V. DISEASES OF FOREST AND SHADE TREES

ABIES BALSAMEA - Balsam Fir

Rust (Calyptospora Goeppertiana) was collected July 28, 1941, at Belle River, P.E.I. (R.R. Hurst; det. E.B. Mains)

Witches' Broom (Melampsorella Caryophyllacearum) affected a large tree in L'Islet Co., Que. (J.E. Jacques)

ACER - Maple

Twig Blight (Coryneum septosporioides) was reported from Vesper, Sask. on A. Negundo. (P.M. Simmonds, I.L. Conners)

Tar Spot (Rhytisma acerinum) was widespread in Kamouraska Co., Que. on A. saccharinum (J.E. Jacques). It was general on A. rubrum, A. saccharum and A. spicatum in P.E.I. (R.R. Hurst) R. punctatum was severe on A. spicatum near Hastings, N.B. (J.L. Howatt)

Frost Injury was severe at the Forestry Farm, Saskatoon, Sask. (H.W. Mead). Considerable frost injury was also seen in various locations between Levis and Riviere du Loup, Que. (C. Perrault)

AESCULUS - Horsechestnut

LEAF BLIGHT (Guignardia Aesculi). Infection varied from a trace to heavy at Charlottetown, P.E.I. No trees were found completely free from it. (R.R. Hurst)

Canker (Nectria sp.) was seen on three large trees in P.E.I., probably connected with winter injury. (R.R. Hurst)

ALNUS - Alder

Catkin Deformation (Taphrina Robinsoniana) was very abundant in Kings, Annapolis and Digby counties, N.S. (J.F. Hockey)

AMELANCHIER

Black Leaf Curl (Apiosporina Collinsii) was found on a few bushes at Patricia Bay, B.C. (W. Jones)

Rust (Gymnosporangium sp.) was unusually prevalent at Edmonton and Three Hills, Alta. (M.W. Cormack)

Blight (Sclerotinia Amelanchieris) was severe on blossoms, leaves and young fruits at Edmonton, Alta. (M.W. Cormack)

CORNUS NUTTALLII - Flowering Dogwood

Leaf Blight (Monilia Corni) was general on Vancouver Island, B.C., but caused slight damage. (W. Jones)

CORYLUS - Filbert

Leaf Spot (Gloeosporium Coryli) caused moderate damage at Kentville, N.S. (G.W. Hope)

Leaf Spot (Labrella Coryli Sacc.) did considerable damage to C. rostrata foliage at Brader and Abbotsford, B.C. It caused large spots (about 2 cm. diam.), sometimes coalescing to form large necrotic areas, central area creamy or light brown, outer area rufous brown with irregular, yellowish border; pycnidia, black, many, scattered, amphigenous; spores hyaline, 1-celled 14.5-18 x 4.5-5.5 microns. (W. Jones)

FAGUS GRANDIFOLIA - American Beech

Brown Mould (Gonatorrhodiella Highlei A.L. Smith). J. Ehrlich (Mycologia 34:705, 1942) records the occurrence of G. Highlei associated with Nectria coccinea (Pers ex fr.) Fr. and the woolly beech scale, Cryptococcus fagi (Baer), on diseased beech in affected stands throughout N.S. and in Albert Co., N.B., during the summers of 1930-1932. The determinations were checked by T.T. Ayres (Mycologia 33:178-187. 1941) who recorded the association of this brown mould from Maine. Ehrlich also records its presence at Fredericton on the authority of R.F. Balch, who says, "The brown mold can, I think, be found wherever heavy infestations of the scale occur". A map supplied by Mr. J.J. de Gryse, Chief, Forest Insect Investigations, indicates the distribution of the beech scale: general, old, heavy infestation now covers all N.S. and P.E.I. and South and South-East N.B. in a strip 30 to 50 miles deep; recent heavy infestations cover a further strip 50 miles deep from Newcastle in the North to Maine in the West, taking in Fredericton; light to moderate infestations occur as much as 30 miles further to the North-West. (I.L. Connors)

FRAXINUS - Ash

Leaf Spot (Piggotia Fraxini). Slight to heavy infection occurred on the leaves of a hedge of F. pennsylvanica var. lanceolata at Morden, Man. (W.L. Gordon)

Rust (Puccinia peridermiospora). A moderate infection occurred on F. pennsylvanica at Lyleton, Man. (W.L. Gordon)

Wilt (Verticillium sp.). This fungus was isolated from a diseased tree of F. americana in the Niagara Peninsula; this is believed to be a new host record. (C.D. McKeen)

