

## INDIANA FUNGI—III.

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 J. M. VAN HOOK.
 

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The fungi recorded in the following list, were for the most part collected from 1911 to 1914. Two of these years (1913 and 1914) were so dry that the collecting of certain groups of fungi was practically abandoned. The year 1915 was a record one for the growth of all kinds of fungi and large collections were made for future study.

A limited number of fungi already recorded occur herein, as these have been found on new hosts.

Great care has been exercised in determining the host species, a thing too much neglected by collectors in the past.

Most of the species have been collected in Monroe county. Where the name of the county is not given, it is understood that the specimen was found in Monroe county. All collections were made by myself unless otherwise specified.

## PHYCOMYCETES.

*Albugo bliti* (Biv.) O. Kuntze. On living leaves of *Amaranthus retroflexus*. Common. Monroe county, September, 1915.

*Albugo ipomoea-panduratae* (Schw.) Swingle. On leaves and stems of *Ipomoea hederacea*. Monroe county, August 2, 1915.

*Chaetocladium jonesii* Fresenius. Parasitic on *Mucor* in culture, in the greenhouse. December 28, 1912. C. E. O'Neal.

*Piptocephalus freseniana* De Bary. On *Mucor*. Greenhouse, December 28, 1912. O'Neal.

*Phycomyces nitens* (Ag.) Kze. On horse dung brought into greenhouse, January 7, 1913. O'Neal.

*Plasmopara viticola* (B. & C.) Berl. & DeToni. On leaves of *Vitis cordifolia*. July, 1915. Very destructive.

*Thamnidium elegans* Link. On dung in greenhouse, December 22, 1912.

## BASIDIOMYCETES.

## USTILAGINEAE.

*Ustilago neglecta* (Niessl.) Rab. On *Chaetochloa*, Montgomery county, 1913. Flora Anderson.

*Ustilago rabenhorstiana* (Kuehn.) Hedw. On *Syntherisma sanguinale*. Montgomery county, 1913. Anderson.

## TILLETIINEAE.

*Entyloma lobeliae*. Farlow. On living leaves of *Lobelia inflata*. October 16, 1915. Forms discolored (light yellow) spots on the upper surface of the leaves.

*Urocystis anemones* (Pers.) Wint. On *Hepatica acutiloba*. Brown county. May 16, 1915. Donaghy. University Farm, Lawrence county, June, 1915.

## POLYPORCEAE.

*Spongipellis occidentalis* Murr. On dead oak log. Helmsburg, Brown county, May 16, 1915. Donaghy.

*Spongipellis unicolor* (Schw.) Murr. On *Acer*, Cascades, fall of 1914. Donaghy.

## AGARICACEAE.

*Crepidotus fulvotomentosus* Pk. On decayed log, Brown county, October 24, 1914.

## LYCOPERDINEAE.

*Bovistella ohioensis* Morg. On the ground in an open field. November, 16, 1914. Donaghy.

## ASCOMYCETES.

## HELVELLINEAE.

*Helvella elastica* Bull. On the ground. University Water Works, May 19, 1915. Harvey Stork.

## PEZIZINEAE.

*Pseudopeziza medicaginis* (Lib.) Sacc. On alfalfa. Autumn of 1912.

*Sarcoscypha occidentalis* Schw. On buried sticks. University Water Works, May 19, 1915. Stork.

## HYSTERIINEAE.

*Hysteriographium gloniopsis* Gerard. On dead wood of *Acer saccharinum*. Huckleberry Hill, November 25, 1910.

*Hysteriographium mori* (Schw.) Rehm. On rails of *Liriodendron tulipifera* and *Juglans nigra*, East campus, October 26, 1915.

## PYRENOAMYCETINEAE.

## PERISPORIALES.

*Erysiphe cichoracearum* D. C. On living leaves of *Plantago rugelii*, *Vernonia noveboracensis*, *Ambrosia trifida* and *Solidago*. Summer of 1911. Sutton.

*Microsphaera alni* (D. C.) Wint. On leaves of *Platanus occidentalis*. Summer of 1912. Sutton.

*Microsphaera elevata* Burr. On leaves of *Catalpa speciosa*. Autumn of 1911. Sutton.

*Phyllactinia corylea* (Pers.) Karst. On *Fraxinus sambucifolia*, Ladoga, Montgomery county, September 16, 1913. Anderson.

*Sphaerotheca castagnei* Lev. On living leaves of *Taraxicum officinale*, 1911. Sutton.

