INDIANA FUNGI, XIII

J. M. VAN HOOK, Indiana University

The fungi discussed herein were collected, for the most part, since the publication of the twelfth paper of this series in 1929. Likewise, the occurrence of fungi for the first time are recorded in certain counties as well as in the state. Following our usual plan, we have added many notes to existing descriptions which, it is hoped, will assist the student in identifying the specimen at hand. Some species have been entirely redescribed as found in our material. The writer has hesitated in naming new species or new varieties, believing that in most cases they are merely variations, as all individuals must vary in their structure. Different hosts will likewise respond differently to each pathogene. On account of their unusual occurrence, a few species out of the state are included. The Gasteromycetes, *Simblum* and *Anthurus*, are rare but should be found commonly, though not abundantly in Indiana. We find no report of either to date.

In this report, if the county is omitted, it is understood to be Monroe.

BACTERIA

Bacterium Mori (B. & L.) Stephens. On leaves and branches of *Morus*. On leaves, the spots are brown with yellow margins, with bacteria oozing. 5334.

MYXOMYCETES

Lycogala epidendron Buxb. On wood among moss, Apr. 12, 1930. 5310.

PHYCOMYCETES

Chytridium olla A. Braun. On *Oedogonium*, Salt Creek Swamp, May 18, 1930. Hughes.

Albugo Ipomoea-pandurae (Farl.) Swingle. On leaves of *Ipomoea purpurea* (L.) Roth. Owen County, Oct. 2, 1930. Amidei. 5368.

Plasmopara viticola (B. & C.) Berl. & DeToni. On *Vitis*.

ASCOMYCETES

Daldinia concentrica (Bolt.) Ces. & DeNot. On *Ulmus*, Salt Creek, March 30, 1930. Hughes. 5311.

Diatrype Hochlage E. & E. On *Pyrus communis*, E. Third Street, Bloomington, Feb. 12, 1931. Martens. 5393. The asci are here 50 to 67½ by 6½ to 7½ microns. The spore-bearing part is 32½ to 51½ by 7 to 7½ microns. The spores are allantoid, hyaline, 7½ to 12½ by 2½ to 5 microns.

Diatrypella Frostii Pk. On dead fallen twigs of *Acer saccharum* Marsh. I. U. campus, Feb. 19, 1931. Amidei. 5394. Agrees, except that our material has 4 to 6 perithecia in a stroma.

Erisiphe cichoracearum DC. On leaves of *Ambrosia trifida* I., Sept. 20, 1930. Amidei. On *Helianthus*, Oct. 1, 1930. 5604. On leaves of *Zinnia elegans*, Nov. 10, 1932. Busteed. 5235. Very fine material. This species is very common on cultivated Zinnias in this county, doing little damage.

Erisiphe Polygoni DC. On *Aquilegia canadensis* L., I. U. campus, Oct. 8, 1930. Amidei. 5351. On *Delphinium azureum* Michx., I. U. campus. 2352.

Eutypella stellulata Fr. On dead twig of *Gymnocladus dioica* (L.) Koch. Cedar Cliff, March 19, 1930. 5292. On *Fraxinus americana* L., University waterworks, 1927. Amidei. 5286.

Humarina tetraspora (Fckl.) Seaver. On seedling boxes, in greenhouse. Hughes. 5291.

Hypoxylon perforatum (Schw.) Fr. On *Ulmus*, Owen County, Oct., 1930. Hughes. 5371.

Hysteriographium Mori (Schw.) E. & E. On stems of *Smilax*, Monroe-Morgan Forest Preserve, Nov. 8, 1932. Busteed. 5609.

Leptothyrium eumorpha (B. & C.) Earle. On *Arundinaria macrosperma* Michx. From South Carolina. Weatherwax. 5389.

Massaria conspurcata Wallr. On dead twigs of cultivated *Prunus* species. Same data as no. 4163 except that it was collected later in the season.

Melogramma Bulliardi Tul. (*M. vagans* DeNot). Agrees except: perithecia not brick red or blood red on the inside, and instead of having 10 to 40 in each stroma, there seem to be not over three. Winter says there are few to many. The asci are 100 to 115 by 10 to 12 microns. Winter gives 40 to 50, and E. & E. say 38 to 50 by 5.

