TOBACCO NECROSIS VIRUS. This soil-borne virus affected plants in both the greenhouse and experimental plots at Vancouver and Agassiz, B.C. (R. Stace-Smith).

JUNE YELLOWS (genetic breakdown) occurred on Premier affecting about 5% of the plants in fields at Grantham and Port Weller, Ont. Affected plants were stunted (G.C.C.).

CHEMICAL INJURY. The application, in hot weather, of lime-sulfur for powdery mildew control caused sl. injury to the foliage of plants on Vancouver Island, B.C. (W.R.O.).

V. DISEASES OF TREES AND SHRUBS

ABIES - Fir

Witches' Broom (Melampsorella caryophyllacearum). Light infections were observed on A. balsamea at Upton, P.E.I. (J.E. Campbell).

ACER - Maple

Leaf Spot (Phleospora aceris) was sev. on A. pensylvanicum at Ste. Anne de la Pocatiere, Que. (D. Leblond).

Leaf Spot (Phyllostica minima) was mod. on A. rubrum at Ste. Anne de la Pocatiere and specimens on A. saccharinum were received from Quebec City, Que. (D.L.).

Tar Spot (Rhytisma punctatum) was sev. on A. spicatum at Ste. Anne de la Pocatiere, Que. (D.L.).

Frost Injury. Late spring frosts in Que. caused extensive damage to A. saccharinum at Quebec City and to A. saccharum at St. Come de Liniere and St. Jean de Dieu, Que. (D.L.).

AESCULUS - Horse Chestnut

Leaf Blotch (Guignardia aesculi). Leaf blotch was general on horse chestnut in P.E.I. in 1958. (J.E. Campbell). Reports from Amherst, N.S. indicated a 90% infection and sev. defoliation in Aug. (J.F. Hockey). At Kentville, N.S. about 2% of the foliage was infected (C.O. Gourley).

AMELANCHIER

Rust (Gymnosporangium clavariaeforme) was mod. on A. stolonifera at Ste. Anne de la Pocatiere, Que. (D. Leblond) and sl. on Amelanchier sp. in the vicinity of St. John's, Nfld. (O.A. Olsen).

Leaf Spot (Phyllosticta ? paupercula) caused a mod. infection on A. stolonifera at Ste. Anne de la Pocatiere, Que. The spores in this collection were larger than those of P. innumerabilis (D.L.).

Leaf Blotch (Physalospora obtusa) was sl. on A. stolonifera at Ste. Anne de la Pocatiere, Que. (D.L.).

BERBERIS - Barberry

Leaf Spot (Phyllosticta berberidis). Mod. infections were seen on B. vulgaris in Battlefields Park, Quebec City, Que. (D. Leblond).

Rust (Puccinia graminis) was mod.-sev. in a nursery at St. Hilaire, Que. (J. Rinquet).

CARAGANA

Leaf Spot (Phyllosticta gallarum). Infection was sl. on C. arborescens at Trois Pistoles, Que. (D. Leblond).

CORNUS - Dogwood

Bark Splitting. The effects of the 1955 freeze continue to be reported on native dogwoods (C. nuttalli) in the Vancouver, B.C. area (H.N.W. Toms).

CRATAEGUS - Hawthorn

Leaf Blight (Entomosporium thuemenii) was sev. on hawthorns at La Gorgendiere, Que. (D. Leblond).

FORSYTHIA

Blossom and Twig Blight (Botrytis cinerea) affected 60% of the flowers and adjacent leaf buds at Kentville, N.S. (K.A. Harrison).

ILEX - Holly

Leaf and Twig Blight (Phytophthora ilicis) was found in a single holly orchard at Gordon Head, B.C. Infection resulted in leaf spotting, premature defoliation and some cankering of twigs on lower branches. A survey of commercial holly orchards on Vancouver Island showed that this disease is not widespread in the area (W.R. Orchard).