Frost Injury was severe at the Forestry Farm, Saskatoon Sask. (H.W. Mead)

JUGLANS - Walnut

Bacterial Blight (Xanthomonas juglandis (Pierce) Dowson, Zeitschr. f. Bakt. u.s.w. Abt. 2. 100:190, 1939; Pseudomonas juglandis Pierce, Bot. Gaz. 31:272. 1901; Starr & Burkh. Phytopath. 32:600. 1942) caused moderate foliage injury in Vancouver Island and the lower mainland, B.C. (W. Jones)

JUNIPERUS

Rust (Gymnosporangium clavariiforme) was found on Swedish Juniper at Courtenay, B.C. (W.R. Foster)

Twig Blight (Phoma sp.) caused some damage at Morden, Man., this being a new record for the province. (W.L. Gordon)

LARIX OCCIDENTALIS - Western Larch

Needle Cast (Hypodermella Laricis) was destructive on larches from Grand Forks to Osoyoos, B.C. (Coll. G.E. Woolliams; det. A.W. McCallum)

MORUS - Mulberry

Canker and Die Back (Fusarium lateritium Nees. var. Mori Desm.) was found near New Westminster, B.C. This is the first Canadian record of this fungus. (Coll. W.R. Foster; det. W.L. Gordon)

NUTTALLIA CERASIFORMIS

Leaf Blight (Cylindrosporium Nuttallii) was general at North Saanich and Coquillam, B.C. (W. Jones)

PICEA - Spruce

Rust (Chrysomyxa spp.). The following collections were made in 1941; Chr. Cassandrae on P. glauca, Belle River, P.E.I. (R.R. Hurst); Chr. ledicola on P. Mariana, Belle River, P.E.I. (R.R. Hurst); Chr. Cassandrae with some Chr. ledicola on P. glauca, Charlottetown, P.E.I. (G.W. Ayers). (All det. E.B. Mains). Rust (Chrysomyxa sp.) was widespread, but not heavy on P. pungens in P.E.I. in 1942. (R.R. Hurst)

Deterioration of killed spruce. A paper by C.G. Riley and A.J. Skolko, "Rate of Deterioration in Spruce Killed by the European Spruce Sawfly." Pulp & Paper Mag. of Canada, June, 1942, is the second of three papers on deterioration of killed spruce. The first (Pulp & Paper Mag. of Canada, Aug. 1940) dealt with the rate of decay of spruce killed by the Eastern spruce bark beetle; the third will deal with decay of fire-killed spruce. Sawfly-killed spruce showed a 43.6% loss due to sapwood decay in 6 years, compared with only 3.9% in 6 years for spruce killed by bark-beetles. The difference is explained by the fact that the bark beetles loosen the bark, which is further removed by woodpeckers, and the wood of such trees dries rapidly; whereas the bark of sawfly-killed trees generally remains intact, maintaining a higher moisture content.

PINUS - Pine

Rust (Cronartium ribicola)was observed on occasional white pines in P.E.I. Where pines have been removed, an appreciable reduction of currant rust has been seen. (R.R. Hurst)

Red Leaf (?Abnormal moisture relations). Reddening and premature falling of leaves of 2-leaved pines was severe on 2 trees at Saskatoon, Sask. A similar condition has been ascribed to moisture deficiency (J.H. Faull, Ont. Min. Lands & For. Rept. 1921, 259-260. 1922) and moisture excess (H.T. Güssow, Dept. of Agr. Div. Bot. Rept. 1928, 31-33. 1929). (T.C. Vanterpool)

PLATANUS OCCIDENTALIS - Plane Tree

Leaf and Twig Blight (Gloeosporium nervisequum) was general in a boulevard at Victoria, B.C., causing slight general damage but considerable killing of branches in a few trees; it was also seen on two trees at the Station, Sidney, B.C. (W. Jones) It was quite severe on a tree in the Macoun Memorial Garden, Ottawa, Ont. (Coll. 7923); the typical thin foliage, except at the branch tips, was evident. The disease was present, but much less severe on two trees in the Dominion Arboretum (7917). See also Quercus. (I.L. Conners)

POPULUS - Poplar

Canker (Cytospora chrysosperma) was found on one branch of P. magnifica in Montreal Botanical Garden, Que. (J.E. Jacques)

Blight (Fusicladium radiosum) caused moderate damage at Roblin and Winnipeg, Man. It was particularly destructive to leaves and tips of young trees. (W.A.F. Hagborg)

Leaf Blight (Linospora tetraspora)was general and often severe on P. tacamahaca in central Alta. (M.W. Cormack)