*Uncinula necator* (Schw.) Burr. On cultivated grapes. September, 1912.

*Uncinula adunca* Lev. On leaves of *Salix nigra*, autumn of 1911. Sutton.

## HYPOCREALES.

*Gibberella saubinetii* (Mont.) Sacc. On wheat, 1911.

## SPHAERIALES.

*Hypoxyton annulatum* (Schw.) Mont. On *Fraxinus americana*. January 17, 1914. Ramsey.

*Hypoxyton effusum* Nitschke. On *Fagus ferruginea*, March 4, 1909; *Quercus*, November 20, 1913. Ramsey.

*Hypoxyton perforatum* (Schw.) Fr. On *Juglans nigra*. January 17, 1914. Ramsey.

*Massaria inquinans* (Tode) Fr. On *Acer*. December 8, 1911.

*Rosellinia aquila* (Fr.) DeNot. On *Acer*. March 6, 1902. Mutchler; on *Juglans*, Unionville, 1911; on *Ostrya*, November 20, 1913, and on *Fagus ferruginea*, December 16, 1913. Ramsey.

*Rosellinia glandiformis* E. & E. On *Liriodendron tulipifera*, 1907; on *Juglans*, November 20, 1913; and on *Fraxinus*, Boone county, January 17, 1914. Ramsey.

*Rosellinia ligniaria* (Grev.) Nke. On *Ostrya virginica*, January 28, 1914, J. M. V. & Ramsey; on *Fraxinus*, Boone county, March 28, 1914. Ramsey.

*Rosellinia medullaris* (Wallr.) Ces. & DeNot. On *Cercis canadensis*, February 4, 1911; on *Juglans cinerea*, 1914. Ramsey.

*Rosellinia mutans* (Cke. & Pk.) Sacc. On *Juglans*, 1914. Ramsey.

*Rosellinia pulveracea* (Ehr.) Fekl. On *Carpinus caroliniana* and *Platanus occidentalis*, November 20, 1913; on the same hosts in Boone county, December 18, 1913. Ramsey.

*Rosellinia subieulata* (Schw.) Sacc. On *Liriodendron tulipifera*, 1911. On *Quercus*, 1914, J. M. V. & Ramsey.

*Venturia pomi* (Fr.) Wint. On leaves and fruit of *Pyrus malus*, July 19, 1912. Common.

*Xylaria corniformis* Fr. On rotten *Acer*. Harrodsburg, August 7, 1915.

## FUNGI IMPERFECTI.

### SPIHAEROPSIDALES.

*Ascochyta mali* E. & E. On living leaves of *Pyrus malus*, 1911. Sutton.  
*Ascochyta rhei* E. & E. On living leaves of *Rheum rhaponticum*. September, 1912.

*Cicinobolus cesatii* DeBary. Parasitic on *Erysiphe cichoracearum* on leaves of *Rudbeckia* or *Helianthus*. Campus, October 5, 1915.

*Darluea filum* (Biv.) Cast. Parasitic on *Phragmidium potentillae* and *Uredo biglowii*, 1911. Sutton.

*Phoma limbalis* Passer. On leaf veins of *Platanus occidentalis*, 1912.

*Phyllosticta celtidis* Ell. & Kell. On leaves of *Celtis occidentalis*, October 5, 1915. These leaves were also affected with a leaf mite. Spores of fungus, bacteria-like, 2 to 3 by 1 micron.

*Phyllosticta fraxini* Ell. & Mart. On leaves of *Cornus florida*, autumn of 1912. Spores, 4 by 9.5 microns. On leaves of *Fraxinus americana*, Unionville, October 3, 1914. J. M. V. & Paul Weatherwax.

*Phyllosticta grossulariae* Sacc. On leaves of *Ribes cynosbati*, October 3, 1914. J. M. V. & P. W.

*Phyllosticta hammamelidis* Pk. On living leaves of *Hammamelis vir-*

giniana, Campus, October 5, 1915. Associated with *Pestalozzia funerea* Desm. Peck reports *Phyllosticta consocia* Pk. as being associated with this *Pestalozzia* and describes the spot as the same and the *Phyllosticta* as the cause. However, *P. consocia* is described as having six cells with four middle ones colored and as being 30 to 35 microns long; setae, 22.5 to 27.5 long. Our spores are about 25 microns long with short setae. Spores, five-celled, the three inner being colored. This *Phyllosticta* is very similar if not identical with *P. sphaeropsidea* E. & E. (Bull. Torr. Bot. Club. 1883, p. 97.) Reported on *Aesculus hippocastanum*.