Massaria epileuca B. & C. On twigs of *Morus alba pendula*. 4897.

Mitrula phalloides (Bull.) Chev. On decayed oak leaves in sphagnum bog, Salt Creek valley, May 18, 1930. Hughes. 5320.

Morchella semilebra (*M. hybrida*) Turkey Run. Apr. 20, 1931. 5301.

Nummularia Bulliardi Tul. On *Acer*, Griffy Creek, May 9, 1930. Hughes. 5305.

Nummularia tinctor (Berk.) E. & E. On *Acer saccharum*, Owen County, Dec. 11, 1930. Martens. 5364.

Peziza badia Pers. May 10, 1934. Martens. 5659. These specimens were from 2 to 10 cm. in diameter.

Phyllactinia corylea (Pers.) Karst. On *Celastrus scandens* L., Nov. 8, 1932. Outgrowths from external cells are here well shown. The fascicles appear as a mucilaginous sheath after being soaked in water for some time.

Rhytisma acerinum (Pers.) Fr. On leaves of *Acer rubrum* L., Sphagnum bog, Salt Creek, Nov. 11, 1930. Martens. 5383.

Rosellinia aquila Schw. On dead *Ulmus*, 1930. 5361.

Rosellina thelena (Fr.) Rab. On dead Hemlock bark, Turkey Run, Apr. 27, 1930. Hughes. 5296. Color, purplish-black. One perithecium,

1½ mm. in diameter. Spores 5½ to 8 by 20 to 28 and occasionally broader. Appendages up to 8 or 9 microns.

Stamnaria americana Mass. & Morg. (*Stictis stellata* Wallr.) On *Equisetum prealtum*, Delaware County, 1932. Floyd Shuttleworth. 5617.

Stictis stellata Wallr. Associated with *Stamnaria americana*, 5279. On *Equiseteum prealtum*, Delaware County, January 1, 1930. E. K. Cash. 5280.

Trematosphaeria nuclearia (DeNot.) Sacc. A beautiful little fungus growing similarly to *Caryospora putaminum* and called by DeNot, *Caryospora nucealria*. On hickory nut shell imbedded in *Fomes applanatus*, Lawrence County, Nov. 11, 1933. McCoy. 5623. Its densely gregarious perithecia, and spores showing a dark band between the inner cell and the colorless end cells will easily identify it.

Uncinula flexuosa Pk. On leaves of *Aesculus carnea* Hayne. I. U. campus, Oct. 21, 1930. 5355. So far as I can learn, no report of this mildew has been made on *A. carnea*, although it has been found on both parents of this hybrid.

Uncinula macrospora Pk. On leaves of *Ulmus americana* L., Fee Place, Oct. 10, 1910. 3107. A very fine and unusual mildew.

Uncinula necator Burr. On berry stems of Thompson seedless grape in market, Oct., 1930. 5359.

Valsaria exasperans (Gerard) Sacc. On bark of *Fagus grandifolia*. I. U. waterworks, March 20, 1910. Amidei & Martens. 5411.

Xylaria hypoxylon (Lenn.) Grev. On decayed *Acer*, Jan. 1, 1931. Martens. 5384.

BASIDIOMYCETES

USTILAGINEAE

Sphacelotheca Sorghi (Pk.) Clint. On *Holcus halepensis*, south entrance to Biology Hall, Indiana University, Oct. 31, 1931. Coll. by Weatherwax. 5620.

UREDINEAE

Puccinia Mariae-Wilsoni Clint. Jasper County, Oct. 19, 1933. Welch. 5618.

Tranzschelia punctata (Pers.) Arth. (*Aecidium punctatum* Pers.) Aecia and pycnia on *Hepatica acutiloba* D. C., Crawford County, April 20, 1934. Very fine and abundant. Busteed. 5654.

Uredinopsis Atkinsonii Magn. (Species of doubtful identity as the markings on the urediniospores are obscure.) See North American Flora, Vol. 7, p. 115. Coll. Lagrange County, Oct. 1, 1933. Busteed. 5638.

Uromyces Euphorbiae C. & P. (*Nigredo proeminens* (D. C.) Arth.) On leaves and stems of *Euphorbia Preslii* Guss. The aecial stage. Crawford County, Oct. 20, 1934. Busteed. 5655.

