

V. DISEASES OF FOREST AND SHADE TREES

ABIES BALSAMEA - Balsam Fir

Witches' Broom (Melampsorella Caryophyllacearum) was observed at Tufts Lake, N.B. A few reports were received from Kings and Queens counties, P.E.I.

ARBUTUS MENZIESII

Tar Spot (Rhytisma Arbuti) was very general in the southern part of Vancouver island, B.C., and caused severe defoliation.

Red Leaf (Exobasidium Vaccinii) was found on a few trees on the new growth where the trees had been cut down in North Saanich, B.C.

ACER - Maple

Tar Spot (Rhytisma acerinum). A slight infection was observed on A. saccharinum and A. rubrum in P.E.I. It was general on A. sp. in a bush near Contrecoeur, Que.

Leaf spot (Septoria acerina) was general and quite severe on A. pennsylvanicum in Queens county, P.E.I.

Leaf spot (Gloeosporium apocryptum) severely infected a few trees on an estate in St. John county, N.B.

Wilt (Verticillium sp.). Several branches were killed on a number of A. platanoides at Macdonald College, Que. It was severe on one maple tree in Queens county, P.E.I.

Twig Blight. Coryneum septosporioides Sacc. & Syd. was discovered on dead shoots of A. negundo at Saskatoon and the Sutherland Forestry Station, Sask. Det. by G.R. Bisby. A small amount of Sphaeropsis albescens as well as Tubercularia vulgaris, and Macrophoma negundinis Ell. & Ev. were also found on dead shoots in the district. (R.C. Russell)

Canker (Nectria sp.). Two trees were severely cankered and practically dead due to canker at Macdonald College, Que. (I.H. Crowell)

AESCULUS - Horse Chestnut

Leaf Blight (Guignardia Aesculi) was heavy on most trees at Charlottetown, P.E.I.

Wood Rot (apparently Collybia sp.) was severe in one tree at Charlottetown, P.E.I.

ALNUS - Alder

Leaf spot (Septoria alnifolia) was general on a clump of A. incana at Morden, Man.

BETULA - Birch

Melanconium bicolor was collected on dying B. papyrifera at Saskatoon, Sask. (R.C. Russell)

CATALPA

Leaf spot (Alternaria sp.). An isolated tree in Welland county, Ont., was rather severely affected, the lesions covering half the leaf surface on some leaves. (G.C. Chamberlain)

CORNUS - Dogwood

Mosaic (virus). A single C. stolonifera shrub with variegated foliage was found at Newport, N.S., among other apparently normal plants. (J.F. Hockey)

Leaf Blight (Monilia Corni) was general, but caused slight damage to C. Nuttallii in the Fraser valley and on Vancouver island, B.C. (W. Jones)

FRAXINUS - Ash

Rust (Puccinia peridermospora) was severe on young ash trees at Senneville, Que. The youngest trees of F. pennsylvanica and the current season's growth on others were killed (I.H. Crowell). A fairly heavy infection was present on specimens received from Liverpool, N.S. (J.L. Howatt)

JUGLANS CINEREA - Butternut

Leaf spot (Gnomonia leptostyla (Marssonina Juglandis)). About 75% of the leaves and 10% of the nut husks were affected at Coldbrook, N.S. The tree was partially defoliated. (J.F. Hockey)

PICEA - Spruce

Needle Rust (Chrysomyxa ledicola) was common on young P. mariana in York and Sunbury counties, N.B. and caused some defoliation (J.L. Howatt). A rust (Chr. sp.) was heavy on P. canadensis in Queens and Prince counties, P.E.I.

Needle Rust (Chrysomyxa Weirii) was collected on P. rubra at St. Martins, N.B., June 20 (I.H. Crowell). As Dr. Crowell points out, this is apparently the first record of its occurrence in Eastern Canada.

Witches' Broom (Peridermium colorodense) was collected on Picea mariana at Tufts Lake, N.B. (I.H. Crowell)

PINUS - Pine

White Pine Blister Rust (Cronartium ribicola) killed many young white pine trees in a natural stand near Lake L'Achigan, Terrebonne county, Que. On a large plantation at Oka, the rust is

causing heavy losses, which are increasing from year to year (F. Godbout). It was observed at Mermaid, P.E.I.

Needle Cast. Lophodermium nitens was found in great abundance on needles of P. strobus on Ile Perrot, Que. L. pinastri was present on P. resinosa at Little Beach, N.B. (I.H. Crowell)

POPULUS - Poplar

Rust (Melampsora) moderately affected young plantations of poplars at the Sutherland Forestry Station, Sask., in August. M. medusae was heavy on the leaves of an ornamental variety of P. deltoides at Morden, Man.

