V. DISEASES OF FOREST AND SHADE TREES

BALSAM FIR (Abies balsamea)

Witches' broom (Melampsorella Caryophyllacearum) was reported from Annapolis county, N.S. and Queens county, P.E.I.

BASSWOOD (Tilia americana)

Powdery mildew (Uncinula Clintonii) was collected at Abbotsford, Que.

BEECH (Fagus)

Canker (Nectria coccinea). Beech trees 4 to 6 inches in diameter at Kentville, N.S. bear numerous cankers on the trunk while most of the older trees are dead and small trees are affected but not so severely. (K.A. Harrison)

BIRCH (Betula)

Polyporus velutinus and P. Tulipiferae were collected at Indian Head, Sask., on white birch.

Frost caused severe damage on May 16, to the leaves of birch, butternut, hawthorn, maple, and oak at the Experimental Station, Fredericton, N.B.

ELM (Ulmus)

Black spot (Gnomonia Ulmi) was found causing early leaf drop on several occasions in Lincoln county, Ont. Several trees were affected at Springhill, N.B.

Cephalosporium wilt (Dothiorella Ulmi (Cephalosporium sp.) was found on single trees at two places in N.S. One tree is approximately 30 years old in a row of elms which otherwise appear healthy. When the disease was noticed, twigs were showing dieback from the base to the top of the tree. The other tree is along a highway and is more or less isolated from other elms. Cultures of the fungus were identified by Dr. D.B. Craeger (J. F. Hockey). This is a new disease for Canada, but it has already received some attention in the United States (Goss, R.W. and P.R. Fink, Univ.

Neb. Agr. Exp. Sta. Res. Bull. 70. 1934 and Craeger, D.B., Jour. Arnold Arb. 16:453-454. 1935)

HAWTHORN (Crataegus)

Leaf blight (Fabraea maculata) was reported from Comox, B.C.

Rust (Gymnosporangium clavariaeforme). Traces of rust were found on C. Oxyacantha var. rosea at Charlottetown, P.E.I.

HORSE CHESTNUT (Aesculus)

Leaf blight (Guignardia Aesculi (Phyllosticta Paviae) caused slight defoliation at Kentville, N.S. It caused moderate to severe damage throughout P.E.I.

MAPLE (Acer)

Tar spot (Rhytisma acerinum) was heavy on some trees at the Station, Kentville, N.S. It was also present in P.E.I.

Powdery mildew (Uncinula circinata) was collected on A. saccharum at Chelsea, Que.

Canker (Cytospora sp.) caused slight damage to a tree of A. saccharinum at Saskatoon, Sask.

Wilt (Verticillium sp.) caused some defoliation on one side of 2 trees growing in a yard at St. Catharines, Ont.

Leaf spot (Septoria acerina) slightly infected A. pennsylvanicum on Wood Islands, P.E.I.

Canker (Nectria cinnabarina) affected one small tree of A. pennsylvanicum planted at the Station, Kentville, N.S.

MOUNTAIN ASH (Sorbus)

Canker (Cytospora sp.) following sun scald or winter injury was found causing moderate injury to one of the two trees at Saskatoon, Sask.

Leaf blight (Fabraea maculata) was prevalent on S. occidentalis at Prince Rupert, B.C.

Fire blight (Erwinia amylovora) was severe on young saplings 2 to 3 ft. high at the Station, Morden, Man. The disease was observed on several trees in P.E.I.; it caused severe damage.

OAK (Quercus)

Heart rot (Polyporus obtusus). This polypore was found causing a serious heart rot in 20-30 year old stands of red oak (Q. rubra) at the Petawawa Forest Reserve, Ont.

PINE (Pinus)

White pine blister rust (Cronartium ribicola J.C. Fischer) was observed in York, Sunbury, Charlotte, Northumberland, Gloucester, Queens, and Kings counties, N.B., (J.L. Howatt). Mature aecia were found at Kentville, N.S. on May 1. The disease is gradually killing the older trees. It caused severe damage in P.E.I. (R.R. Hurst). Blister rust is evidently destructive in Bonaventure county, Que. One tree, 10 feet high, which was dying from a multiple infection, bore 13 separate cankers. Trees of the original growth, which have been left standing often bear a typical flag. (I.L. Conners)

P. koraiensis in the Arboretum, Experimental Farm, Ottawa, Ont. was found to be a new host of Lophiodermium nitens. The identification was confirmed by Dr. G.D. Darker. (J.E. Bier)

POPLAR (Populus)

Yellow leaf blister (Taphrina aurea). Affected leaves were received from Massett, Graham Island, B.C., where it is apparently general. A light infection was observed on Lombardy poplar (P. nigra var. italica) in Queens county, P.E.I.

