The Polyporaceae of Iowa

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THE POLYPORACEAE OF IOWA

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I. Introduction.

The group of fungi belonging to the family Polyporaceae are principally wood inhabiting, a few species occurring on the soil. In making a survey of a woody area during either the spring, summer, or autumn, species of this group can always be found. These fungi grow either saprophytically on dead trees, both fallen and standing, or parasitically on living trees. Typical forms may be found on almost every stump, on prostrate logs and trees, on bridges, posts, and piers. Economically the family is of very little importance. A few of the species are edible, but since the American people do not relish them as food like the people of France, Germany, and other European countries, these fungi are of very little importance in the United States as a food. Sometimes certain species are aids to the farmer in that they assist in the rotting of old stumps in the field, but on the other hand they are far more detrimental in killing living trees in the native woods, apple trees in the farm orchard, and in the rotting of fence posts, and other wood material exposed to their attack.

In this paper an attempt has been made to bring together all the species reported from Iowa. The herbarium of Iowa State College has been made use of and collections have been made by the writer in several counties of the state as opportunity presented itself. In addition the literature has been consulted in so far as time allowed. The first extensive work on this family from Iowa was reported by Macbride (4) in 1885 in his paper on the fungi in eastern Iowa. He published a list of the Polyporaceae giving a key to the genera and their habitat and distribution. Later Hess and Vandivert (3) list a few of the commoner species of central Iowa and still more recently Wilson (7) published a list from Fayette, Iowa, which was very complete for that locality.

Besides these local floras, the more extensive works of Overholts (6) who lists the Polyporaceae of the Middle West and of Murrill (5) who has monographed the family for North America were consulted.
Synonyms are not included, but an attempt was made to follow Overholts (6) in so far as this was possible. At present only a key to the genera is given.

II. Key to the Genera of Polyporaceae.

I. Fruiting body entirely resupinate; pileus none ___ Poria

II. Fruiting body shelving or resupinate; fruiting layer toothed, teeth continuous with pileus, arranged in rows or reticulate, basally widened and lamellate ___ Irpex

III. Fruiting body sessile or stalked, seldom effused, reflexed but not normally resupinate.

A. Plants annual.

1. Tubes with hexagonal pore-like openings, stem usually present.
   (a) Stem usually central or sub-central; tubes sunken to an equal depth in the context, not radiating, pileus tough-leathery to papery ___________ Polyporus
   (b) Stem lateral, often rudimentary, pores usually in radiating rows _______ Favolus

2. Tubes with circular to angular pore-like openings, sunken to an unequal depth in the context __________________________ Trametes

3. Tubes gill-like, pileus hirsute to villous; context usually less than 1 mm. thick.
   (a) Tubes lamellate, at first in part ___ Lenzites
   (b) Tubes daedaloid but not typically lamellate, radiating __________ Daedalea

4. Tubes gill-like; pileus smooth.
   (a) Tubes composed of concentric lamellae; pileus stalked ___________ Cyclomyces

5. Tubes of the hymenium reduced to shallow pits separated by narrow ridges, folds, or reticulations ___________ Merulius

6. Pileus gelatinous in part, leathery above; tubes gelatinous ___________ Gloeoporus

B. Plants perennial _________________________ Fomes

III. Catalogue of species of Polyporaceae in Iowa.¹

GENUS POLYPORUS MICHX.

1. Polyporus abietinus var. irpiciformis Pk.
   Ames 1902 (Fawcett)
   On dead wood.

¹ Species marked (*) are not present in the Iowa State College Herbarium.
   Ames 1902 (Fawcett) (1) (3);
   Decorah 1882, (Holway);
   Fayette (7);
   Iowa (4) (5) (6).
   On oak, basswood, birch, popular and dead deciduous wood.

   Webster City 1923 (Pammel);
   Iowa (6).
   On dead *Celtis occidentalis* (Hackberry).

   Ames 1902 (Hess and Morrison);
   Fayette (7);
   Iowa (4) (6).
   Woody regions in early summer on stumps of dead deciduous trees.

