

## BASIDIOMYCETES OF THE CHAGRIN RIVER DISTRICT OF NORTHERN OHIO

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The following notes are a preliminary contribution to the knowledge of the fungi in the Chagrin River district of Northern Ohio. Only the Basidiomycetes are dealt with in this paper. Two-thirds of these were found on "Vallevue Farm," the former estate of Judge Andrew Squire, located in the north-eastern section of Cuyahoga County. The rest were collected upon the farm of Harvey Bingham, Glen Rock, Bainbridge Township, Geauga County.

"Vallevue Farm" includes over two hundred and fifty acres of rolling fields, pastures and woodland. It has recently come into the possession of Western Reserve University, whose Biological Department expects to make an intensive study of the flora and fauna found there. The woodland is primarily beech and sugar maple. The most northern woods has been untouched for ten or twelve years, and most of the trees are over fifty years of age. Through part of the woodland a small stream has cut a deep ravine through the shale. Here beech, maple, dead chestnut, hemlock, birch and tulip are found.

Soil acidity varies from 3.7 pH under the hemlocks to an average of 4 pH in the woodland and ravine, and 5 pH in the open. Rainfall in this area is usually greatest in April, when there is over two inches, with an average of one inch in both January and September.

The collecting ground in Bainbridge Township is similar to that of the Squire property. Beech and maple predominate, with birch, ironwood and black cherry common. The land is rolling, with ravines and small streams.

The fungi have been photographed either in their natural environment or soon after collection. Sixty lantern slides and photographs of the Squire Estate fungi are on file in the Biological Department of Western Reserve University. Specimens of the Agaricaceae from the Squire Estate are there, also. The Polyporaceae, Thelaphoraceae, Hydnaceae, and Gasteromycetes are in the writer's collection. The Geauga County fungi are in the Oberlin College Herbarium.

H. C. Beardslee has determined the rarer Agariaceae, and L. O. Overholts and F. O. Grover many of the Polyporaceae. Unusual spore measurements and other striking characteristics have been noted. The frequency of occurrence is indicated by the letters C for common, I for infrequent, and S for a single collection.

I. Cuyahoga County, Squire Estate Collections.  
Fifty-six species are represented.

*Amanita phalloides* Fries.

Beardslee says, "Volva with free margin, spores globose, 7-9  $\mu$ ." S.

*Clitocybe clavipes* Fries. S.

*Clitopilus abortivus* Berk. and Curt.

Normal specimens, found with abortive forms, had spores salmon in mass, nucleate, elongated angular, 6.4-7 x 4-4.8  $\mu$ . I.

*Collybia radicata* Fr. S.

*Collybia semitalis* Fr.

Beardslee says, "This is a very interesting specimen. . . . In the dried specimens the spores are 5-6  $\mu$ . long, smaller than my measurements of fresh spores (7-9  $\mu$ ). Your plant agrees in having the gills turn yellow when cut, and apparently they have blackened somewhat." I.

*Coprinus micaceus* Fr.

Spores 4.8-6.4 x 8-9  $\mu$ ., purple black. Found in good condition as late as December first. I.

*Flammula spumosa* Fr.

Spores 8-10 x 5-6  $\mu$ ., smooth, brown. S.

*Hypoloma sublateritium* Fr.

Spores 6-7 x 3.5-4  $\mu$ . C.

*Lentius vulpinus* (Sow.) Fr.

Spores 2.5-3.5  $\mu$ , ovoid, hyaline, white in mass. On sugar maple. S.

*Lepiota procera* Fr. S.

*Leptonia serrulata* Fr.

Beardslee says, "Spores angular, 7-9 x 4-5  $\mu$ ." S.

*Marasmius fagineus* Morgan. I.

*Panus stipticus* Fr. C.

*Pholiota adiposa* Fr.

Spores obovoid, 8-10 x 5-7  $\mu$ , ochre, smooth. I.

*Pleurotus sapidus* Kalch.

Spores 7-10 x 4-4.5  $\mu$ , oblong, smooth. I.

*Schizophyllum commune* Fr. C.

*Hydnochaete olivaceum* (Schw.) Banker. I.

*Hydnum ochraceum* (Pers.) Fr.—*Steccherinum ochraceum* (Pers.) S. F. Gray. I.

*Hydnum macrodon* Pers. ex Fries.—*Oxydontia macrodon* (Fr.) Miller. I.

*Peniophora cinerea* (Fr.) Cke. C.

*Solenia anomala* (Pers.) Fr. S.

*Stereum cinerascens* (Schw.) Masee. C.

*Stereum rameale* Schw. C.