Green Scum (Protococcus sp.) A green alga grows profusely on leaves and twigs of established holly trees in B.C. and other parts of the Pacific Northwest and presents a nuisance problem to most holly orchardists. The currently recommended sanitary spray schedule of 1 fall and 1 spring spray with tri-basic copper sulphate 2/100 will not eliminate the problem where air drainage is inadequate or where low pressure apparatus fails to give good coverage (W.R.O.).

Oedema (cause unknown). A few affected leaves were received from Hatzic, B.C. for diagnosis (H.N.W. Toms).

LONICERA - Honeysuckle

Leaf Blight (Herpobasidium deformans) was sev. on specimens from Granby and mod. on 1000 plants at Ste. Foy, Que. (H.S. Thompson). It was also sev. on L. tatarica at Thetford Mines and Montreal, Que. (D. Leblond).

Leaf Spot (Kabatia lonicerae) was sev. on L. canadensis at Ste. Anne de la Pocatiere, Que. (D.L.).

MALUS

Rust (Gymnosporangium clavipes). A heavy infection occurred on ornamental crabs at St. John's West, Nfld. Most of the infected fruits produced aecia. No infection occurred in an apple orchard 350 yds. from the site (O.A. Olsen).

MAHONIA

Rust (Cumminsiella mirabilissima). Heavy infections occurred on 2500/3000 plants in a nursery at Trafalgar, Ont. The plants were imported in 1956 (H.S. Thompson).

PICEA - Spruce

Needle Rust (Chrysomyxa ledicola) was recorded on P. pungens var. glauca at St. Edouard, Que. (D. Leblond).

POPULUS - Poplar

Ink Spot (Ciborinia whetzelii) affected 3 small trees of P. nigra var. italica at Riviere du Loup and was mod. on 200 other trees in a nursery at Ste. Foy, Que. (H.S. Thompson). The same species of poplar was also affected at Sacre Coeur, Que. (D. Leblond).

Canker (Cytospora chrysosperma). More than 50% of the trees of P. grandidentata in a large stand at Silver Lake Provincial Park, Ont. bore large trunk or branch cankers. Affected trees had not produced leaves in mid-May and it seemed probable that all would die (D.W. Creelman).

Leaf Spot (Marssonina brunnea) was mod. on specimens received from St. Bruno, Que. (H.S.T.).

Rust (Melampsora abietis-canadensis). Sev. infections were seen on P. tremuloides at Ste. Anne de la Pocatiere, Que. (D.L.).

PHILADELPHUS - Mock Orange

Leaf Spot (Ascochyta sp.). Mod. infections occurred on 1000 plants in a nursery at Rougemont, Que. (H.S. Thompson).

PINUS - Pine

Rust (Cronartium coleosporioides) was found on a branch of a 5-6-year old tree of P. contorta near Summerland, B.C. (G.E. Woolliams).

White Pine Blister Rust (Cronartium ribicola) affected about 10% of the trees in a young stand of P. strobus at Kentville, N.S. (C.O. Gourley).

PRUNUS - Flowering Cherry

Blossom and Twig Blight (Monilinia fructicola). A sev. infection on P. glandulosa resulted in cankering and death of 10-75% of the shoots of a number of shrubs at Kentville, N.S. (J.F. Hockey).

Leaf Drop (cause undetermined). Defoliation of P. cerasifera at Vancouver, B.C. was noticeable in May (H.N.W. Toms).

PYRACANTHA

Scab (Fusicladium pyracanthae) caused heavy damage to berry clusters of P. coccinea at Saanichton, B.C. In one garden 75% of the fruits and pedicels were infected (W.R. Orchard).

PYRUS - Mountain Ash

Fire Blight (Erwinia amylovora) occurred on P. americana at Quebec City, Que. (D. Leblond).

Rust (Gymnosporangium spp.). Sev. leaf infections were seen on P. decora at Clearwater Bay, Ont. Nearby P. aucuparia was not infected (W.L. Gordon). P. americana was infected by G. juniperi at St. John's West, Nfld. (O.A. Olsen).