*5. Polyporus arcticus* Fries.
   Iowa (4).
   On rotting logs.

   Ames (1).
   On rotten logs, especially oak.

   Decorah 1885 (Holway);
   Iowa (6).
   On live *Betula* (Birch).

   Iowa (4) (5) (6).
   Growing on dead wood of deciduous trees.

   Decorah 1882 (Holway);
   On coniferous trees.

    Ames (3);
    Decorah 1882 (Holway);
    Iowa (4) (6).
    Common about deciduous stumps in pasture.

*11. Polyporus chioneus* Fries.
    Iowa (4).
    Very rare. Found on species of *Salix*.

    Ames (1) (3) 1899 (Hume); 1902 (Hess and Morrison);
    Cedar Rapids 1902 (Buchanan);
    Dallas County 1923 (Fennell);
    Decorah 1882 (Holway);
    Iowa (4) (5).
    On various dead deciduous woods.

    Decorah 1882 (Holway);
    Iowa (4) (5) (6).
    On mossy soil or decayed wood almost reduced to humus.

Ames 1902 (Fawcett), 1923 (Trenk); Fayette (7); Iowa (4) (7).
Common on dead Ulmus (Elm).

*15. Polyporus corticola Fr.
Ames (1).
On decaying pine boards.

*16. Polyporus croceus Persoon ex Fries.
Iowa (5).
On dead oak.

17. Polyporus cupulaeformis Br. ex Rav.
Decorah 1882 (Holway).
On bark of living Carpinus americanus.

*18. Polyporus dichrous Fries.
Iowa (4) (6).
Dead wood of deciduous trees.

Iowa (4).
Found growing on or in the ground at the base of stumps of old apple trees.

*20. Polyporus dryophilus Berkeley.
Iowa (4).
Large and handsome, not common; on species of Quercus.

Iowa (4) (5) (6).
Decayed fallen branches, stumps and roots of various deciduous trees.

*22. Polyporus epileucus Fries.
Iowa (4).
Not common. On Betula and Salix.

*23. Polyporus frondosus Fries.
Fayette (7);
Iowa (4).
Found on Quercus.

*24. Polyporus fumosus (Persoon) Fries.
Fayette (7);
Iowa (4) (6).
Rare. Growing on deciduous trees, especially dead elm.

*25. Polyporus galactinus Berkeley.
Iowa (4).
Not common; on rotting logs usually near the ground.

Iowa (6).
On ground around stumps.

27. Polyporus gilvus Schweinitz ex Fries.
Ames (1), 1897 (Eckles), 1902 (Buchanan), 1923 (Fennell);
Fayette (7);
Iowa (4) (5) (6).
On dead and live oak trees damaging them to some extent.

Ames 1923 (Pammel).
On dead wood of deciduous trees.
   Doliver Park, Webster County 1923 (Fennell); Iowa (4) (5) (6).
   On dead and live trunks of oak. Destructive to *Quercus macrocarpa*
   (Burr oak).

   Ames (1), 1902 (Buchanan and King), 1896 (Crum),
   1902 (Fawcett), 1923 (Fennell), (Pammel);
   Decorah 1882 (Holway);
   Fayette (7);
   Iowa (4) (5) (6).
   Living and dead trunks of various deciduous trees.

   Iowa (4).
   On oak log.

32. *Polyporus nidulans* Fries.
   Iowa (4) (5) (6).
   Dead wood of deciduous trees, especially *Quercus*.

   Decorah 1882 (Holway);
   Fayette (7);
   Muscatine 1923 (Pammel);
   Tuttle Lake 1923 (Pammel);
   Iowa (4) (6).
   On oak trees, especially standing trunks of young *Quercus macrocarpa*.

34. *Polyporus occidentalis* Burrill ex Saccardo.
   Iowa (6).
   Growing on old logs in the woods.

35. *Polyporus pargamenus* Fries.
   Ames (3);
   Cedar Rapids 1902 (Buchanan);
   Decorah 1882 (Holway);
   Fayette (7);
   Iowa (4) (6).
   Common as a parasite and saprophyte on *Quercus*, *Betula*, and *Populus*,
   less frequent on other genera.

