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A Preliminary List of the Parasitic Fungi of Idaho

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BUREAU OF PLANT INDUSTRY

UNITED STATES DEPARTMENT OF AGRICULTURE

A PRELIMINARY LIST OF THE PARASITIC FUNGI OF IDAHO

by Arthur L. Schade

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INTRODUCTION

Previous to the present work there has been no enumeration of the fungi of Idaho. Collections have been erratic and scattered. Of these, some have been placed in the herbarium of the Department of Plant Pathology, College of Agriculture, University of Idaho, at Moscow, and are primarily those fungi responsible for disease in herbaceous plants. In view of the fact that the time allotted for identification, checking, and compilation of the already collected specimens was but ten months, it was considered advisable to limit the present preliminary list, for the most part, to those fungi parasitic on herbaceous plants. Additional collections made by the writer in the current year were restricted, therefore, by this fixed policy.

The present list purports in no way to be a comprehensive report of the fungi parasitic on the herbaceous plants of the State. Cultivated hosts received a greater share of attention than wild hosts. A number of the collections cited were received in exchange from the herbarium of the School of Forestry for specimens of tree diseases in the herbarium of the Department of Plant Pathology. The writer wishes to express appreciation for the cooperation given by the School of Forestry in this matter. The collections thus received are appropriately designated in the list. All collections reported, with a few noted exceptions, are to be found in the herbarium of the Department of Plant Pathology.

Following the list of fungi, arranged according to mycological classification, an alphabetically arranged host index is included to facilitate use of the report. After each host given for a particular fungus, appear the localities in the State (followed in parentheses by the county) from which the reported collections were made, the names of the collectors, and the years of collection. Listings which have the letters, U.I.F.P.H. No. ___, after them are those which designate the duplicates of the herbarium specimens of the School of Forestry deposited in the Plant Pathology herbarium. Specimens marked with an asterisk (*) were checked for this report, but, because of the paucity of material, could not be split and remain in the forestry herbarium. A plus sign (+) following a fungus name indicates that the name is not valid according to the International Rules of Nomenclature and should receive attention for establishment.

To increase the usefulness and value of the list, a bibliography has been added to which each collection is referred in order that a description of the fungus in question may be readily found. An attempt has been made to choose descriptions which seemed to the writer to be most complete and available in the usual reference literature. In some cases it was found necessary to make use of more than one reference to insure an adequate description. The figures immediately following the fungus name refer to a paper in the bibliography in which a description is to be found. Synonymy of the fungi listed has not been undertaken, but an attempt has been made to use those names most frequently applied. The writer has avoided designating as a new species any collection that showed but minor variations from the given description. Where such variations occurred, they are indicated in appended notes to the host on which the fungus was found.

For the naming of the host plants, the writer has used as much as possible, Flora of Southeastern Washington and Adjacent Idaho, by Charles Piper and R. Kent Beattie, 1914, and A New Manual of Botany of the Central Rocky Mountains, by J. M. Coulter and Aven Nelson, 1909. In some instances the Flora of the Rocky Mountains and Adjacent Plains, by P. A. Rydberg, 1922, was consulted. The Manual of the Grasses of the United States, by A. S. Hitchcock, 1935, served for the nomenclature of the grasses.

The writer is greatly indebted to Dr. C. W. Hungerford, Head of the Department of Plant Pathology, for making possible, suggesting, and aiding in the compilation of this list of fungi. Many thanks are due Miss Vada Allen and Dr. Gordon Alcorn of the Botany Department for help in some host determinations. Dr. David H. Linder of Harvard University and Dr. George B. Cummins of Purdue University rendered valuable aid in the identification of some fungi. To Dr. John Ehrlich of the School of Forestry the writer expresses his appreciation of live interest and many helpful suggestions.

SYSTEMATIC LIST OF FUNGI

SCHIZOMYCETES

BACTERIACEAE

APLANOBACTER INSIDIOSUM McCulloch (13, p. 6)

On Medicago sativa L. Caldwell (Canyon): Hungerford, 1933. Preston (Franklin): Smith, 1920.

BACILLUS AMYLOVORUS (Burr.) Trev. (13, p. 18)

On Crataegus monogyna Jacq. var. rosea Willd. Moscow (Latah): Hungerford, 1933.

On Prunus sp. (cult. cherry). Moscow (Latah): Willis, 1915.

On Pyrus communis L. Moscow (Latah): Raeder, 1934. Kendrick (Latah): Johnson, 1923. St. Marie (Benewah): Hungerford, 1923. Payette (Payette): Hungerford, 1920.

On Pyrus malus L. Moscow (Latah): Raeder, 1934.

BACILLUS CAROTOVORUS L. R. Jones (26)

On Solanum tuberosum L. Aberdeen (Bingham). Moscow (Latah).

BACTERIUM CAMPESTRE (Pam.) EFS. (13, p. 99)

On Brassica oleracea L. Orofino (Clearwater): 1931.

BACTERIUM CORONAFACIENS C. Elliott (13, p. 122)

On Avena sativa L. Moscow (Latah): Willis, 1915.

BACTERIUM HOLCI Kendrick (13, p. 138)

On Sorghum vulgare Pers. var. sudanense (Piper) Hitchc. Tetonia (Teton): Christ, 1919.

BACTERIUM MEDICAGINIS (Sack.) EFS. (13, p. 162)

On Medicago sativa L. Sandpoint (Bonner): Longley, 1919. Parma (Canyon): Hungerford, 1923. Moscow (Latah): Hungerford, 1926. Burley (Cassia).

BACTERIUM PHASEOLI EFS. (13, p. 177)

On Phaseolus vulgaris L. Moscow (Latah): Hungerford, 1920.

BACTERIUM PISI (Sack.) EFS. (13, p. 184)

On Pisum sativum L. Arco (Butte): Hungerford, 1932. Idaho Falls (Bonneville): Raeder, 1928.

BACTERIUM SYRINGAE (van Hall) EFS. (13, p. 217)

On Syringa vulgaris L. Kootkia (Idaho): Raeder, 1932.

BACTERIUM TRANSLUCENS Jones, Johnson, Reddy (13, p. 229)

On Hordeum vulgare L. Aberdeen (Bingham): Hungerford, 1930.

BACTERIUM TRANSLUCENS SECALIS Reddy, Godkin, Johnson (13, p. 230)

On Secale cereale L. Moscow (Latah): Hungerford, 1919.

BACTERIUM TRANSLUCENS UNDULOSUM Smith, Jones, Reddy (13, p. 231)

On Triticum aestivum L. Felt (Teton): Hungerford, 1926.

BACTERIUM TUMEFACIENS EFS. & Town. (13, p. 234)

On Lycopersicum esculentum P. Miller. Moscow (Latah): Willis, 1916.

On Rubus sp. (cult. blackberry). Moscow (Latah): Hungerford, 1929.

On Vitis sp. (cult. grape). Lewiston (Nez Perce): Blodgett, 1928.

ACTINOMYCETACEAE

ACTINOMYCES SCABIES (Thaxt.) Güssow (28)

On Solanum tuberosum L. Moscow (Latah): Hungerford, 1924.

PHYCOMYCETES

ALBUGINACEAE

ALBUGO BLITI (Biv.-Bern.) O. Kuntze (61, p. 77)

On Amaranthus retroflexus L.

ALBUGO CANDIDA (Pers. ex Berk.) O. Kuntze (61, p. 64)

On Camelina microcarpa Andrz. Johnson's Bar in Snake River Canyon (Idaho): Schade, 1936.

On Capsella bursa-pastoris L. Moscow (Latah): Hungerford, 1921.

