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SOME RECENT RECORDS OF
PLANT PATHOGENS IN MISSOURI

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The Plant Disease Reporter is issued as a service to plant pathologists throughout the United States. It contains reports, summaries, observations, and comments submitted voluntarily by qualified observers. These reports often are in the form of suggestions, queries, and opinions, frequently purely tentative, offered for consideration or discussion rather than as matters of established fact. In accepting and publishing this material the Division of Mycology and Disease Survey serves merely as an informational clearing house. It does not assume responsibility for the subject matter.
SOME RECENT RECORDS OF PLANT PATHOGENS IN MISSOURI

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In 1937 the writer published a rather extensive list (23) of Missouri fungi. Since then numerous new records of plant pathogens on wild and cultivated hosts have accumulated, most of them based on collections made during the last three years. Nearly half of these fungi apparently have never been reported for Missouri, and most of the others are new host records, so it seems desirable to publish the following list.

In this list an asterisk before the name of a species indicates, so far as the writer knows, a new record for the State, while nearly all other entries are for new hosts. Most of the names of hosts are those used in Gray's New Manual of Botany, 1908. After the names of hosts the place of collection, names of collectors and dates are given. The numbers in parentheses after the names of the fungi refer to the bibliography at the end of the list, showing where descriptions of the various species may be found. Brief notes have been added in some places. Several of the fungi were found on specimens in the phanerogamic herbarium of the University of Missouri. This is shown by giving the numbers of the sheets from which the fungi were taken. Identification of hosts was done almost entirely by the writer, and of the fungi mainly by him; however, much valuable aid in determining the fungi was received from C. M. Tucker, George B. Cummins, Charles Chupp, George L. Zundel, Anna E. Jenkins, H. H. Whatzel, John T. Middleton and others.

*Alternaria brassicae* (Berk.) Sacc. var. nigrescens Fogl. (31)

*Alternaria solani* (Ell. & Mart.) Jones & Grout (17, 28)

*Bacterium papavericola* Bryan and McWhorter (5)
Bacterium tumofaciens Smith & Townsend (11)
On Cucumis sativus L. Columbia: Tucker, 1939. In a greenhouse at the University of Missouri.

*Badhamia utricularis (Bull.) Berk. (22)

Botrytis cinerea Pers. (31)

*Corcospora acatosella Ell. (12)
On Rumex acatosella L. Columbia: Maneval, 1939.

*Corcospora alismatis Ell. & Holw. (12)
On Alisma plantago-aquatica L. Joplin: Charles Thom; 1900. From herbarium specimen 216.

Corcospora althaeina Sacc. (12)
On Malva rotundifolia L. Columbia: Maneval, 1937.

*Corcospora (Corcosporina) cannabis Karo (17a)
On Cannabis sativa L. Weston: Barton L. Poss, 1938. Determination by Charles Chupp who says that, according to his data, this is the first record of this species in the United States.

Corcospora cruciforarum Ell. & Ev. (14)
On Radicula palustris (L.) Moonch. Columbia: Maneval, 1938. This fungus was collected by Galloway on Raphanus sativus in Missouri in 1887 (14).

*Corcospora dolichi Ell. & Ev. (14a, 31, 35)

Corcospora dubia (H. Riess) Wint. (31)

*Corcospora hansonii Ell. & Ev. (29, vol. 11: 629)
On Asclepias syriaca L. Cedar Creek east of Columbia: Maneval, 1917. Determination by Charles Chupp. Previously reported (23) as Cercospora clavata.

Corcospora helianthi Ell. & Ev. (14)
On Helianthus sp. Columbia: J. E. McClary, 1938. Previously reported (14) for Missouri but this is our first collection.
Cercospora plantaginis Sacc. (12, 35)

*Cercospora plataniicola Ell. & Ev. (14, 47)
On Platanus occidentalis L. Columbia: Maneval, 1924.

*Cercospora polygonacca Ell. & Ev. (12)

*Cercospora populina Ell. & Ev. (14)
Determination by Charles Chupp.