   Iowa (5) (6).
   Dry exposed soil in woods, especially where fires have been kindled.

   Ames (3), 1923 (Pammel);
   Decorah 1882 (Holway);
   Fayette (7);
   Iowa (4) (5) (6).
   On stumps and logs.

   Dallas County 1923 (Fennell);
   Iowa (4) (6).
   On dead wood deciduous trees. Found by writer on dead oak.

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Ames 1923 (Pammel);
Iowa (4) (5) (6).
On decaying deciduous timber.

*40. *Polyporus radicatus* Schweinitz.
   Ames (3);
   Iowa (4).
   Found on the ground in autumn.

41. *Polyporus resinosus* Schrader ex Fries.
   Ames (1), 1902 (Buchanan and King), (3), 1902 (Morrison);
   Fayette (7);
   Iowa (4) (5) (6).
   Common on dead wood especially of *Tilia* and *Acer*, on all dead deciduous trees.

42. *Polyporus sanguineus* ex Fries.
   Ames 1923 (Fennell);
   Decorah 1882 (Holway).
   Found on dead *Quercus rubra* and on other dead deciduous trees.

*43. *Polyporus Schweinitzii* Fries.
   Iowa (5).
   Trunks, stumps and roots of various coniferous trees.

*44. *Polyporus scruposus* Fries.
   Ames (1).
   On rotten logs.

*45. *Polyporus semipileatus* Peck.
   Fayette (7);
   Iowa (6).
   Rare. Found on *Salix* upon which it is a wound parasite, gaining entrance from dead branches.

   Iowa (5) (6).
   Dead wood, especially oaks, beeches and chestnuts.

*47. *Polyporus spumeus* Sowerby ex Hornemann.
   Iowa (6).
   Growing from wounds in living trees, rarely on logs.

   Iowa (4).
   On dead deciduous woods.

49. *Polyporus sulphureus* (Bull.) Fries.
   Ames (Morrison), 1901 (Pammel);
   Cedar Rapids 1902 (Buchanan);
   Fayette (7);
   Iowa (4) (6).
   Common on various living and dead deciduous and coniferous trees, especially so on oak, ash, and wild cherry.

   Iowa (4).
   Found on rotting logs, not common.

51. *Polyporus tulipiferus* (Schweinitz) Overholts.
   Ames 1902 (Fawcett) 1923 (Fennell), 1902 (Buchanan);
   Dallas County 1923 (Fennell);
   Decorah 1882 (Holway);
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52. *Polyporus varius* Fries.
   Decorah 1882 (Holway);
   Iowa (4).
   Not common.

53. *Polyporus versicolor* Linn. ex Fries.
   Ames 1899 (Hume); (1); 1923 (Fennell); 1902 (King and Buchanan); (3); 1902 (Morrison), (Pammel), (Fawcett); 1891 (Raymond);
   Iowa (4) (5) (6).
   On decaying wood of all kinds.

54. *Polyporus zonatus* Fries.
   Ames (Hess);
   Iowa (4).
   Not common, on decaying wood.

GENUS FOMES FRIES.

1. *Fomes annosus* Fries.
   Iowa (5) (6).
   On coniferous trees and stumps.

2. *Fomes applanatus* Persoon ex Wallroth.
   Ames (1), 1902 (Fawcett), 1923 (Fennell), 1902 (King and Buchanan), 1923 (Pammel, L.H.), (Pammel,H.E.), (Royse);
   Decorah 1882 (Holway);
   Fayette (7);
   Fifteen mile 1902 (Paddock);
   Steamboat Rock 1909 (Pammel,L.H.);
   Iowa (4) (6).
   On logs and live trunks of deciduous trees (rarely conifers).

3. *Fomes conchatus* Persoon ex Gillet.
   Decorah 1882 (Holway);
   Fayette (7);
   Iowa (5) (6).
   Common parasite on *Crataegus*, wild grape, and as a payrophyte on decaying deciduous wood.