On Sisymbrium altissimum L. Moscow (Latah): Willis, 1916. Lewiston (Nez Perce): Hungerford, 1925. Johnson's Bar in Snake River Canyon (Idaho): Schade, 1936.

ALBUGO TRAGOPOGONIS (Pers.) S. F. Gray (61, p. 72)

On Tragopogon porrifolius L. Moscow (Latah): Vincent, 1916.

On Tragopogon pratensis L. Moscow (Latah): Schade, 1936.

PYTHIACEAE

PYTHIUM DEBARYANUM Hesse (4)

On Solanum tuberosum L. Moscow (Latah): Hungerford, 1924.

PERONOSPORACEAE

PERONOSPORA EFFUSA (Grev. ex Fr.) Rabenh. (18, p. 467)

On Chenopodium album L. Moscow (Latah): Willis, 1916.

PERONOSPORA SPARSA Berk. (18, p. 464)

On Rosa sp. Deary (Latah): Willis, 1915.

PERONOSPORA TRIFOLIORUM de Bary (18, p. 457)

On Medicago sativa L. Moscow (Latah): Willis, 1915. Leviston (Nez Perce): Hungerford, 1919. Boise (Ada): Ashley, 1915. Caldwell (Canyon): Willis, 1915. Kendrick (Latah): Hungerford, 1923.

PERONOSPORA VICIAE de Bary (18, p. 454)

On Pisum sativum L. Twin Falls (Twin Falls): Hungerford. Idaho Falls (Bonneville).

ASCOMYCETES

EXOASCACEAE

EXOASCUS CERASI (Fckl.) Sadeb. (44, p. 69)

On Prunus avium L. Moscow (Latah): Hungerford, 1926.

On Prunus demissa (Nutt.) Walp. Moscow (Latah): Hungerford, 1919.

EXOASCUS DEFORMANS (Berk.) Fckl. (42, p. 316)

On Amygdalus persica L. Moscow (Latah): Hungerford, 1919.

Coeur d'Alene (Kootenai): Longley, 1919.

ERYSIPHACEAE

ERYSIPHE CICHORACEARUM DC.* (48, p. 193)

On Amsinckia intermedia Fisch. & Mey. Johnson's Bar in Snake River Canyon (Idaho): Schade, 1936.

On Aster novae-angliae L. Moscow (Latah): Hungerford, 1935.

On Helianthus annuus L. Moscow (Latah): Woo, 1923.

On Lactuca scariola L. var. integrata Gren. & Godr. Moscow (Latah): Barber, 1917.

On Madia glomerata Hook. Moscow (Latah): Schade, 1935.

ERYSIPHE GRAMINIS DC.* (48, p. 209)

On Bromus inermis Leyss. Moscow (Latah): Bever, 1932.

On Bromus vulgaris (Hook.) Shear. Moscow (Latah): Hungerford, 1923.

On Dactylis glomerata L. Moscow (Latah): Bever, 1932.

On Triticum aestivum L. Moscow (Latah): Larsen, 1923.

ERYSIPHE POLYGONI DC.* (48, p. 174)

- On Brassica campestris L. Hayden Lake (Kootenai): Hungerford, 1923.
- On Delphinium sp. Moscow (Latah): Hungerford, 1930.
- On Lupinus sp. Princeton (Latah): Engel, 1932.
- On Pisum sativum L. Moscow (Latah): Barber, 1917. Caldwell (Canyon): Willis, 1915.
- On Polygonum aviculare L. Moscow (Latah): Larsen, 1923.
- On Trifolium hybridum L. Twin Falls (Twin Falls): Willis, 1912. Moscow (Latah): Larsen, 1923.
- On Trifolium pratense L. Moscow (Latah): Poulson, 1924.

MICROSPHAERA ALNI (DC.) Wint. (48, p. 129)

- On Cornus occidentalis (Torr. & A. Gray) Coville. Moscow (Latah): Whitman and Hungerford, 1935.
- On Lonicera ciliosa (Pursh) Poir. Moscow (Latah): Schade, 1935.

MICROSPHAERA DIFFUSA Cke. & Pk. (48, p. 161)

- On Symphoricarpos albus (L.) Blake. Bovill (Latah): Stillinger, 1920, (U.I.F.P.H. No. 563). Moscow (Latah): Schade, 1935.

PODOSPHAERA OXYACANTHAE (DC.) de Bary (48, p. 29)

- On Amygdalus persica L. Lewiston (Nez Perce): Hungerford, 1928.
- On Prunus pennsylvanica L. Moscow (Latah): Willis, 1916.
- On Prunus sp. (cult. cherry). Moscow (Latah): Willis, 1917.
- On Pyrus malus L. Moscow (Latah): Hungerford, 1919. Emmett (Gem): Willis, 1916.

SPHAEROTHECA CASTAGNEI Lev. p.p. (16, p. 8)

- On Geranium viscosissimum Fisch & Mey. Moscow (Latah): Fajardo, 1924.

SPHAEROTHECA HUMULI (DC.) Burr. (48, p. 47)

- On Forsellesia spinescens (A. Gray) Greene. Johnson's Bar in Snake River Canyon (Idaho): Schade, 1936.
- On Polemonium micranthum Benth. Johnson's Bar in Snake River Canyon (Idaho): Schade, 1936.

SPHAEROTHECA HUMULI FULIGINEA (Schl.) Salm. (48, p. 49)

- On Taraxacum officinale Weber. Moscow (Latah): Schade, 1935.

SPHAEROTHECA MORS-UVAE (Schw.) Berk. & Curt. (48, p. 70)

- On Ribes sp. (cult. gooseberry). Sandpoint (Bonner): Hungerford, 1925. Moscow (Latah): Willis, 1915.

SPHAEROTHECA PANNOSA (Wallr. ex Fr.) Lev. (48, p. 65)

- On Rosa sp. Moscow (Latah): Larsen, 1923.

UNCINULA NECATOR (Schw.) Burr. (48, p. 99)

- On Psedera quinquefolia (L.) Greene. Moscow (Latah): Schade, 1935.

HELOTIACEAE

SCLEROTINIA TRIFOLIORUM Erikss. (63)

- On Medicago sativa L. Coeur d' Alene (Kootenai): Hungerford, 1928.
Rose Lake (Kootenai): Hungerford, 1925.
 On Melilotus alba Desr. Coeur d' Alene (Kootenai): Hungerford,
 1928. Rose Lake (Kootenai): Hungerford, 1925.
 On Trifolium hybridum L. Sandpoint (Bonner): Hungerford and Christ,
 1928.
 On Trifolium pratense L. Moscow (Latah): Hungerford, 1923. Rose
Lake (Kootenai): Hungerford, 1925.

SCLEROTINIA SP. (33)

- On Pisum sativum L. Moscow (Latah): Hungerford, 1923.

MOLLISIAEAE

PSEUDOPEZIZA MEDICAGINIS (Lib.) Sacc. (24)

- On Medicago sativa L. Moscow (Latah): Leth, 1924. Twin Falls (Twin
 Falls): Hungerford, 1932. Weiser (Washington): Willis, 1919.
Lewiston (Nez Perce): Willis, 1915. Rexburg (Madison): Hunger-
 ford, 1925.

PSEUDOPEZIZA TRIFOLII (Biv.-Bern.) Fekl. (24)

- On Trifolium pratense L. Twin Falls (Twin Falls): Hungerford, 1919.

PYRENOPEZIZA MEDICAGINIS Fekl. (23)

- On Medicago sativa L. Moscow (Latah): Willis, 1915. Cottonwood
 (Idaho): Christ, 1919. Rexburg (Madison): Hungerford, 1925.
Twin Falls (Twin Falls).

