

## V. DISEASES OF TREES AND SHRUBS

### ABIES - Fir

Witches' Broom (Melampsorella caryophyllacearum). A tr. infection was general on A. balsamea in w. Lunenburg Co., N. S. (D. W. Creelman).

Rhizothyrium abietis Naum. was found on needles of A. balsamea collected at McGirney Junction, N. B., by R. H. Cochrane, 26 July 1955. A second collection was made at Wilton-Dale, St. Barbe district, Nfld. This fungus does not appear to have been reported previously in North America. The fungus sometimes occurs in association with another member of the Phomales, Rhizophæra abietis Mang. & Hariot. The latter attacks current season or one-year-old needles; the affected needles are completely necrotic and a few to all needles on a branch may be attacked (J. A. Parmelee).

### ACER - Maple

Leaf Spot (Gloeosporium apocryptum) was sev. on young shoots of A. saccharum at St. Gabriel, Que. Ascervuli visible on both sides of the leaf; spores 6-10 x 3-4 microns (D. Leblond). This pathogen caused mod. damage in early summer at Kentville, N. S. (D. W. Creelman).

Die-back (Nectria cinnabarina) affected about 100 maples in a nursery nr. ?St. John's, Nfld. (G. C. Morgan, H. S. Thompson).

Leaf Spot (Phleospora aceris), the most common on maple in N. S., was general in Kings, Annapolis and Lunenburg counties (D. W. Creelman).

Tar Spot (Rhytisma acerinum). Sev. on A. rubrum in the forest at St. Gabriel, Que. (D. Leblond); common in Kings and Lunenburg counties, N. S. (D. W. Creelman); sl. infections on A. rubrum and A. saccharum at Upton, P. E. I. (W. L. Seaman). Rhytisma punctatum was observed on A. spicatum in Lunenburg Co., N. S. (D. W. C.).

Leaf Spot (Taphrina dearnesii) was sev. on A. rubrum at Chateau d' Eau, Quebec Co., Que. The fungus in the specimens collected 15 June was nearly spent (D. Leblond, D. B. O. Savile).

2, 4-D Injury. The damage on A. negundo was the least observed in recent years at Saskatoon, Sask. Apparently greater care is being taken in applying the herbicide (T. C. Vanterpool).

### AESCULUS - Horsechestnut

Leaf Blotch (Guignardia aesculi) caused slight defoliation of trees at Kentville, N. S. (C. O. Gourley).

### BETULA - Birch

Leaf Spot (Marssonina betulæ) was collected on B. papyrifera in York Co., N. B., about 6 mi. from where it was observed in 1954 (P. D. S. 34:122). According to C. A. Arthurs, about half the leaves on a half dozen small trees were affected (J. A. Parmelee).

### CRATAEGUS - Hawthorn

Rust (Gymnosporangium globosum) was heavy on 9 Sept. on several Crataegus spp. in the Arboretum, Ottawa, Ont. It was particularly conspicuous

on C. glandulosa, C. caesia and two trees of C. sp. 25-30 yd. n.e. of two Juniperus virginiana. One of these trees bore fruiting galls in late May. South of the four hawthorns, infection gradually decreased until it was virtually absent. G. clavipes was still in evidence on fruits of hawthorn at this late date (D. B. O. Savile, J. A. Parmelee).

#### FORSYTHIA

Aerial Root Galls were numerous on a plant of F. ?suspensa in a home garden at Vancouver, B. C. They appeared to be larger and more numerous than those usually figured for the species (J. Royal Hort. Soc. 71:166-172. 1946) (H. N. W. Toms). When galls received from Mr. Toms were placed in a moist chamber there was a rapid development of a species of Phoma or possibly a Coniothyrium. It did not appear referable to published descriptions of species of Phoma reported on Forsythia (J. W. Groves).

#### FRAXINUS - Ash

Anthraxnose (Gloeosporium aridum). Infection was heavy and damage considerable on F. americana at Lunenburg, N. S. (D. W. Creelman).

Rust (Puccinia sparganioides). All trees of F. americana observed from Bridgetown to Digby and Lower Granville, N. S., were defoliated by rust early in the summer. Many trees defoliated in 1954 failed to put out leaves over large portions of the tree and appeared to be dying (D. W. Creelman).

#### JUGLANS

White Mold (Microstroma juglandis). About 30% of the leaves on two small walnut trees were sev. deformed in a nursery at Bridgetown, N. S. (D. W. C.).

#### LIGUSTRUM - Privet

Crown Gall (Agrobacterium tumefaciens). Specimen of L. amurense from Riverview, N. B. was received for identification (J. E. Campbell).

#### LONICERA - Honeysuckle

Leaf Blight (Herpobasidium deformans) was heavy on specimens of L. tatarica var. rosea received from Port Burwell, Ont., and Village des Aulnies, Que., and on L. sp. from Ste. Foy during the Plant Protection nursery survey (H. S. Thompson). This disease was noticed in 21 nurseries in Que. Infection was sl.-mod.; no sev. infections were noted this year (J. Ringuet).

Powdery Mildew (Microsphaera alni var. loniceræ) has been quite heavy on honeysuckle at the forest nursery, Southport, P. E. I., for several years, but appears to cause very little damage (J. E. Campbell).

#### PICEA - Spruce

Rust (Chrysomyxa ledicola). Infection was mod. on a specimen of P. pungens received from Lower West Pubnico, N. S.; the tree, on private grounds, is reported to become infected each year about mid-July (H. S. Thompson).

Canker (Cytospora sp.) occurred in a planting of P. sp. at Berwyn, Alta. (A. W. Henry).