*Phyllosticta kalmicola* (Schw.) E. & E. On living leaves of *Kalmia latifolia*, one-half mile northeast of Borden, Clark county, February 20, 1915.

*Phyllosticta linderae* E. & E. On *Lindera benzoin*, Brown county, July, 1912.

*Phyllosticta sambuci* Desm. On leaves of *Sambucus canadensis*, Campus, October 5, 1915. The pycnidia are described as being very minute. In our specimens, they measure from 90 to 200 microns with spores 4 to 7 by 2 to 2½ microns.

*Phyllosticta sambucicola* Kalchbr. On the same host as the above and associated with it as was also *Cercospora sambucina* and a *Septoria*. The pycnidia are 50 to 90 microns and spores 2½ to 5 microns. The spores are subglobose. Kalchbrenner describes them as being very minute.

*Septoria evonymi* Rabh. On *Evonymus atropurpureus*, Campus, October 5, 1915. Our species is undoubtedly identical with the one described by Rabenhorst, though differing somewhat. The following is a description of our fungus: Spots epiphyllous, 3 to 10 microns in diameter or by confluence, covering large areas, irregular in shape, often limited by veins making them angular in outline, olive brown, bounded by a dark purplish line, lighter colored on the lower surface of the leaf; pycnidia 75 to 125 microns in diameter, black, protruding and with a large irregular opening; spores 15 to 30 by 2 to 3 microns, for the most part one-septate, straight, crescent-shaped or irregularly curved.

*Septoria helianthi* Ell. & Kell. On *Helianthus annuus*, autumn of 1912.

*Septoria laetueae* Pass. Common on *Laetuca scariola*, Harrodsburg, August 7, 1915. Spores filiform, 20 to 35 by 1½ to 2 microns.

*Septoria mimuli* Wint. On leaves of *Mimulus alatus*, summer of 1911. Sutton.

*Septoria oenothera* West. On *Oenothera biennis*, Harrodsburg, August 7, 1915.

*Septoria polygonorum* Desm. On *Polygonum persicaria*, July 29, 1915. This fungus was very common and very destructive to its host throughout the summer. It varies slightly from the description as follows: Spots 2 to 3 mm. in diameter. Leaf fades to yellow, curls, dries on the plant or falls to the ground. Some spores exceed 25 microns in length.

*Septoria rubi* West. On cultivated raspberries. September, 1912. Also common on blackberries.

*Septoria scrophulariae* Pk. On *Scrophularia nodosa* or *marylandica*. Summer of 1911. Sutton.

*Septoria verbascicola* B. & C. On *Verbascum blattaria*, autumn of 1912.

*Sphaeropsis asiminae* E. & E. On dead twigs of *Asimina triloba*, Boone county, December, 1913. Ramsey.

#### MELANCONIALES.

*Cylindrosporium capsellae* E. & E. On leaves of *Capsella bursa-pastoris*, 1911. Sutton.

*Cylindrosporium padi* Karst. On *Prunus serotina*, summer of 1911. Sutton.

*Gloeosporium caryae* Ell. & Dear. Common on leaves of *Carya alba*, Harrodsburg, August 7, 1915.

*Gloeosporium intermedium* Sacc., var. *poinsettiae* Sacc. On dead stems of *Poinsettia pulcherrima*, greenhouse, March 16, 1915. Plants grown from Florida stock.

*Marsonia juglandis* (Lib.) Sacc. On leaves of *Juglans cinerea*, Helmsburg, Brown county, July, 1912; Unionville, Monroe county, October 3, 1914. On leaves of *Juglans nigra*, Unionville, October 3, 1914. On leaves of *Juglans sieboldiana*, Campus, October 5, 1915.

*Marsonia martini* Sacc. & Ell. On leaves of *Quercus acuminata*, Harrodsburg, July 7, 1915.

*Pestalozzia funerea* Desm. On leaves of *Hammamelis virginiana*, Campus, October 5, 1915.

#### HYPHOMYCETES.

*Cercospora ampelopsidis* Pk. On living leaves of *Ampelopsis quinquefolia*, October 5, 1915. The conidiophores of this fungus measure 30 to 112 by 5 to 6 microns and are 2 to 4 septate; the spores are 25 to 125 by 6 to 8

microns and are 4 to 9 septate. There seems to be no doubt as to the identity of the fungus as the remainder of the description corresponds admirably.

*Cercospora bartholomaei* Ell. & Kell. On living leaves of *Rhus glabra*, summer of 1911. Sutton.