Cercospora rosacea Eckl. (12, 31)
On Reseda odorata L. Columbia: Maneval, 1923. This species was omitted in the list (23) published in 1937.

*Cercospora ribis Earle (29, vol. 11: 625)

*Cercospora sagittariae Ell. & Kell. (13)

Cercospora viridula Ell. & Ev. (14a)
On Ipomoea coccinea L. McBaine: Maneval, 1917. Previously reported (14a) on Ipomoea purpurea for Missouri, but this is our first collection.

Claviceps purpurea (Fr.) Tul. (32)
On Agropyron repens (L.) Boeuv. Milan, 1939. This specimen was received at the seed testing laboratory in the Missouri College of Agriculture and the host was identified by Miss Clara Fuhr.

On Agrostis alba L. Laddonia; Mrs. Milton Pohlman, 1937.

On Daucus glomerata L. Columbia: Maneval, 1939.


On Festuca glauca Lam. (F. ovina var. glauca (Lam.) Koch). Centrajia: C. L. Lorebyre, 1938. This host is not a native grass, but was planted along borders in the cork garden of A. B. Chance. It was identified by Mrs. Agnes Chase.


Colesporium solidaginis (Schw.) Thüm. (1)
Colletotrichum cereale Manns (31, 45)

Cylindrosporium clematidis Ell. & Ev. (14)

Darluca filum (Biv.) Cast. (31)

Didymellina iridis (Desm.) Höhn. (31, 38)
On Belamcanda chinensis (L.) DC. Columbia: Maneval, 1938.

Empusa grylli (Fres.) Novak (25, vol. 7: 282)
On Melanoplus mexicanus. Near Camdenton: George D. Jones, 1938. Many grasshoppers, mostly M. bivittatus, were killed by the fungus. In one place the dead insects were found over an area of 60 acres. The first dead ones were found about the middle of June.

*Entyloma australis Speg. (7)
On Physalis missouriensis Mack. & Bush. Columbia: Maneval, 1937. This smut has recently been reported also on Physalis pubescens L. in Missouri (50).

Entyloma linariae var. veronicae Wint. (7)
On Veronica peregrina L. Columbia and Rockport: K. W. Simons, 1937. This is our only collection of this smut. It was first recorded by Winter and Demetrio (46) for Perryville, Missouri, the type locality.

Erysiphe graminis DC. (30)
On Triticum vulgare Vill. Buchanan County: Roscoe V. Hill, 1938. Previously reported for the State on this host but this is our first collection. Specimens from farm of Arthur Fragge and many fields reported infected.

Erysiphe polygoni DC. (30)
Erysiphe polygoni DC. (30) (continued)
On Lycochim halimifolium Mill. Columbia: Maneval, 1938. No perithecia were found so the identity of the mildew is uncertain as Sphaerotheca pannosa also occurs on this host.
On Trifolium repens L. Columbia: Maneval, 1937.

*Fusarium hatorosporium Noes (48)

Fusarium oxysporum (Schl.) var. gladioli Massoy (48)

Gymnosporangium clavipes Cke. & Pk. (1)
On Crataegus crus-galli L. Columbia: L. Haseman, 1937. This rust occurs on several species of Crataegus in and around Columbia.

Gymnosporangium globosum Parl. (1)
On Crataegus oxyacantha L. Columbia: Maneval, 1939. This host is not listed by Arthur (1) nor Seymour (34) but the identification seems positively correct. During 1939 the infections of Crataegus spp. by this rust in central Missouri were the heaviest that I have ever seen. On many trees practically all of the leaves were infected, and on some of them all were killed by midsummer.

Gymnosporangium juniperi-virginianae Schw. (1)

*Hystorium pulicace. Pers. ox. Fr. (3, 15)
On Botula nigra L. Meramec State Park: John M. Mason, 1938.

