

TAXONOMY AND ECOLOGY OF ECTOMYCORRHIZAL MACROFUNGI OF  
GRAND TETON NATIONAL PARK

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Objectives

The 1989 field studies continue the inventory of macrofungi known to occur in the Grand Teton-Yellowstone Park area. The long-term objectives of this study are:

1. to determine which species grow in forest, range, and pasturelands in and around Grand Teton National Park;
2. to gain a better understanding of their role in the ecosystem; and
3. to prepare descriptions, keys, and illustrations for the common species.

These are approached simultaneously although smaller, specific segments are emphasized in different collecting seasons. The work proposed for the 1989 field season concentrates on the mushroom genus Cortinarius Fries, Sect. Telamonia and Leprococybe, although fungi of the 1988 burn sites and other macrofungi are studied as permitted by time and availability of specimens.

## Methods

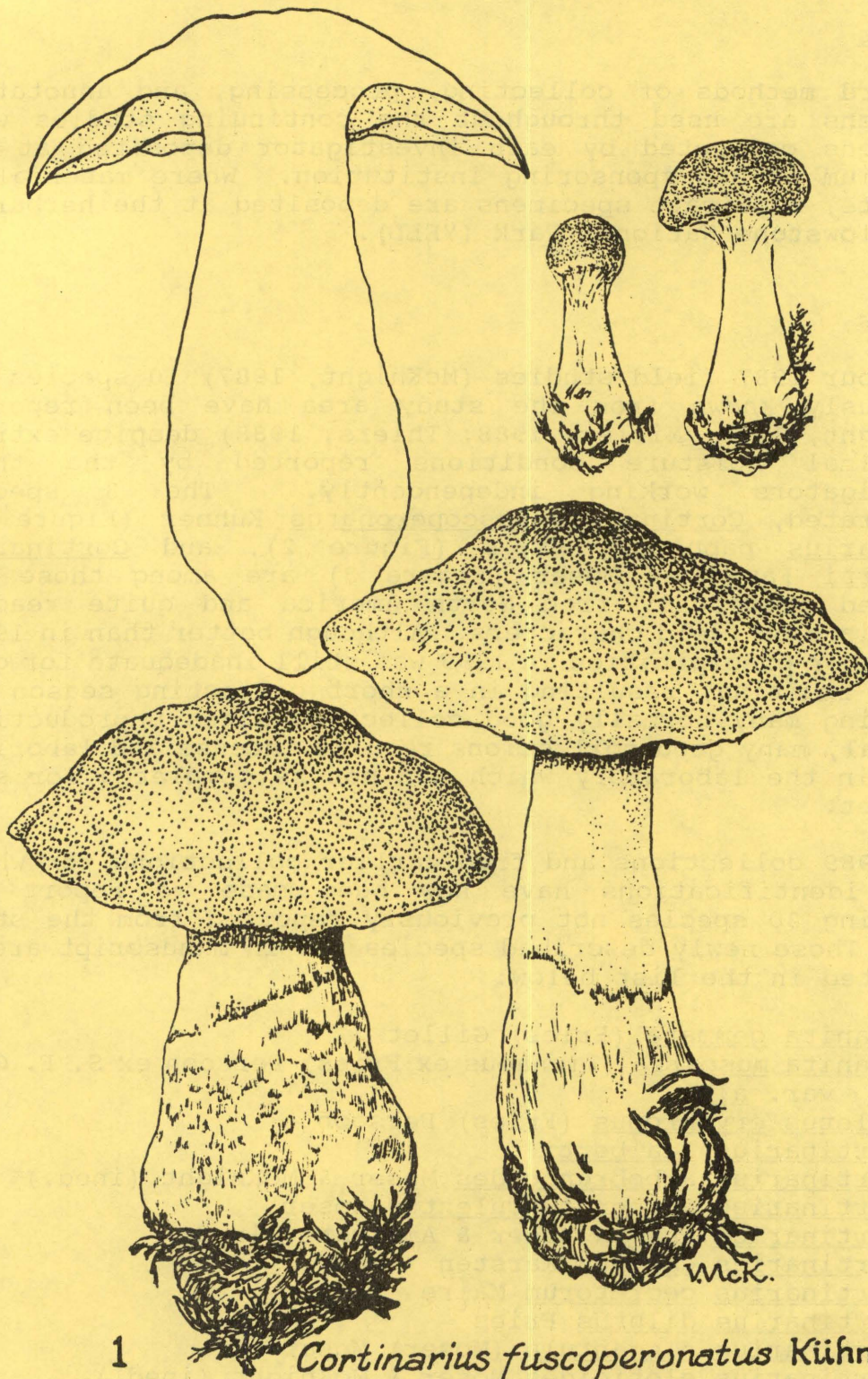
Standard methods of collecting, processing, and annotating specimens are used throughout the continuing studies with specimens collected by each investigator deposited at the herbarium of his sponsoring institution. Where material is adequate, replicate specimens are deposited at the herbarium of Yellowstone National Park (YELL).