PHACIDIACEAE

COCCOMYCES DISTATUS (Schmidt ex Fr.) Sacc. (42, p. 745)

- On Mahonia repens Lindl. Moscow (Latah): Schade, 1935. Hope
 (Bonner): Schade, 1936.

Note: Asci 50-70u x 15u; spores 40-45u x 2u.

MICROTHYRIACEAE

DIPLOCARPON ROSAE Wolf (62)

- On Rosa sp. Pollock (Idaho): 1907.

HYPOCREACEAE

CLAVICEPS PURPUREA (Fr.) Tul. (50, p. 220)

On Agropyron pauciflorum (Schw.) Hitchc. Challis (Custer): Christ, 1919.

On Elymus canadensis L. Moscow (Latah): Schade, 1935.

On Elymus condensatus K. B. Presl. Preston (Franklin): Barber, 1919. Challis (Custer): Christ, 1919. Parma (Canyon): Hungerford, 1925.

DOTHIDIACEAE

PHYLLACHORA TRIFOLII (Pers. ex Fr.) Fckl. (16, p. 597)

On Trifolium pratense L. Castleford (Twin Falls): Hungerford, 1932.

Hayden Lake (Kootenai): Hungerford, 1923.

On Trifolium sp. Moscow (Latah): Hungerford & Raeder, 1928.

PLOWRIGHTIA MORBOSA (Schw.) Sacc. (48, p. 40)

On Prunus demissa (Nutt.) Walp. Moscow (Latah): Kinnison, 1915.

MYCOSPHAERELLACEAE

MYCOSPHAERELLA CHIMAPHILINA (Pk. in Sacc.) House (45, p. 297; 21)

On Chimaphila corymbosa Pursh. Viola (Latah): Schade, 1936.

Note: Spots brown, sub-circular to irregular, amphigenous.

Pycnidia amphigenous. Spores 12-14u x 3-4u.

MYCOSPHAERELLA PACHYASCA (Rostr.) Vester. (43, p. 613)

On Heuchera glabella Nutt. Coeur d'Alene (Kootenai): Schade, 1936.

Note: Asci 15-18u x 50-70u; spores 14-20u x 4-6u.

MYCOSPHAERELLA PACHYSTIMAE Dearn. (11, p. 246)

On Pachystima myrsinites Raf. Viola (Latah): Schade, 1936.

Note: Spots sometimes claiming whole leaf, irregular, without border. Asci 70-75u x 20-22u; spores uniseptate, 20-25u x 6-8u.

MYCOSPHAERELLA RUBI Roark (37)

On Rubus sp. (raspberry). Payette (Payette): Sherman, 1916. Falls City (Jerome): Towle, 1917.

SPHAERELLA RUMICIS (Desm.) Cke. (38, p. 512)

On Rumex obtusifolius L. Moscow (Latah): Hungerford, 1934.

Note: Probably Mycosphaerella rumicis Lindau.

PLEOSPORACEAE

VENTURIA INAEQUALIS (Cke.) Aderh. (58)

On Pyrus malus L. Moscow (Latah): Hungerford, 1923. Sandpoint (Bonner): Longley, 1919. Coeur d'Alene (Kootenai): Longley, 1919. Rose Lake (Kootenai): 1922. Bonniers Ferry (Boundary): 1928.

OPHIOPOLUS GRAMINIS Sacc. (9; 39, p. 349)

On Triticum aestivum L. Nezperce (Lewis): Bever, 1934.

FUNGI IMPERFECTI

SPHAEROIDACEAE

ASCHOCHYTA MELILOTI (Trel.) J. J. Davis (7, p. 663)

On Melilotus alba Desr. Moscow (Latah): Hungerford, 1921.

PHOMA MEDICAGINIS Malbr. & Roum. (36)

Syn. Pleospora rehmanniana (Staritz) Sacc.

On Medicago sativa L. Moscow (Latah): Willis, 1915. Twin Falls (Twin Falls): Hungerford, 1935.

PHYLOSTICTA GALLICOLA Ell. & Ev. (51, p. 14)

On Solidago missouriensis Nutt. Moscow (Latah): Schade, 1935.

PHYLOSTICTA GLOBIGERA Sacc. (47, p. 67)

On Pyrus sitchensis (Roem.) Piper. Moscow (Latah): Hungerford, 1928.

PHYLOSTICTA MAHONIAECOLA Pass. (44, p. 100)

On Mahonia repens Lindl. Viola (Latah): Schade, 1936.

Note: Spots margined; pycnidia mostly epiphyllous and numerous. Spores uniguttulate, 6-8u x 3-4u.

PHYLOSTICTA RIBESICIDA Speg. (46, p. 830)

On Ribes petiolare Dougl. Confluence Breakfast Creek and North Fork Clearwater River (Clearwater): Schade, 1935.

SEPTORIA ASARICOLA Allesch. (1, p. 736)

On Asarum caudatum Lindl. Moscow (Latah): Hungerford and Raeder, 1928.

SEPTORIA GROSSULARIAE (Lib.) Westend. (40, p. 491)

On Ribes lacustre (Pers.) Toir. Moscow (Latah): Hungerford, 1935.

SEPTORIA HYALINA Ell. & Ev. (39, p. 538)

On Viola flabella Nutt. Moscow (Latah): Hungerford and Raeder, 1928.

SEPTORIA MENTHICOLA Sacc. & Let. (40, p. 539)

On Mentha canadensis L. Johnson's Bar in Snake River Canyon (Idaho): Schade, 1936.

Note: Spots gray-brown, irregular, delimited by veins. Spores straight or curved, 16-34u x 1-1.5u.

SEPTORIA OXYSPORA Penz. & Sacc. var. CULMORUM Grove (47, p. 428)

On Dactylis glomerata L. Moscow (Latah): Hungerford, 1921.

Note: Leaves, culms, and glumes attacked.

SEPTORIA RUMICIS Trail (44, p. 380)

On Rumex crispus L. Moscow (Latah): Hungerford, 1923.

SEPTORIA STREPTOPIDIS Pk. (25, p. 64)

On Disporum majus (Hook.) Britt. Confluence Breakfast Creek and North Fork Clearwater River (Clearwater): Schade, 1935.

Note: Spores straight or curved, 5-8 septate, 52-82u x 3-5u.

SEPTORIA TRITICI Desm. (59)

On Triticum aestivum L. Moscow (Latah): Willis, 1919.

STAGONOSPORA ATRIPLICIS (Westend.) Lind (8, p. 683)

On Chenopodium album L. Johnson's Bar in Snake River Canyon (Idaho): Schade, 1936.

Note: Pycnidia mostly epiphyllous, 90-100u in diam. Spores oblong, 14-28u x 3.5-4.5u, 1-2 septate.

LEPTOSTROMATACEAE

MELASMIA MENZIESIAE Dearn. & Barth. (10, p. 355)

On Menziesia ferruginea J. E. Smith. Pierce (Clearwater): Hubert, 1929, (U.I.F.P.H. No. 194). Confluence Breakfast Creek and North Fork Clearwater River (Clearwater): Schade, 1935.

MELANCONIACEAE

CORYNEUM BEIJERINCKII Oud. (52)

On Amygdalus persica L. Moscow (Latah): Vincent, 1919. Lewiston (Nez Perce): 1919. Parma (Canyon): Blodgett, 1930. Boise (Ida): 1929. Grandview (Owyhee): Bernard, 1929. Mica Flats (Kootenai): Hungerford, 1924.

On Prunus armeniaca L. Moscow (Latah): 1934.

On Prunus sp. (cult. cherry): Moscow (Latah): Willis, 1916. Parma (Canyon): Hungerford, 1932. Lewiston (Nez Perce): Hungerford, 1932.

