

SOME RECORDS OF PLANT-PARASITIC NEMATODES
ENCOUNTERED IN CANADA IN 1962

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Root-knot Nematodes

The northern root-knot nematode, Meloidogyne hapla Chitwood, 1949, was found on intercepted plant material from several areas in the United States: on rose from Texas and Ohio, on Hydrangea arborescens and Deutzia lemaini from New York, on Caladium sp. from Florida, on Weigela sp. from Ohio and Tennessee, on Spiraea sp., Syringa sp., and Philadelphus sp. from Tennessee, on Forsythia sp. and Philadelphus sp. from Alabama, on Artemisia sp. from Indiana, on strawberry from Maryland, and on tomato from Virginia. It was intercepted on rose from England, Holland, Denmark, France, and on Berberis thunbergii var. atropurpurea from Holland. It was also found on Philadelphus aurea from a nursery at Strathroy, Ontario.

The southern root-knot nematode, Meloidogyne incognita incognita (Kofoid & White, 1919) Chitwood, 1949, was found on interceptions of Lonicera sp. from Texas, U.S.A., Caladium sp. from Illinois and New York, U.S.A., and tomato from Georgia, U.S.A. It was also found on begonia from St. Catharines, Ontario, and on Cactus sp. from a nursery at Dundas, Ontario.

The cotton root-knot nematode, Meloidogyne incognita acrita Chitwood & Oteifa, 1952, was found on Hoya sp. from Montreal, Quebec.

The Javanese root-knot nematode, Meloidogyne javanica (Treub, 1885) Chitwood, 1949, was found on a shipment of tomato plants from Georgia, U.S.A.

The peanut root-knot nematode, Meloidogyne arenaria (Neal, 1889) Chitwood, 1949, was intercepted on rose from Texas, U.S.A.

The Thames root-knot nematode, Meloidogyne arenaria thamesi Chitwood, in Chitwood, Specht and Havis, 1952, was found on tomato from Georgia, U.S.A., and on Hoya sp. from Montreal, Quebec.

Cyst-forming Nematodes

The oat cyst nematode, Heterodera avenae Wollenweber, 1924, was found in soil in shipments of conifers from Belgium, Syringa sp. from Denmark, Thuja sp. from Holland, soil from automobiles from Germany, and in potato soil from Toronto, Ontario.

The cactus cyst nematode, Heterodera cacti Filipjev & Schuurmans Stekhoven, 1941, was found on Cactus sp. from a nursery at Dundas, Ontario.

The cabbage cyst nematode, Heterodera cruciferae Franklin, 1945, was found in shamrock soil from Ireland.

The pea cyst nematode, Heterodera goettingiana Liebscher, 1892, was found on Clematis sp. from Belgium and ornamentals from the United Kingdom.

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The hop cyst nematode, Heterodera humuli Filipjev, 1934, was found on hop from Sardis and Chilliwack, British Columbia,

The grass cyst nematode, Heterodera punctata, was found in shipments of Clematis sp., Taxus sp., Pinus sp. from Holland, cacti from Germany, in soil from East Germany, and in soil supporting potatoes from Toronto, Ontario.

The most important plant-parasitic nematode discovered in Canada in 1962 was the golden nematode (also called the potato root eelworm), Heterodera rostochiensis Wollenweber, 1923, on potato roots and in soil from an area in Newfoundland. This first record of the golden nematode in Canadian soil was made by Dr. O.A. Olsen, Experimental Farm, St. John's West, Newfoundland.

The clover cyst nematode, Heterodera trifolii Goffart, 1932, was intercepted on shipments with soil of junipers, Thuja sp., and Euonymus sp. from Holland, conifers and Cystisus sp. from Belgium. It was also found in potato soil from an area in Ontario, Quebec, and New Brunswick, and in nursery soil from Prince Edward Island.

Root-lesion Nematodes

Pratylenchus penetrans (Cobb, 1919) Filipjev & Schuurmans Stekhoven, 1941, was found in soil around roots of Rhododendron sp., lilac, Laburnum sp., malling root stock, Thuja sp., Thuja globosa, Pinus sp., Clematis sp., juniper, Taxus sp., and rose from Holland, hydrangea and Pinus mugo from Belgium, Clematis sp. and Ginkgo sp. from Germany, chrysanthemum, Coleus sp., currant, gooseberry from France, and mint from Portugal. It was also found in soil from Sheffield Mills, Nova Scotia, and in a sour cherry orchard at Fonthill, Ontario.

