VI. DISEASES OF ORNAMENTAL PLANTS

ASTER

Rust (Coleosporium Solidaginis) was severe on the lower leaves of cultivated A. novae-angliae at L'Assomption, Que.

BARBERRY (Berberis)

Stem rust (Puccinia graminis) moderately infected the common barberry at Ottawa, Ont.; pycnia were exuding nectar on May 29 and aecia were mature on June 5. A slight infection was reported on B. vulgaris from Macdonald College, Que.; aecia were mature on June 7. Rust affected 5% of the leaves and aecia were shedding spores on June 20 in Kings county, N.S. Traces of stem rust were noted on the barberry in July at Charlottetown, P.E.I.

BEGONIA

The eelworm, Aphelenchoides fragariae, was found on a few greenhouse plants at Langley, B.C.; symptoms were: veins brownish and necrotic, leaves with light coloured areas, and margins of leaves brown. (R. Hastings)

BELL FLOWER (Campanula)

A trace of yellows (virus) was found at the Experimental Station, Fredericton, N.B.

BUCKTHORN (Rhamnus)

Aecia of rust (Puccinia coronata) were present at Macdonald College, Que., on June 7.

CALENDULA

Yellows (virus) affected 70-85% of the plants at the Experimental Station at Fredericton, N.B., and Charlottetown, P.E.I. respectively; the damage was severe.

CARAGANA

Leaf spot (Septoria Caraganae) was reported as follows: from Edmonton, Alta.; moderate infection with some defoliation at Saskatoon and in many localities in southern Sask., in the latter part of the seaaon.

CARNATION (Dianthus)

Rust (Uromyces caryophillinus) caused 1% damage at Langley, B.C. and slightly infected the leaves and stems in a greenhouse at Falmouth, N.S.

Blossom blight (Botrytis sp.) was severe on buds and blossoms on plants grown under glass at Sussex, N.B.

CHINA ASTER (Callistephus)

Yellows (virus) was severe in a garden at Saskatoon, Sask.;

it caused considerable trouble at Harrow, Ont.; traces were present at L'Assomption, Que.; it was common in York and Sunbury counties, N.B., and the damage was severe; 100% of plants were affected in 10 gardens surveyed in P.E.I.

Wilt (Fusarium conglutinans var. Callistephi) was destructive in some beds and absent in others about Summerland, B.C.; a trace was found in a garden at Saskatoon. A part of one bed at Harrow, Ont. was completely killed out by wilt; other reports were 5% in one garden at Ste. Anne de la Pocatière, Que.; 20% in 2 gardens in York county, N.B. and in one at Middleton, N.S.

Rust (Coleosporium Solidaginis) moderately infected a tenth of a long border bed at L'Assomption, Que.

Root rot (Sclerotinia sclerotiorum) killed a few plants in zone 10, Alta.

CHRYSANTHEMUM

Leaf spot (Septoria chrysanthemella) caused 10% infection in a greenhouse at Victoria, B.C.

Powdery mildew (Oidium Chrysanthemi) caused a trace of damage in greenhouses at Victoria, B.C.

Blight (Botrytis cinerea) slightly infected the older blooms in a greenhouse at Falmouth, N.S.

CLARKIA

A trace of yellows (virus) was found on Clarkia at Fredericton, N.B.

COLEUS

Yellows (virus) severely affected 78% of the plants at the Experimental Station, Fredericton, N.B.

COLUMBINE (Aquilegia)

Powdery mildew (Erysiphe Polygoni) was found on a few plants at Saanichton, N.B. and Lennoxville, Que.

CONEFLOWER (Rudbeckia)

Yellows (virus) slightly affected 3 plants at the Experimental Station, Fredericton, N.B.

DAHLIA

Three plants out of 30 were affected with mosaic (virus) at Fredericton, N.B.

Stunt (virus) was found on Daily Mail, Jane Cowl, Treasure Island and was prevalent on some of the Pompom types at Charlottetown, P.E.I.