AGARICACEAE

Claudopus nidulans Fr. On *Salix nigra*, Owen County, Nov. 1, 1931. Busteed. 5499.

Clitocybe multiceps Pk. Unusually fine specimens. Some caps 10 cm. broad. Haas. 5331.

Clitocybe peltigerina Pk. Arbutus Hill, March 22, 1930. On *Peltigera*. See Report 39 of New York State Museum, p. 38. 5290.

Crepidotus Malachium B. C. On decaying wood, I. U. campus, May 7, 1930. Ruth King. 5314.

Lentinus lepideus Fr. This is the form known as *L. spretus* Pk. On bridge timber, I. U. campus, May 12, 1930. Hughes. 5319.

Lentinus tigrinus Fr. On *Platanus occidentalis*, Owen County, Nov. 1, 1931. Busteed. This is the monstrous form, named *Lentodium squamulosum* by Morgan. He placed this form in a new genus. The gills are overgrown with a white mycelium which appears to anastomose freely. The spores are very copious. When dried specimens are placed in water, the bottom of the dish is soon covered with the white spores. (Kauff. Agaricaceae of Mich., Vol. 1, p. 52.)

Lenzites betulina (L.) Fr. On *Ulmus americana*, April 24, 1930. Hughes. 5313.

Paxillus involutus (Batch.) Fr. On lawn, Oct. 23, 1933. 5619.

Pleurotus applicatus Fr. On twig of *Juglans nigra*, 1930. 5363.

Russula variata Bam. & Pk. On ground under beech tree in open woods, May 12, 1930. Hughes. 5318.

POLYPORACEAE

Boletinus porosus (Berk.) Pk. Syn. *Boletinellus merulioides* Schw. (See Murr., N. A. Flora, Vol. 9, p. 158.) Growing out of clay bank, I. U. campus, October 1, 1934. 5671.

Fomes nigricans Fr. On living *Juglans nigra*, Turkey Run, April 26, 1930.

Irpex mollis B. & C. On dead silver maple; sessile, imbricate, tending to be resupinate, .3 to 3 cm. thick. Spores white, subspherical, 5 to 7 microns in diameter; poroid at first, splitting into flat teeth. On dead oak bark, near Kirksville, Oct. 20, 1931. Martens. 5526.

Irpex fuscescens Schw. (*I. cinnamomeus*). On red oak, Owen County, Dec., 1930. Martens. 5375.

Polyporus biformis Klottch. On dead, decaying deciduous log, Salt Creek, Nov. 11, 1933. Haynes. 5625.

Polyporus chionius Fr. On decayed deciduous wood, Salt Creek Swamp. Nov. 11, 1931. Martens. 5520. The tubes are about 4 to 5 to a mm. In dried specimens, the surface, when touched with a knife, immediately rises in a blister-like manner. In a twenty-seven year old specimen the test was shown.

Polyporus cinnabarinus Schw. On plum wood, Salt Creek, May 19, 1930. Hughes. 5322.

Polyporus cuticularis Bull, ex Fries. On deciduous wood, winter of 1930. 5372. Also a somewhat thicker and zonate form collected by Stanley Brooks, Oct. 16, 1930. 5354.

Polyporus lucidus (*Ganoderma Tsugae* of Murr.) On *Tsuga canadensis*, Turkey Run, Apr. 26, 1930. Very common and abundant. 5202.

Polyporus paragamenus Fr. On *Prunus serotinus*, May 6, 1930. Hughes. 5308.

Solenia conferta Burt. North Amer. Thel. 11, 17 (1924). Indiana Univ. waterworks, March 1, 1931. Busteed. 5402.

Trametes pini (Thore.) Fr. On *Pinus strobus*, Porter County, August 29, 1933. Martens. 5627.

FUNGI IMPERFECTI

SPHAEROPSIDALES

Phomopsis stewartii Pk. Collected about 1915, when my entire lot of cosmos was killed by the fungus. Diagnosed at the time, as a *Phlyctaenia*. 5409.

Phyllosticta Dulcamarae Sacc. Mich. Vol. 1, p. 160 (1878). On leaves of *Solanum carolinense* L. July 3, 1927. 4890.

