

Proceedings of the Iowa Academy of Science

Volume 77 | Number

Article 4

1970

Notes on Fleshy Fungi in Iowa. V.

Michael D. Woodward
Iowa State University

Lois H. Tiffany
Iowa State University

Harold S. McNabb Jr.
Iowa State University

Copyright © Copyright 1970 by the Iowa Academy of Science, Inc.
Follow this and additional works at: <https://scholarworks.uni.edu/pias>

Recommended Citation

Woodward, Michael D.; Tiffany, Lois H.; and McNabb, Harold S. Jr. (1970) "Notes on Fleshy Fungi in Iowa. V.," *Proceedings of the Iowa Academy of Science*: Vol. 77: No. 1 , Article 4.
Available at: <https://scholarworks.uni.edu/pias/vol77/iss1/4>

This Research is brought to you for free and open access by UNI ScholarWorks. It has been accepted for inclusion in Proceedings of the Iowa Academy of Science by an authorized editor of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

Notes On Fleshy Fungi In Iowa V¹

MICHAEL D. WOODWARD, LOIS H. TIFFANY, AND
HAROLD S. McNABB, JR.²

Abstract. During the summer and fall of 1967, 1968, and 1969, 330 sporocarps of fleshy fungi were collected. In the collections, were 11 species, *Boletus fraternus*, *Boletus parvulus*, *Boletus subglabripes*, *Cortinarius brunneofulvus*, *Cortinarius privignus*, *Cortinarius subpulchrifolius*, *Hygrophorus chlorophanus*, *Inocybe sindonia*, *Inocybe subochracea*, *Russula densifolia*, and *Tricholoma irinum*, not previously reported for Iowa.

Sporocarps of fleshy fungi have been collected during the past 8 years in six white oak sites (1) in the eastern half of Iowa (Table 1). During the first 5 years of a 10-year oak mycorrhizae study, 22 fungal species and one genus (1, 2, 3, 4) not previously reported in Iowa (5, 6, 7, 8, 9, 10) were found. The 1967, 1968, and 1969 collections included 330 sporocarps representing at least 24 genera and 86 species. Among the specimens were 11 species not previously reported in Iowa.

The fungi reported in this note were identified by using Kauffman (11) with the following exceptions: Coker and Beers (12) for the genus *Boletus*, Hesler and Smith (13) for *Hygrophorus chlorophanus* (Fr.) Fr., and Groves (14) for *Tricholoma irinum* (Fr.) Kummer.

Boletus fraternus Pk. Several specimens were collected six times from three of the sites. Collections were made at Sites 5 and 6 on 8 August 1967 and the next day at Site 4. Since, it has been found at Site 4 on 25 August 1967 and 2 August 1968 and at Site 6 on 12 August 1968. The flesh of the pileus and stipe quickly turned blue after bruising but eventually returned to yellow. The numerous collections agreed well with the description given in Coker and Beers. Specimens occurred both as free-living sporocarps and in close association with litter. Often, specimens were found parasitized by a white fungus. The parasitized sporocarps decayed rapidly. This species seems to occur mostly in early August and usually in a moist habitat.

Boletus parvulus Coker & Beers. Three specimens were found at Site 6, on 12 August 1968. The sporocarps were small; the pilei measured 2 cm or less in diameter. Another distinctive characteristic was the rapid blue reaction of the stipe after cutting or hand-

¹ Journal Paper No. J-6574 of the Iowa Agriculture and Home Economics Experiment Station, Ames, Iowa. Project No. 1707.

² Honors Program Student and Professors respectively, Department of Botany and Plant Pathology, Iowa State University of Science and Technology.

Table 1. Data on the six white oak collection sites for fleshy fungi (1)

Site	County	Location	Description
1	Boone	Mitigwa Scout Reservation	Hilltop along the Des Moines River
2	Hancock	Pilot Knob State Park	Low-lying swampy area
3	Allamakee	Paint Creek Unit, Yellow River State Forest	Ridgetop in rough country
4	Iowa	*Private tract NNE of West Amana (S½, Sec. 13, T81N, R10W)	Hilltop in woodland
5	Lee	Donnellson Unit, Shimek State Forest	Hillside in rolling woodland
6	Lucas	White Breast Unit, Stevens State Forest	Hillside in heavily eroded country

* New location beginning in 1967. Old location on private tract S of Main Amana on hilltop along the Iowa River was logged by owner during winter 1966-67.

Table 2. Fungal species reported as new occurrences in Iowa and re-collected since this study began in 1962 (1, 2, 3, 4) and their collection sites and dates

Species	First Collection		Later Collections					
	Date	Site	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
<i>Boletus fraternus</i>	8- 8-67	6				8- 9-67 8-25-67 8- 2-68 9-24-64	8- 8-67	8-12-68
<i>Cortinarius albidipes</i>	9- 4-63	1						
<i>Cortinarius duracinus</i>	9-24-64	3	7-29-68					
<i>Cortinarius praepallens</i>	8-28-63	1	9- 5-64					
<i>Cortinarius uraceus</i>	7-21-62	4	7- 7-65					
<i>Inocybe radiata</i>	7-22-62	2	7-19-69					7-17-69
<i>Inocybe subochracea</i>	9-21-68	4					7-17-69	
<i>Russula aeruginea</i>	8- 8-63	2	7- 3-68		7-18-69			6- 9-65 7- 3-67 6- 8-68 7-17-69
<i>Russula densifolia</i>	7-29-68	1	7-19-69					
<i>Russula pulverulenta</i>	7-23-63	2	7-19-69		7- 9-68			
<i>Russula sororia</i>	8-31-63	2						7- 3-67

1970]

FLESHY FUNGI IN IOWA

11

ling. The tubes also turned blue when bruised but then turned brownish. The combination of these characteristics is quite distinctive.

