V. DISEASES OF TREES AND SHRUBS*

ACER - Maple

Coral canker (Nectria cinnabarina) caused mod. damage on A. platanoides at St. John's, Nfld. Some branches appeared to have been killed (O.A. Olsen),

Leaf spot (Phleospora aceris) was very sev. on A. saccharum in maple sugar bush at Piopolis, Frontcnac Co., Oue. Premature defoliation was probable (D. Leblond).

Tar spot (Rhytisma acerinum) was mod. on A. ginnala at St. James, Man. (B. Peturson).

Windscorch (physiological). Many complaints were received from home gardeners of damage to A. palmatum in Vancouver, B.C. In some cases 100% of the foliage was dried-out and scorched (H.N. W. Toms).

AESCHYNANTHUS

Root-knot nematode (Meloidogyne incognita incognita) was recovered from specimens from Dundas, Ont. (R.H. Mulvey (C. P. D.S. 41:5. 357. 1961).

AESCULUS - Horsechestnut

Leaf blotch (Guignardia aesculi). Infection at Kentville and in Yarmouth Co., N. S. was extremely heavy in Aug. and Sept. (C. O. Gourley, K.A. Harrison). Leaf blotch was general and occasionally sev. in P. E.I. (J.E. Campbell).

Coral canker (Nectria cinnabarina) was sev. on trees in St. John's Nfld. (O.A. Olsen),

BERBERIS - Barberry

Anthracnose (Gloeosporium berberidis) was sev. on hedges of B. vulgaris in Quebec City, Que. (D. Leblond).

Root-knot nematode (Meloidogyne hapla) was recovered from B. thunbergii atropurpurea at Strathroy and from Berberis sp. from Toronto, Ont. (R.H. Mulvey (C. P. D.S. 41:5. 357. 1961).

BETULA - Birch

Anthracnose (Gloeosporium sp.). Infected specimens were received from Montreal, Que. The causal organism was thought to be G. betulae-luteae Sacc & Dearn. (P.K. Basu).

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* Diseases referred to in this section are mainly those of shade trees and ornamental shrubs, although occasional reference is made to diseases on native forest trees. For a more comprehensive report of tree diseases in Canada, the reader is referred to the Annual Reports of the Forest Insect and Disease Survey, published by the Forest Entomology and Fathology Branch, Canada Department of Forestry, Ottawa, Ont. (D. W. Creelman),

CARAGANA - Pea-Tree

Crown rot (Fusarium solani). An infected specimen of C. arborescens was received from Carleton, Bonaventure Co., Que. (D. L.).

CHAENOMALES - Japanese Quince

Blossom blight (Monilinia laxa). Two bushes of C. japonica, out of several in a garden at Sidney, B. C., were affected in the latter part of the bloom period (R.G. Atkinson). This is the first Canadian record of brown rot blossom blight on Chaenomales (D. W. C.).

CHAMAECYPARIS

Root rot (Phytophthora cinnamomi). All 80 plants of C. lawsoniana in an ornamental nursery nr. Victoria, B. C. showed varying degrees of foliar necrosis and 4 plants had been killed. P. cinammomi was isolated from affected plants. This nursery has a history of heavy infestation with Phytophthora (R. G. Atkinson).

CORNUS - Dogwood

Leaf spot (Ascochyta cornicola Sacc.) was collected on C, stolonifera at Ste. Anne de la Pocatiere, Que. Sporulation was sparse, but the few conidia seen measured 10-15 x 3-4μ and fitted the description of A. cornicola (D. Leblond). This disease has not been previously reported to the Survey (D. W. C.).

Blossom blight (Gloeosporium sp.) was mod. -sev. on bracts and floral parts of C. nuttallii at Saanichton, B. C. Its distribution was general in the area. possibly due to the prolonged, wet spring. Sporulation on the bracts was profuse (R. G. Atkinson). This constitutes the first record of a Gloeosporium sp. on Cornus in Canada (D. W. C.).

Powdery mildew (Phyllactinia guttata (Fries) Lév. = P. corylea (Pers.) Karst.) was common on Cornus spp. in the Edmonton, Alta, district. Affected leaves turned red and dropped prematurely. Numerous cleistothecia were formed in mid-Aug. (W. P. Skoropad). Previous reports, to the Survey, of powdery mildew on Cornus, have all been from B. C. (D. W. C.).