Phyllosticta fallax Sacc. On leaves of *Acer saccharinum*, Ripley County. Busteed. 5555. The description of the spots agrees fairly well with those of *P. pseudoplatini* Sacc., but the pycnidia and spores are quite different. Our pycnidia are about 50 to 100 microns; the spores 3 by 5, chlorine to quite dark in mass. *P. pseudoplatini* has pycnidia 60 microns and spores hyaline. The dark spores should separate this species. I have no report of this species having been found in America previously.

Phyllosticta fraxinicola (F. Cary) E. & E. On *Fraxinus americana*, Ripley County, Aug. 5, 1931. Busteed. 5574. Agrees well except that spores measure quite regularly 5 by 10 microns.

Phyllosticta globifera E. & E. (*P. cornicola* D. C.). On *Cornus florida* L., Oct. 6, 1934. S. Witmer. 5687. Reported from Del., W. Va., and Kansas; also from Europe. Known by its spots which are up to 1 cm., oval in shape, and appear to be warped downward, and by its fine hyaline granular globose spores.

Phyllosticta liriodendrica Cke. On leaves of *Liriodendron tulipifera* L., I. U. campus, Oct. 6, 1934. Witmer. 5686. Associated with this *Phyllosticta*, is an Ascomycete whose immature asci are often mistaken for spores of *P. macrospora* E. & E. In this material the asci are beginning to form. The ascomycete is said to be *Sphaerella liriodendrica* Cke. (See Grevillia, Vol. 12, p. 26. 1883.)

Phyllosticta Paviae Desm. *(Guignardia Aesculi)*. On *Aesculus hippocastanum*, Sept. 20, 1929. 5380.

Septoria Aquilegiae Penz. & Sacc. On leaves of *Aquilegia canadensis*, I. U. campus, Oct., 1928. Lohrman. 4942. *Septoria Aquilegiae* E. & K. reported on *Aquilegia vulgaris* from Ohio, is near this species, but our material agrees with *S. Aquilegiae* of Penz. and Sacc.

Septoria Convolvuli Desm. On *Convolvules sepium* L., near Fleener bridge, June 1, 1930.

Septoria polygonorum Desm. On *Polygonum* species, Putman County, July 17, 1922. Glenn W. Blades. 5407.

Septoria sambucina Pk. On leaves of *Sambucus canadensis* L., Oct. 10, 1929. Less prevalent than in 1928. 5233 .

Septoria violae var. **rostrata** n. var. Spots one-half to 3 mm. in diameter, circular, pallid to brownish yellow, with a reddish brown border. Spores filiform, straight or curved, 20 to 30 by 1 to 1⅓ microns,

no guttulae evident. The dark color of the beaks is its most noticeable characteristic. 5594.

Septoria Violae Westend. On common blue violet, Morgan-Monroe forest preserve, Nov. 8, 1933. Busteed. 5603. Agrees well. The pore of the pycnidium is surrounded by a dark-brown border. Pycnidia 150 microns in diam. Pores 12 to 15. Spores 35 to 40 by 1 to 1½.

MELANCONIALES

Colletotrichum graminicolum (Cesati) Wilson. On *Holcus halepensis,* Oct. 31, 1933, I. U. campus. Weatherwax. 5621.

Colletotrichum lagenarium (Pers.) E. & H. On watermelon, Lagrange County, Oct. 1, 1933. Busteed. 5635.

Cylindosporium Clematidis E. & E. On leaves of *Clematis virginiana* L., Lagrange County, Oct. 1, 1933. Busteed. 5637. Jour. Myc. 3:22.

Cylindrosporium oculatum E. & E. Near Bloomington, Oct. 6, 1934. S. W. Witmer. 5691. Spores 75 to 125 microns. Acervuli 125 to 165 by 75 to 125, on *Populus grandidentata.* 5691.

Gleosporium betularum Ell. & Mart. Very abundant along White River, Daviess County, Oct., 1934. 5662.

Gleosporium ulmicolum Miles. On *Ulmus americana,* I. U. campus, June 23, 1934. Witmer. 5681.

Marsonina Violae (Pass.) P. Magnus. On leaves, petioles, and flower stalks of *Viola sororia,* banks of White River, Owen County, Nov. 7, 1931. Busteed. 5560.

Stegonosporium piriforme (Hoffm.) Cke. On *Acer saccharum.* 5408.