Leaf Spot (Marssonina Castagnei) was so severe on native poplars at Summerland, B.C. that the leaves largely turned brown and shrivelled prematurely. (G.E. Woolliams)

Rust (Melampsora spp.) M. albertensis was general at Summerland, B.C. (G.E. Woolliams). M. Medusae infection was slight to moderate on P. tacamahaca at Edmonton, and severe on one tree at Brooks, Alta. (M.W. Cormack). M. occidentalis was abundant on P. trichocarpa at MacLeod, Alta. (I.L. Conners)

Leaf Spot (Septoria spp.). S. populicola was general and quite severe on P. trichocarpa throughout the Southern interior of B.C. (G.E. Woolliams). S. musiva lightly infected poplars near Calgary, Alta. (M.W. Cormack)

PSEUDOTSUGA TAXIFOLIA - Douglas Fir

Rust (Melampsora albertensis) was abundant near Kootenay, B.C., especially close to the lake. It was also sent in from Kamloops. (H.T. Güssow, J.W. Eastham, W.R. Foster)

Leaf Blight (Rhabdogloeum Pseudotsugae Sydow) was general in the Grand Forks and Osoyoos region, B.C. (G.E. Woolliams). In this material, collected in July, the Rhabdogloeum is fruiting and Rhabdocline past. In material collected in January, the Rhabdocline is immature; in May it is mature. (I.L. Conners)

QUERCUS - Oak

Leaf and Twig Blight (Gloeosporium nervisequum) was found on Q. ?macrocarpa at the mouth of the Jock River, near Ottawa, Ont. (D.C. McIntosh). See also Platanus.

RHAMNUS PURSHIANA - Cascara

Leaf Spot (Phyllosticta Rhamni) was fairly general at Cloverdale, B.C., causing slight damage. (W. Jones)

SALIX - Willow

Canker (Cytopspora chrysosperma) caused slight damage at Kentville, N.S. (G.W. Hope)

Rust (Melampsora spp.) was common throughout the Okanagan Valley, B.C. (G.E. Woolliams). A general, slight to severe infection was seen at Edmonton and Fort Saskatchewan, Alta. (M.W. Cormack)

Tar Spot (Rhytisma salicinum) was light at Edmonton, Alta. (M.W. Cormack)

Powdery Mildew (Uncinula Salicis) was common on native willows near Summerland, B.C. (G.E. Woolliams). It was moderately abundant at Edmonton, Alta. (M.W. Cormack)

SAMBUCUS RACEMOSA - Elder

Leaf Spot (Septoria sambucina) was heavy and general at Brandon and Morden, Man. (W.L. Gordon)

SORBUS - Mountain Ash

Fire Blight (Erwinia amylovora) practically killed a large tree (S. ?aucuparia) at Montreal, Que. (J.E. Jacques)

Rust (Gymnosporangium Juniperi) was abundant on trees at Cap à l'Aigle, Que., causing considerable leaf injury. (I.L. Conners)

TILIA AMERICANA - Basswood

Leaf Spot (Cercospora microsora) was light but general at Brandon, and moderate at Morden, Man.; this is a new Manitoba record. (W.L. Gordon)

Leaf Spot (Gloeosporium Tiliae) was heavy on a tree at the Station, Charlottetown, P.E.I. (R.R. Hurst)

ULMUS - Elm

Black Spot (Gnomonia ulmea). A moderate infection occurred on

U. americana at Morden, Man. (W.L. Gordon). It was severe at Morden, causing serious defoliation, and slight at Winnipeg on U. pumila, this being the first Man. record on this host. (W.A.F. Hagborg)

Coral Spot (Nectra cinnabarina) attacked U. pumila severely again at Montreal Botanical Garden, although vigorous pruning has cut down the spread; 2% of the trees had to be removed. The close planting of some trees in hedges has greatly favoured the disease. (J. E. Jacques)

VIBURNUM CASSINOIDES

Rust (Coleosporium Viburni) was common in Sunbury Co., N.B. (J.L. Howatt)

INSECTS

Empusa sp. was abundant on aphids in potato fields in York, Carleton, Albert, Westmorland and Victoria counties, N.B., greatly reducing the aphid population. (J.L. Howatt)

A few leafhoppers (Empoasca ?fabae) were found infected by Empusa sp. in potato plots at the Station, Fredericton, N.B. (J.L. Howatt)

Empusa sp. caused slight mortality in tarnished plant bugs (Lygus pratensis) in York Co., N.B. (J.L. Howatt)