CORYNEUM MICROSTICTUM Berk. & Br. (40, p. 775)

On Rubus sp. (cult. blackberry). Moscow (Latah): Hungerford, 1929.

CYLINDROSPORIUM SMILACINAE Ell. & Ev. (17, p. 58)

On Smilacina stellata (L.) Desf. Confluence Breakfast Creek and North Fork Clearwater River (Clearwater): Schade, 1935.

Note: Spores in specimen are 20-30u x 3u and continuous to 3 septate.

CYLINDROSPORIUM VERATRINUM Sacc. & Wint. (40, p. 740)

On Veratrum californicum Durand. Viola (Latah): Hungerford, 1936.

Note: Spores 63-106u x 4u.

GLOEOSPORIUM CAULIVORUM Kirchn. (60)

On Trifolium pratense L. Moscow (Latah): Hungerford, 1921.

GLOEOSPORIUM EQUISETI Ell. & Ev. (14, p. 52)

On Equisetum hyemale L. Moscow (Latah): Hungerford, 1925.

Note: Spores 26-39u x 3u - Continuous to 1-septate.

GLOEOSPORIUM PERENNANS Zeller & Childs (65)

On Pyrus malus L. Coeur d' Alene (Kootenai): Hungerford and Fischer, 1929.

GLOEOSPORIUM RIBIS (Lib.) Mont. & Desm. (49, p. 102)

Syn. Pseudopeziza ribis (Lib.) Kleb.

On Ribes vulgare L. Moscow (Latah): Kinnison, 1916.

MARSSONINA POTENTILLAE (Desm.) Magn. (40, p. 770)

Syn. Marssonina potentillae (Desm.) Fischer

On Potentilla rivalis Nutt. Moscow (Latah): Hungerford, 1921.

MONILIACEAE

ASPERGILLUS NIGER van Tiegh. (54, p. 167)

On Allium cepa L. Gooding (Gooding): 1932.

BOTRYTIS ALLII Munn (31; 57)

On Allium cepa L. Twin Falls (Twin Falls): 1925.

BOTRYTIS PAEONIAE Oud. (32)

On Paeonia sp. (cult.). Preston (Franklin): Hungerford, 1932.

BOTRYTIS TULIPAE (Lib.) Hopkins (20)

On Tulipa sp. (cult.). Moscow (Latah): Hungerford, 1925.

BOTRYTIS VULGARIS (Link ex Fr.) Fr. (41, p. 128)

On Dianthus caryophyllus L. Moscow (Latah): Hungerford, 1925.

CERCOSPORELLA HERPOTRICHOIDES Fron (53)

On Hordeum vulgare L. Nezperce (Lewis): Hungerford.

On Triticum aestivum L. Moscow (Latah): Michels, 1934. Nezperce (Lewis): Hungerford.

CERCOSPORELLA VIRGAURAE (Thüm.) Allesch. (27, p. 428)

On Solidago missouriensis Nutt. Moscow (Latah): Schade, 1936.

GLOMERULARIA CORNI Pk. (41, p. 10)

On Cornus canadensis L. Moscow (Latah): Hungerford and Raeder, 1928.

OVULARIA VICIAE (Frank) Sacc. (44, p. 542)

On Vicia americana Muhl. Moscow (Latah): Hungerford, 1928.

RAMULARIA ARNICALIS Ell. & Ev. (44, p. 557)

On Arnica cordifolia Hook. Cora (Latah): Schade, 1936. Viola (Latah): Hungerford, 1936.

Note: Spores 16-20u x 3-4u.

RAMULARIA TARAXACI Karst. (41, p. 207)

On Taraxacum officinale Weber. Mica (Kootenai): Schade, 1936.

Note: Spots amphigenous, gray, not bordered by purple concentric circles. Clusters of conidiophores distinctly amphigenous. Spores 17-34u x 4-6u; continuous to 1-septate.

RAMULARIA TULASNEI Sacc. (41, p. 203)

Syn. Mycosphaerella fragariae (Tul.) Lindau

On Fragaria bracteata Heller. Viola (Latah): Hungerford, 1936.

On Fragaria platypetala Rydb. Moscow (Latah): Hungerford, 1932. Viola (Latah): Hungerford, 1936.

RAMULARIA VARIATA J. J. Davis (8, p. 688)

On Mentha canadensis borealis (Michx.) Piper. Viola (Latah): Hungerford, 1921.

RHYNCHOSPORIUM SECALIS (Oud.) J. J. Davis (2, p. 610)

Syn. Marssonina secalis Oud.

On Hordeum vulgare L. Moscow (Latah): Hungerford, 1922.

DEMATIACEAE

ALTERNARIA SOLANI (Ell. & Mart.) Jones & Grout (34)

On Solanum tuberosum L. Blackfoot (Bingham): Hungerford. Caldwell (Canyon): Willis, 1915. Burley (Cassia): Barber, 1923.

CERCOSPORA CIRCUMSCISSA Sacc. (49, p. 134)

On Prunus pennsylvanica L. Moscow (Latah): Willis, 1916.

CERCOSPORI SYMPHORICARPI Ell. & Ev. (15, p. 70)

On Symphoricarpos albus (L.) Blake. Moscow (Latah): 1932.

Note: Spores 20-35u x 3-5u - One-septate.

CLADOSPORIUM FULVUM Cke. (49, p. 122)

On Lycopersicum esculentum P. Miller. Boise (Ada): Hungerford, 1930.

HELMINTHOSPORIUM CALIFORNICUM Mackie & Paxton (29)

On Hordeum vulgare L. Moscow (Latah): Bever, 1930.

HELMINTHOSPORIUM GRAMINEUM Rabenh. (12, p. 650)

On Hordeum vulgare L. Murtaugh (Twin Falls): Bever, 1935. Payette (Payette): Barber, 1919. Preston (Franklin): Barber, 1919.

Weiser (Washington): Hungerford, 1919.

HELMINTHOSPORIUM SATIVUM Pammel, King, and Bakke (12, p. 690)

On Hordeum vulgare L. Caldwell (Canyon): Barber, 1919. Boise (Ada): Barber, 1919. Aberdeen (Bingham): Barber, 1919. Rupert (Minidoka): Burnett, 1919. Buhl (Twin Falls): Barber, 1919.

HELMINTHOSPORIUM TERES Died. (12, p. 656)

Syn. Pyrenophora teres (Died.) Drechsler.

On Hordeum vulgare L. Rupert (Minidoka): Barber, 1919.

HETEROSPORIUM GRACILE (Wallr.) Sacc. (56)

Syn. Didymellina iridis (Desm.) Höhn.

On Iris sp. (cult.) Moscow (Latah): Hungerford, 1932. Lewiston (Nez Perce): Hungerford, 1921. Boise (Ada): Hungerford, 1936.

SCOLECOTRICHUM GRAMINIS Fekl. (41, p. 348)

On Cinna latifolia (Trevir.) Griseb. Avon (Latah): Hungerford, 1926.

On Hordeum jubatum L. Moscow (Latah): Hungerford, 1920. Parma (Canyon): Hungerford, 1923.

On Hordeum nodosum L. Driggs (Teton): Hungerford, 1926.

SPONDYLOCLADIUM ATROVIRENS Harz (30)

On Solanum tuberosum L. Lewiston (Nez Perce): Hungerford, 1924.

TUBERCULARIACEAE

FUSARIUM FLOCCIFERUM Cda. (64, p. 79)

On Solanum tuberosum L. Moscow (Latah): Schade, 1936.

FUSARIUM OXYSPORUM Schl. (64, p. 117)

On Solanum tuberosum L. Moscow (Latah): Pierce, 1936.

