybia* hymenium. Comparable abnormalities in *Schizophyllum commune* have been shown by Zattler⁶ to be inherited in definite lines, and unpublished studies by Miss Gilmore, who worked with *Psilocybe coprophila* in this laboratory, have indicated the same thing. Apparently such variations are inherited among the fungi just as similar abnormalities are inherited in higher organisms. It seems desirable to place such instances on record.

3. Observations on *Mycenastrum corium*

The genus *Mycenastrum* was established by Desvaux⁷ to contain a species collected in France, and which he thought possibly the same as *Lycoperdon corium* Guersent, cited by Fries⁸ as a possible synonym of his *Bovista suberosa*. In an editorial note to the paper by Desvaux, Montane is quoted as of the opinion that this is the case. Hollós⁹ cites twenty-nine synonyms for this species. If his conclusions are correct, it is a puffball of extremely wide distribution, occurring in Europe, Asia, North and South America and Australia, commonly in prairies and pastures.

The North American form was first described from New Mexico by Peck¹⁰ as *Bovista spinulosa*. Three years later¹¹ he transferred it to the genus *Mycenastrum*, stating that it differs from *M. chilense* Mont., to which he regarded it as allied, "by its paler and globose peridium and its larger and globose spores." Hollós regards *M. chilense* as another synonym of *M. corium*.

Peck in his original description, says the species ranges from two to four inches in diameter; Hollós describes it as usually three

⁵ Bull. Soc. Myc. de France 6: 169-173. 1890.

⁶ Zeitschr. f. Bot. 16: 433-499. 1924.

⁷ Ann. Sci. Nat. Bot. 2 ser. 17: 143-147. 1842.

⁸ Syst. mycologicum 3: 26. 1829.

⁹ Die Gasteromyceten Ungarns. 1904.

¹⁰ Bot. Gazette 3: 170. 1878.

¹¹ Bot. Gazette 6: 240. 1881.

to eight centimeters in diameter, occasionally reaching twelve. The spores are described by Morgan¹² as sessile; by Hollós as “ungestielt, oder oft mit kleinen oder schlanken, hyalinen stielen.”

This species is well known from Iowa, and abundant collections in Dickinson County, near Spirit Lake, permit certain corrections to be made to the published descriptions. The average size of the Iowa specimens is much larger than indicated in the preceding citations (Fig. 2). The largest unopened specimen collected measured 23 cm. in its longest dimension, 66 cm. in circumference and weighed 1690 grams. Many other specimens nearly as large were collected and some larger ones were not collected because they had been damaged by stock trampling upon them.

The basidia are borne in a clearly defined hymenium lining the chambers in the gleba and the spores are invariably borne on well-developed, and not particularly slender sterigmata. The great majority of the basidia bear four spores (Fig. 3, a-d). A few were seen in every mount bearing but three, (Fig. 3, e-f), and in one of the latter instances, two of the three were borne on a branched sterigma (Fig. 3f). Such aberrant basidia are no more common than they are in many agarics.

The puffballs grew in conspicuous fairy rings (Fig. 4), most of which were from two to four meters in diameter. One group of such rings made a distinct arc of 60 degrees of a much larger ring 60 meters in diameter.

While young, the species, like all puffballs, is edible, but unlike most puffballs, which are rather tasteless, it has a distinctive and pleasing flavor.

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¹² Jour. Cin. Sec. Nat. Hist. 14: 147. 1892.

EXPLANATION OF FIGURES

- Fig. 1. *Cortinarius anomalus*. Two normal specimens and two with morcheloid pilei.
- Fig. 2. *Mycenastrum corium*. Upper right, full-sized, unopened specimen; left, recently opened specimen; lower right, specimen which has wintered over from previous year, spores still numerous. The scales are in inches.
- Fig. 3. *Mycenastrum corium*, basidia. a-d, progressive stages in 4-spored basidia; e, 3-spored basidium; f, 3-spored basidium with branched sterigma.
- Fig. 4. Small fairy ring of *M. corium*, itself one of a number on the periphery of a larger ring.