Pratylenchus pratensis (de Man, 1880) Filipjev, 1936, was found in soil around roots of Rhododendron sp., lilac, and Laburnum sp. from Holland, hydrangea from Belgium and rose from Denmark.

Pratylenchus convallariae Seinhorst, 1959 was found in soil supporting begonia, Coleus sp., and chrysanthemum from France, and mint from Portugal. A species closely resembling P. convallariae was found around begonia roots from a nursery at Dundas, Ontario.

Pratylenchus crenatus Loof, 1960 was found in soil around roots of Picea alba from Belgium, Taxus sp. from Holland, Laurentian Swede turnip from New Brunswick, in soil from Sheffield Mills, Nova Scotia, and in a sour cherry orchard at Fonthill, Ontario.

Pratylenchus neglectus (Rensch, 1924) Filipjev & Schuurmans Stekhoven, 1941 was intercepted in shamrock soil from Ireland, soil supporting Koster blue spruce from Holland, and strawberry roots from Ontario.

Pratylenchus vulnus Allen & Jensen, 1951 was found in soil around roots of Thuja sp. from Holland,

Pratylenchus sp. was found associated with the roots of rose from Denmark and Holland, Pinus sp. from Holland and Belgium, Picea sp., Taxus sp., Juniperus sp., and Clematis sp. from Holland, mint from Italy, and cacti from Austria,

Stunt Nematodes

Tylenchorhynchus brevicaudatus Hopper, 1959 was found around roots of raspberry from Abbotsford, British Columbia.

Tylenchorhynchus crassicaudatus Williams, 1960 was found in association with Toots of Citrus sp. from Hong Kong,

Tylenchorhynchus brevidens, Allen, 1955 was found on soil blocks from Blackpool, England, and on cacti and crown-of-thorns from Germany.

Tylenchorhynchus bursifer Loof, 1959 was found in shipments with soil of Thuja sp., Thuja globosa, Picea sp., and Taxus sp. from Holland,

Tylenchorhynchus claytoni Steiner, 1937 was intercepted in soil around roots of Rhododendron sp., lilac, Laburnum sp., Ribes sp., Lonicera sp., Spiraea sp., and in soil from Holland, and on rose from California.

Tylenchorhynchus dubius (Buetschli, 1873) Filipjev, 1936 was found in soil in a shipment of Picea alba and Amaryllis sp. from Holland, and around roots of begonia from a nursery at Windsor, Ontario,

Tylenchorhynchus maximua Allen, 1955 was found in blueberry soil from Fredericton, New Brunswick.

Tylenchorhynchus parvus Allen, 1955 was intercepted in soil in shipments of herbaceous plants from Europe and rose from Denmark.

Tylenchorhynchus sp. was noted around roots of Rhododendron sp. from Holland, and hydrangea from Belgium.

Spiral Nematodes

Rotylenchus robustus (de Man, 1876) Filipjev, 1936 was found in soil around roots of Rhododendron sp. and Thuja sp. from Holland and in shamrock soil from Ireland.

Rotylenchus uniformis (Thorne, 1949) Loof & Oostenbrink, 1958 was recorded in soil in shipments of hydrangea from Belgium, Ginkgo sp. from Germany, Thuja sp. from Holland, and mint from Portugal.

Rotylenchus goodeyi Loof & Oostenbrink, 1958 was found in soil supporting rose from Richmond Hill, Ontario. Rotylenchus sp. was also noted in soil supporting rose from Denmark.

Helicotylenchus erythrinae (Zimmermann, 1904) Golden, 1956 was found in soil around roots of Pinus nigra var. austriaca and Thuja sp. from Holland, heather from England, and Philodendron hastatum from Florida. Helicotylenchus sp. was noted in soil from Ireland and England, in juniper soil from Hong Kong, in soil supporting Clematis sp. from Holland, chrysanthemum, Coleus sp. and begonia from France, Rhododendron sp. from Germany, and in corn loam from the Central Experimental Farm, Ottawa, Ontario,

Scutellonema brachyurum (Steiner, 1938) Andrassy, 1958 was intercepted in soil around the roots of Calla aethiopica from Italy, Primula sp. from Sweden, and rose from the Central Experimental Farm, Ottawa, Ontario. Scutellonema sp. was also detected on interceptions of potato and dahlia tubers from Scotland.