CRATAEGUS - Hawthorn

Leaf blight (Fabraea maculata). Trees of C. oxyacantha in home gardens at Chilliwack and West Vancouver, B. C. suffered sev. defoliation (H. N. W. Toms).

Rust (Gymnosporangium globosum). Specimens of infected leaves of C. oxyacantha variety "Lavelli" were received from a nursery at Niagara Falls, Ont. (G. C. Chamberlain).

DAPHNE

Twig blight (Botrytis cinerea). The organism was found on diseased twigs received from Vernon, B. C. (G. E. Woolliams).

Anthracnose (Marssonina daphnes). Three bushes of D. meaereum in an ornamental border at Saanichton, B. C. were completely defoliated. The same

bushes were defoliated in 1960. Bushes of D. burkwoodii, also known as "Somerset" showed no sign of infection (R.G. Atkinson). It continues to be damaging at Vancouver, B.C. Little attempt is made to control it. (H. N. W. Toms).

FRAXINUS - Ash

Rust (Puccinia sparaganoides). Many trees were infected in the areas around Digby Basin and the Annapolis River in w. N.S. Many mature trees had died as the result of rust infection in previous seasons (K.A. Harrison).

HEBE

Root rot (Pellicularia filamentosa) killed 1 plant of H. cupressoides (Veronica cupressoides) in a garden at Victoria, B.C. An extensive mat of white mycelium developed under the bark in the crown region (R.G. Atkinson).

HYDRANGEA

Gray mold (Botrytis cinerea) caused an inflorescence blight and was the probable cause of a leaf spot on H. paniculata in a greenhouse at Saskatoon, Sask. (R. C. Russell).

Powdery mildew (Erysiphe communis) was extremely heavy on hydrangeas at Devon, N.B. (S.R. Colpitts).

ILEX - Holly

Leaf spot and Stem canker (Phytophthora ilicis). Thirty % of the trees in a closely-planted, 50-year old orchard of 450 trees nr. Victoria, B.C. were infected in the winter of 1960-61. Most infected trees showed mod. leaf spotting and stem cankering but a few suffered sev. defoliation and killing of twigs. The site of the orchard is at sea level and soil conditions in winter are wet. Air drainage is also poor. A sawdust mulch, applied five years ago before the adoption of a clean fallow practice, undoubtedly permitted infested soil and spores to be splashed on the lower limbs from whence the disease has spread to 6-8 ft. above ground (R.G. Atkinson).

LONICERA - Honeysuckle

Leaf blight (Herpobasidium deformans). Infected specimens were received from Montreal, Que. (D.W. Creelman).

Powdery mildew (Microsphaera penicillata var. lonicerae). A heavy infection was observed on a hedge at the Cent. Exp. Farm, Ottawa, Ont. (D. W. C.).

Variegation (? virus). A single bush on the grounds of the Dominion Observatory, Ottawa, Ont. was sev. affected. Others in the near vicinity seemed normal (D.W.C.).

MALUS - Ornamental Crab

Fire blight (Erwinia amylovora) was sev. in Edmonton, Alta. in the spring. Many mature ornamentals were killed or damaged (W. P. Campbell).

Scab (Venturia inaequalis). Diseased specimens were received from Waterloo, Ont. (P.K. Basu).

PARTHENOCJSSUS - Ivy

Leaf spot (Phyllosticta ? viticola). A brown, circular leaf spot was prevalent on P. tricuspidata (Boston Ivy) at Vineland Station, Ont. Spots were brown with a—darker margin and pycnidia were abundant in the center of many of the spots. Conidia were ovoid and hyaline (W.G. Kemp),

Powdery mildew (Uncinula nector) was sl. on a vine of P. quinquefolia (Virginia Creeper) at Ottawa, Ont, (D. W. Creelman).

PINUS - Pine

Gall rust (? Cronartium quercuum). Galls, resembling those caused by C. quercuum were found om a large proportion of the trees of P. sylvestris at Maitland, Annapolis Co., N.S. Some galls were up to 3 inches in diameter, There was no evidence that they were of insect origin (K.A. Harrison).

Blister rust (Cronartium ribicola) affected 10% of the trees in a young stand of P, strobus at the Research Station, Kentville, N.S. A number of these 5-7 year old trees have died as a result of rust infection (C.O. Gourley). Infection was heavy on a white pine at Charlottetown, P.E.I. (J.E. Campbell).