FLOWERING CURRANT (Ribes aureum)

Rust (Cronartium ribicola) slightly affected this shrub at L'Assomption and Lennoxville, Que.

FRENCH MARIGOLD (Tagetes patula)

Yellows (virus) severely affected the 65 plants growing at the Station, Fredericton, N.B.

GAILLARDIA

A trace of yellows (virus) was present on Gaillardia at the Station, Fredericton, N.B.

GERANIUM

Rust (Uromyces Geranii (DC.) Fr.) was heavy on named plants of G. sylvaticum, G. albiflorum, G. platypetalum, and G. anemmaefolium in the Arboretum, C.E.F., Ottawa, Ont.; a little rust was also developed on G. Andressi, G. pratense, and G. Londessi, but none was found on G. sibiricum, G. sanguineum, G. sanguineum var. prostratum, and G. tuberosum. The rust was also collected by H. D. House on G. pratense near Williamsburg, Ont. and communicated by H.S. Jackson, who also confirmed the identification of the Ottawa collections. This is the first report of this rust in North America outside of Alaska. (M. Timonin & I.L. Conners)

GERANIUM (Pelargonium)

Bacterial leaf spot (Phytomonas Erodii) was received from London, Ont. in June 1934. (D.H. Jones)

GLACIER LILY (Erythronium grandiflorum)

Rust (Uromyces heterodermus) was found on a few plants in the Victoria district, B.C.

GLADIOLUS

Bacterial blight (Phytomonas gummisudans) moderately affected Gladiolus at Winnipeg, Man. It has been previously reported from Ont. (Ann. Rept. Pl. Dis. Survey 13:68. 1934)

Scab (Phytomonas marginata) was affecting corms received from Brantford and Watford, Ont., in 1934. (D.H. Jones)

Hard rot (Septoria Gladioli) affected 10% of the corms in beds in Queens county, P.E.I.

Root rot (Cause undetermined) affected 100% of the plants in one garden in P.E.I. and a trace to 50% was reported in others.

GOLDENGLOW (Rudbeckia laciniata)

Wilt (Sclerotinia sclerotiorum) was heavy in a few clumps at Winnipeg, Man.

HAWTHORN (Crataegus)

Powdery mildew (Podosphaera Oxyacanthae) heavily infected hawthorn at the Experimental Station, Charlottetown, P.E.I.

HOLLYHOCK (Althaea)

Rust (Puccinia Malvacearum) was severe at Grand Forks, B.C.; it was noted at St. Catharines, Ont.; it was moderate to severe at Lennoxville, Farnham, and Beaumont, Que.; it was slight to severe in the southern half of N.B.; and was moderate to severe in P.E.I., spraying weekly with Bordeaux 4-4-40 gave reasonable control.

Leaf spot (Cercospora altheina) was severe at Winnipeg, Man.

HONEYSUCKLE (Lonicera)

Powdery mildew (Microsphaera Alni). Trace found at Lennoxville, Que.

Blight (Glomerularia Lonicerae) was severe on L. tatarica and a trace to moderate infections occurred on other species and varieties at Lennoxville and L'Assomption, Que., and a trace was also noted at Farnham.

HOUSE LEEK (Sempervivum)

Rust (Endophyllum Sempervivi). A few plants of S. Finchii and S. juratense were affected in a rockery at Victoria, B.C. (W. Jones)

IRIS

Leaf spot (Didymellina macrospora) Heterosporium gracile) was reported as follows: general but rate of infection variable on Vancouver island and in the Fraser valley, B.C.; moderate infection, Grand Forks, B.C.; moderate at Indian Head and Swift Current, Sask.; moderate at Morden, slight at Brandon, Man.; present in several gardens at St. Catharines, Ont.; moderate at L'Assomption, and Macdonald College, Que., severe on a few clumps but otherwise moderate at Lennoxville, Que.; moderate to severe in Queens county, P.E.I.