HYPHOMYCETES

Acremonium alternatum Link. On languishing leaves of *Primula,* I. U. greenhouse April, 1932. Agrees, except that it does not appear to have the fertile and sterile branches alternate. Associated with *Botrytis cineria* Auct. 5581.

Alternaria tenuis Nees. On *Hibiscus syriacus* L., I. U. campus, Oct. 1, 1934. Busteed. 5978.

Botrytis sp. On stems of *Paeonia* and *Aquilegia* causing "die back." Forms sclerotia. Collected by A. C. Kinsey. 5614.

Cephalothecium roseum Cda. (*Trichothecium* Link.). On fern prothallia (*Pteris longifolia*), greenhouse, Nov. 8, 1934. D. M. Mottier. 5597. Usually a saprophyte, the fungus is here a most destructive "damping off" parasite. It has been reported as destroying a number of seedlings, but this is the first report we find on prothallia.

Cercospora Acalyphae Pk. On leaves of *Acalypha virginica* L., Salt Creek, Sept. 19, 1931. Busteed. 5569. Spots ½ to 2 mm., paler beneath. Conidiophores 45 to 140 by 4 to 5 microns, some hypophyllous, a very few septate. Conidia 66 to 130 by 4 to 5 microns. The spores are slightly broader than those of Peck's description.

Cercospora altheina Sacc. On rose of Sharon, Sept. 28, 1934. 5676.

Cercospora canescens E. & M. This is probably the variety *C. canescens* var. *Ricini* E. & E. Not to be confused with *C. Ricini* Spreg. (Fg. Arg. novi v. crit., p. 343.) which latter species is quite distinct

from *C. ricinella* (Sacc.) Berl. Our description agrees quite well with those published. Our spores are as many as 15-septate. 5494.

Cercospora copallina Cke. & Pav. On *Rhus copallina* L., Oct. 6, 1934. Witmer. 5688. *C. copallina* and *C. Rhoina* C. & E. are too closely related. We have however, placed ours under the former because of the fuscous conidiophores.

Cercospora flagellifera Atk. On *Desmodium rotundifolium* (Michx.) DC., Salt Creek hills, Sept. 19, 1931. Busteed, 5568. Spots small ½ to 4 mm., circular or angular or coalescing to form large areas, dark brown, paler beneath. Conidiophores amphigenous but mostly epiphyllous, tufted or single, straight or wavy toward tips, drak brown, paler at tips, 3 to 4 by 64 to 136 microns, 3 to 5 septate, bearing several spores. Spores hyaline, many guttulate, up to several septate, 4 to 5 by 80 to 250 microns. On account of the long tapering end of the spore this species seems well named.

Cercospora pastinacae (Sacc.) Pk. Distinct from *C. Apii.* Not a variety. It differs in color, number of conidophores in a fascicle, and in shape of conidiophores and spores. On *Pastinaca,* garden, Bloomington, Oct. 24, 1930. T. P. Amidei. 5356.

Cercospora Physalides Ell. On *Nicandra Physalodes,* Sept. 13, 1934. Witmer. 5696. Our material shows most typical spots.

Cercospora Spiraeae Theum. On leaves of *Physocarpus opulifolius,* I. U. campus, Nov. 2, 1934. Witmer.

Cercospora Symplocarpi Pk. On leaves of *Symplocarpus foetidus* (L.) Nutt., Dunes State Park, June 9, 1931. Amidei. 5576. Add to Peck's description: Conidophores 25 by 7½ microns, straight or variously bent. Spores 25 to 125 by 5 microns, those under 35 being cylindrical, resembling closely those of *Ramularia.*

Cercosporella Apocyni (Ell. & Kell.) Trel. On *Apocynum androsaemifolium L.,* Steuben County, Oct. 7, 1933. Busteed. 5634. Originally described as *Cercospora* by Ellis and Kellerman (Bull. Torr. Bot. Club. 11:121). Agrees with the description except that our material has spores that are distinctly septate. The original description says "becoming faintly 3- to 4-septate."

Cercosporina Nelumbii (Tharp.) Sacc. (*Cercospora Nelumbii* Tharp). On leaves of *Nelumbo lutea,* Smith's Lake, Greene County, Sept. 30, 1934. Busteed and Witmer. 5679. Agrees well with Saccardo's description except that our material has a few spores up to 200 microns in length. The characters of the genus are well represented in this material. Saccardo transferred this to the genus *Cercosporina* which differs in its hyaline conidia and from *Cercosporella* in its olive conidiophores.

