VI. DISEASES OF FOREST AND SHADE TREES

ABIES BALSAMEA - Balsam Fir

Witches' Broom (Melampsorella Caryophyllacearum) was rather heavy in Kings Co., P.E.I.

?Canker (Dasyscypha Agassizii). A few apothecia were found on stems of fir on Ile Perrot, Que. (I.H. Crowell)

Needle Cast (Bifusella Faullii Darker) was found on Ile Perrot, Que., on June 22. (I.H. Crowell)

ACER - Maple

Tar Spot (Rhytisma acerinum) was rather severe on A. rubrum in Kings Co., P.E.I. (R.R. Hurst)

Leaf Spot (Gloeosporium apocryptum) caused extensive damage to the leaves of maples in Madawaska and Kings counties, N.B. (J.L. Howatt)

Powdery Mildew (Uncinula Aceris) was observed in North Saanich, B.C., in October (W. Jones). The appendages are bifid and thickwalled and thus are totally unlike those of U. circinata (I.L. Conners)

Massaria inquinans (Tode) Fr. was seemingly parasitic on a few small trees on Ile Perrot, Que. (I.H. Crowell)

AESCULUS - Horse Chestnut

Leaf Blight (Guignardia Aesculi) was very destructive in P.E.I. in 1939 (R.R. Hurst). Infection was moderate on trees sprayed with Bordeaux at the Station, Kentville, N.S., but it was quite heavy on some trees in the town. (D.W. Creelman)

AILANTHUS GLANDULOSA - Tree of Heaven

Butt Decay (Armillaria mellea). One tree is gradually dying at the Station, Sidney, B.C. (W. Jones)

ARBUTUS MENZIESII

Rust (Thecopsora sparsa) was found on a few trees in the Victoria district, B.C. (W. Jones)

CARYA - Hickory

Schizophyllum commune seems to be parasitic on branches of some trees of C. cordiformis on Ile Perrot, Que. (I.H. Crowell)

CATALPA

Drought. Two trees at Kentville, N.S., showed conspicuous large spots on the foliage; no pathogen was isolated from the spots. Apparently the wilt and leaf spot were due to drought. (J.F. Hockey)

CORYLUS AVELLANA - Filbert

Canker (Phomopsis revellens v. Höhn.) appears to be of some importance in the Fraser Valley, B.C., according to Mr. E. Clark, District Horticulturist. Isolations made from cankers received from Sumas Prairie yielded a Phomopsis, the A and B spores of which agreed with those of P. revellens. Dr. L.E. Wehmeyer confirmed the determination, although in the absence of the perithecial

stage it was impossible to be positive. The growing of filberts is hardly an industry in B.C., but it is becoming increasingly important. (W.R. Foster)

FAGUS - Beech

Canker (Nectria, following Cryptococcus fagi). Traces were seen at Falconwood Farm, Linkletter Road, and Miscouche, P.E.I. (R.R. Hurst)

FRAXINUS - Ash

Rust (Puccinia peridermiospora) was collected at Senneville, Que., on F. americana. Rust was severe on several trees of F. nigra at Liverpool, N.S. It was heavy on two small trees and light on a larger one of the same species near Delhaven.

JUGLANS REGIA - Walnut

Bacterial Blight (Phytomonas Juglandis) was general at the Station, Sidney, B.C., and caused a 10-20% loss of the crop; it was also present in the Fraser Valley.

JUNIPERUS

Rust (Gymnosporangium Juniperi-virginianae) has been observed occasionally in Eastern Ont. on J. virginiana, but this year it was observed in Lambton and Essex counties in Western Ont. A serious outbreak was reported in the Essex Peninsula (J.E. Howitt). A heavy infection was observed close to one apple orchard near Picton, Ont. (I.L. Conners)

Gymnosporangium globosum was severe on J. virginiana in an old garden near Hull, Que. (I.L. Conners)

Gymnosporangium clavariaeforme was heavy on J. communis var. hibernica at Charlottetown, P.E.I.

LARIX - Larch

Needle Cast (Hypodermella Laricis) was first noted during July on L. occidentalis in the Grand Forks area, B.C.; the infection was moderate to severe. Again around Bridesville and Rock Creek the infection was heavy.

No further observations were made until August. At that time the larch was throwing a second set of apparently healthy needles. The Bridesville - Rock Creek infection now appeared mild. In the Monashee Pass the disease was very slight, increasing to moderate at Edgewood, Redlands and the Arrow Lakes. Infection was slight at New Denver and Slocan, moderate to severe at Balfour and Kaslo and slight to moderate at Sunset. To sum up, the infection was moderate to severe in the Southern Interior of B.C. with a gradual lessening of the disease at the northern limit of larch. (W.D. Touzeau)

PICEA - Spruce

Witches' Broom (Peridermium coloradense). Several brooms were seen on a few trees at Oka, Que., on P. glauca. (I.H. Crowell)

Needle Rusts (Chrysomyxa spp.) occurred across the entire northern forest belt from the Yukon to eastern Newfoundland. It was particularly conspicuous in northern Sask. and Man. and throughout northern Ont. Its unusual prevalence may be associated with high midsummer humidities. Although its aspect is striking, damage may be expected only if infection should continue over

several consecutive years (A.W.A. Brown). While these rusts are reported here and there across Canada every year, the above note gives the first comprehensive statement of their distribution in any one year.