Rhizome rot (Erwinia carotovora) was severe in one garden and slight in 2 others in Queens county, P.E.I.

Eelworm (Anguillulina dipsaci) infested from 0-15% of the iris in the Victoria district, B.C. The highest infestation was on Supreme.

Mosaic (virus) affected up to 80% of the bulbous iris being forced in greenhouses at Victoria and Vancouver, B.C. Observations indicate that more of the imported bulbs are affected than those being grown locally. It was, however, present in all plantings inspected.

JERUSALEM CHERRY (Solanum)

A specimen showing Oedema (Non-parasitic) was collected in a greenhouse at Calgary, Alta.

LARKSPUR (Delphinium)

Powdery mildew (Erysiphe Polygoni) was noted on many plants in garden and nursery in Lincoln county, Ont. It was also present at Lennoxville and Ste. Anne de la Pocatière, Que., and at Shelbourne, N.S.

Bacterial blight (Phytomonas Delphinii) was severe at Deschambault, moderate at Lennoxville and L'Assomption, Que.; it was slight to severe in the southern half of N.B.

Yellows (virus). A trace was observed on annual larkspur at Fredericton, N.B.

LILAC (Syringa)

Powdery mildew (Microsphaera Alni) was noted several times in Lincoln county, Ont.; common at Lennoxville, Que.; severe on a large lilac hedge in St. John county, N.B.; trace in Queens county, P.E.I.

Blight (Phytomonas Syringae). A disease corresponding to the description of lilac blight has been found in York and St. John counties, N.B.

LILY (Lilium)

Blight (Botrytis elliptica) was injurious to several plants in a garden at Winnipeg, Man.

Root rot (Cylindrocarpon radicicola) was present on L. longiflorum brought from Toronto, Ont. (G.C. Chamberlain)

LOBELIA

A trace of yellows (virus) was found on Lobelia at the Station, Fredericton, N.B.

LUPINE (Lupinus)

Powdery mildew (Erysiphe Polygoni) was of general occurrence in the Saanichton district, B.C.

Fusarium wilt (Fusarium oxysporum) killed one plant at the Station, Charlottetown, P.E.I.

MALTESE CROSS (Lychnis)

Leaf spot (Phyllosticta Lychnidis) was moderate at Indian Head, Sask.; a trace was present on the lower leaves of L. Chalcedonica at Lennoxville, Que.

A leaf spot (Septoria noctiflorae) moderately infected L. Chalcedonica at Morden, Man.

Another leaf spot (Septoria Lychnidis) was reported from L'Assomption, Que.

NARCISSUS

Mosaic, or Grey disease (virus) affected up to 10% of the plants on Vancouver island, B.C. (W. Jones)

Leaf Scorch (Stagonospora Curtisii) was general but the infection was slight on Vancouver island and the Fraser valley, B.C. (R.J. Hastings)

White mould (Ramularia vallisumbrosae) slightly infected narcissus in crowded plantings in home gardens on Vancouver island, B.C., but was seldom found in commercial plantings.

Eelworm (Anguillulina dipsaci) affected up to 3% of plants on 55 acres on Vancouver island, B.C., and up to 10% on the mainland. On Vancouver island most growers use the hot water treatment, which has proved fairly effective. (R.J. Hastings)

PANSY (Viola)

Leaf spot (Colletotrichum Violae-tricoloris) severely stunted 75% of the plants in a garden in Lunenburg county, N.S.

PEONY (Paeonia)

Blight (Botrytis Paeoniae) was affecting a specimen received from Vernon, B.C. from Mr. A.A. Dennys, Entomological Laboratory. The disease was evident on a few plants in zone 13, Alta. A trace was found at Morden and a slight infection at Brandon, Man. A few diseases plants were noted in the Arboretum, Ottawa, Ont. Moderate infections were reported from Lennoxville and Ste. Anne de la Pocatière, Que. The disease was conspicuous on the 68 varieties in the plots at Fredericton, N.B. after blooming. Least affected were Reine Hortense and Festiva Maxima.

