

## SOME RECORDS OF PLANT PARASITIC NEMATODES ENCOUNTERED IN CANADA IN 1968

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Many plant-parasitic nematodes representing several genera and species were extracted from soil and plant tissues of samples submitted to the Nematology Section, Entomology Research Institute. The majority of samples were submitted by Plant Protection Division, CDA, some by private individuals, florists, horticulturists, etc., and by other Government agencies. Some of these samples came from various parts of Canada, while others were intercepted at port of entry from foreign countries.

### ROOT-KNOT NEMATODES (genus *Meloidogyne*)

*Meloidogyne hapla* Chitwood, 1949, the northern root knot nematode, was found on carrot from St. Sauveur des Monts, Quebec, cucumber from Manitoba, *Spirea* sp. from Tennessee, *Chrysanthemum* sp. from Ottawa, and *Berberis thunbergii* from Toronto. *Meloidogyne incognita* (Kofoid and White, 1919) Chitwood, 1949 was found on tomato from Claxton and Tifton, Georgia, and from Richton, Mississippi. *Meloidogyne javanica* (Treub, 1885) Chitwood, 1949, the Javanese root knot nematode, was removed from roots of tomato (*Lycopersicon esculentum*) from Tifton, Georgia.

### CYST-FORMING NEMATODES (genus *Heterodera*)

The cyst-forming nematode, *Heterodera trifolii* Goffart, 1932, was taken from soil obtained in surveys in Quebec and Ontario, and from soil intercepted on rubber tires, greenhouse plants, and cyclamen bulbs from England, on ornamentals, peony, iris and *Dahlia* sp. from California and New York, and also from soil on cars and machinery from Hamburg, Germany, herbaceous plants and fern, from Portugal, *Sedum* sp. from Hungary, ornamentals, *Spathiphyllum* sp., *Rhododendron* sp. from Italy, and on passengers' baggage from Lebanon and France. *Heterodera humuli* Filipjev, 1934, the hop cyst nematode, was detected in soil associated with *Cactus* sp. and fern from France; carnation from Belgium; *Merium oleander*, and house plants from Italy; *Thymus* sp. from Portugal, and in soil on a car from Europe. *Heterodera punctata* Thorne, 1928, the grass cyst nematode, was removed from soil on a car and trailer from Liverpool, England. *Heterodera avenae* Wollenweber, 1924 (Filipjev, 1934) was encountered in soil taken from cars and machinery and from rosemary plants from Germany;

*Begonia* sp. and herbs from Portugal; greenhouse plants from Yugoslavia; *Sedum* sp. from Hungary; vegetables from Spain; and *Merium oleander* from Italy. *Heterodera cacti* Filipjev and Schuurmans-Stekhoven, 1941, the cactus cyst nematode, was found on ornamentals; *Thuja occidentalis woodwardi* and palm tree from Tennessee, North Carolina, and New York; also on *Lilium* sp. from France. This nematode was also present on material collected during a cyst survey of the following areas in Ontario: London, Windsor and Toronto. *Heterodera schachtii* Schmidt, 1871 was reported on tulip and herbaceous plants from Holland and Portugal. *Heterodera goettingiana* Liebscher, 1892 was discovered on herbaceous and greenhouse plants from Portugal. *Heterodera fici* Kirjanova, 1954 was present on mint from Italy and in soil taken from imported agricultural implements. *Heterodera rostockiensis* Wollenweber, 1923 was detected on *Callum* sp. intercepted from Scotland. Material examined after a cyst survey and identified as *Heterodera* sp. was taken from the following: soil from areas around Toronto and Windsor, Ontario, and Montreal, Quebec: soil from Christchurch, New Zealand; soil from rubber tires from England; soil from Sicily; peony and iris plants from Massachusetts; greenhouse plants and *Spathiphyllum* sp. from Italy; *Sedum* sp. from Hungary; *Geranium* sp. and *Cactus* sp. from Europe; soil from France.

### ROOT-LESION NEMATODES (genus *Pratylenchus*)

*Pratylenchus crenatus* Loof, 1960 was found in soil associated with strawberry from Burlington, Washington, and from Christchurch, New Zealand. *Pratylenchus penetrans* (Cobb, 1917) Filipjev and Schuurmans-Stekhoven, 1941 was found in soil from strawberry from Burlington, Washington, and from *Ligustrum vulgare* from Boskoop, Holland, and on vegetables from Berwick, Nova Scotia. *Pratylenchus pratensis* (de Man, 1880) Filipjev, 1936 was screened from soil associated with strawberry from Burlington, Washington. *Pratylenchus neglectus* (Rensch, 1924) Filipjev and Schuurmans-Stekhoven, 1941 was encountered on strawberry from Burlington, Washington.

### SPIRAL NEMATODES (genera *Helicotylenchus* and *Rotylenchus*)

*Helicotylenchus platyurus* Perry in Perry, Darling and Thorne, 1959 was extracted from soil off *Tsuga canadensis* from McMinn, Tennessee, and *Helicotylenchus* sp. was found on *Ligustrum* sp. *Helicotylenchus* sp. was taken from soil from Christchurch, New Zealand. *Rotylenchus robustus* (de

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Man, 1876) Filipjev, 1936 was found on Azalea sp. from Maryland.

STUNT NEMATODES (genus Tylenchorhynchus)

Tylenchorhynchus claytoni Steiner, 1937, the tobacco stunt nematode, was discovered on Rhododendron sp. from Eden, New York, and on Azalea sp. from Maryland. Tylenchorhynchus longus Wu, 1969 was found on balsam and poplar from Bow River forest, Alberta. Tylenchorhynchus brevidens Allen, 1955 was removed from soil off blueberry plants from Geneva, New York.

PIN NEMATODES (genus Paratylenchus)

Paratylenchus projectus Jenkins, 1956 was removed from soil off Rhododendron sp. from Eden, New York.

RING NEMATODES (genus Criconemoides)

Criconemoides demani Micoletzky, 1925 was discovered on vegetables from Berwick, Nova Scotia.

BUD AND LEAF NEMATODES (genus Aphelenchoides)

The Chrysanthemum sp. foliar nematode, Aphelenchoides ritzemabosi (Schwartz, 1911) Steiner and

Buhrer, 1932, was found infesting Chrysanthemum sp. from Morden, Manitoba. An Aphelenchoides sp., possibly A. fragariae (Ritzema Bos, 1890) Christie, 1932 was found on strawberry from Washington. Also Aphelenchoides sp. on blueberry plants from Avondale, Newfoundland.

SEED GALL NEMATODES (genus Anguina)

Anguina sp. was extracted from soil with bentgrass from Halsey, Oregon.

DORYLAIMIDS

The American dagger nematode, Xiphinema americanum Cobb, 1913 was found in soil with raspberry plants and Tsuga canadensis from Michigan. Xiphinema sp., possible X. americanum, was recorded on Spartina basiliensis from Guyana.

MISCELLANEOUS (tylenchids)

Tylenchus sp. was discovered on Spartina basiliensis from Guyana and on Acer platanoides from Holland. Ditylenchus dipsaci (Kuhn, 1857) Filipjev, 1936 was found infesting gladiolus bulbs from Washington and Allium sp. intercepted from Germany.