

ASCOMYCETES NEW TO THE FLORA OF INDIANA.¹

BRUCE FINK and SYLVIA C. FUSON, Miami University, Oxford, Ohio.

This work is presented as a contribution to a knowledge of the ascomycetes of Indiana. The collecting was begun by the authors in Union County, July 21, 1917, and most of the collections were made during August and September of the same summer in the following counties: Franklin, Hendricks, Montgomery, Parke, Tippecanoe, and Union. Thus far, about six hundred and twenty-five specimens have been brought together, representing thirty-eight counties. Of this number, fifty-five were obtained from the herbarium of Purdue University and about the same number from the herbarium of Wabash College.

It is the intention to record in this first paper a list of the ascomycetes found which have not been published previously for the State. Of these there are about one hundred and forty, including two new species. A second paper, which is to follow, will consist of an arrangement of all the ascomycetes now known to Indiana.

The classification used in this paper follows that initiated by Bruce Fink in "The Ascomycetes of Ohio,"¹ published in Bulletin 5 of the Ohio Biological Survey, June, 1915.

Full sets of the species are preserved in the herbaria of Bruce Fink and Sylvia C. Fuson, and a partial set was sent to the herbarium of Purdue University.

Unless otherwise stated, all collections were made by the authors. Other collectors mentioned are H. W. Anderson, J. C. Arthur, F. E. Bryant, G. W. Clark, Miss Katherine Longhead, C. P. Orton, J. R. Schram, Miss Simonds, and M. B. Thomas.

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The list of species not previously reported from Indiana follows.

¹ Contributions from the Botanical Laboratories of Miami University—XV.

PEZIZALES.

PEZIZACEAE.

Geopyxis nebulosa (Cooke) Sacc.

On rotten logs in woods. Parke, Montgomery.

Humaria fusispora Berk.

On moist ground in grassy wood. Jasper (Arthur 1903).

Lachnea setosa (Nees) Phill.

On old stumps in wood. Montgomery.

Peziza bronca Peck.

On soil in open wood. Tippecanoe.

ASCOBOLACEAE.

Ascobolus atrofuscus Phill. and Plow.

On burnt soil in open wood. Montgomery.

Ascophanus carneus (Pers.) Boud.

On sheep dung under belljar. Tippecanoe (Arthur 1896).

Ascophanus testaceus (Moug.) Phill.

On old sacking. Tippecanoe (Arthur 1903).

Saccobolus neglectus Boud.

On cow dung in open pasture. Montgomery.

HELOTIACEAE.

Chlorosplenium chlora (L. and S.) Mass.

On rotten logs in woods. Montgomery, Parke, Tippecanoe.

Helotium fraternum Peck.

On petioles in low wood. Parke.

Helotium lutescens Fries.

On old log in Sayre's wood. Union.

Lacknum leucophaeum (Pers.) Karst.

On dead pokeberry stems on low, open, flood plain. Montgomery.

Lanzia helotioides Rehm.

On old log in low wood. Montgomery.

Phialea scutula (Pers.) Gill.

On dead balsam and other decaying stems on flood plain of Sugar Creek. Montgomery.

Sclerotinia tuberosa (Hedw.) Fuck.

On soil in wood. Tippecanoe (Reed).

MOLLISIIACEAE.

Belonidium minutissimum Fries.

On dead tree trunks in Sayre's wood. Union.

Beloniella dehnii (Rabenh.) Rehm.

On rough cinquefoil. Tippecanoe (Orton 1911).

Mollisia cinerea (Batsch) Karst.

On decaying logs in wood at Turkey Run. Parke.

Orbilia leucostigma Fries.

On dry sticks in woods. Montgomery, Parke, Tippecanoe, Union.

Orbilia vinosa (Alb. and Schw.) Karst.

On osage orange in open woods. Montgomery, Union.

Tapesia cinerella Rehm.

On rotten logs in woods. Parke, Tippecanoe, Union.

CENANGIACEAE.

Dermatea carpinea (Pers.) Rehm.

On dead tree trunk in Sayre's wood. Union.

Sarcosoma rufa (L. and S.) Rehm.

On soil in Sayre's wood. Union.

PATELLARIACEAE.

Karschia fusispora (Cooke and Peck) Sacc.

On logs in wood. Montgomery.

Patellaria atrata (Hedw.) Fries.

On logs in wet, open woods. Montgomery, Tippecanoe.

LECANORALES.

LECIDEACEAE.

Bacidia inundata (Fries) Koerb.

On moist bricks, limestone, and other rocks, usually in woods. Monroe, Montgomery, Putnam, Tippecanoe, Union.

Bacidia rubella (Hoffm.) Mass.

On bark of willow in open wood. Tippecanoe.

Bacidia schweinitzii (Tuck.) Fink.

On bark of beech in Sayre's wood. Union.