Heart rot (Polyporus dryophilus var. vulpinus) was found to be common in a 45-year old stand of P. grandidentata at the Petawawa Forest Reserve, Ont.

Canker (Hypoxylon pruinatum) was common on aspen (P. tremuloides) of all ages up to 65 years at the Petawawa Forest Reserve, Ont. (J.E. Bier)

Canker (Cytospora chrysosperma). Lombardy poplar affected with this canker was received from Grinrod, and

Trail, B.C. It was reported to have killed a number of 6 to 8 year old trees at Trail.

Rust (Melampsora Medusae) was very severe on Russian poplar at the Forestry farm, Indian Head, Sask. It was collected on Northwest poplar (P. balsamifera x deltoides) at the Petawawa Forest Experimental Station, Chalk River, Ont.

RED CEDAR (Juniperus)

Rust (Gymnosporangium globosum) was fairly abundant on J. virginiana (var. ?hibernica) at Abbotsford. Nearby hawthorn were heavily rusted in 1935, but no attempt to collect it was made this year. (H.N. Racicot)

Rust (Gymnosporangium clavipes) was found on the lower limbs on one side of a tree of J. virginiana at Port Dalhousie, Ont. (H.N. Racicot)

SPRUCE (Picea)

Rust (Chrysomyxa ledicola). A severe outbreak was observed at Maryland Hill, N.B. on P. nigra. (J.L. Howatt)

Rust (Chrysomyxa sp.) heavily infected P. canadensis at St. Timothy, P.E.I. Specimens from rusted blue spruce planted at Lakeview House, Portneuf Co., Que., were received at Ottawa on Aug. 24; it had been noted for the past 2 years.

SUMACH (Rhus)

Sphaeropsis Sumachi Cooke & Ellis (=Physalospora obtusa) was found causing a die-back of blossom spurs at Dartmouth and Berwick, N.S. (J.F. Hockey)

WALNUT

Bacterial blight (Phytomonas Juglandis) caused about 20% damage to the fruits and leaves of English walnut in the orchard at the Station, Sidney, B.C.

WILLOW (Salix)

Tar spot (Rhytisma salicinum) slightly infected willows at Oxford, N.S.

Powdery mildew (Uncinula Salicis) was slight at Gillam (Hudson Bay Railway, mile 326.7), Man. It was collected on S. cordata at St. Pie, Que.

Rust (Melampsora ?Abieti-capraearum) moderately infected willows at Gillam, Man.

Scab (Fusicladium saliciperdum) was severe from Levis to Rimouski, Que., especially between Ste. Anne de la Pocatiere and Riviere Ouelle. In this more limited section, the foliage of nearly all the trees dried up in July. A few trees among the diseased were apparently resistant as they showed no sign of injury from scab (C. Perrault). It was also observed at several points along the highway between Levis and Ste. Angele de Laval, opposite Three Rivers, and at Louiseville, nearly 25 miles west of Three Rivers, where several large trees were browned by the disease (C. G. Riley). Scab caused more damage in 1936 than it has in recent years in N.B. Several ornamental varieties of willow at the Fredericton Station, which had previously escaped, were severely affected this season (J. L. Howatt and S. Clarkson). Scab was more destructive throughout the Annapolis valley, N.S. than at any time since 1928. Trees with three-quarters of their foliage dead were common throughout the summer. Weather conditions favoured the early appearance of the disease. (K. A. Harrison)

Black canker (Physalospora Miyabeana) was not as evident as scab during the past summer in Kings county, N.S., but it was present on most trees. It was quite common in the Gaspereaux valley. (K. A. Harrison)

Canker (Stereum purpureum). Part of the trunk of a weeping willow tree was dead and thereon the fungus was fruiting at the Station, Kentville, N.S. (K.A. Harrison)