FUSARIUM OXYSPORUM Schl. forma 7 Wollenw. (64, p. 120)

Syn. Fusarium cepae Hanzawa

On Allium cepa L. Gooding (Gooding): 1932.

FUSARIUM REDOLENS Wollenw. forma 1 Wollenw. (64, p. 127)

?Syn. Fusarium spinaciae Sherb.

On Spinacia oleracea P. Miller. Moscow (Latah): Hungerford, 1919.

FUSARIUM SAMBUCINUM Fekl. forma 6 Wollenw. (64, p. 78)

, On Solanum tuberosum L. Moscow (Latah): Schade, 1936.

FUSARIUM SOLANI (Martius) var. MARTII (App. et Wollenw. sub specie)
Wollenw. forma 3 Snyder (64, p. 137)

Syn. Fusarium martii phaseoli W. H. Burkh.

On Phaseolus vulgaris L. Twin Falls (Twin Falls): Hungerford, 1924.
Moscow (Latah): Hungerford, 1922.

FUSARIUM TRICHOETECIOIDES Wollenw. (64, p. 85)

On Solanum tuberosum L. Blackfoot (Bingham). Coeur d' Alene
(Kootenai): Pierce, 1936.

BASIDIOMYCETES

USTILAGINACEAE

SOROSPORIUM SYNTHETRISMAE (Pk.) Farl. (5, p. 38)

On Cenchrus tribuloides L. King Hill (Elmore): Walsh, 1932.

On Panicum miliaceum L. Moscow (Latah): Hungerford, 1921.

USTILAGO AVENAE (Pers.) Jens. (5, p. 7)

On Avena sativa L. Moscow (Latah): 1932.

USTILAGO BROMIVORA (Tul.) Fisch. de Wald. (5, p. 10)

On Bromus carinatus Hook. & Arn. Stites (Idaho): Stillinger, 1920,
(U.I.F.P.H. No. 581*). Orofino (Clearwater): Stillinger, 1920,
(U.I.F.P.H. No. 583*). Pierce (Clearwater): Stillinger, 1923,
(U.I.F.P.H. No. 580*).

On Bromus marginatus Nees. Grangeville (Idaho): Christ, 1919.
Moscow (Latah): 1921.

On Bromus tectorum L. Moscow (Latah): Bever, 1935. Post Falls
(Kootenai): Zundel, 1926. Johnson's Bar in Snake River Canyon
(Idaho): Schade, 1936.

USTILAGO HORDEI (Pers.) Kellern. & Swingle (5, p. 6)

On Hordeum vulgare L. Moscow (Latah): Willis, 1915. Weiser (Wash-
ington): Hungerford, 1920. Aberdeen (Bingham): Hungerford, 1926.

USTILAGO LEVIS (Kellerm. & Swingle) Marn. (5, p. 7)

On Avena sativa L. Payette (Payette): Barber, 1919. DeSmet (Benewah): 1919. St. Maries (Benewah). Jerome (Jerome): Barber, 1919. Nez Perce County: Christ, 1919. Aberdeen (Bingham): Hungerford, 1932. Lowell (Latah): Stillinger, 1920, (U.I.F.P.H. No. 582*). Weiser (Washington): 1920. Moscow (Latah): 1932.

USTILAGO LORENTZIANA Thüm. (5, p. 9)

On Hordeum jubatum L. Salmon (Lemhi): Wolpart, 1917, (U.I.F.P.H. No. 586*). Soda Springs (Caribou): Whitman, 1923.
On Hordeum nodosum L. Salmon (Lemhi) Christ, 1919.

USTILAGO NUDA (Jens.) Kellerm. & Swingle (5, p. 8)

On Hordeum vulgare L. Moscow (Latah): Willis, 1915.

USTILAGO PERENNANS Rostr. (5, p. 7)

On Arrhenatherum elatius (L.) Mert. & Koch.

USTILAGO STIPITIFORMIS (Westend.) Niessl (5, p. 18)

On Elymus sp. Challis (Custer): Chris., 1919.
On Phleum pratense L. Genesee (Latah). 1919. Moscow (Latah): Willis, 1915. Hayden Lake (Kootenai): Hungerford, 1923.

USTILAGO TRITICI (Pers.) Rostr. (5, p. 8)

On Triticum aestivum L. Nezperce (Lewis). 1921. Caldwell (Canyon): 1920. Aberdeen (Bingham): Hungerford, 1933. Moscow (Latah): 1921. Twin Falls (Twin Falls): Pierce, 1928.

TILLETIACEAE

TILLETIA GUYOTIANA Hariot (19)

On Bromus mollis L. Moscow (Latah): Zundel and Honey, 1925.

TILLETIA LAEVIS Kühn (5, p. 48)

On Triticum aestivum L. Rexburg (Madison): Bever, 1935.

TILLETIA TRITICI (Bjerk. ex Pers.) Wint. (5, p. 48)

On Triticum aestivum L. McCammon (Bannock): Barber, 1919. Moscow (Latah): Willis, 1915. Rancroft (Bannock).

URCCYSTIS CARCINODES (Berk. & Curt.) Fisch. de Wald. (5, p. 55)

On Actaea rubra (Ait.) Willd. Stillinger, 1923, (U.I.F.P.H. No. 585).

URCCYSTIS TRILLII Jacks. (22, p. 151)

On Trillium ovatum Pursh. Pierce (Clearwater): Stillinger, 1920, (U.I.F.P.H. No. 587).

MELAMPSORACEAE

CHRYSONOMYXA LEDI (Alb. & Schw.) de Bary (3, p. 34)

On Ledum columbianum Piper. Elk City (Idaho): Stillinger, 1920, (U.I.F.P.H. No. 727).

COLEOSPORIUM SOLIDAGINIS (Schw.) Thüm. (3, p. 43)

On Aster conspicuus Lindl. Potlatch (Latah): Stillinger, 1920, (U.I.F.P.H. No. 746).

On Solidago missouriensis Nutt. Moscow (Latah): Hungerford, 1923.

On Solidago serotina salebrosa Piper. Potlatch (Latah): Stillinger, 1920, (U.I.F.P.H. No. 751). Elk City (Idaho): Stillinger, 1920, (U.I.F.P.H. No. 744).

On Solidago sp. Elk River (Clearwater): Pierson, 1931, (U.I.F.P.H. No. 657).

CRONARTIUM RIBICOLA J. C. Fischer (3, p. 26)

On Grossularia inermis (Rydb.) Cov. & Britt. Coeur d' Alene (Kootenai): Hubert, 1932, (U.I.F.P.H. No. 476).

On Ribes lacustre (Pers.) Toir. Clarkia (Shoshone): Hubert, 1932, (U.I.F.P.H. No. 473).

On Ribes petiolare Dougl. Emida (Benewah): Pierson and Ehrlich, 1935, (U.I.F.P.H. No. 834).

HYALOSORA ASPIDIOTUS (Pk.) Magn. (3, p. 10)

On Thegopteris dryopteris (L.) Fee. Bovill (Latah): Stillinger, 1920, (U.I.F.P.H. No. 803).

MILEZIA POLYSTICHI Wineland (3, p. 9)

On Polystichum munitum (Kaulf.) K. B. Presl. Pierce (Clearwater): Stillinger, 1920, (U.I.F.P.H. No. 804).

PUCCINIASTRUM GOEPPERTIANUM (Kühn) Kleb. (3, p. 19)

On Vaccinium sp. Cascade (Valley): Hubert, 1928, (U.I.F.P.H. No. 184).

PUCCINIASTRUM MYRTILLI (Schum.) Arth. (3, p. 18)

On Vaccinium macrophyllum (Hook.) Piper. Moscow (Latah): Hungerford, 1935. Oxford (Bannock): Stillinger, 1921, (U.I.F.P.H. No. 791).