Buellia myriocarpa (Lam. and DC.) Mudd.

On board fences and telephone poles along roadsides. Franklin, Montgomery, Union.

Lecidea coarctata (J. E. Smith) Nyl.

On bricks, limestone, and other moist rocks in Crawford's wood. Montgomery.

Lecidea enteroleuca Ach.

On flat, exposed rocks in open pasture. Union.

Lecidea myriocarpoides Nyl.

On rotten stump on Indiana University Campus wood. Monroe.

Lecidea uliginosa (Schrad.) Ach.

On rotten stumps in woods. Hendricks, Montgomery, Union.

CLADONIACEAE.

Cladonia bacillaris (Del.) Nyl.

On stumps in open pasture. Hendricks.

Cladonia cariosa (Ach.) Spreng.

On soil in Crawford's wood. Montgomery.

Cladonia coniocraea (Floerke) Spreng.

On rail fences and old logs in woods. Hendricks, Montgomery, Tippecanoe, Union.

Cladonia macilenta Hoffm.

On rail fences and old logs in woods. Montgomery, Tippecanoe, Union.

COLLEMACEAE.

Leptogium tremelloides (L.) S. F. Gray.

On shaded, mossy rocks along creek. Montgomery.

PYRENOPSISIDACEAE.

Pyrenopsis fuscoatra Fink sp. nov.

Thallus of brown-black, minute, flat or convex, usually scattered, sometimes disappearing granules, these often forming a more or less broken crust; apothecia minute, 0.1 to 0.3 mm. in diameter, concolorous, scattered or clustered, hemispherical or flattened, pyrenocarpic or finally more or less open, with a flesh pink to concolorous disk; hypothecium pale or tinged brown; hymenium pale below and brown above; asci clavate or ventricose; paraphyses slender, hyaline, distinct to coherent semi-distinct, brown tipped; spores simple, hyaline, oblong-ellipsoid, 13 to 22 mic. long and 7 to 10 mic. wide, 8 in each ascus.

On limestone in low, moist, open fields. Montgomery.

PELTIGERACEAE.

Peltigera horizontalis (L.) Hoffm.

On rocks at The Shades. Montgomery.

Peltigera praetextata (Sommerf.) Fink comb. nov.

On limestone rocks in wood. Tippecanoe.

ACAROSPORACEAE.

Acarospora cervina (Wahl.) Koerb.

On granite boulders in open pasture. Montgomery.

LECANORACEAE.

Lecanora dispersa (Pers.) Floerke.

On chistose and granite boulders in open fields. Franklin, Montgomery, Union.

Lecanora hageni Ach.

On fences, old stumps, and limestone rocks. Monroe, Montgomery, Union.

Lecanora varia (Hoffm.) Ach.

On bark of hickory, old stumps, and picket fences. Hendricks, Montgomery, Union.

PERTUSARIACEAE.

Pertusaria pustulata (Ach.) Nyl.

On apple bark in Sayre's wood. Union.

PARMELIACEAE.

Parmelia ciliata (Lam. and D. C.) Fink comb. nov.

On bark of sycamore in Sayre's wood. Union.

Parmelia conspersa (Ehrh.) Ach.

On granite boulders in Crawford's wood. Montgomery.

Parmelia rudecta Ach.

On bark in woods. Franklin, Hendricks, Montgomery, Parke, Tippecanoe, Union.

USNEACEAE.

Ramalina fraxinea (L.) Ach.

On fence posts in open country. Union.

TELOSCHISTACEAE.

Placodium aurellum (Hoffm.) Fink comb. nov.

On limestone and on sandstone conglomerate. Montgomery, Union.

Placodium microphyllum Tuck.

On board and rail fences. Montgomery, Union.

Placodium pyraccum (Ach.) Fink.

On dead roots in open pasture. Montgomery.

Placodium sideritis (Tuck.) Fink comb. nov.

On limestone boulders in open woods. Franklin, Montgomery, Putnam.

Placodium ulmorum Fink comb. nov.

On bark in wood. Tippecanoe.

Placodium variabile (Pers.) Nyl.

On exposed limestone boulder on open hillside. Franklin.

Teloschistes lychnus (Ach.) Tuck.

On maple bark in open field along road. Montgomery.

PHYSICIACEAE.

Physcia aquila (Ach.) Nyl.

On bark in woods. Montgomery.

Physcia astroidea (Fries) Nyl.

On walnut bark in woods. Franklin, Montgomery.

Physcia endochrysea (Hampe) Nyl.

On bark and rocks in woods. Hendricks, Montgomery, Tippecanoe.

Physcia leucoleptes (Tuck.) Fink comb. nov.

On bark in woods and along roadsides. Franklin, Monroe, Montgomery.

Physcia obscura (Schaer.) Nyl.

On bark in woods and along open roadsides. Franklin, Montgomery, Union.

