

VIII. Additions to the Fungus Flora of the Mackenzie River Basin

Margaret Newton

During a holiday trip down the Mackenzie River to Aklavik, N.W.T., and return between August 27 and September 12, the author collected the parasitic fungi that were to be found on cereals, grasses, and other vegetation within comparatively easy reach of the points of call along the route.

A special effort was made to find the northernmost limit of the cereal rusts. Puccinia graminis was found on Hordeum jubatum at Hay River, N.W.T., situated at the western end of Great Slave Lake (latitude 61°). Heretofore, Churchill, Man., (latitude 58°) was the most northerly point at which stem rust has been collected in Canada. Puccinia triticina was found on wheat at Fort Smith. For position of these places see map, p. 102.

The most northerly point at which plots of wheat, oats, and barley were seen was Fort Simpson. For three hours, these plots were examined for traces of rust but none were found.

The collections from the Mackenzie River Basin are arranged alphabetically according to the pathogen:-

Erysiphe graminis DC. on Agropyron dasystachyum (Hook.) Scribn., Arctic Red River, N.W.T., August. 30; Oil Wells, N.W.T., Sept. 2; on Hordeum jubatum L., Ft. Good Hope, N.W.T., Sept. 1; Hay River, N.W.T., Sept. 10.

Fusarium 1/ sp., on Salix sp., Fort Simpson, N.W.T., Sept. 6.

Heterosporium Phlei 2/ Gregory, on Phleum pratense L., Fort Resolution, N.W.T., Sept. 10.

Melampsora Abietis-capraearum 3/ Tub. on Salix sp., Ft. Good Hope, N.W.T., Sept. 1; Oil Wells, N.W.T., Sept. 2; Fort Simpson, N.W.T., Sept. 6. on Salix sp., Oil Wells, N.W.T., Sept. 2.

Melampsora Bigelowii 1/ Thüm. on Salix spp., Ft. Good Hope, N.W.T., Sept. 1; Ft. McMurray, Alta., Aug. 27.

Phragmidium americanum 4/ (Pk.) Diet. on Rosa sp. Arctic Red River, N.W.T. Aug. 30; Fort Good Hope, N.W.T., Sept. 11.

Phragmidium disciflorum 4/ (Tode) James on Rosa sp. Fort McMurray, Alta., August 27.

Phragmidium speciosum 4/ (Fr.) Cooke on Rosa sp. Fort McMurray, Alta., August 27.

1/ Identified by W. L. Gordon,

2/ Identified by J. E. Machacek,

3/ Identified by I. L. Conners,

4/ Identified by A. M. Brown.

Phyllactinia corylea ^{1/} (Pers.) Karst. on Cornus stolonifera Michx., Fort Simpson, N.W.T., Sept. 6.

Phytomonas coronafaciens ^{5/} (Elliott) Bergey et al. (lacking halo) on Avena sativa L., Fort Simpson, N.W.T., Sept. 6.

Puccinia Asteris ^{4/} Duby on Aster sp. Fort Simpson, July 6.

Puccinia coronata ^{4/} Corda on Elaeagnus commutata Bernh., Fort Simpson, N.W.T., July 6.

Puccinia graminis Pers. on Hordeum jubatum L., Hay River, N.W.T., Sept. 10; Fort Chipewyan, Alta., Sept. 14; Ft. McMurray, Alta., Aug. 27; on Hordeum vulgare L., Ft. McMurray, Alta., Sept. 28. From this latter collection was isolated P. graminis Tritici race 56.

Puccinia pygmaea ^{6/} Erikss. on Arctagrostis latifolia (R.Br.) Griseb. Ft. Good Hope, N.W.T., Sept. 1.

Puccinia triticina Erikss. on Triticum aestivum L., Ft. Smith, N.W.T., Sept. 12. From this collection was isolated P. trit. races 1 and 58.

Pucciniastrum pustulatum ^{1/} (Pers.) Diet. on Epilobium sp., Arctic Red River, N.W.T., Aug. 30; Ft. Good Hope, N.W.T., Sept. 1; Oil Wells, N.W.T., Sept. 2. Ft. Norman, N.W.T., Sept. 3.

Rhytisma salicinum ^{1/} (Pers.) Fr. on Salix spp., Ft. Simpson, N.W.T., Sept. 6.

Septoria Bromi ^{2/} Sacc. on Bromus ciliatus L., Ft. Good Hope, N.W.T., Sept. 1.

Uncinula Salicis ^{1/} (DC.) Winter on Salix sp., Ft. Simpson, N.W.T., Sept. 6.

Ustilago Hordei ^{1/} (Pers.) K. & S. on Hordeum vulgare L., Ft. Smith, N.W.T., Sept. 12.

Ustilago Kolleri ^{1/} Wille (U. levis) on Avena sativa L., Fort Smith, N.W.T., Sept. 12.

Ustilago Lorentziana ^{1/} Thüm. on Hordeum jubatum L., Fort Good Hope, N.W.T., Sept. 1.

Ustilago nuda ^{1/} (Jens.) Rostr. on Hordeum vulgare L., Fort Simpson, Sept. 6, 1940.

^{5/} Identified by W. A. F. Hagborg, ^{1/} Identified by W. Popp.

^{6/} Identified by George B. Cummins, (Purdue University),