Ring Nematodes

Criconema celetum Wu, 1960 was found in soil supporting rose from the Central Experimental Farm, Ottawa, Ontario,

Criconemoides curvatum Raski, 1952 was found around strawberry roots and in soil from Manotick, Ontario, and in a sour cherry orchard at Fonthill, Ontario,

Criconemoides lobatum, Raski, 1952 was found in soil blocks from Blackpool, England, and in soil from Sheffield Mills, Nova Scotia,

Pin Nematodes

Paratylenchus microdorus Andrásy, 1959 was intercepted in soil around roots of hydrangea from Belgium.

Paratylenchus macrophallus (de Man, 1880) Goodey, 1934 was found in soil supporting rose from Denmark,

Paratylenchus hamatus Thorne & Allen, 1950 was found around roots of rose at the Central Experimental Farm, Ottawa, Canada,

Paratylenchus nanus Cobb, 1923 was found in soil around roots of Ginkgo sp. from Germany, Primula sp. from Sweden, in soil from Italy, and from Sheffield Mills, Nova Scotia, on Strawberry roots and soil from Manotick, Ontario, in sour cherry orchard at Fonthill, Ontario, and in soil around roots of Peperomia sp. from a greenhouse in Quebec City, Quebec. Paratylenchus sp. was also noted in soil blocks from England, shamrock soil from Ireland, soil supporting Thuja globosa, Taxus sp., and Clematis sp. from Holland, and cacti and Gypsophila sp. from Austria,

Other Tylenchids

Ditylenchus destructor Thorne, 1945, the potato-rot nematode, was found on potato tubers from Prince Edward Island, and species of Ditylenchus were collected from shipments with soil of palm plants from California, U.S.A., Rhododendron sp., and oleander from Germany, Philodendron hastatum from Florida, U.S.A. It was also found in soil supporting Taxus sp. from a nursery in Ontario, around strawberry roots and in soil from Manotick, Ontario, and in soil around roots of oats from Smithville, Ontario.

Species of the genera Tylenchus Bastian, 1865, Aglenchus (Andrásy, 1954) Meyl, 1961, Filenchus (Andrassy, 1954) Meyl, 1961, Psilenchus de Man, 1921, and Tetylenchus Filipjev, 1936 were also found in association with soil and plants imported from abroad and from some areas in Canada,

Aphelenchids

Aphelenchus avenae Bastian, 1865 was found in soil supporting hydrangea from Belgium, potato and dahlia tubers from Scotland, rose, dahlia, and gladiolus from Denmark, Calla aethiopica from Italy, Citrus sp. from Hong Kong, Taxus sp., Clematis sp., Amaryllis sp., Thuja pyramidalis, and Koster blue spruce from Holland, chrysanthemum, Coleus

sp., and begonia from France, mint from Portugal, and was also found in iris soil from Oregon, U.S.A.

Aphelenchoides parietinus (Bastian, 1865) Steiner, 1932 was found in association with roots of Pinus nigra var. austriaca from Holland, and cacti from Germany,

Aphelenchoides subtenuis (Cobb, 1926) Steiner & Buhner, 1932 was found in soil around roots of junipers from Holland, and rose from a nursery at Toronto, Ontario,

Aphelenchoides sp. resembling A. limberi Steiner, 1936 was found associated with Philodendron sp. from Italy,

Aphelenchoides ritzemabosi (Schwartz, 1911) Steiner & Buhner, 1932 was found on Verbena hybrida from Saanichton, British Columbia.

Seinura sp. was recorded from samples of soil supporting rose from a nursery at Toronto, Ontario, Clematis sp., and Taxus sp. from Holland, and cacti from Germany.

Dorvaimids

Xiphinema americanum Cobb, 1913 was found in shipments with soil, of rose from Holland, in soil near pine roots from Gatineau Park, Quebec, and in a sour cherry orchard at Fonthill, Ontario.

Xiphinema diversicaudatum (Micoletzky, 1927) Thorne, 1939 was found in soil blocks from Blackpool, England, and on rose from a commercial firm in Ontario,

Trichodorus pachydermis Seinhorst, 1954 was found around the root system of various shrubs and Rhododendron sp. from Holland,

Trichodorus christiei Allen, 1957 was found in soil around roots of Philodendron hastatum from Florida, U.S.A. Trichodorus sp. was also noted on Picea alba from Holland,

Tylencholaimellus striatus Thorne, 1939 was found in soil around roots of hydrangea from Belgium.

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