Physcia pulverulenta (Schreb.) Nyl.

On stumps, tree trunks, and paling fences. Franklin, Montgomery, Union.

Physcia tribacia (Ach.) Nyl.

On old posts and on bark, usually toward base of trees, in woods. Hendricks, Montgomery, Parke, Union.

Pyxine sorediata (Ach.) Fries.

On old logs in wood along creek. Montgomery.

Rinodina lecanorina Mass.

On hornblend granite in Crawford's wood. Montgomery.

HELVELLALES.

GEOGLOSSACEAE.

Leotia stipitata (Bosc.) Schröt.

On grassy place in open wood. Montgomery.

HELVELLACEAE.

Helvella crispa (Scop.) Fries.

On ground in grassy wood. Montgomery.

Helvella sulcata (Schäff.) Afz.

On open hillside along road. Montgomery.

PHACIDIALES.

STICTIDIACEAE.

Stictis radiata (L.) Pers.

On dead stems of pokeberry on low, open, flood plain of Sugar Creek. Montgomery.

HYSTERIALES.

HYSTERIACEAE.

Gloniopsis gerardiana Sacc.

On old limbs in Crawford's wood. Montgomery.

Gloniopsis lineolata (Cooke) Sacc.

On rail fence along roadside. Hendricks.

Glonium lineare (Fries) Sacc.

On sycamore bark in open pasture. Union.

Glonium nitidum Ell.

On exposed logs in open wood. Montgomery (Miller).

Glonium stellatum Muhl.

On old logs in wood. Montgomery (Anderson).

Hysterium insidens Schw.

On rail fence in woods. Hendricks, Montgomery.

Hysterographium cinerascens Schw.

On fallen tree. Montgomery.

Hysterographium lesquereuxii (Duby) Ell. and Ev.

On old logs in wood. Union.

Hysterographium rousselii De Not.

On exposed paling in open wood along road. Montgomery.

Hysterographium variable Cooke and Peck.

On decorticate wood, rails, and fence posts, in woods. Montgomery, Parke, Tippecanoe.

GRAPHIDACEAE.

Opegrapha varia Pers.

On bark in woods. Parke, Tippecanoe.

ARTHONIAEAE.

Arthonia dispersa (Lam. and DC.) Duf.

On maple bark in woods. Montgomery, Union.

Arthonia lecideella Nyl.

On bark, usually in woods. Hendricks, Montgomery, Parke, Tippecanoe, Union.

Arthonia radiata (Pers.) Ach.

On basswood bark in low wood. Tippecanoe.

HYPOCREALES.

HYPOCREACEAE.

Chromocrea gelatinosa (Tode) Seaver.

On old log in wood at Turkey Run. Parke.

Hypocrea lenta (Tode) Berk. and Br.

On exposed logs along border of wood. Montgomery.

Hypocrea sulphurea (Schw.) Sacc.

On *Exidia* over decorticate wood in Sayre's wood. Union.

Nectria episphaeria (Tode) Fries.

On osage orange bark in open field along Sugar Creek. Montgomery.

Nectria sanguinea Fries.

On dead stems of common ragweed on low ground near Sugar Creek.
Montgomery.

DOTHIDIALES.

DOTHIDIACEAE.

Dothidea glumarum Berk. and Curt.

On couch-grass in wood. Montgomery (Thomas 1893).

Phyllachora potentillae Peck.

On cinquefoil in wood. Montgomery (Thomas 1893, 1913).

SPHAERIALES.

CHAETOMIACEAE.

Chaetomium bostrychodes Zopf.

On sheep dung in pasture. Tippecanoe (Arthur 1896).

SORDARIACEAE.

Sporormia minima Auersw.

On cow dung in open pasture. Montgomery.

SPHAERIACEAE.

Lasiosphaeria hirsuta (Fries) Ces. and De Not.

On decaying logs in wood at Turkey Run. Parke.

Lasiosphaeria hispida (Tode) Fuck.

On old wood along dry branch. Montgomery.

Lasiosphaeria ovina (Pers.) Ces. and De Not.

On old logs in Sayre's wood. Union.

Leptosphaeria borealis Ell. and Ev.

On ash in wood along creek. Montgomery.

Leptosphaeria doliolum (Pers.) Ces. and De Not.

On old aster stems in low, open field. Montgomery.

Leptosphaeria dumentorum Niessl.

On stems of giant ragweed and mint in open field near Sugar Creek.
Montgomery.

Leptosphaeria subacuta (Cooke and Peck) Sacc.

On stems of giant ragweed in low, open field. Montgomery.

Leptosphaeria subconica (Cooke and Peck) Sacc.

On dead stems of actinomeris in low, open field near creek. Montgomery.

Teichospora obducens (Fries) Fuck.

On ash bark in open wood. Union.

Trichosphaeria pilosa (Pers.) Fuck.