4. *Fomes connatus* Gill.
   Iowa (5) (6).
   Wounds on trunks of living *Acer, Populus, Linden, Fagus* and a few other deciduous trees.

5. *Fomes Everhartii*, Ellis and Gall.
   Doliver Park, Webster County 1923 (Fennell);
   Fayette (7);
   Iowa (6).
   Growing on live trees of species of *Quercus* (oak).

6. *Fomes fomentarius* (Linn.) Fries.
   Ames (1);
   Fayette (7);
   Iowa (4) (5) (6).
   Growing on live trees, especially *Betula* and *Fagus*.
7. *Fomes fraxineus* Bull. ex Cooke.
   Ames 1924 (Fennell);
   Iowa (6).
   Usually growing on species of *Fraxinus* (ash).

   Iowa (5) (6).
   Growing on trunks of species of *Fraxinus*.

9. *Fomes fulvus* Gill.
   Ames 1893 (Carver);
   Fayette (7);
   Iowa (5) (6).
   Diseased trunks and stumps of various species of *Prunus*.

10. *Fomes ignarius* Linn. ex Gillet.
    Ames 1902 (Fawcett);
    Decorah 1882 (Holway);
    Fayette (7);
    Steamboat Rock (Pammel and Hume);
    Iowa (4) (5) (6).
    Very common on various trees, especially on *Quercus*.

*11. *Fomes lobatus* Schw. ex Cooke.
    Fayette (7);
    Iowa (4) (6).
    On logs and stumps of deciduous trees.

*12. *Fomes lucidus* (Leys.) Fries.
    Ames (3);
    Iowa (4).
    Common in Iowa on dead trees but exceedingly variable in form.

    Decorah 1882 (Holway);
    Fayette (7);
    Iowa (6).
    On dead wood and structural timbers.

    Fayette (7);
    Iowa (5).
    Parasitic on *Acer*.

*15. *Fomes rimosus* Berkeley.
    Iowa (4).
    Not common. Found mostly on *Quercus*.

    Fayette (7);
    Iowa (6).
    On structural pine timber, rose colored sporophore easily distin-
    guished.

*17. *Fomes scutellatus* Schw. ex Cooke.
    Iowa (6).
    Usually growing on *Alnus* and witch-hazel.

*18. *Fomes ulmarius* Fries.
    Iowa (4).
    Confined to species of *Ulmus*.
**GENUS TRAMETES. FRIES**

*1. Trametes malicola* Berkeley and Curtis.
   Iowa (6).
   On dead wood deciduous trees.

   Ames 1899 (Hume) 1902, (Fawcett) (Pammel);
   Fayette (7);
   Iowa (4) (5) (6).
   Common, chiefly on stumps of *Populus, Acer* and *Salix*.

*3. Trametes pini* Thore ex Fries.
   Iowa (4).
   Found growing on planted coniferous trees throughout Iowa. Found
   by MacBride on *Pinus* near Muscatine.

*4. Trametes scutellata* Schweinitz.
   Iowa (4).
   On dead wood.

   Ames (1);
   Decorah 1882 (Holway);
   Fayette (7);
   Iowa (5) (6).
   On structural and other dead timber, and fence posts.

   Iowa (5).
   Rare. On dead coniferous and deciduous trees.

*7. Trametes serpens* Fries.
   Iowa (4).
   On elm logs.

*8. Trametes suaveolens* Fries.
   Ames (1).
   On decaying wood.

**GENUS DAEDALEA PERS. EX FRIES**

*1. Daedalea ambigua* Berk.
   Iowa (4).
   On stumps of *Acer*, not common.

*2. Daedalea aurea* Fries.
   Iowa (4).
   On dead wood

   Ames (3), 1923 (Ho);
   Cedar Rapids 1902 (Buchanan);
   Decorah 1882 (Holway);
   Fayette (7);
   Iowa (4) (5) (6).
   Very common both as a parasite and saprophyte on *Salix* and *Crataegus*.

   Doliver Park, Webster County 1923 (Fennell);
   Iowa (4) (5).
Found on *Quercus macrocarpa*, live trees. Reported by Murrill as occurring on trunks and timbers of oak and chestnut.