Needle Rust (?Pucciniastrum americanum)was moderate on three blue spruce adjacent to a raspberry patch at Southport, P.E.I., while an occasional needle was affected on a white spruce hedge at the same place. (G.W. Ayers)

PINUS - Pine

White Pine Blister Rust (Cronartium ribicola). A reconnaissance trip was made June 5-22 through a 10 to 30 mile strip along the north shore of the Ottawa River in Pontiac and Temiskaming counties, Que., a white pine area once famous in the Ottawa valley. Blister rust was present fairly generally but in no instance was the degree of infection heavy, which condition was accounted for by the scarcity of Ribes. However, for a country, which originally bore heavy trees, the amount of young growth is disappointingly small. Probably several factors are operating, the most important being the practical elimination of seed trees by logging and fire (A.W. McCallum). White pine blister rust was found at Charlottetown, P.E.I. (R.R. Hurst)

Needle Cast (Lophodermium nitens) was abundant on P. Strobus on Ile Perrot and at Rowden, Que. (I.H. Crowell)

Needle Cast (Lophodermium Pinastri), was also common but not abundant on P. resinosa at the same places. (I.H. Crowell)

Cenangium acuum Cke. & Pk. was collected in small quantities on Ile Perrot, Que. (I.H. Crowell)

POPULUS - Poplar

Ink Spot (Sclerotium bifrons) was severe on P. tremuloides near Brainard, in the Peace River District, Alta. Some trees lost 90-95% of their foliage. Dr. J.W. Groves confirmed the identification of the fungus (M.W. Cormack). It was observed on P. tremuloides at several points in Balkley Valley, central B.C. It occurs in definite patches ranging from a few trees to several acres. The general appearance of the disease is similar to the effects of severe frost. (J.D. Menzies)

Leaf Spot (Cladosporium subsessile) was found on small trees of P. tremuloides, 1 to 4 ft. in height at Senneville, Que. (I.H. Crowell)

Cenangium populneum was abundant on a few small fallen trees of P. tremuloides at Senneville, Que. (I.H. Crowell)

QUERCUS - Oak

Leaf Blister (Taphrina caerulescens) was slight to moderate at Beaverlodge, Alta.

Leaf Blotch (Marssonina Martini). Several roadside trees of Q. alba were scorched conspicuously on July 15 at Senneville, Que., and they were partially defoliated by Aug. 1. (I.H. Crowell)

SALIX - Willow

Scab (Fusicladium saliciperdum). Early infection was general in Kings Co., N.S., but dry weather during the summer checked the disease to such an extent that it had almost disappeared by August. At Grand Pre Memorial Park, 5 applications of Bordeaux mixture completely controlled scab. Large French willows are becoming scarce in N.S. Several survivors of the severe epidemic

of 1926-28 were further weakened by the severe epidemic in 1937 and failed to survive the winter of 1938-39. (K.A. Harrison)

Black Canker (Physalospora Miyabeana). A slight scattered infection was present in Kings Co., N.S., during the summer, but it caused little damage. (K.A. Harrison)

Powdery Mildew (Uncinula Salicis) literally covered the leaves of Salix cordata growing in crowded situations about Macdonald College, Que.

Rust (Melampsora Abieti-capraearum). A moderate infection was observed on Salix prob. discolor, in Kings Co., N.S. (D. Creelman)

SORBUS - Mountain Ash

Rust (Gymnosporangium Juniperi) was fairly heavy on leaves of S. americana at Murray Bay, Que. (I.H. Crowell)

Rust (Gymnosporangium clavipes) was collected at Kentville, N.S. This is the first time this rust has been found on Mountain ash in N.S. (J.F. Hockey and I.L. Conners)

Canker (Nectria cinnabarina). Several scattered twigs showing die-back and canker were found at Kentville, N.S. (J.F. Hockey)

Fire Blight (Erwinia amylovora) killed a tree of S. americana, 12 in. in diameter at Macdonald College, Que. (I.H. Crowell)

ULMUS - Elm

Black Spot (Gnomonia ulmea). Fine perithecial material was found fully mature on May 4 at Macdonald College, Que. Many trees were prematurely defoliated at the College and in the vicinity. (I.H. Crowell)

Specimens of Chinese elm affected by Nectria cinnabarina were collected at Liverpool, N.S. (J.F. Hockey)

WOOD PRODUCTS

Monilia sitophila was found affecting birch veneer in N.S. (J.F. Hockey and I.L. Conners)

Rhizopus nigricans affected 25-92% of the berry boxes from one factory in Ont. After preliminary trials with 25,000 boxes, over 500,000 boxes, which had been found contaminated in April, were successfully disinfected with formaldehyde under the direction of Dr. L.W. Koch. (G.H. Berkeley)

Boxes from another factory were found affected by a blue stain fungus by Dr. Berkeley. The causal organism was identified as Endoconidiophora adiposa by Dr. J.W. Groves.

TIMBER

Dry Rot caused apparently more damage than usual to floor joists, etc., in northern Sask.; four or five enquiries (with specimens) were received. The spring and early summer were wet. (T.C. Vanterpool)

INSECTS

About 20 dead larvae of Diacrisia virginica, the yellow bear, were collected at St. Michel, Bellechasse Co., Que., in a small field in about a quarter of an hour by N.J. Baillairge; only one live caterpillar was found. The larvae were parasitized by Entomophthora Grylli Fries. (I.L. Conners and H.G. Crawford)