Leaf Spot (Septoria musiva) was heavy at the Sutherland Forestry Station, Sask., in young poplar plantations. (R.C. Russell)

Leaf Spot (Marssonina Castagnei) slightly infected P. alba var. Bolleana in East St. Paul, Man.

Yellow Leaf Blister (Taphrina aurea) was fairly common on P. nigra in North Saanich and was found on P. trichocarpa at Cowichan Lake, B.C. (M. Wilson)

Branch Gall (Macrophoma tumefaciens Shear) severely infected 2 trees of P. tacamahaca (M.W. Cormack). It is reported commonly on P. trichocarpa and P. tremuloides (F. Kaufert. Am. Jour. Bot. 24:24-30. 1937). (I.L. Conners)

Cryptosphaeria populina was collected on Populus sp. (cult.) at Saskatoon, Sask. and Cucurbitaria staphula in good fruit on galls of P. tacamahaca at Beaver Creek, Sask. (R.C. Russell)

QUERCUS - Oak

Leaf Blister (Taphrina caerulescens). Three or four Q. rubra were almost completely defoliated, while other nearby trees of the same planting were not attacked at Macdonald College, Que. (I.H. Crowell). Affected leaves of Q. borealis and of an undetermined species of Quercus were received from Iberville. (D.B.O. Savile)

SALIX - Willow

Scab (Fusicladium saliciperduum) and Black Canker (Physalospora Miyabeana) was again destructive in N.S. Five applications of Bordeaux mixture held the disease in check at Grand Pre. Control was not as complete as has been secured in the past with this number of applications, but weather conditions were unfavourable for spraying, but very favourable for the spread of the disease (K.A. Harrison). Scab was general and destructive on willows throughout N.B. (J.L. Howatt). The disease was general from Bellechasse county to Rimouski, Que. A few trees have remained perfectly healthy so far, while trees all around them have been killed. (C. Ferrault)

Cryptomyces maximus was severe on Salix pellita at Tisdale, Sask., and was evidently highly parasitic, as many limbs had been killed (W.P. Fraser and R.C. Russell)

Other fungi collected on native willows this year include Diaporthe tessella, Valsa boreella, Hypoxyylon Blakei Berk. & Curt. (det. J.E. Bier) on Salix planifolia; Mastomyces proboscidea (Fr.) Sacc. and its perfect stage, Scleroderris fuliginosa (Fr.) Karst. on S. pellita and Diplodina Salicis West. (R.C. Russell)

Rust (Melampsora sp.) was discovered on the stems of S. serissima and S. pyrifolia, in early June, the lesions reaching a diameter of five-eighths of an inch. According to Dr. G.B. Cummins, several collections of M. Bigelowii on willow stems are in the Perdue Univ. Herbarium and Dr. G.R. Bisby states that some European species of Melampsora occur on willow bark. (W.P. Fraser and R.C. Russell)

SORBUS - Mountain Ash

Fire Blight (Erwinia amylovora) severely affected several trees at Charlottetown, P.E.I. (R.R. Hurst)

Rust (Gymnosporangium Juniperi) was heavy on all mountain ash trees at Kipling Island, Lake of the Woods, Ont. (A.M. Brown)

Canker (Cytospora sp.) caused moderate damage to mountain ash at Edmonton, Alta.

THUJA - Arbor Vitae

Needle Spot (Keithia thujina) was general and caused moderate damage to T. plicata on Vancouver island and the lower mainland, B.C. (W. Jones)

Poria Weirii was collected in Feb. on T. plicata in North Saanich, B.C. Det. by Irene Mounce (W. Jones).

TSUGA - Hemlock

Sapwood Rot (Poria tsugina) was seemingly the cause of the death of several T. canadensis trees on Isle Perrot, Que. (I.H. Crowell)

ULMUS - Elm

Black Spot (Gnomonia Ulmi) was general on a clump of old trees causing premature leaf drop in Lincoln county, Ont. The disease was also occasionally noted on scattered trees (G.C. Chamberlain). It was severe on U. pumila, Chinese elm, at Brockville, Ont. (I.L. Connors). Several trees of U. americana were so heavily infected at Macdonald College, Que., that they were defoliated almost completely by early August (I.H. Crowell). Black spot was

heavy on young trees, but the damage was slight in York county, N.B. (J.L. Howett). The disease caused partial defoliation of U. americana at Lawrencetown, N.S. About 60% of the leaves were affected. (J.F. Hockey)

Root Rot (Armillaria mellea) was apparently responsible for the death of 3 scattered trees in Ste. Anne de Bellevue and nearby Senneville, Que. (I.H. Crowell)