Melampsora abieti-capreaeum Tub. (1)

*Melampsora euphorbiae-serpyllorum W. Mull. (1)
On Euphorbia commutata Engelm. Meramec State Park: John M. Mason, 1938. Arthur (1) lists this rust as occurring in northern Indiana and eastern West Virginia in this country.
Microsphaera diffusa Cke. & Pk. (30)
On Lespedeza striata (Thumh) Hook. & Arn. Columbia: Edward Weaver, 1938. In an earlier list (23) the identity of this mildew was indicated as doubtful; but in this collection perithecia and ascospores were present so the identification is certain.

Percnospora lepidii (McAlp.) Wils. (31,44)
Cardamine parviflora L. var. arenicola (Britt.) O. E. Schulz.
Osage Beach, Lake of the Ozarks: John T. Middleton, 1937.
On Sisymbrium canescens var. brachycarpon (Richards) Watson Columbia: Maneval, 1937. This mildew and also P. parasitica were unusually abundant at Columbia in May, 1937, on the hosts named and also on Lepidium spp.

Phyllachora graminis (Pers.) Fckl. (6)

Phyllactinia coryleae (Pers.) Karst. (30)

Phyllosticta melaleuca Ell. & Ev. (33)

Phyllosticta phomiformis Sacc. (24, 33)
On Quercus mühlenbergii Engel. Columbia: Jasper A. Clark, 1937
Previously reported (33) for Missouri, but this is our first collection at Columbia.

*Phyllosticta verbenicola Martin (24)
On Verbena hastata L. Columbia: Maneval

Phytophthora cactorum (Leb. & Cohn) Schroet. (40, 41)
On Paeonia (cult.) Columbia: Tucker, 1937, 1939. This fungus was reported by Crandall & Hartley (8) as associated with seedling diseases of Caragana, Nyssa, and Colutea in a forest nursery at Elsberry, and presumably also on Acer, Cornus, Ostrya, Prunus, and Robinia in the surrounding area.

Phytophthora sp.
On Antirrhinum majus L. Jefferson City: Tucker, 1938
On Iris (cult.) Columbia: Tucker, 1937.
On Tulipa (cult.) Columbia: Tucker, 1936.
These are the first reports for Missouri of Phytophthora parasitizing the last three hosts named.
Puccinia extensicola onotherae (Mont.) Arth. (1)

Puccinia graminis Pers. (1)
On Elymus canadensis var. glaucifolius (Muhl.) Gray. Columbia: Maneval.
Determination by George E. Cummins.

Puccinia impariensis (Schw.) Arth. (1)
Elymus virgineus L. Columbia: Maneval. Our first collection but previously reported (1) for Missouri.

*Puccinia phragmitis (Schum.) Körn. (1)

*Puccinia physostegiae Fk. & Cke. (1)
This rust is recorded in Arthur's Manual (1) for Indiana and New York.

Puccinia polygoni-amphibii Pers. (1)
On Geranium carolinianum L. McRae: Maneval, 1917. This is
This is the only record that I have found for this rust on
G. carolinianum. Arthur (1) does not list it for this host.

*Puccinia proserpinacea (Berk. & Curt.) Farl. (1)
On Proserpinaca palustris L. Dunklin County: B.F. Bush, 1892.
From herbarium specimen 8430.

*Puccinia tumidipes Pk. (1)
On Lycium halimifolium Mill. Ridgeway: Tucker, 1939; Columbia:
Clara Fuhr, 1939.

Pythium arrhonomanae Drouchler (21, 26)
On Triticum vulgare Vill. Augusta Tucker, 1939; Determination
by Chris G. Schmitt.

Pythium debaryanum Hesse (4, 26)
*Pythium Splendens Braun (4, 26)
*Pythium ultimum Trow (39)
On Begonia sp. (fibrous rooted). Columbia: Tucker & Middleton, 1938. These three species of Pythium were all isolated and
identified by John T. Middleton. They occurred on roots, crowns, stems and basal leaves of the host.