UREDINOPSIS MACROSPERMA (Cke.) Magn. (3, p. 5)

On Pteridium aquilinum pubescens Underw. Priest River (Bonner): Schmitz, 1924, (U.I.F.P.H. No. 355). Harvard (Latah): Hubert, 1928, (U.I.F.P.H. No. 120). Headquarters (Clearwater): Hubert, 1930, (U.I.F.P.H. No. 399).

UREDINOPSIS STRUTHIOPTERIDIS Störmer (3, p. 4)

On Athyrium cyclosorum Rupr. Avon (Latah): Hungerford, 1925.

PUCCINIACEAE

CUMMINSIELLA SANGUINEA (Tk.) Arth. (3, p. 75)

On Mahonia aquifolium (Pursh) Nutt. Moscow (Latah): Schade, 1936.

On Mahonia repens Lindl. Moscow (Latah): Callahan, 1935. Chatcolet (Bonner): Schade, 1936. Granite (Bonner): Schade, 1936. Viola (Latah): Schade, 1936.

PHRAGMIDIUM DISCIFLORUM (Tode) J. F. James (3, p. 84)

On Rosa sp. Moscow (Latah): 1907.

PHRAGMIDIUM IVESIAE Syd. (3, p. 89)

On Potentilla blaschkeana Turcz. Moscow (Latah): Thomas, 1916.
Winchester (Lewis): Hungerford, 1926. Worley (Kootenai):
Schade, 1936.

PHRAGMIDIUM MONTIVAGUM Arth. (3, p. 86)

On Rosa sp. Moscow (Latah): Schade, 1935.

PHRAGMIDIUM OCCIDENTALE Arth. (3, p. 83)

On Rubus parviflorus Nutt. Moscow (Latah): Hungerford, 1922. Santa
(Benewah): Pierson & Ehrlich, 1935, (U.I.F.P.H. No. 826*).

PHRAGMIDIUM PECKIANUM Arth. (3, p. 81)

On Rubus bartonianum M. E. Peck. Johnson's Bar in Snake River Canyon
(Idaho): Schade, 1936.

PHRAGMIDIUM ROSAE-ACICULARIS Liro (3, p. 85)

On Rosa gymnocarpa Nutt. Johnson's Bar in Snake River Canyon (Idaho):
Schade, 1936.

On Rosa sp. Moscow (Latah): Willis, 1915.

PHRAGMIDIUM ROSAE-CALIFORNICAE Diet. (3, p. 87)

On Rosa pisocarpa A. Gray. Moscow (Latah): Posey & Stillinger,
1920, (U.I.F.P.H. No. 631).

PHRAGMIDIUM SPECIOSUM (Fr.) Cke. (3, p. 88)

On Rosa sp. Moscow (Latah): Ehrlich, Pierson, Schade, 1935.

GYMNOCONIA PECKIANA (Howe) Trotter (3, p. 96)

On Rubus laciniatus Willd. St. Maries (Benewah): Emerson, 1927.
Moscow (Latah): 1919.

NYSSOPSORA ECHINATA (Lév.) Arth. (3, p. 99)

On Ligusticum leibergii Cov. & Rose. Pierce (Clearwater): Stillinger,
1920, (U.I.F.P.H. No. 622).

PUCCINIA ABSINTHII (Hedw. f.) DC. (3, p. 343)

On Artemisia tridentata Nutt. Weiser (Washington): Wright, 1916.
Twin Falls (Twin Falls): Hungerford, 1923.

PUCCINIA ANOMALA Rostr. (3, p. 176)

On Hordeum vulgare L. Moscow (Latah): Hungerford, 1921.

PUCCINIA ANTIRRHINI Dearn. & House (3, p. 257)

On Antirrhinum majus L. Moscow (Latah): Larsen, 1923.

PUCCINIA ASPARAGI DC. (3, p. 225)

On Asparagus officinalis L. Lewiston (Nez Perce): Blodgett, 1935.

PUCCINIA BALSAMORHIZAE Pk. (3, p. 342)

On Balsamorhiza sagittata (Pursh) Nutt. Warren (Idaho): Stillinger,
 (U.I.F.P.H. No. 630).

PUCCINIA BISTORTAE (Strauss) DC. (3, p. 280)

On Polygonum bistortoides Pursh. Elk River (Clearwater): Pierson,
 1931, (U.I.F.P.H. No. 665).

PUCCINIA CALOCHORTI Pk. (3, p. 276)

On Calochortus elegans Pursh. Moscow (Latah): Hungerford.

PUCCINIA CARICIS GROSSULARIATA Arth. (3, p. 208)

On Grossularia inermis (Rydb.) Cov. & Britt. Elk River (Clearwater):
 Pierson, 1931, (U.I.F.P.H. No. 666*).

On Ribes sp. (wild currant). Pierce (Clearwater): Pinson, 1922.

On Ribes petiolare Dougl. Elk River (Clearwater): Pierson, 1931,
 (U.I.F.P.H. No. 652).

PUCCINIA CARICIS URTICATA (Kern) Arth. (3, p. 208)

On Urtica dioica L. Elk River (Clearwater): Pierson, 1931,
 (U.I.F.P.H. No. 667*).

PUCCINIA CHRYSANTHEMI Roze (3, p. 270)

On Chrysanthemum sp. (cult.). Moscow (Latah): Hungerford, 1919.

PUCCINIA CIRCAEAE Pers. (3, p. 250)

On Circaea pacifica Aschers. & Magn. Moscow (Latah): 1919. Oxford
 (Bannock): Stillinger, 1920, (U.I.F.P.H. No. 682).

PUCCINIA CIRSII Lasch. (3, p. 348)

On Cirsium palousense Piper. Moscow (Latah): Thomas, 1916.

PUCCINIA CLINTONII Pk. (3, p. 336)

On Pedicularis groenlandica Retz. Big Springs (Fremont): Wolpart,
 1917, (U.I.F.P.H. No. 591).

PUCCINIA CNICI Martius (3, p. 346).

- On Cirsium lanceolatum (L.) Hill. Moscow (Latah): Schade, 1935.
Warren (Idaho): Stillinger, 1920, (U.I.F.P.H. No. 817*). Confluence Breakfast Creek and North Fork Clearwater River (Clearwater): Schade, 1935.

PUCCINIA CORONATA Cda. (3, p. 152)

- On Calamagrostis rubescens Buckl. Elk River (Clearwater): Pierson, 1931, (U.I.F.P.H. No. 671).
 On Cinna latifolia (Trevir.) Griseb. Avon (Latah): Hungerford, 1926.
 On Holcus lanatus L. Moscow (Latah): Hungerford, 1928. Headquarters (Clearwater): Hubert, 1929, (U.I.F.P.H. No. 188).
 On Rhamnus alnifolia L. Bovill (Latah): Hungerford, 1931.
 On Shepherdia canadensis (L.) Nutt. Champion Creek (Custer): Hungerford, 1932.

PUCCINIA CRANDALLII Pammel & Hume (3, p. 162)

- On Symphoricarpos albus (L.) Blake. Elk River (Clearwater): Stillinger, 1923, (U.I.F.P.H. No. 679).
 On Symphoricarpos sp. Pierce (Clearwater): Stillinger, 1923, (U.I.F.P.H. No. 677).

PUCCINIA CYANI (Schleich.) Pass. (3, p. 349)

- On Centaurea cyanus L. Moscow (Latah): Schade, 1935.

PUCCINIA DIFFORMIS Kunze (3, p. 260)

- On Galium aparine L. Bovill (Latah): Pierson, 1931, (U.I.F.P.H. No. 673).