Cicinnobolis Cesatii Debary. Parasitic on *Microsphaera Alni* (DC.) W'nt., which, in turn, was on *Evonomus atropurpurea;* fall of 1929. 5333.

Cladosporium paeoniae, Putnam County, Aug. 4, 1924. Blades. 5661.

Coniothyrium sp. On canes of *Rosa,* causing "die back," Lagrange County, Oct. 1, 1933. Busteed. 5640.

Coniosporium Arundinis (Cda.) Sacc. On stems of *Arundinaria.* 5404. Collected in the south by Weatherwax. Spores are broad, lens-shaped, brown, borne on short stalks.

Coniothyrium concentricum (Desm.) Sacc. On leaves of *Yucca filamentosa* L. Very bad in the shade. Spores yellow, almost brown, of various shapes, ovate, short elliptic, subglobose, and quite often of irregular shapes, mostly 5 by 7 microns. 5602. June 2, 1932. Busteed.

Cytospora leucostoma Aderh. Associated with *Valsa leucostoma,* of which it is the conidial stage according to Eriksson (Fungous Diseases of Plants, p. 373.) Said to occur on cherry in Europe. While the one on peach, plum, and apricot, is said to be *V. prunastri* Pers. with the conidial stage *Cytospora rubescens* Fuck. On peach twigs, Feb. 21, 1921. Duncan. 5398. On *Prunus* species, Free Lane, March 20, 1931. Amidei and Martens. 5415. Oct. 18, 1934. Witmer. 5683. Causing definite spots by the extension of those caused by another fungus. Though acting here like a parasite, it occurs as a saprophyte on many widely diversified plants.

Fusarium lateritium Nees. On *Morus alba pendula,* about 1925. A *Nectria* stage was associated with this. The species was undetermined, but a *Tubercularia* (presumably *T. vulgaris*), has appeared quite regularly since.

Haplosphaerella Juglandis Ell. & Barth. On twigs of *Juglans nigra,* Matlock's woods, March 21, 1931. Amidei and Martens. 5431. Spores brown, 10 to 15 by 20 to 27 microns; pycnidia 14 to 34 mm., mostly in stromata, but some are separate, probably causing confusion with *Sphaeropsis Juglandis* E. & Barth. However, they should be regarded as synonyms. Our spores appear to be larger than those described.

Hormiscium sp. On old fence rails of *Liriodendron tulipifera.* 5670. Oct. 15, 1915. Also on *Juglans nigra.* 5670. This latter specimen was associated with *Hysteriographium Mori,* of which it might be the conidial stage.

Macrosporium sarcinaeforme Cav. On leaves of *Trifolium pratense* and *T. hybridum,* Ripley County, June 30, 1932. Busteed. 5606. These conidiophores resemble those of *Polythrincium.* Spores are 20 to 30 by 15 to 20 microns. Spots are concentrically zoned.

SUPPLEMENTARY MISCELLANEOUS FUNGI

Clavaria formosa Pers. Turkey Run, Oct. 25, 1934. Van Kooten. 5690.

Collybia amabilipes Pk. On old deciduous log, in dense woods, May 18, 1930. 5326. Hughes.

Collybia radicata Rehl. An unusual form with short stipe and pileus quite rugose. Oct. 12, 1934. Witmer. 5682.

Cytosporina Ailanthi Sacc. Forestry grounds, Wooster, O., summer of 1920. Kills branches. Secrest. 5395.

Didymaria didyma (Unger) Lindau. On *Ranunculus hispidus* Michx. 5595. On *R. recurvatus* Poir. 5596. May 19, 1932, in a deep ravine, Turkey Run. Very abundant. Corresponds, except that our material shows spots zoned, up to 1 cm., then leaves dying rapidly. The

two host species growing together and equally attacked. Conidiophores 5 by 45 to 90 microns, simple, wavy, with terminal spores, sometimes one or several laterally attached giving the conidiophore a denticulate appearance. Spores ovoid, subglobose, ovate to cylindrical, continuous to 1-septate, 18 to 12 by 20 to 37 microns, mostly about 10 by 23.