- Stereum hirsutum* (Willd.) Fr. C.  
*Stereum lobatum* (Kuntze) Fr. C.  
*Stereum frustulosum* (Pers.) Fr. C.  
*Thelephora pallida* (Pers.) Fr. I.  
*Exidia glandulosa* Fr. I.  
*Daedalea unicolor* (Bull.) Fr.—*Cerrena unicolor* (Bull.) Murr.  
 Spores ovoid, 4–6 x 3–4  $\mu$ , hyaline, smooth; on beech. C.  
*Daedalea confragosa* (Bolt.) Fr.  
 Spores 4–6 x 2  $\mu$ , on maple. I.  
*Fomes applanatus* (Pers.) Wallr.—*Elfvigia megaloma* (Lév.) Murr.  
 Spores 7–8 x 6  $\mu$ , ovoid, smooth, brownish, on sugar maple. C.  
*Lenzites flaccida* (Bull.) Fr. var. *variegata* (Fr.) Cost. and Dufour (Rea. Brit. Basid. 613. 1922).—*L. variegata* Fr. (Bourdot and Galzin, Nym. d. Fr. 580. 1927).—*L. betulina forma variegata* (Fr.) Lloyd.  
 This seems to be the common form in the United States. The pilei are thin and have broad bands of orange between wood colored zones. Spores elliptical, some curved, hyaline, smooth, 4–6.5 x 2–4  $\mu$ .  
*Polyporus adustus* (Willd.) Fr.—*Bjerkandera adusta* (Willd.) Karst. I.  
*Polyporus bififormis* (Klotzsch.) Berk.—*Coriolus bififormis* (Klotzsch.) Pat.  
 Spores 4–7 x 2  $\mu$ , curved, hyaline, hyphae 4  $\mu$ , on beech. C.  
*Polyporus brumalis* (Pers.) Fries.—*Polyporus polyporus* (Retz.) Murr. S.  
*Polyporus caesius* (Schrad.) Fr.—*Tyromyces caesius* (Schrad.) Murr.  
 Spores 4–5 x 1–2  $\mu$ , curved, smooth. I.  
*Fomes connatus* (Weinm.) Gill—*Fomes populinus* (Schum.) Cooke.  
 Spores 3–5  $\mu$ , globose, hyaline, on maple. S.  
*Polyporus delectans* Peck.—*Spongipellis delectans* (Pk.) Murr. S.  
*Polyporus galactinus* Berk.—*Spongipellis galactinus* (Berk.) Pat. S.  
*Polyporus gilvus* (Schw.) Fries—*Hapalopilus gilvus* (Schw.) Murr. C.  
*Polyporus hirsutus* (Wulf.) Fries—*Coriolus nigromarginatus* (Schw.) Murr. C.  
*Polyporus pargamenus* Fr.—*Coriolus prolificans* (Fr.) Murr.  
 Spores 6–8 x 2–4  $\mu$ , smooth, hyaline, curved, on beech. C.  
 Spores 6–8 x 2–3  $\mu$ , smooth, curved, on black cherry. C.  
*Polyporus rigidus* Lév. (resupinate form).  
 Spores 3–4 x 2–3  $\mu$ , hyaline. S.  
*Polyporus sulphureus* (Bull.) Fr.—*Laetiporus speciosus* (Batt.) Murr.  
 Spores 6–8 x 5–6  $\mu$ , hyaline, on chestnut. S.  
*Polyporus tephroleucus* Fr.—*Polyporus albellus* Am. Auth., not Peck.  
 Spores 4–5 x 1–1.5  $\mu$ , smooth. Hyphae of context 4  $\mu$  diam., unbranched. Clamps present. I.  
*Polyporus tulipiferus* (Schw.) Overholts.—*Irpiciporus lacteus* (Fr.) Murr.  
 Spores 5–7 x 2  $\mu$ , curved, hyaline, smooth, on beech. C.  
*Polyporus versicolor* (L.) Fr.—*Coriolus versicolor* (L.) Quel. C.  
*Poria eupora* Karst. S.  
*Trametes Sepium* Berk.—*Coriollelus Sepium* (Berk.) Murr. I.  
*Phlebia radiata* Fr. C.  
*Geaster Triplex* Jung. S.  
*Lycoperdon gemmatum* Batsch.  
 Spores spiny, spherical, 4–5.5  $\mu$ .; capillitium thread brown, 6 $\mu$ , little if any branching, ends obtuse. C.

*Lycoperdon pyriforme* Schaeff.

Spores brown, spherical, 3.7–4  $\mu$ , with large oil drop; capillitium threads 3.6–4.5  $\mu$ , ends blunt, branched occasionally, pale olivaceous. C.