Rhizoctonia bataticola (Taub.) Butler (2, 37)
(Macrophomina phaseoli (Maubl.) Ashby)
"Rhyncosporium secalis" (Omd.) J.J. Davis (29)
On Hordeum vulgare L. Reported on barley at Columbia by A.C. Johnson, 1937 (P. D. Reporter 21: 242, 1937) and by Jesse E. Livingston as common at Elsberry in 1938. Johnson says his report seems to be the first for Missouri.

*Rhytisma* (ilicis-canadensis Schw.)

*Sclerotinia convoluta* Drayton (10)
On Iris (cult.) Clayton: Tucker, 1939.

*Sclerotinia libertiana* Fckl. (49)

*Sclerotium delphini* Wolch (36)
On Viola tricolor L. var. hortensis DC. University City: Tucker, 1937.

*Scolecorichium graminis* Fckl. (19)

*Septoria aceris* (Lib.) Berk. & Br. (25)

*Septoria acicola* (Thür.) Sacc. (18)
On Pinus nigra austriaca Schneid. Cedar City: J. Carl Dawson, 1939. This is our first collection of this fungus, but it had previously been reported for Missouri by George C. Hedgcock (18).

*Septoria chrysanthemi* Halsted
On Chrysanthemum leucanthemum L. Columbia: Maneval, 1939. This material agrees with Seymour & Earle, Economic Gungi 301, on the label of which the species is described.

*Septoria conspicua* Ell. & Mart. (25)
*Septoria convolvuli Dcne. (29, vol. 3: 536; 31)
  On Convolvulus arvensis L. Oak Grove, 1938.

*Septoria (gauring ?)
  On Gaura biennis L. Burlington Junction; J. R. Singleton, 1939.

*Septoria littoralis Sacc. (25)

Septoria nabeli Berk. & Curt. (25, 31)

Septoria conotherae Westé. (25)

*Septoria passerini Sacc. (43)
  On Hordenum jubatum L. Sumner; Kenneth Krumm, 1938; Columbia: Maneval, 1938. This fungus agrees well with Weber's description (43).

*Septoria pontstemonis Ell. & Ev. (25)

*Septoria tecomae Ell. & Ev. (16)

*Stagonospora curtisii (Berk.) Sacc. (9)
  On Narcissus (cult.) Cartersville: R. C. Auten, 1937.

*Taphrina carvori A.E. Jenkins (20)

Taphrina ulmi (Fckl.) Joh. (27)
  On Ulmus amoricana L. Columbia: Maneval, 1939.

*Urocystis kmetiana Mgn. (50)
  On Viola rafinesquei Greene. Five miles east of Columbia (Lake of the Woods): Ilda McVeigh & K. W. Simons, 1937. Identification verified by George L. Zundel. This smut had previously been reported (7) for Arkansas and Tennessee.

Uromyces lespedezae-procumbantis (Schw.) Curt. (1)
Uromyces pockianus Farl. (1)
On Plantago clumpata Pursh. Sandstone Bluff, northeast of Columbia: Manoal, 1933. Apparently a new host for this rust, as it is not included in Arthur’s Manual (1).

Uromyces plumbarius Pk. (1)
On Gaura biennis L. Zebra: Francis Brouet & R. E. Zirkle, 1928;
Burlington Junction: J. A. Singleton, 1939.

*Ustilago spormophora Berk. & Curt. (7)

Ustilago striiformis (West.) Niessl. (7)
On Agropyron subsecundum (Link) Hitchc. Columbia (greenhouse):
Chris G. Schmitt, 1937.

Vonturia inacualis (Cro.) Wint. (17, 42)
On Pyrus ioensis (Wood) Bailey. Eastville: G. W. Bohn and
Francis Drouet, 1935, herbarium specimen 23769; Springfield:
M. A. Smith, 1937; Bevier: Tucker, 1938.

Virus diseases
*Streak on Nicotiana tabacum L. Camden Point, Glasgow, Keytesville,
BIBLIOGRAPHY