Leaf Spot (Phyllosticta sp.) was sl. on P. americana at Ste. Anne de la Pocatiere, Que. (D.L.).

QUERCUS - Oak

Anthracnose (Gloeosporium nervisequum). Leaves bearing mod. infections were received from Manotick, Ont. (D.W. Creelman)

Leaf Blister (Taphrina caerulescens) was mod. on Q. rubra at Charlottetown, P.E.I. (J.E. Campbell).

RHAMNUS - Buckthorn

Crown Rust (Puccinia coronata). Tr. infections only were seen on R. cathartica at Charlottetown and Summerside, P.E.I. It was much lighter in intensity than usual (J.E. Campbell).

RHODODENDRON

A Wilt of cultivated Rhododendron associated with Pestalotia macrotricha Klebahn

J.F. Hockey

Some of the cultivated rhododendron plants grown in a "slat" house in a commercial nursery at Centerville, Nova Scotia were observed on September 25, 1958 to be affected by a wilt. The majority of the wilted plants had one or more stems affected. The leaves drooped along the stem rather than holding their normally rigid position, and some of the current season green wood bore tan-colored cankers extending from a basal scar upwards toward the top whorl of leaves.

An examination of the crowns of affected plants revealed the presence of partially or completely girdled scion wood, the bark of which loosened readily to expose a thin, white felt of fungus mycelium. The stocks on which the scions were grafted appeared normal and buds had developed from some stocks giving rise to shoots.

Observations were made about a week later on the plants remaining and the prevalence of wilt was recorded. These data presented in the following table.

The incidence of wilt in the nine varieties of rhododendron

Caractacus	10/16	Mrs. P. Den Ouden	0/25
Dr. H.C. Dresselhuys	3/25	Lee's Dark Purple	0/30
America	3/28	Dr. H.J. Lovink	0/30. 0/30
Mrs. C.H. Sargent	10/22	Van Dee Hoop	0/28
F.D. Goodman	2/30		

Cultures on potato-dextrose-agar of sub-epidermal tissue from affected plants yielded a Pestalotia which fitted well the description of P. macrotricha Klebahn. Acervuli of this fungus appeared on affected stems after about two weeks in a moist chamber.

A similar condition was described by Howarth and Chippendale (Gard. Chron. 86: 471, 1929). They reported a heavy mortality in rhododendrons 3 to 5 years after grafting and stated that Pestalotia macrotricha was readily isolated from stems and branches of affected plants. White (Phytopath. 20: 85-91, 1930) showed P. macrotricha and P. rhododendri to be weak parasites on rhododendrons. Both organisms could enter the plants through wounds or injuries and once established could invade otherwise healthy tissues.

Note: Specimens from Centerville submitted with this report agreed well with Klebahn's description of P. macrotricha and with collections filed under this name in DAOM. P. macrotricha has not previously been reported on Rhododendron in the Survey, though there is a collection on leaves from Annapolis Royal, N.S., in the Kentville herbarium. P. rhododendri (D. Sacc.) Guba has been reported as causing a leaf spot in B.C. (P.D.S. 12: 1933) and Quebec (P.D.S. 16: 1937).

Guba (Phytopath. 19: 191-231, 1929) in his monograph of Pestalotia retains Klebahn's species as distinct from P. rhododendri. In a more recent study Steyaert (Bull. Jard. bot. Brux. 19: 285-354, 1949) maintains that Pestalotia de Not. is a monotypic genus with P. pezizoides de Not. the single species. The remaining species of Pestalotia he disposes in two new genera, Pestalotiopsis and Truncatella. He places P. macrotricha Klebahn in synonomy with Pestalotiopsis guepini (Desm.) Steyaert, the type species of the new genus (D.W. Creelman).