Dimerosporium Collinsii (Schw.) Sacc. On *Amelanchier canadensis.* Monroe County. No other data. At Bass Lake, Mich., this disease is quite common and very severe, killing all the leaves on the newer growths; the tops of entire thickets of the younger bushes are blackened. Such does not seem to be the case here.

Diplodia species undetermined. On leaves of *Acer rubrum.* Oct. 6, 1934. Witmer. 5692. Pycnidia 75 to 115 microns. Spores two-celled, brown, 8 by 13, a few spores three-celled, some one-celled. 5692.

Discosia artocreas (Tode.) Fr. On spots on leaves of *Cercis canadensis,* Oct. 18, 1934. Campus. Witmer. 5683. Although the spots are quite definite, they are merely extended by the *Discosia,* a saprophyte on various dead leaves.

Hyalothyridium decandra. On leaves of *Phytolacca decandra* L., July 20, 1927. Spots to 1 cm., becoming light brown. Pycnidia gregarious, epiphyllous, 25 to 30 by 125, pore about 10 to 12, rather prominent. Spores elliptical with one or two cross walls and cells divided lengthwise to the spore, which is surrounded by slime. This species is like a *Staganospora* in some respects. 4862.

Irpex tulipifera (Schw.) Murr. On dead limb of Montmorency cherry, Nov. 8, 1934. 5598.

Lenzites vialis Pk. Brown County, Oct., 1934. Witmer.

Lepiota cepaestipes Fr. On old sawdust pile, Owen County, May 11, 1930. Haas. 5317.

Massaria conspurcata Wallr. On dead twigs of *Prunus* (large blue plum) July 1, 1925; same place later in the season. 4070 and 4163. Perithecia 1 to 1½ mm.; ruptures the epidermis, ostiolum short. Ascus obclavate with short stipe, 250 to 280 by 16 to 25 microns. Spores 50 to 57 by 16 to 25 microns, brown, 4-celled. *M. conspurcata, M. vomitoria,* and *M. inquinans* are in some respects similar. This material is very fine.

Morchella esculenta (L.) Pers. Collected at Turkey Run by Hughes, Apr. 26, 1930. 5300.

Morchella semilebra (*M. hybrida*) Turkey Run, Apr. 26, 1930. Hughes. 5301.

Marsonina (Marsonia) Martini Sacc. & Ell. On leaves of *Quercus Michauxii,* I. U. campus, July 16, 1929.

Oidium balsamii Mont. (*Erisiphe Polygoni*). On leaves and stems of *Delphinium azureum,* Oct. 8, 1930. 5442. Attacks the leaves less severely than the stem. Conidiophores unbranched. Spores large, hyaline, 27 to 35 by 15 to 22. Amidei. 5352.

Oidium monilioides Lk. The conidial stage of *Erisiphe graminis.* On wheat in the university greenhouse, Nov. 18, 1930. Amidei. 5360.

Oospora rosea (Preuss.) On piece of dead wood. Spores hyaline, 7½ to 10. Amidei. 5344.

Paxillus involutus (Batch) Fr. On lawn, Bloomington, Oct. 23, 1933.

Phoma destructiva Plowr. (*Phyllosticta Lycopersici* Pk.) On fruit of tomato in market, Apr. 15, 1932.

Phyllosticta gentianicola (D. C.) E. & E. On leaves and petals of *Gentiana Andrewsii*, Owen County, Sept. 30, 1934. Witmer. 5694.

Polyporus pubescens Schum ex Fr. Turkey Run, Apr. 26, 1931. Busteed. 5298.

Robillarda species. On *Lysimachia nummularia*, Sept. 26, 1934, I. U. campus. Witmer. 5672. This material shows very distinctly the three spines on the end of the spores. Spores do not seem to agree with any described species.

Rhytisma Curtisii. B. & Rax. On *Ilex verticillata*, Salt Creek, Oct. 11, 1930. Busteed. 5391.

Russula variata Baum. & Peck. On ground under beech tree, I. U. campus, May 12, 1930. Hughes. 5318.

Anthurus borealis Burst. Collected in southern Ohio by J. S. Houser in the summer of 1921. 5610.

Simblum sphaerocephalum Schlecht. On rich black soil in corn field, near Anchor, Ill. 5664. Sept. 11, 1934. Martens.