PLANT-PARASITIC NEMATODES FROM CANADA AND ABROAD, 1969

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During 1969, soil samples, plants, and other materials were submitted to the Nematology Section, Entomology Research Institute, for the extraction and identification of nematodes. Most of the samples came through the Plant Protection Division, Canada Department of Agriculture, being intercepted at airports and ports. Other agricultural agencies, scientists, local farmers, greenhouse operators and florists from across Canada also sent in material for identification and advice.

CYST-FORMING NEMATODES (Genus Heterodera)

Heterodera trifolii Goffart, 1932 (Oostenbrink, 1949) was intercepted in soils containing Spirea sp. from Holland, Oxalis sp. from Ireland, rosemary house plants from Italy and Portugal, and nursery stock from New Jersey; it was also found in a survey of potato fields carried out in the Montreal, Toronto, and Vineland areas. Heterodera avenae Wollenweber, 1924 (Filipjev, 1934) was encountered in soil during the cyst survey of the Toronto and Vineland areas. and from soils supporting Spirea sp. and tulip from Holland, and Rosa sp. from England. Heterodera schachtii Schmidt, 1871, the sugar beet nematode, was associated with house plants, potatoes, peppers, and Lilium sp. from Italy, and tomatoes from Portugal. Heterodera bifenestra Cooper, 1955 was intercepted in soil on ornamentals from Italy. Heterodera weissi Steiner, 1949 was discovered in soils associated with Oxalis sp. from Holland and ornamentals from Yugoslavia and Tennessee. Heterodera cacti Filipjev and Schuurmans-Stekhoven, 1941 was intercepted in soils associated with cauliflower from the United States, and Crassula sp. from Europe, and from the cyst survey carried out in the Toronto area. Heterodera cruciferae Franklin, 1945 was reported from soil about the roots of Ranunculus sp. and begonia from Portugal, and Crassula sp. from Europe. Heterodera humuli Filipjev, 1934, the hop cyst nematode, was found in close association with grape cuttings from Italy and oleander from Portugal. Heterodera fici Kirjanova, 1959 was detected in shipments of fern and house plant from Italy, tomato plants from Portugal, and asparagus from Greece. Heterodera punctata Thorne, 1928 was found in soil with Spirea sp. from Holland, and from soil samples from surveys made in Newfoundland and British Columbia.

ROOT-KNOT (Genus Meloidogyne)

Meloidogyne hapla Chitwood, 1949, the northern root-knot nematode was found on Rosa sp. from Pasadena, California; clematis, and Rosa sp. from Holland; Rosa multiflora from France, Oregon, and Belgium; horseradish from Ancaster, Ontario; and in soil from lilac from Iowa. Meloidogyne incognita (Kofoid and White, 1919) Chitwood, 1949 was found on tomato plants from Georgia and in greenhouse soil from the CDA Research Station, Kentville, Nova Scotai; also in a soil sample from Macdonald College, Quebec, and from soil on honeysuckle rose from Tennessee. Meloidogyne javanica (Treub, 1885) Chitwood, 1949, the Javanese root-knot nematode, was removed from the roots of tomato plants from Georgia, U.S.A.

ROOT-LESION NEMATODE (Genus Pratylenchus)

Pratylenchus crenatus Loof, 1960 was found in soils associated with an unidentified herbaceous plant from England, and with red and pin oak from Pennsylvania. Pratylenchus penetrans (Cobb, 1917) Filipjev and Schuurmans-Stekhoven, 1941 was found on a herbaceous plant from England, on oak from Illinois, on red clover from Prince Edward Island, on lily from Holland, and on juniper from Pennsylvania Prat [illegible] Seinhorst, 1959 [illegible] us [illegible] 1968 were [illegible] lily-of-the-valley pips from Holland.

SPIRAL NEMATODES (Genera Helicotylenchus and Rotylenchus

Helicotylenchus pseudorobustus (Steiner, 1914) Golden, 1956 was found on house plants from Portugal and in soil associated with orange trees from Florida. Helicotylenchus digonicus Perry, 1959 was detected in soil taken from the roots of Acer sp., rosemary, and begonia from the United States, Italy, and Russia, respectively. Helicotylenchus platyurus Perry, 1959 was found on blueberry from Aylen Lake, Ontario, and in soil from the roots of juniper from Pennsylvania. Helicotylenchus californicus Sher, 1966 was reuorted on begonia from Russia. Heiicotylenchus dihystera (Cobb, 1893) Sher, 1961 was found on begonia from Italy, and on Mimosa sp. ,from New York. Nematodes identified as Helicotylenchus sp. were reported from a farm field in Ancaster, Ontario, in which horseradish was cultivated. Hoplolaimus galeatus (Cobb, 1913) Sher, 1963 was intercepted in soil on red oak, pin oak, and juniper from New York. Scutellonema brachyurum (Steiner, 1938) Andrassy, 1958 was intercepted in soil from around fruit trees from Israel.

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STUNT NEMATODES (Genus Tylenchorhynchus)

Tylenchorhynchus dubius (Butschli, 1873) Filipjev, 1936 was discovered on strawberry from the Central Experimental Farm, Ottawa, and on begonia from Russia. Tylenchorhynchus maximus Allen, 1955 was discovered in grasses from a golf course at Glenlea, Manitoba. Tylenchorhynchus martini Fielding, 1956 was reported on soil around orange trees from Florida.

PIN NEMATODES (Genus Paratylenchus)

Paratylenchus projectus Jenkins, 1956 was removed from soil around heather and ornamentals from Belgium and Poland.

RING NEMATODES (Genus Criconemoides)

Criconemoides ornatum Raski, 1958 was intercepted on oak from Pennsylvania. Criconemoides curvatum Raski, 1952 was intercepted from fruit trees, rosemary, and orange trees from Israel, Italy, and Florida, respectively. Criconemoides xenoplax Raski, 1952 was found on oak from Illinois.

Several Criconemoides spp. (possibly new species) were identified from Mimosa sp. from New York, begonia from Italy, and strawberry from Ottawa, Ontario.

MISCELLANEOUS (Tylenchids)

Psilenchus hilarulus de Man, 1921 was found on Mimosa sp. from New York. Ditylenchus destructor Thorne, 1945, the potato-rot nematode, was identified on iris bulbs from New Jersey.

DORYLAIMIDS

Xiphinema americanum Cobb, 1913 was recorded on Acer platanoides and on juniper from Illinois and Pennsylvania. Xiphinema bakeri Williams, 1961 was found in a soil sample submitted from British Columbia.