PUCCINIA EXTENSICOLA HIERACIATA (Schw.) Arth. (3, p. 199)

- On Senecio columbianus Greene. Bertha Hill (Clearwater): Ehrlich, 1936.

PUCCINIA GENTIANAE (Strauss) Link (3, p. 322)

- On Gentiana parryi Engelm. Winchester (Lewis): Hungerford, 1923.

PUCCINIA GLUMARUM (Schmidt) Erikss. & Henn. (3, p. 186)

- On Agropyron cristatum (L.) Gaertn. Moscow (Latah): Willis, 1916.
 On Bromus marginatus Nees. Moscow (Latah): Hungerford, 1919.
 On Bromus rubens L. Moscow (Latah): Hungerford, 1921.
 On Bromus vulgaris (Hook.) Shear. Moscow (Latah): Hungerford, 1921.
 On Elymus condensatus K. B. Presl. Twin Falls (Twin Falls): Hungerford, 1921. Parma (Canyon): Hungerford, 1925. Moscow (Latah): Hungerford, 1925.
 On Elymus glaucus Buckl. Moscow (Latah): Leth, 1924. Winchester (Lewis): Hungerford, 1926. Avon (Latah): Hungerford, 1925.
 On Festuca octoflora Walt. Moscow (Latah): Raeder, 1926.
 On Hordeum jubatum L. Gooding (Gooding): Hungerford, 1919. Jerome (Jerome): Hungerford, 1919. Moscow (Latah): 1919. Parma (Canyon): Raeder, 1925. Pocatello (Bannock): Jackson, 1918. Twin Falls (Twin Falls): Hungerford, 1919. Emmett (Gem): Hungerford, 1935.

- On Hordeum nodosum L. Moscow (Latah): Hungerford, 1921.
 On Hordeum vulgare L. Moscow (Latah): Raeder, 1926.
 On Hystrix californica (Bolund.) O. Kuntze. Moscow (Latah): Hungerford, 1928.
 On Triticum aestivum L. Nezperce (Lewis): Bristol, 1921. Grangeville (Idaho): Bristol, 1921. Moscow (Latah): Humphrey, 1915.
 On Triticum compactum Host. Felt (Teton): Hungerford, 1930. Troy (Latah): Barber, 1919. Cambridge (Washington): Barber, 1919. Moscow (Latah): Hungerford, 1921. Juliaetta (Latah): Dunlap and Pierce, 1921.

PUCCINIA GRAMINIS Pers. (3, p. 173)

- On Berberis vulgaris L. Moscow (Latah): Barber, 1917.
 On Elymus canadensis L. Moscow (Latah): Leth, 1924.
 On Elymus glaucus Buckl. Avon (Latah): Hungerford, 1925.
 On Hordeum jubatum L. Emmett (Gem): Hungerford, 1935.
 On Hordeum vulgare L. Sandpoint (Bonner): Schade, 1935.

PUCCINIA GRAMINIS AVENAE Erikss. & Henn. (3, p. 175)

- On Avena sativa L. Caldwell (Canyon): Barber, 1919.

PUCCINIA GRAMINIS PHLEI-PRATENSIS (Erikss. & Henn.) Stak. & Piem. (3, p. 176)

- On Phleum pratense L. Moscow (Latah): Larsen, 1923. Bovill (Latah): Stillinger, 1920, (U.I.F.P.H. No. 789).

PUCCINIA GRAMINIS TRITICI Erikss. & Henn. (3, p. 175)

- On Triticum aestivum L. Kimberly (Twin Falls): Barber, 1919. Star (Ada): Barber, 1919. Burley (Cassia): Barber, 1919. Weiser (Washington): Barber, 1919. Twin Falls (Twin Falls): Pierce, 1928.

PUCCINIA HELIANTHI Schw. (3, p. 267)

- On Helianthus sp. Lewiston (Nez Perce): Hungerford, 1923. Moscow (Latah): Larsen, 1923.

PUCCINIA HEUCHERAE (Schw.) Diet. (3, p. 292)

- On Mitella stauropetala Piper. Viola (Latah): Schade, 1936.
 On Tiarella unifoliata Hook. Moscow (Latah): Thomas, 1916. Bovill (Latah): Pierson, 1931, (U.I.F.P.H. No. 668).

PUCCINIA HIERACII (Schum.) Martius (3, p. 351)

- On Hieracium albiflorum Hook. Warren (Idaho): Stillinger, 1920, (U.I.F.P.H. No. 816).
 On Taraxacum officinale Weber. Moscow (Latah): Schade, 1935. Confluence Breakfast Creek and North Fork Clearwater River (Clearwater): Schade, 1935.

PUCCINIA INTERVENIENS (Pk.) Bethel (3, p. 131)

- On Sidalcea crenulata A. Nels. Pierce (Clearwater): Stillinger, 1920, (U.I.F.P.H. No. 821).

PUCCINIA JONESII TYPICA Arth. (3, p. 316)

On Leptotaenia multifida Nutt. Juliaetta (Latah): 1906. Boles (Idaho): Baeder, 1924. Moscow (Latah): Hungerford, 1922.

PUCCINIA MALVACEARUM Bert. (3, p. 246)

On Althaea rosea L. Kamiah (Lewis): Willis. Moscow (Latah): Larsen, 1923. Lewiston (Nez Perce): Willis, 1915. St. Maries (Benewah): Hungerford, 1923.

On Malva rotundifolia L. Moscow (Latah): Hungerford, 1921. Johnson's Bar in Snake River Canyon (Idaho): Schade, 1936.

PUCCINIA MCCLATCHIEANA Diet. & Holw. (3, p. 191)

On Scirpus microcarpus K. E. Presl. Boise (Ada): Stillinger, 1920, (U.I.F.P.H. No. 814). Bozill (Latah): Stillinger, 1920, (U.I.F.P.H. No. 809*).

PUCCINIA MESOMALLIS Berk. & Curt. (3, p. 278)

On Clintonia uniflora (Schult.) Kunth. Moscow (Latah): Hungerford, 1922. Elk River (Clearwater): Pierson, 1931, (U.I.F.P.H. No. 674).

PUCCINIA MINUSSENSIS Thüm. (3, p. 355)

On Lactuca pulchella (Pursh) DC. Twin Falls (Twin Falls): Hungerford, 1923.

PUCCINIA OBSCURA Shroet. (3, p. 186)

On Luzula campestris (L.) DC. Elk River (Clearwater): Hungerford, 1927.

PUCCINIA OENOTHERAE Vize (3, p. 248)

On Sphaerostigma contortum (Dougl.) Wolf. Roberts (Jefferson): Christ, 1919.

PUCCINIA ORTONII Jacks. (3, p. 321)

On Dodecatheon pauciflorum (Durand) Greene. Warren (Idaho): Stillinger, 1920, (U.I.F.P.H. No. 819).

PUCCINIA PARKERAE Diet. & Holw. (3, p. 211)

On Ribes lacustre (Pers.) Poir. Moscow (Latah): Pinson, 1914. Priest River (Bonner): Stillinger, 1919, (U.I.F.P.H. No. 805).

PUCCINIA PATTERSONIANA Arth. (3, p. 272)

On Sitanion jubatum J. G. Smith. Parma (Canyon): Hungerford, 1923.

PUCCINIA PENTSTEMONIS Pk. (3, p. 123)

On Pentstemon triphyllus Dougl. Johnson's Bar in Snake River Canyon (Idaho): Schade, 1936.

Note: Pedicels often much longer than spores.

PUCCINIA PILIPINELLAE (Strauss) Martius (3, p. 315)

On Osmorrhiza brevipes Cov. & Rose. Wallace (Shoshone): Stillinger, 1924, (U.I.F.P.H. No. 681).