RIBES - Flowering Currant

Anthracnose (Drepanopeziza ribis). Heavy infections occurred on 1000 plants of R. alpinum in a nursery at Port Burwell and mod.-sev. infections were prevalent in the Ottawa, Ont. district (H.S. Thompson). At St. Jean, Que. 50% of the plants in a hedge were sev. infected and defoliation was about 20% (L. Cinq-Mars, D.B.O. Savile). It was sev. at Les Saules and mod. on 3000 nursery plants at Ste. Monique des Saules, Que. (D. Leblond, H.S.T.). Anthracnose was 8-sl. 5-mod. 1-sev./14 Quebec nurseries inspected (J. Ringuet).

ROBINIA - Locust

Anthracnose (Gloeosporium sp.). Mod. infections occurred on leaves and twigs of R. pseudo-acacia at Ste. Anne de la Pocatiere, Que. (D. Leblond).

ROSA - Rose

Gray Mold (Botrytis cinerea) caused sev. flower spotting on floribunda roses at Saanichton, B.C. The infection was apparently spread from an underplanting of Viola by overhead irrigation (W.R. Orchard). Rosebuds in a garden at Lethbridge, Alta. were affected (J.E. Moffatt).

Black Spot (Diplocarpon rosae) was not as sev. in the St. Catharines laboratory garden as in previous years but did develop in unsprayed plots late in Sept. and early in Oct. (W.G. Kemp). Most varieties in a nursery at Bunbury, P.E.I. showed sl.-mod. infections (J.E. Campbell). Infections as high as 80% occurred on the varieties Doctor and Mrs. Calcombeth at Kentville, N.S. Other varieties were less affected (J.F. Hockey).

Powdery Mildew (Sphaerotheca pannosa). An extremely sev. infection was observed on the variety Better Times in a large rose range at Port Dover, Ont. The greenhouse was drafty and humid (W.G.K.). Sl.-mod. infections were seen in several gardens at St. Jean, Que. (R. Crête). It was mod. on several varieties in a nursery at Bunbury, and mod.-sev. on climbers at Charlottetown, P.E.I. (J.E.C.). Specimens of mildew paratized by Cicinnobolus sp. were received from Meteghan, N.S. (R.G. Ross).

Wilt (Verticillium dahliae). The organism was isolated from 1/5 plants from a garden at Lachine, Que. The affected stems showed light to medium brown diseased areas (H.S.T., J.W. Groves).

Mosaic (virus). One plant of the variety White Butterfly was infected in a greenhouse at Oxford, N.S. (K.A. Harrison).

? Manganese Toxicity. Interveinal chlorosis typical of manganese toxicity or molybdenum deficiency, either of which is expressed under the acid soil conditions prevailing, was pronounced on a climber rose bush at Charlottetown, P.E.I. Blooms did not persist but dropped off within 24 hours (J.E.C.).

SALIX - Willow

Crown Gall (Agrobacterium tumefaciens) affected 1 tree of S. blanda at L'Abord a Plouffe, Que. (J. Ringuet).

Canker (Cytospora chrysosperma). A sample of 10 young trees was submitted from a nursery in Toronto. All were heavily infected and only 2/10 were alive at the time of examination (H.S. Thompson).

Scab and Twig Blight (Fusicladium saliciperdum, Physalospora miyabeana). Several trees on a golf course near Hull, Que. were sev. damaged, others moderately so and still others bore traces of infection. P. miyabeana was fruiting in small branch cankers (D.W. Creelman). Specimens were seen from Quebec City, Roberval, Turtle Lake and Carleton, Que. (D. Leblond). Willows in a nursery at Southport, P.E.I. suffered considerable damage (J.E. Campbell). At Grand Pré, N.S. where many willows were killed a few years ago, some blight has occurred on young shoots that have developed in the last 3 or 4 years. S. babylonica and S. pentandra have made good recovery and S. caerulae is immune to blight (K.A. Harrison).

Powdery Mildew (Uncinula salicis) was prevalent near Kleena Kleene, B.C. Cleistothecia developed in abundance (G.E. Woolliams).

SPIRAEA

Leaf Spot (Cylindrosporium spiraeicola) was mod. in nurseries at St. Paul de Joliette and Rougemont, Que. (J. Ringuet).