## Results

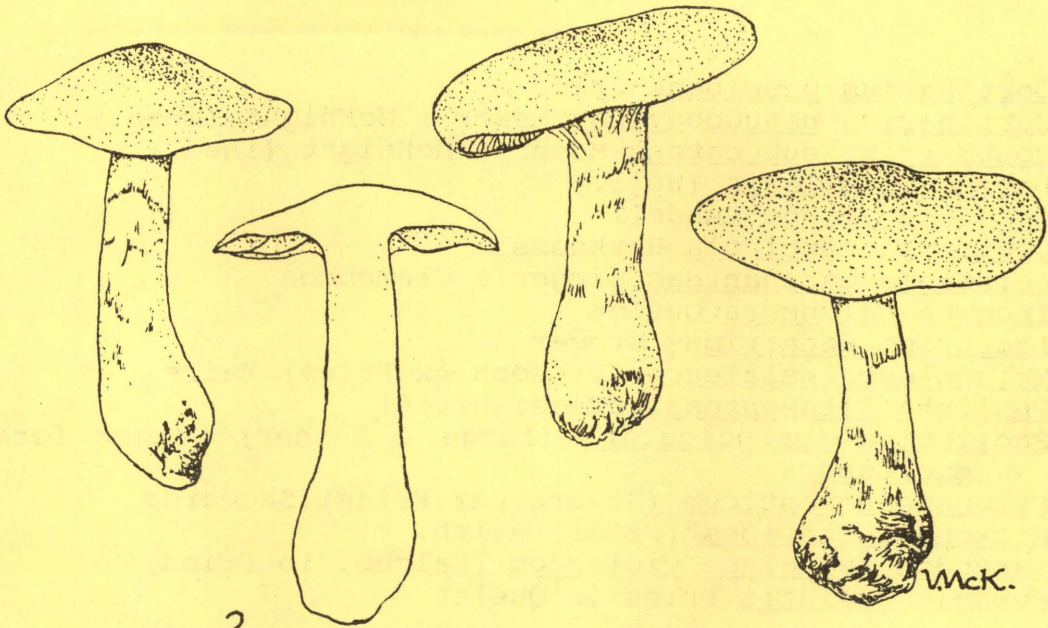
Since our 1987 field studies (McKnight, 1987) 10 species not previously known from the study area have been reported (McKnight, 1988; Miller, 1988; Thiers, 1988) despite extreme suboptimal moisture conditions reported by the three investigators working independently. The 3 species illustrated, Cortinarius fuscoperonatus Kühner (Figure 1), Cortinarius papulosus Fries (Figure 2), and Cortinarius adalberti Favre ex Moser (Figure 3) are among those not reported previously from North America and quite readily recognized on field characters. Although better than in 1988, the summer precipitation in 1989 was still inadequate for good fungus fruiting, resulting in a short collecting season and rendering many normally good collecting sites unproductive. As usual, many good collections require intense and laborious study in the laboratory which can not be completed for some time yet.

From 1989 collections and from earlier collections for which final identifications have now been made we report the following 30 species not previously reported from the study area. Those newly described species now in manuscript are so indicated in the list below:

Amanita gemmata (Fries) Gillet  
Amanita muscaria (Linnaeus ex Fries) Persoon ex S. F. Gray  
var. alba  
Boletus erythropus (Fries) Persoon  
Cortinarius adalberti  
Cortinarius albobrunnoides Moser & McKnight (ined.)  
Cortinarius aureopulverulentus Moser  
Cortinarius aurora Moser & Ammirati (ined.)  
Cortinarius calopus Karsten  
Cortinarius cedretorum Maire  
Cortinarius dilutus Fries  
Cortinarius elegantula (Moser) Moser  
Cortinarius elotioides Moser & McKnight (ined.)  
Cortinarius fuscoperonatus Kühner