*Lycoperdon umbrinum* Pers.

Spores spherical, 3.5–4  $\mu$ , smooth, with oil drop; capillitium threads 4–5  $\mu$ , ends blunt. I.

*Scleroderma aurantium* (Vaill.) Pers.—*Scleroderma vulgae* (Hornem.) Fr.

Spores spiny, 10–12  $\mu$ , dark brown, spherical; hyphae light brown, 6–8  $\mu$ , with tapering ends. C.

II. Geauga County, Bainbridge Township, Bingham Farm Collections.—Thirty-two species are reported.

*Exidia glandulosa* Fr. C.*Guepinia spathularia* (Schw.) Fr., on *Prunus serotina*. S.

(See G. W. Martin, Am. Jour. Bot. 23: 627–629, 1936, for validity of this name.)

*Schizophyllum commune* Fr. Common on *Carpinus* and *Malus*.*Coniophora arida* (Fr.) Karst.

Spores 8.8–11 x 6.8  $\mu$ . On *Carpinus*.

*Peniophora cinerea* (Pers.) Cooke. On *Carpinus* and *Quercus alba*. C.*Stereum sericeum* Schw. On *Carpinus*. C.*Corticium investiens* (Schw.) Bres. C.*Odontia crustosa* (Pers.) Quel. On *Carpinus*.*Merulius ceracellus* Berk. and Curt. On *Malus*. S.*Phlebia radiata* Fr. On *Malus* and *Prunus serotina*. I.*Daedalea confragosa* (Bolt.) Fr. On Black Cherry. C.*Lenzites trabea* (Pers.) Fr. (Overholts, Bull. Penn. State Coll. 316:5, 1935).

*Lenzites vialis* Peck.—*Gloeophyllum trabeum* (Pers.) Murr. Lamelloid form. On *Prunus serotina*.

*Polyporus bififormis* (Klotzsch.) Berk.—*Coriolus bififormis* (Klotzsch.) Pat. C.*Polyporus brumalis* (Pers.) Fr.—*Polyporus polyporus* (Retz.) Murr. On *Prunus serotina*. S.*Polyporus albellus* Peck.—*Polyporus chioneus* Am. Auth. not Fries. On *Prunus serotina*.*Polyporus caesius* (Schrad.) Fr.—*Tryomyces caesius* (Schrad.) Murr. On *Tilia* and *Ulmus americana*. I.*Polyporus fumosus* (Pers.) Fr.—*Bjerkandera fumosa* (Pers.) P. Karst.

Spores smooth, hyaline, ellipsoid-ovoid, 2–3 x 4.5–6  $\mu$ . I. On *Ulmus ameri*.

*Polyporus hirsutulus* Schw.—*Coriolus hirsutulus* (Schw.) Murr. On *Acer* and *Fraxinus*.*Polyporus hirsutus* Fr.—*Coriolus nigromarginatus* (Schw.) Murr. On *Amelanchier canadensis*.*Polyporus psrgamenus* Fr.—*Coriolus prolificans* (Fr.) Murr. On *Prunus serotina*.*Polyporus picipes* Fr. On *Ulmus americana*. S.*Polyporus pubescens* (Schum.) Fr.—*Coriolus pubescens* (Schum.) Murr. On *Prunus serotina*. S.

*Polyporus tulipiferus* (Schw.) Overholts—*Irpiciporus lacteus* (Fr.) Murr.

On *Quercus alba* and *Prunus serotina*.

*Polyporus versicolor* (L.) Fr.—*Coriolus versicolor* (L.) Quel. On *Prunus serotina* and *Platanus occidentalis*. C.

*Poria candidissima* (Schw.) Cooke. Det. L. O. Overholts.

This *Poria* seems to be a rare species. In his study of *Porias* in 1923, Overholts was able to examine only six specimens from this country. Two characteristics are unique: the spores are echinulate, and the hyphae have occasional swollen walls next to the cross walls. Spores 2.5–4  $\mu$ . On beech.

*Poria corticola* Fr. Det. L. O. Overholts.

*Poria eupora* (P. Karst.) Cooke. On *Acer*.

*Poria ferruginosa* (Schrad.) Bres. On *Carpinus*.

*Poria medulla-panis* (Pers.) Cooke. On *Castanea*.

*Poria versipora* (Pers.) Fr. On *Carpinus*.

*Polyporus conchifer* (Schw.) Fr.—*Poronidulus conchifer* (Schw.) Murr.

On *Ulmus americana*.

*Fomes fulvus* (Scop.) Gill—*Pyropolyporus fulvus* (Scop.) Murr. On *Prunus*.

Spores 3–5 x 4–6  $\mu$ .