## PINUS - Pine

Rust (Cronartium ribicola) was affecting about 50% of the trees of P. strobus in stands visited at Cambridge and Kentville, N.S., on 10 May. Blisters were just ready to burst. Many of the young trees had broken off at the trunk infection (C.O. Gourley).

## POPULUS - Poplar

Sooty - Bark Canker (Cenangium singulare (Rehm. ex Starback) Davidson & Cash). The authors (Phytopathology 46:34-36. 1956) determined a specimen collected at S. Aurora, Ont., by H. S. Jackson 2 Oct. 1932 as this fungus (I. L. C.).

Ink Spot (Ciborinia whetzellii (Seaver) Seaver). In a recent paper (Can. J. Botany 33:577-590. 1955) J. Walton Groves and Constance A. Bowerman give an account of the species of Ciborinia known on Populus. C. whetzellii forms conspicuous black sclerotia on living leaves of Populus; hence, the name, ink spot. According to these authors the correct name of the sclerotial state is Sclerotium bifrons Ell. & Ev. ex Sacc. & Syd. The perfect state has been seen by them from specimens collected at Tenaga, Que., and nr. Ottawa, Ont. An associated species found by them in the Ottawa district is C. pseudobifrons Whetz. in Groves and Bowerman. It, unlike C. whetzellii, can be grown in culture (I. L. C.).

Leaf Speck (Marssonina populi). Infection was general and mod. on P. carolinensis in a nursery at Abbotsford, Que., on 15 July (J. Ringuet) and mod., causing yellowing and defoliation, on P. nigra var. italica at Quebec on 25 Aug. (D. Leblond).

Rust (Melampsora abietis-canadensis) was common and sometimes sev. in forest stands of P. tremuloides in Temiscouata Co., Que. (D. Leblond).

## PRUNUS

Black Knot (Dibotryon morbosum) was present on a tree of P. padus planted at Red Deer, Alta. (A. W. Henry).

Leaf Curl (Taphrina deformans) infected most of the leaf terminals on 4 trees of a purple-leaved variety of P. persica in a garden at St. Catharines, Ont. (G. C. Chamberlain).

## QUERCUS

Leaf Curl (Taphrina caerulescens) caused some early defoliation on ornamental trees at St. Jean Port Joli, Que. (L. J. Coulombe).

## RHAMNUS

Crown Rust (Puccinia coronata) caused mod. infection on R. cathartica at Charlottetown, P. E. I.; aecia were beginning to discharge on 27 June (J. E. Campbell).

## SALIX - Willow

Blight (Fusicladium saliciperdum and Physalospora miyabeana) was heavy on two trees at St. Cyrille, L'Islet, Co., Que. (L. J. Coulombe). An affected specimen was received from Carleton-by-the-Sea (D. Leblond). Infection was light on the French willows in the Memorial Park at Grand Pre, N.S.

As an economy measure, the railway company that maintains the park are considering the dropping of their present spray program, which has permitted these willows to survive (K. A. Harrison). Blight was sev. on susceptible trees in P. E. I. (J. E. Campbell).

#### SORBUS

Die-Back (Cytospora sp.) was reported from Red Deer, Alta. (A. W. Henry).

Fire Blight (Erwinia amylovora) was common in the Edmonton area, Alta. (W. P. Campbell).

Rust (Gymnosporangium clavipes) caused mod. infection on two trees of S. aucuparia in a private garden at Ottawa. This rust has been reported a few times on S. americana but this collection, made by F. L. Drayton, is the first Canadian record on the European rowan berry (J. A. Parmelee).

Rust (G. cornutum). Infection was very sev. on the leaves of Pyrus decora growing 50 feet from infected Juniperus communis var. depressa at Clearwater Bay, Ont. Infection was progressively less as the distance between the two hosts increased and was light at 150 feet (W. L. Gordon). Infection was mod. and general on S. americana in the district about Quebec City (D. Leblond).

#### TILIA

Leaf Spot (Cercospora microsora) mod. infected T. americana at St. Gabriel, Que. (D. Leblond). A mod. infection caused sl. damage on T. europea at Bridgetown and Lawrencetown, N. S. (D. W. Creelman).

Spot Anthracnose (Elsinoe tiliae Creelman) was again general on European lindens at Lunenburg, N. S. Also an outbreak was observed on 8 trees at Bridgetown and a few trees were found infected in a nursery at Annapolis Royal (D. W. C.).

Anthracnose (Gloeosporium tiliae) rather sev. infected a few trees of T. cordata at Halifax, N. S. (D. W. C.). Several ornamental linden trees were partly defoliated at Kensington, P. E. I. (W. L. Seaman).

Twig Die-Back (Phomopsis sp.). About 10% of the twigs on trees of T. europea at Lunenburg, N. S., bore cankers resulting in a die-back. When isolations were made, the predominant isolate was a Phomopsis, not Sphaceloma as anticipated. (D. W. Creelman).

#### ULMUS

Dutch Elm Disease (Ceratostomella ulmi). Of the 613 specimens examined in 1955, 452 yielded the pathogen; 386 from Que. and 66 from Ont. In Ont. samples from infected trees were received from 5 countries as follows: Lambton 5, Middlesex 2, Norfolk 1, Oxford 1, and Wentworth 13. In Que. no less than 326 samples came from Sherbrooke (Ruth Macrae).

Canker (Nectria cinnabarina) was reported affecting a few plants in a hedge of Chinese elm at Ottawa, Ont. Diseased specimens were received from La Toque and Charlesbourg, Que. The fungus was identified as the imperfect state of Nectria cinnabarina, as Tubercularia ulmea does not appear to be distinct from this common species (H. S. Thompson).

#### VIBURNUM

Leaf Spot (Cercospora varia). A tr. infection was found on V. carlesii at Southport, N. S. (R. R. Hurst, D. B. O. Savile).