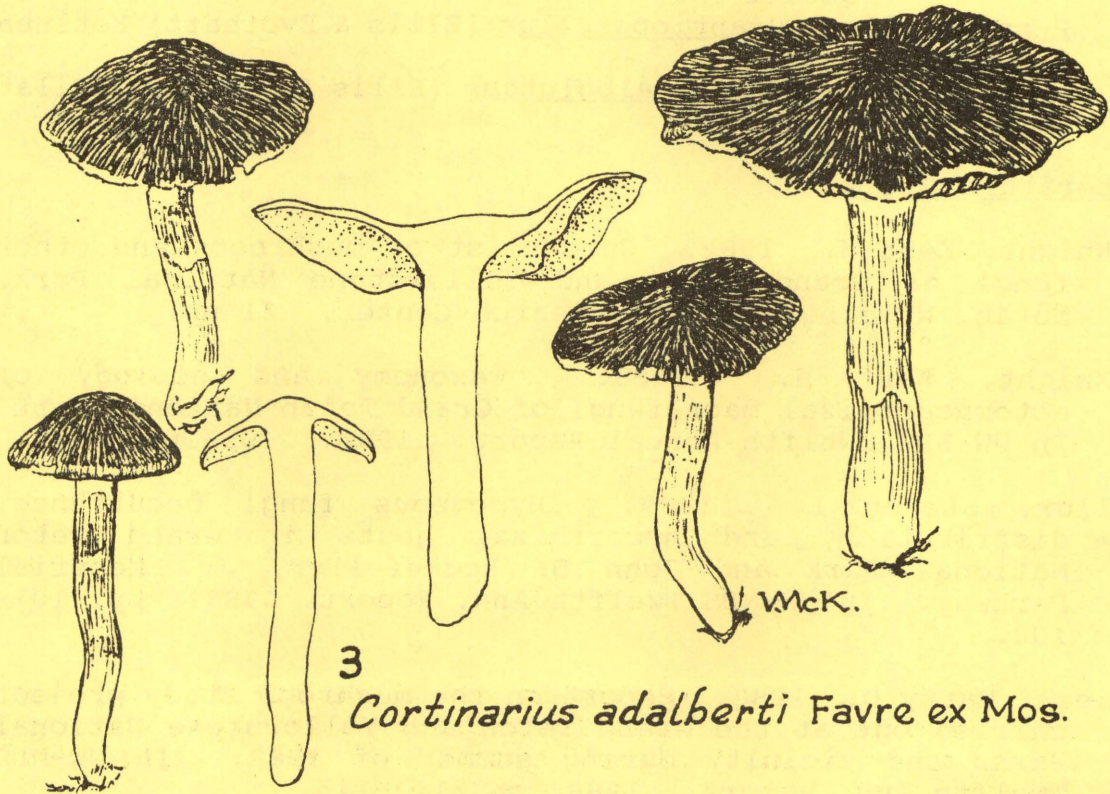


1 *Cortinarius fuscoperonatus* Kühner



2

*Cortinarius papulosus* Fr.



3

*Cortinarius adalberti* Favre ex Mos.

Cortinarius papulosus Fries  
Cortinarius pseudobovinus Moser & McKnight (ined.)  
Cortinarius subfoetens Moser & McKnight (ined.)  
Dermocybe polaris (Höjl.)  
Entoloma vernum Lundell  
Gautieria monticola Harkness  
Gerronema marchanteae Singer & Clemoncon  
Inocybe calospora Quélet  
Lactarius deterrimus Gröger  
Melanoleuca melaleuca (Persoon ex Fries) Maire  
Pholiota filamentosa (Fries) Herpel  
Pholiotina appendiculata (Lange & Kühner) Singer forma  
macrospora  
Pyronema domesticum (Sowerby ex Fries) Saccardo  
Rickenella setipes (Fries) Raith.  
Sarcodon fuligineo violaceum (Kalchb. in Fries)  
Russula queletii Fries in Quélet

Nomenclatural changes:

Inocybe fastigiella Atkinson = Inocybe fastigiata  
(Schaeffer ex Fries)  
Quélet  
Pycnoporellus aurantioporellus (Ellis & Everhart) Kotlaba  
& Pouzar  
= Phaeolus alboluteus (Ellis & Everhart) Pilat

Literature Cited

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