PUCCINIA PLUMBARIA Pk. (3, p. 325)

On Microsteris gracilis (Dougl.) Greene. Moscow (Latah): Schade, 1936.

On Microsteris humilis Greene. Moscow (Latah): Schade, 1936.
Plummer (Benewah): Schade, 1936.

PUCCINIA POLYGONI-AMPHIBII PERSICARIAE (Strauss) Arth. (3, p. 232)

On Polygonum muhlenbergii (Meissn.) S. Wats. Stites (Idaho): Stillinger, 1926, (U.I.F.P.H. No. 790); Priest River (Bonner): Stillinger, 1919, (U.I.F.P.H. No. 796).

PUCCINIA PORPHYROGENITA Curt. (3, p. 251)

On Cornus canadensis L. Elk River (Clearwater): Pierson, 1931, (U.I.F.P.H. No. 658).

PUCCINIA PORRI (Sow.) Wint. (3, p. 221)

On Allium schoenoprasum L. Moscow (Latah): Hungerford, 1935.

PUCCINIA PULSATILLAE Kalchbr. (3, p. 184)

On Trautvetteria grandis Nutt. Pungalow (Clearwater): Stillinger, 1923, (U.I.F.P.H. No. 799).

PUCCINIA RIBIS DC. (3, p. 295)

On Ribes triste Pall. Little North Fork, Clearwater River (Clearwater): Putnam, 1929, (U.I.F.P.H. No. 173).

PUCCINIA RUBIGO-VERA AGROPYRI (Erikss.) Arth. (3, p. 178)

On Aquilegia formosa Fisch. Moscow (Latah): Bever, 1936.

On Clematis ligusticifolia Nutt. Twin Falls (Twin Falls): Hungerford, 1925. Figgins (Idaho): Allen, 1936.

On Delphinium nelsonii Greene. Johnson's Bar in Snake River Canyon (Idaho): Schade, 1936.

On Viorna hirsutissima (Pursh) Heller. Tensed (Benewah): Schade, 1936.

PUCCINIA RUBIGO-VERA AGROPYRINA (Erikss.) Arth. (3, p. 180)

On Agropyron repens L. Weiser (Washington): Hungerford, 1930.

PUCCINIA RUBIGO-VERA APOCRYPTA (Ell. & Tr.) Arth. (3, p. 182)

On Hydrophyllum albifrons Heller. Elk River (Clearwater): Pierson, 1931, (U.I.F.P.H. No. 663). Moscow (Latah): Thomas, 1916.

On Mertensia lanceolata (Pursh) DC. Coeur d'Alene (Kootenai): Hubert, 1929, (U.I.F.P.H. No. 421).

On Mertensia subcordata Greene. Elk City (Idaho): Stillinger, 1920, (U.I.F.P.H. No. 795).

PUCCINIA RUBIGO-VERA SECALIS (Erikss.) Carl. (3, p. 181)

On Secale cereale L. Moscow (Latah): Hungerford and Paeder, 1921.

PUCCINIA RUBIGO-VERA TRITICI (Erikss. & Henn.) Carl. (3, p. 181)

On Triticum aestivum L. Kimberly (Twin Falls): Barber, 1919.

Rathdrum (Kootenai): Hungerford, 1923. Moscow (Latah): Hungerford, 1923.

On Triticum compactum Host. Moscow (Latah): Willis, 1915.

PUCCINIA STIPAE Arth. (3, p. 140)

On Chrysothamnus sp. Twin Falls (Twin Falls): Hungerford, 1923.

PUCCINIA VAGANS EPILOBII-TETRAGONI DC. (3, p. 313)

On Epilobium paniculatum Nutt. Moscow (Latah): Bever, 1935.

PUCCINIA VIOLAE (Schum.) DC. (3, p. 311)

On Viola adunca J. E. Smith. Juliaetta (Latah): Darlington, 1906.

On Viola canadensis L. Greer (Clearwater): Stillinger, 1921, (U.I.F.P.H. No. 788).

On Viola glabella Nutt. Pierce (Clearwater): Stillinger, 1920, (U.I.F.P.H. No. 794).

On Viola sp. Bovill (Latah): Pierson, 1931, (U.I.F.P.H. No. 656).
Elk City (Clearwater): Stillinger, 1920, (U.I.F.P.H. No. 806).
Hungerford, 1926.

PUCCINIA XANTHII Scow. (3, p. 187)

On Xanthium speciosum Kearney. Caldwell (Canyon): Stillinger, 1927, (U.I.F.P.H. No. 770).

GYMNOSPORANGIUM JUVENESCENTIS Kern (3, p. 364)

On Amelanchier alnifolia Nutt. Fish Haven (Bear Lake): Whitman, 1928.

UROMYCES CARYOPHYLLINUS (Schränk) Wint. (3, p. 285)

On Dianthus sp. Moscow (Latah): Barber, 1917.

Note: According to the International rules this name should be Uromyces dianthi (Pers.) Niessl.

UROMYCES FABAE (Pers.) de Bary (3, p. 278)

On Lathyrus bijugatus T. G. White. Coeur d'Alene (Kootenai): Schade, 1936.

UROMYCES HETERODEPLIUS Syd. (3, p. 278)

On Erythronium grandiflorum Pursh. Dover (Bonner): Schade, 1936.
Worley (Kootenai): Schade, 1936.

UROMYCES POLYGONI (Pers.) Eckl. (3, p. 230)

On Polygonum aviculare L. Moscow (Latah): Raeder, 1934.

UROMYCES PROBUS Arth. (3, p. 228)

On Olsynium grandiflorum (Dougl.) Raf. Worley (Kootenai): Schade and Pierce, 1936.

UROMYCES RUDBECKIAE Arth. & Holw. (3, p. 201)

On Rudbeckia occidentalis Nutt. Confluence Breakfast Creek and North Fork Clearwater River (Clearwater): Schade, 1935.

UROMYCES TRIFOLII FALLENS (Desm.) Arth. (3, p. 305)

On Trifolium pratense L. Twin Falls (Twin Falls): Raeder, 1924. Hayden Lake (Kootenai): Hungerford, 1923.

UROMYCES TRIFOLII HYBRIDI (W. H. Davis) Arth. (3, p. 304)

On Trifolium hybridum L. Morton (Bonner): Hungerford, 1925. Moscow (Latah): Larsen, 1923.

UROMYCES TRIFOLII TRIFOLII-REPENTIS (Liro) Arth. (3, p. 304)

On Trifolium repens L. Lewiston (Nez Perce): Hungerford, 1919.

UROMYCES ZYGADENI Peck (3, p. 221)

On Zygadenus venenosus S. Wats. Twin Falls (Twin Falls): Murphy, 1930.

THELEPHORACEAE

CORTICIUM VAGUM Berk. & Curt. (6)

On Solanum tuberosum L. Moscow (Latah): Hungerford, 1924. Lewiston, (Nez Perce): Hungerford, 1925.

CLAVARIACEAE

TYPHULA GRAMINUM Karst. (35)

On Agropyron cristatum (L.) Gaertn. Tetonia (Teton): Hungerford, 1936.

On Dactylis glomerata L. Moscow (Latah): Raeder, 1932.

On Hordeum vulgare L. Sandpoint (Bonner): Rensberg, 1932.

On Triticum aestivum L. Squirrel (Fremont): Burkholder, 1926. Donnelly (Valley): Mayer, 1932. Hill City (Camas): Hungerford, 1931. Sandpoint (Bonner): Christ, 1931. Felt (Teton): Hungerford, 1926. Soda Springs (Caribou): Finch, 1934.

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