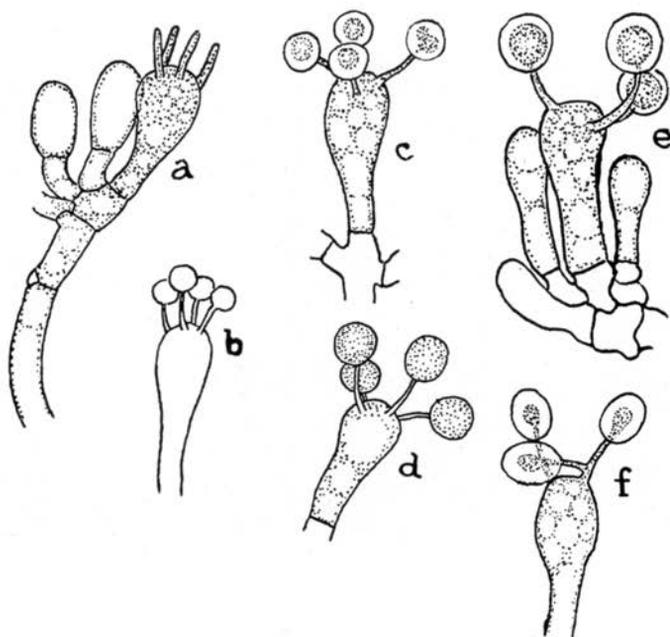


Fig. 3

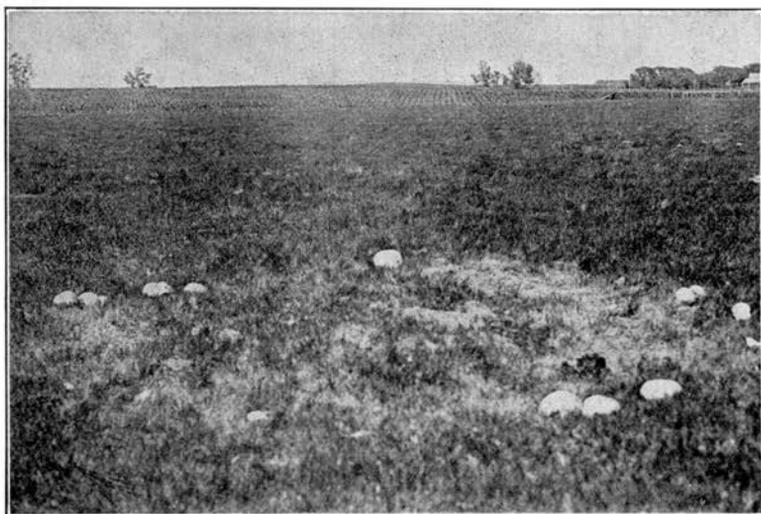


Fig. 4

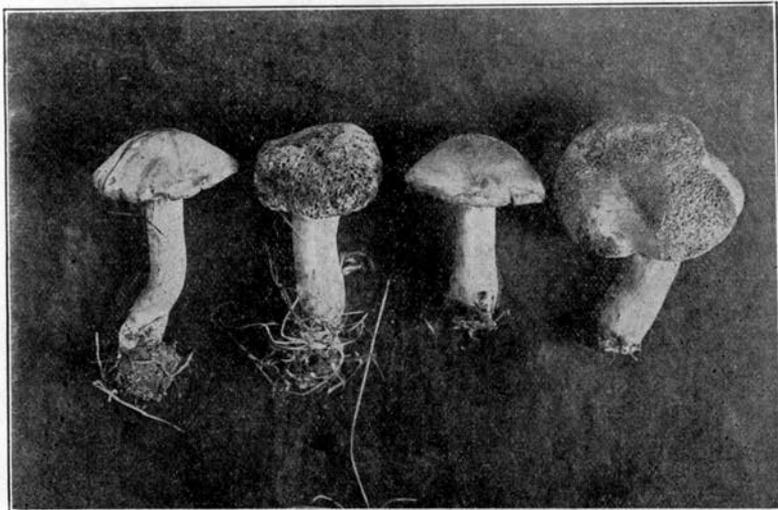


Fig. 1

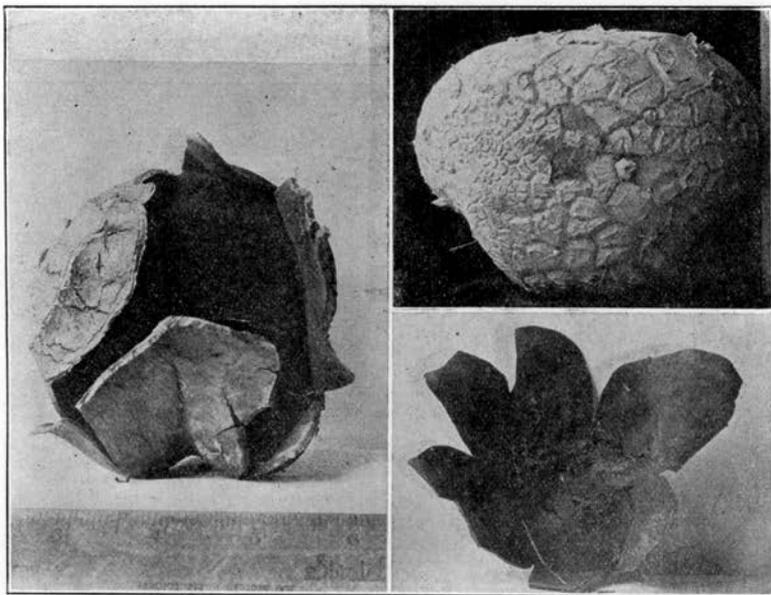


Fig. 2