PRUNUS - Flowering Cherry

Black knot (Dibotryon morbosum). Specimens were received from Sherbrooke, Que. (D. Leblond). Prunus nigra, grown as an ornamental at Halfway River, N. S., was sev. infected. Some 60% of the branches bore knots (C. O. Gourley).

Brown rot (Monilinia demissa (Dana) Honey. A species of chokecherry, Prunus demissa, was heavily infected at the virus experimental orchard nr. Summerland, B.C. About 50% of the leaves were affected and, despite profuse sporulation, infection did not spread to surrounding cherry, apricot, peach and plum trees (L.E. Lopatecki). M. demissa is confined to Prunus demissa and, until this record, was known only from the type locality in Washington State (D. W. C.).

Blossom and Twig blight (Monilinia laxa) was observed on Prunus subhirtella var. pendula at Saanichtoq, B.C. Twigs were killed back to the extent of 12-18 inches (R.C. Atkinson).

Blast (Pseudomonas syringae). Specimens were received from several gardens in n. and w. Vancouver, B.C. (H.N.W. Toms),

PYRUS - Mountain Ash

Fire blight (Erwinia amylovora) was reported, and specimens were received from Edmonton, Alta. (W.P. Campbell). Infection was mod, on a tree at St. John, N.B. (K.M. Graham).

Rust (Gymnosporangium cornutum), A el, infection was present on leaves of P. decora at Clearwater Bay, Ont. It was much less prevalent than in most seasons, probably because of the exceptionally dry weather (W.L. Gordon).

QUERCUS - Oak

Leaf blister (Taphrina caerulescens). Light infections were seen on oak at the Exp. Farm, Charlottetown, P. E.I. (J.E. Campbell).

RHAMNUS - Buckthorn

Crown rust (Puccinia coronata agrostidis). Aecia were first seen 1 June on a single tree of R. frangula on the grounds of the Dominion Observatory, Ottawa, Ont. Crown rust on this host has been previously reported from N.S. and N.B. (D. W. Creelman).

RHODODENDRON

Crown gall (Agrobacterium tumefaciens). Infection was found on an F_1 hybrid of R. smirnowii x R. catawbense at Kentville, N. S. No previous reports of crown gall on Rhododendron from North America could be found although it has been reported from England (K.A. Harrison).

Leaf gall (Exobasidium vaccinii). Diseased specimens of azalea were received from Vancouver, B. C. (H. N. W. Toms). Fleshy galls affected the flower parts and unopened buds of 19/50 azalea plants in a greenhouse at Hamilton and on 1/50 plants at Fonthill, Ont. (W.G. Kemp).

Leaf rust (Pucciniastrum myrtilli) was found on 1 of approximately 100 plants of Rhododendron hybrids at Kentville, N.S. It caused a fine spotting of the upper leaf surface and spores were borne on the lower surface (K.A.H.). This is the first report, to the Survey, of P. myrtilli on Rhododendron (D.W.C.).

RHUS - Sumac

Dieback (Tubercularia vulgaris). Branch cankers caused sl-mod. killing at Thetford Mines and a sev. trunk infection, resulting in defoliation, was observed at Quebec City, Que. (D. Leblond).

RIBES - Flowering Currant

Anthracnose (Drepanopeziza variabilis Müller, Hütter & Schüepp. stat. conid. = Gloeosporidiella variabilis (Laub.) Nannf.). Severe infections, that resulted in considerable defoliation, were reported on a number of hedges of R. alpinum at Ottawa, Ont. In one instance, repeated applications of captan failed to hold the disease in check (H.S. Thompson, P.K. Basu, D. W. Creelman).

Powdery mildew (Sphaerotheca mors-uvae) was sev. in a hedge of R. alpinum at Edmonton, Alta. (W.P. Skoropad). It affected 10% of the plants in one hedge at Ottawa, Ont. and another was 50% infected with considerable distortion of terminals (D.W. C.).

ROSA - Rose

Black spot (Diplocarpon rosae). Infection was heavy on a specimen received from Ottawa, Ont. (P.K. Basu). Infection was 80% and defoliation sev. at Black's Harbor, N. B. (S.R. Colpitts). A sl. infection was seen at St. John's, Nfld. (O.A. Olsen).

Rust (Phragmidium sp.) was tr. in a home garden at St. James, Man. (B. Peturson).