On old sticks in wood. Montgomery.

CERATOSTOMACEAE.

Ceratostomella barbarostra (Duf.) Sacc.

On maple bark on Indiana University Campus. Monroe.

AMPHISPHAERIAEAE.

Amphisphaera incrustans Ell. and Ev.

On old wood in open pasture. Montgomery.

PLEOSPORACEAE.

Ophiobolus acuminatus (Sow.) Duby.

On dead grape stems in low, open field. Montgomery.

Ophiobolus anguillides (Cooke) Sacc.

On dead stems of giant ragweed in low field. Montgomery.

Ophiobolus solidaginis (Fries) Sacc.

On dead stems of giant ragweed in low ground near Sugar Creek. Montgomery.

VALSACEAE.

Diaporthe albocarnis Ell. and Ev.

On dead twigs in wood. Montgomery. (Anderson.)

Diaporthe orthoceras (Fries) Nits.

On dead stems of actinomeris in open ground. Montgomery.

Eutypa ludibrunda Sacc.

Old wood along roadside. Montgomery.

Eutypella cerviculata (Fries) Ell. and Ev.

On log in wood. Tippecanoe.

DIATRYPACEAE.

Diatrype asterostoma Bock. and Curt.

On beech twigs in open pasture. Union.

MELOGRAMMATACEAE.

Botryosphaeria sumachi (Schw.) Cooke.

On sumach bark in open, flood plain. Montgomery.

XYLARIACEAE.

Hypoxylon insidens Schw.

On exposed board in wood. Montgomery.

Hypoxylon stigmatum Cooke.

On hickory log in woods. Montgomery, Union.

Xylaria digitata (L.) Grev.

On old log in wood. Montgomery.

PYRENULALES.

VERRUCARIACEAE.

Verrucaria epigea (Pers.) Ach.

On exposed soil in Sayre's wood. Union.

Verrucaria muralis Ach.

On exposed bricks, sandstone, and limestone boulders. Franklin, Monroe, Montgomery, Putnam.

Verrucaria nigrescens Pers.

On exposed limestone boulders in open field. Montgomery, Putnam, Tippecanoe.

Verrucaria rupestris Schrad.

On exposed sandstone in open wood along road. Montgomery.

Verrucaria sordida Fink sp. nov.

Thallus partly hypolithic, the epilithic portion thin, sordid, roughened, clinky-areolate, the poorly defined areoles minute, 0.2 to 0.5 mm. across; apothecia numerous, concolorous or darker, minute, 0.15 to 0.25 mm. across, semi-immersed, dimidiate, the superficial portion subconical and surmounted by a minute and obscure ostiole; hypothecium and hymenium pale; paraphyses gelatinizing and disappearing early; asci clavate, becoming distended and variously shaped; spores simple, hyaline, oblong-ellipsoid, 16 to 22 mic. long and 9 to 12 mic. wide, 8 in each ascus.

On limestone boulders along dry run. Montgomery.

Verrucaria viridula Ach.

On rock on north side of barn. Montgomery.

PYRENULACEAE.

Pyrenula cinerella (Flot.) Fink.

On cultivated cherry bark in Sayre's wood. Union.

Pyrenula leucoplaca (Wallr.) Karst.

On beech bark in wood at Turkey Run. Parke.

Pyrenula nitida (Weig.) Ach.

On bark in wood at Turkey Run. Parke.

DERMATOCARPACEAE.

Endocarpon pusillum Hedw.

On limestone and granite boulders in woods. Franklin, Montgomery, Union.

Thelocarpon prasinellum Nyl.

On board along Sayre's wood. Union.

TRYPETHELIACEAE.

Trypethelium virens Tuck.

On beech bark in wood. Tippecanoe.

PERISPORIALES.

ERYSIBACEAE.

Microsphaera euonymi (DC.) Sacc.

On cultivated spindle tree. Tippecanoe (Orton).

Sphaerotheca humuli fuliginea (Schlecht.) Salm.

On tamarix and heal-all on low ground. Montgomery.

ASPERGILLALES.

ASPERGILLACEAE.

Penicillium crustaceum L.

On canned fruit. Tippecanoe (Simonds 1906).

EXOASCALES.

EXOASCACEAE.

Exoascus mirabilis Atkins.

On wild plums. Jefferson (Clark 1898), Orange (1909).

Taphrina caerulescens (Mont.) Tul.

On scarlet oak in wood. Montgomery (Thomas 1893).

Taphrina potentillae (Farl.) John.

On cinquefoil (*Potentilla canadensis*). Vigo (Arthur).

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NOTE: The following papers are said to have been read before the Indiana Academy of Science, but we have been unable to obtain either of them:

- Brannon, M. A. Some Indiana mildews. Read in 1887. Never published.
- Evans, W. H. Lichens of Indiana, 1887. Said to have been published.