*Cercospora condensata* Ell. & Kell. Summer of 1911. Sutton.

*Cercospora elongata* Pk. On *Dipsacus sylvestris*, Harrodsburg, July 7, 1915. Spores attain a length of 275 microns. Peck gives 50 to 150 microns.

*Cercospora kellermani* Bubak. On leaves of *Althaea rosea*, October 5, 1915. This species seems too closely related to *C. malvarum* Sacc. and to *C. althaeina* Sacc. Conidiophores to 110 microns long and spores from 20 to 152 microns.

*Cercospora plantaginis* Sacc. On leaves of *Plantago rugelii*, Campus, October 5, 1915. Very common. Forms brown spots. Conidiophores as much as 250 microns long. Spores, 75 to 175 microns long.

*Cercospora rhoina* E. & E. On leaves of *Rhus glabra*, Unionville, October 3, 1914. J. M. V. & P. W.

*Cercospora ribis* Earle. On cultivated *Ribes rubrum*, autumn of 1912. Very severe on its host.

*Cercospora rosicola* Pass. On *Rosa carolina*, Campus, October 26, 1915. The description of this species gives the measurement of the conidiophores 20 to 40 by 3 to 5 microns and spores, 30 to 50 by 3½ to 5 and 2 to 4-septate. Our conidiophores are 20 to 75 by 4 to 5 and spores 30 to 80 by 5 to 7 microns and are mostly 3-septate. The very dark hemispherical base from which the conidiophores arise, is very characteristic of this species.

*Cercospora sambucina* Ell. & Kell. On leaves of *Sambucus canadensis*, Campus, October, 1915.

*Cercospora septorioides* E. & E. On leaves of *Rubus villosus*, Harrodsburg, August 7, 1915. This species has many characters which place it near *C. rubi* Sacc., *C. rubicola* Thuem. and *C. rosicola* Pass. The spots are very characteristic and the resemblance of the spores to those of a *Septoria* is very striking.

*Cercospora toxicodendri* (Curt.) E. & E. On leaves of *Rhus toxicodendron*, Harrodsburg, August 7, 1915.

*Haplographium apiculatum* Pk. On leaves of *Hammamelis virginiana*, Griffey Creek, October 3, 1914.

*Macrosporium catalpae* Ell. & Mart. On leaves of *Catalpa speciosa*,

Campus, 1911 and 1912. Common. This fungus seems to follow the injury produced by an insect—a very characteristic brown spot.

*Macrosporium sarciniaeforme* Cav. On *Trifolium pratense*, Campus, October 6, 1915. The swollen nodes of these conidiophores somewhat resemble those of *Polythrincium trifolii* so common on clover.

*Macrosporium solani* Ell. & Mart. Common on *Datura stramonium*, Griffey Creek and Harrodsburg, July and August, 1915.

*Piricularia grisea* (Cke.) Sacc. On leaves of *Panicum sanguinale*, autumn of 1915. Very common every year.

*Tubercularia vulgaris* (Tode.) Meekl. On twigs of *Asimina triloba*, Boone county, December, 1913. Ramsey.

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(In conforming with the original plan, the following Myxomycetes are here appended, though out of the sphere of fungi.)

#### MYXOMYCETES.

*Arcyria incarnata* Pers. On rotten wood, Griffey Creek, October 29, 1914. Donaghy.

*Diderma crustaceum* Pk. On dead leaves, Brown county, October 24, 1914. Donaghy.

*Enteridium splendens* Morg. On rotten wood, Brown county, October 24, 1914.

*Lycogola flavo-fuscum* (Ehr.) Rost. On sawed end of maple log, November 16, 1914. Donaghy.

*Mucilago spongiosa* (Leyss.) Morg. On stems of living weeds, November 12, 1914. Donaghy.

*Physarum cinereum* (Batsch.) Pers. On living grass, Campus, June 4, 1915. Mottier.

*Stemonitis caroliniana* Maehr. On rotten wood, 1915.

*Stemonitis morgani* Pk. On rotten wood. Griffey Creek, October 29, 1914. Donaghy. Also on dead maple log, Campus, June 1, 1915. Donaghy.

*Stemonitis nigrescens* Rex. Greenhouse under bottom of palm tub. Sporangia on the sand. May 20, 1915.

*Tilmadoche polyccephala* (Schw.) Maehr. On bark of fallen elm. Running over moss and bark. Griffey Creek, June 5, 1915.

Indiana University,  
January, 1916.