5. *Daedalea unicolor* Bull. ex Fries.
   Ames (1), 1889 (Hume), 1903 (Pammel);
   Decorah 1882 (Holway);
   Doliver Park, Webster county 1923 (Fennell);
   Fayette (7);
   Iowa (4) (5) (6).
   On live *Salix*. Found on various dead deciduous trees.

**GENUS LENZITES FRIES**

   (Ames (1), 1899 (Pammel);
   Decorah 1882 (Holway);
   Fayette (7);
   Iowa (6).
   Common on oak. Found on various dead deciduous trees.

   Ames (1);
   Dallas County 1923 (Fennell);
   Iowa (5) (6);
   Growing on *Quercus*, and other dead trees.

   Ames 1923 (Fennell);
   Decorah 1882 (Holway);
   Fayette (7);
   Iowa (5) (6).
   Found on *Tilia*, also on dead deciduous and coniferous wood, structural timber in particular.

**GENUS FAVOLUS FRIES**

1. *Favolus canadensis* Klotzsch.
   Ames (1), 1902 (Fawcett), (3), 1923 (Pammel);
   Decorah 1882 (Holway);
   Fayette (7);
   Iowa (4) (6).
   On dead branches of deciduous trees.

2. *Favolus rhipidium* Berk.
   Decorah 1882 (Holway);
   Growing on old logs in the woods.

**GENUS GLOEOPORUS MONT.**

1. *Gloeoporus conchoides* Mont.
   Ames (3);
   Decorah 1882 (Holway);
   Common on dead wood of deciduous trees.

**GENUS CYCLOMYCES KUNZ AND FRIES**

*1 *Cyclomyces Greenii* Berk.
   Iowa (4) (6).
   Very rare. Grows on the ground in the woods.
GENUS MERULIUS HALLER EX FRIES

   Ames 1902 (King and Buchanan).
   On dead limb of *Quercus*.
*2 Merulius corium* Fries.
   Iowa (4).
   On dead wood.

*3. Merulius incarnatus* Schweinitz.
   Ames (1).
   On rotten log in winter.

   Ames (Barnes), 1910 (Moore), 1900 (Welch).
   On decaying timber.

5. *Merulius tremellosus* Schrader.
   Ames (1);
   Decorah 1882 (Holway);
   Iowa (4).
   On logs.

GENUS IRPEX FRIES

1. *Irpex cinnamomeus* Fries.
   Dallas county 1923 (Fennell);
   Decorah 1882 (Holway);
   Fayette (7).
   Grows on various species of *Quercus*.

2. *Irpex coriacens* Berk. and Rav.
   Decorah 1882 (Holway);
   Iowa (5).
   Decaying limbs of *Quercus* and other deciduous trees.

3. *Irpex mollis* Berk. and Curtis.
   Ames 1899 (Hume);
   Dallas County 1923 (Fennell);
   Iowa (5).
   Growing on dead wood of deciduous trees.

*4. Irpex obliquus* Fr.
   Ames (1).
   On dead branches of apple trees.

*5* *Irpex sinnosus* Fr.
   Ames (1).
   On old trunks of plum and cherry.

GENUS PORIA PERS.

1. *Poria barbaeformis* B. and C.
   Decorah 1882 (Holway);
   Iowa (4).
   On dead oak (*Quercus*).

*2 Poria mollusca* Fries.
   Iowa (4).
   On dead wood, especially *Salix*.

3. *Poria obducens* Persoon
   Decorah 1882 (Holway);
Iowa (4).
On oak rails.

   Iowa (4).
   On rotten sap-wood of various sorts.

   Iowa (4).
   On charred wood.

   Ames (1);
   Decorah 1882 (Holway);
   Iowa (4).
   On oak.

7. *Poria vinca* Berk.
   Decorah 1882 (Holway);
   Iowa (4).
   On oak.

   Ames (1);
   Decorah 1882 (Holway).
   On deciduous trees.

   Decorah 1882 (Holway);
   Iowa (4).
   On decaying oak.

IV. Bibliography:


Department of Botany,
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