Ring spot (virus) was reported at Swift Current, Sask.; severe on David Copperfield, Triomphe de l'Exposition de Lille, Rachel and Ivanhoe at Morden, Man., and slight infection found at Brandon. A trace was found at Farnham, Que., and Mme. d'Hour and Mme. Auguste Dessert were moderately affected at L'Assomption. In addition to the varieties reported last year it was found on

Alice de Julenecourt, Claire Dubois, Marie Crousse and Duchesse d'Orleans at Fredericton, N.B. Attempts to artificially transmit the virus to tobacco and petunia by the rubbing method failed. (J.L. Howatt and S. Clarkson). A single plant has shown the symptoms at Kentville, N.S. each spring. (K.A. Harrison)

Lemoine's Disease has been noted in 4 peony plantings in zone 10, Alta.; buds failed to open, roots were deformed and plants were stunted. (G.B. Sanford)

Septoria leaf spot (S. Paeoniae var. berolinensis) developed slightly on Ivanhoe at Morden, Man.

Leaf blotch (Cladosporium Paeoniae) slightly to moderately infected the varieties of peonies at Macdonald College, Que.

Hail injury. A hail storm cut off about 5% of the buds at Fredericton, N.B. on June 12.

PETUNIA

Yellows (virus) was severe on a few plants at the Station, Fredericton, N.B.

PHLOX

Yellows (virus) was severe on 30% of the plants at the Station, Fredericton, N.B.

Septoria leaf spot caused by S. divaricata moderately affected the lower leaves of Rosenberg at Brandon, Man.

Leaf spot caused by Septoria sp. was heavy on P. Drummondi var. sanguinea at L'Assomption, Que., and on P. Drummondi at Kentville, N.S.

Powdery mildew (Erysiphe Cichoracearu) was abundant on phlox in a garden at Ottawa, Ont., and at Lennoxville, Que.

POPPY (Papaver sp.)

A trace of yellows was found on poppy at the Station, Fredericton, N.B.

PRIMROSE (Primula polyantha)

Yellows (virus) was severe on 70% of the plants at the Station, Fredericton, N.B. Attempts to transmit this disease to 4 species of Solanaceae and to healthy P. polyantha failed. (D. J. MacLeod)

RED CEDAR

Rust (Gymnosporangium globosum). Fresh galls were received on May 29 from Simcoe, Ont. A small tree, heavily infected was

brought from Beaver Mills, Ont. The small galls were not noticed until rainy weather expanded the telia horns. It was also found on red cedar at Abbotsford, Que.

ROSE

Rust (Phragmidium spp.) was heavy on Betty Bland, moderate on Tetonkaha and slight on Banshee in the University garden, Saskatoon, Sask.; slight to moderate infections were reported from Lennoxville, Macdonald College, and Kamouraska county, Que.; a trace to moderate infections were noted on varieties in the plots at Fredericton, N.B. It was common on several varieties at Kentville, N.S. and moderate to severe in Queens county, P.E.I.

Powdery mildew (Sphaerotheca pannosa) was heavy in a greenhouse at Langley, B.C.; it was general on Vancouver island and the Fraser valley, B.C.; the mildew was heavy on a Crimson Rambler in Lincoln county, Ont. A slight amount was noted at Macdonald College, Que.; it was severe on Pauls Scarlet and Dorothy Perkins in Queens county, P.E.I.

Black spot (Diplocarpon Rosae (Marssonina Rosae) was fairly general on Vancouver island and in the Fraser valley, B.C.; it was controlled in greenhouses by regulating the ventilation and temperature. It slightly infected yellow roses at Indian Head, Sask., and Harrison's Yellow at Swift Current, while it caused severe defoliation of Persian Yellow and Austrian Copper at Saskatoon. Black spot did not appear to be as prevalent or severe as usual in Lincoln county, Ont. The disease moderately infected roses at Macdonald College, and was rather severe at L'Assomption and Deschambault, Que.; about Fredericton, N.B.; and Charlottetown, P.E.I.