Boletus subglabripes Pk. These sporocarps agreed well with Coker and Beers' description of *B. subglabripes* except for the presence of large cystidia, 48.5 x 9 microns, scattered in the hymenium. The collection was made at Site 6 on 12 August 1968. The other members of the genus *Boletus* discussed in this paper were also found on this date at this site. An estimated 600 sporocarps of fleshy fungi, including nearly 40 species, were seen at the site on this date. Apparently, the environmental conditions necessary for fruiting of many species were optimal during this period. A number of unusual collections were made, including the three species of *Boletus*.

Cortinarius brunneofulvus Fr. Two specimens of this species were found clumped, and several others were scattered at Site 1 on 5 July 1969. The specimens agreed well with the description presented in Kauffman.

Cortinarius privignus Fr. Two sporocarps were collected on 3 July 1967 at Site 6. Although the collection did not include a complete developmental sequence, available characteristics agreed well with Kauffman's discussion of this species.

Cortinarius subpulchrifolius Kauff. Several specimens were found in Site 1 during a 10-day period beginning 27 July 1968. The presence of a variety of developmental stages was helpful in species determination.

Hygrophorus chlorophanus (Fr.) Fr. Although only a single specimen was collected, bright yellow pileus and stipe, broadly spaced gills, and viscidness of the entire sporocarp are so distinctive a combination of characteristics that identification was not difficult. The collection was made at Site 3 on 18 July 1969.

Inocybe sindonia Fr. Several sporocarps were collected at Site 4 on 21 September 1968. The specimens agreed well with Kauffman's description of this species.

Inocybe subochracea Pk. This species was collected first at Site 4 on 21 September 1968. A solitary specimen was found on 17 July 1969 at Site 5. The specimens agreed well with Kauffman's description.

Russula densifolia Secr. A solitary abnormal specimen was collected at Site 1 on 29 July 1968. The stipe turned rosy-red and then blackened when handled. After being cut, the gills turned pink and then black. Another solitary specimen was collected at the same site on 19 July 1969. Both sporocarps were somewhat smaller than Kauffman described. Other species of the subgenus *Compactae* were collected at Site 1 during late July and early August 1968. Other unusual collections also were made at this site during

this time. Apparently fruiting conditions were optimal for an unusually large number of species because over 70 species were collected and more than 300 sporocarps were observed during the 3-week period.

Tricholoma irinum (Fr.) Kummer. Four large specimens were collected on 20 September 1968 at Site 3. The specimens agreed well with the description in Groves.

A number of the 33 species originally reported as new occurrences in Iowa in this and earlier notes (1, 2, 3, 4) have been re-collected (Table 2). Those species found most often occur at nearly the same time each year. The major exception is *Russula aeruginea*, which has appeared throughout the summer. This may be because of climatic variations in the specific years or fruiting requirements that are not highly specific.

Literature Cited

1. HOWE, V. K., L. H. TIFFANY, & HAROLD S. McNABB, JR. 1963. *Proc. Iowa Acad. Sci.* 70: 87-89.
2. _____, _____, _____, _____. 1964. *Proc. Iowa Acad. Sci.* 71: 71-73.
3. _____, M. D. Woodward, L. H. Tiffany, and Harold S. McNabb, Jr. 1965. *Proc. Iowa Acad. Sci.* 72: 45-46.
4. RANDALL, H., _____, _____, _____. 1967. *Proc. Iowa Acad. Sci.* 74: 16.
5. GARDNER, P. D. 1947. *Proc. Iowa Acad. Sci.* 54: 67-97.
6. GARNER, J. H. B. 1955. *Proc. Iowa Acad. Sci.* 62: 216-222.
7. MARTIN, G. W. 1948. *Proc. Iowa Acad. Sci.* 55: 199-204.
8. _____. 1952. *Proc. Iowa Acad. Sci.* 59: 111-118.
9. _____. 1954. *Proc. Iowa Acad. Sci.* 61: 138-140.
10. _____. 1960. *Proc. Iowa Acad. Sci.* 67: 139-144.
11. KAUFFMAN, C. H. 1918. *Agaricaceae of Michigan*. Wynkoop-Hallenbeck-Crawford Co., Lansing.
12. COKER, W. C. & A. H. BEERS. 1943. *The Boletaceae of North Carolina*. The University of North Carolina Press, Chapel Hill.
13. HESLER, L. R. & A. H. SMITH. 1963. *North American Species of Hygrophorus*. The University of Tennessee Press, Knoxville.
14. GROVES, J. W. 1962. *Edible and Poisonous Mushrooms of Canada*. Research Branch, Canada Department of Agriculture, Publication 1112, Ottawa, Ontario.