Coral Canker (Nectria cinnabarina) caused sl. damage to S. vanhouttei at Quebec City, Que. Both the Nectria and Tubercularia stages were present (D. Leblond).

SYRINGA - Lilac

Leaf Spot (Phyllosticta ? syringella). A sl. infection was observed on a hedge at Ste. Anne de la Pocatiere, Que. (D. Leblond).

Twig Blight (Pseudomonas syringae). Specimens were received from Halifax, N.S. with a report that 20% of the shoots in a hedge were affected (J.F. Hockey).

Frost Injury. June frosts caused sev. damage to lilacs at Val Brilliant and Quebec City, Que. (D.L.).

THUJA - Cedar

Drought Injury. A reddening of leaves, attributed to drought, was general on T. plicata in the lower Fraser Valley, B.C. (H.N.W. Toms).

Twig Reddening. The effects of the 1955 freeze still continue to show up in the Vancouver, B.C. district (H.N.W.T.).

TILIA - Basswood

Anthracnose (Gloeosporium tiliae) was mod.-sev. on T. americana at Point Prim, P.E.I. One tree was defoliated early in the season but produced a second crop of foliage which was also attacked (J.E. Campbell).

ULMUS - Elm

Leaf Spot (Gnomonia ulmea) was sl. on a hedge at Cornwall, Ont., sl. on 175 plants of U. pumila at La Tugue, sl.-mod. on 1,000 plants at Charlesbourg, and on 400 plants at Ste. Foy, Que. (H.S. Thompson).

Coral Canker (Nectria cinnabarina) sev. affected a hedge and affected 900/1000 plants of U. pumila in a nursery at Ottawa, Ont. (H.S.T.). Specimens were seen from Ste. Germaine and Quebec City, Que. (D. Leblond). A hedge at Charlottetown, P.E.I. was mod. attacked (J.E. Campbell).

Chemical Injury. Chemical weed control programs in the city of Windsor, Ont. resulted in considerable damage to U. pumila as well as to roses, Hibiscus, Liriodendron, Salix, apples, pears, and grapes (R.W. Walsh).

VIBURNUM

Downy Mildew (Plasmopara viburni). Light infection caused negligible damage to V. opulus in a nursery at Les Saules, Que. (J. Ringuet).

VI. DISEASES OF HERBACEOUS ORNAMENTALS

ALTHAEA - Hollyhock

Rust (Puccinia malvacearum) was commonly encountered in the Okanagan Valley, B.C. (G.E. Woolliams). Heavy infections occurred at Winona and Hamilton (W.G. Kemp), and at Carp and Mountain, Ont. (H.S. Thompson). Specimens were received from Valcourt, Roberval and Levis, Que. (D. Leblond). Infection was sev. at Moncton, N.B. (S.R. Colpitts) and mod.-sev. at Charlottetown, P.E.I. (J.E. Campbell).

ANTIRRHINUM - Snapdragon

Powdery Mildew (Oidium sp.) was particularly heavy on a block of 300 young plants of the variety Christina at Hamilton, Ont. (W.G. Kemp).

Rust (Puccinia antirrhini). The greenhouse variety Indian Chief was heavily infected at St. Catharines, Ont. Snowman and Hercules were infected to a lesser degree (W.G.K.).

Stem Canker (Rhizoctonia solani) affected 77/100 Snowman plants in a Hamilton, Ont. greenhouse. It appeared that the seedlings had been planted too deeply (W.G.K.).

AQUELIGIA - Columbine

Powdery Mildew (Erysiphe cichoracearum) was common in all sections of the Okanagan Valley, B.C. (G.E. Woolliams).

ARABIS

White Rust (Albugo candida) was general on all plants of A. albida in a home garden rockery at Vancouver, B.C. (H.N.W. Toms).

ASTER

Rust (Coleosporium asterum) was sl. on A. novi-belgii at Ste. Thérèse, Que. (J. Rinquet).

Wilt (Fusarium sp.) was sev. in a planting at the University, Edmonton, Alta. (L.E. Tyner).