Crown gall (Phytomonas tumefaciens) affected 60% of the plants in a garden in Prince county, P.E.I.

Cercospora leaf spot (C. rosaecola) was general, but slight at the Farm at Brandon and at the Station at Morden, Man. It was also reported from Chamberlain, Sask.

Chlorosis (?virus) slightly affected a few bushes of Mme. Ed. Herriot at Sardis, B.C.

SAFFLOWER (Carthamus tinctorius)

Root rot (?) slightly affected this plant in a garden in zone 2, Alta.

SNAPDRAGON

Rust (Puccinia Antirrhini) appeared about September 1 in the Saanichton district, B.C. much later than in 1934. Infection was less than in any season for the past 5 years. The damage was

slight. It was severe on all the plants in a garden at Penticton. The rust was heavy in a greenhouse and was affecting all the plants in a garden at Edmonton, Alta. A slight infection was reported from Estevan, Sask. It was severe on plants at Abbotsford, Que., which had been grown from seed in a Montreal greenhouse and then transplanted outdoors. A dozen plants were killed by rust at Kentville, N.S.

Leaf spot (Phyllosticta Antirrhini) slightly affected snapdragons at Saanichton, B.C.

SPIREA

Winter killing. About 4/5 of the above ground parts of S. arguta plants were killed at Saskatoon, Sask.

STOCK (Mathiola)

Yellows (virus) affected slightly 9 plants at Fredericton, N.B.

SWEET PEA (Lathyrus)

Root rot (Thielaviopsis and Fusarium spp.). Specimens were received from various parts of N.S. Traces to 25% of the plants were severely affected by root rot, chiefly caused by Rhizoctonia, in Queens county, P.E.I.

Powdery mildew (Microsphaera diffusa) was very destructive in gardens in Queens county, P.E.I.

TULIP (Tulipa)

Blight (Botrytis Tulipae) slightly infected tulips and caused only a trace of damage on Vancouver island on account of dry weather and the practise of roguing. On the mainland infection was 50% and the damage 20% as roguing is not generally practised. It infected 95% of the plants in a garden in Kamloops, B.C.; the white varieties were ruined, the reds were moderately affected while the yellows appeared resistant. Severely affected specimens said to be representative of a planting of 20,000 tulips, were received from Pickering, Ont., at Ottawa. Lesions were present all over the petals. Blight was also noted at Abbotsford, Que.

Grey bulb rot (Sclerotium Tuliparum) almost completely destroyed the tulips in 5 beds at Rockcliffe, Ont. It began in one 2 years ago and since has spread to others although the soil was removed and fresh soil put in. (F.L. Drayton)

Basal dry rot (Sclerotium Delphinii) was found on 1% of the bulbs in an importation of Prince of Orange at Saanichton, B.C. (W. Jones and F.L. Drayton)

Break (virus) affected up to 100% of the tulips on Vancouver island, B.C. It was fairly general in many fields where no roguing was done. It is less prevalent in early varieties.

VIRGINIA CREEPER (Ampelopsis)

Powdery mildew (Uncinula necator) injured slightly virginia creeper at Saskatoon, Sask.

WALLFLOWER (Cheiranthus)

Downy mildew (Peronospora Cheiranthi Gäum.) affected a few plants in Victoria, B.C. This is the first report of its occurrence in Canada.

ZINNIA

Wilt (Sclerotinia sclerotiorum) affected 10% of the plants in a bed at Summerland, B.C.

Wilt (Fusarium sp.) infected 15 to 50% of the plants depending on the location at Summerland, B.C. (G.E. Woolliams)

Blight (Botrytis sp.) severely affected 2% of the plants in a garden in Queens county, P.E.I.

Yellows (virus). A trace was present in zinnias at Fredericton, N.B.