Powdery mildew (Sphaerotheca pannosa) was extremely sev. on a large planting of the variety Chalice in a greenhouse at Winona, Ont. All plants were affected and 25% of the blooms were discarded while the remainder were graded low. The variety Better Times was less severely affected (W. G. Kcmp). Late season infection was mod. in a home garden at Ottawa, Ont., but it occurred too late to cause any damage (D. W. Creelman). Specimens showing sev. damage to buds were rcccived from Levis, Que. (D. Leblond). It was general in N.B. (S.R, C.). Powdery mildew was sev. on rambler roses at Kentville and specimens were received from Halifax and Chester, N.S. (C.O. Gourley). It was more prevalent at Charlottetown, P.E.I. than it has been for a number of years (J.E. Campbell).

Dagger nematode (Xipliinema diversicaudaturn) was a problem in at least 4 greenhouses between Toronto and Windsor, Ont. in the winter 1961-62. In one house, flower production was reduced by 25%. The affected varieties were grafted on Manette rootstock. The nematode is believed to have been introduced on plants imported from Arizona, California or both, since it is not indigenous to Ont. Good control and plant response were obtained through the application of Nemagon at 5 1/2 oz/1000 sq. ft. of bench (J.L. Townshend).

SALIX - Willow

Twig blight (Marssonina kriegeriana) was seen on S. babylonica at Vancouver, B. C. (H. N. W. T.) and on Salix sp. at Grand Bay, N.B. (K.M. Graham).

Scab and Twig blight (Venturia saliciperda, Physalospora miyabeana) was epidemic in April and May in the southern part of Vancouver Island and in the coastal areas of the B.C. mainland, Salix vitellina var. aurea and S. babylonica suffered sev. blighting of leaves, cankering of small twigs and killing of entire branches (R. G. Atkinson). It caused considerable defoliation of S. babylonica at Vancouver, B. C. during an extended period of hot,, dry weather (H.N. W. Toms). Willow blight was sev. in the Annapolis Valley, N.S. early in the season. Good control was abtained at Grand Pre Memorial Park by the use of Phygon at 1/2 lb/100 gal. (K.A. Harrison).

SPIRAEA

Dieback (Fusarium equiseti), apparently induced by frost injury, was sev. on S. vanhouttei at St. Patrice de Beaurivage, Lotbiniere Co., Que. (D. Leblond).

Lime-induced chlorqsis was especially prevalent on Spiraea spp. in the Winnipeg, Man. area. Many plantings were retarded (W. L. Gordon),

SYMPHORICAR POS - Snowberry

Powdery mildew (Microsphaera diffusa). Infection was general in a planting of S. albus on the University Campus, Vancouver, B. C. (H. N. W. Toms).

SYRINGA - Lilac

Crown gall (Agrobacterium tumefaciens). Specimens were received from Ottawa, Ont. from a home owner who stated that several affected plants in a young hedge had died during the summer (D. W. Creelman).

Powdery mildew (Microsphaera penicillata). Infected specimens of S. vulgaris were received from Weston, Ont. (P.K. Basu). A hedge of S. amurensis was heavily infected on the Cent. Exp. Farm, Ottawa, Ont. and the disease was general on S. vulgaris in the Ottawa area (D.W.C.). It was mod.-sev. at Ste. Clothilde, Que. late in the season (R.O. Lachance) and caused some defoliation in a nursery at Kentville, N.S. (K.A. Harrison).

Bacterial blight (Pseudomonas syringae) was mod.-sev. in the spring on Vancouver Island, B.C. (R.G. Atkinson). It was observed at Fredericton, St. John and North Head, Grand Manan, N.B. (K.M. Graham).

TILIA - Linden

Anthracnose (Gnomonia tiliae). Infection was mod. on several trees of T. europaea in the vicinity of Charlottetown, P.E.I. (J.E. Campbell).

ULMUS - Elm

Dutch Elm disease (Ceratocystis ulmi) was identified from trees on the Cent. Exp. Farm by J. Reid of the Forest Biology Laboratory, Maple, Ont. (P.K. Basu).

Leaf spot (Gnomonia ulmea). Infection was sl. on specimens received from Carp, Ont. and Hull, Que. (P.K.B.).

Coral canker (Tubercularia ulmi). An infected specimen of U. pumila was received from Sillery, Que. (D. Leblond).